



## FRONTESPIZIO PROTOCOLLO GENERALE

AOO: ASL\_BO  
REGISTRO: Protocollo generale  
NUMERO: 0025257  
DATA: 10/03/2021  
OGGETTO: GARA EUROPEA A PROCEDURA APERTA ACCELERATA FINALIZZATA ALLA STIPULA DI UN ACCORDO QUADRO CON OPERATORE ECONOMICO PER IL SERVIZIO DI ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DEL RNA - RT-PCR COVID 19 CIG: 8664376543 CUI: S02406911202202100034

SOTTOSCRITTO DIGITALMENTE DA:

Rosanna Campa

CLASSIFICAZIONI:

- [01-07-07]

DOCUMENTI:

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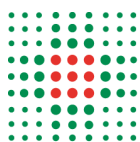


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UO Servizio Acquisti Metropolitan (SC)

**OPERATORI ECONOMICI VARI  
LORO SEDI**

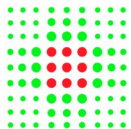
**OGGETTO: GARA EUROPEA A PROCEDURA APERTA ACCELERATA FINALIZZATA ALLA STIPULA  
DI UN ACCORDO QUADRO CON OPERATORE ECONOMICO PER IL SERVIZIO DI  
ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DEL RNA - RT-PCR  
COVID 19 CIG: 8664376543 CUI: S02406911202202100034**

Si inoltre la documentazione relativa alla gara in oggetto

Distinti saluti

Firmato digitalmente da:  
Rosanna Campa

Responsabile procedimento:  
Giuseppe Giorgi



**SERVIZIO SANITARIO REGIONALE**  
**EMILIA-ROMAGNA**  
**Azienda Unità Sanitaria Locale di Bologna**

**Istituto delle Scienze Neurologiche**  
Istituto di Ricovero e Cura a Carattere Scientifico

**Dipartimento Amministrativo**

**Servizio Acquisti Metropolitan**

**Settore Attrezzature e Prodotti Informatici**

**Il direttore**

## **DISCIPLINARE DI GARA**

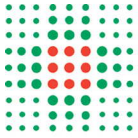
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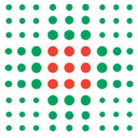
**CUI: S02406911202202100034**

**Servizio Acquisti Metropolitan**  
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Giuseppe.giorgi@ausl.bologna.it

**Azienda USL di Bologna**  
Sede Legale: Via Castiglione, 29 - 40124 Bologna  
Tel. +39.051.6225111 fax +39.051.6584923  
Codice fiscale e Partita Iva 02406911202



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## 1. PREMESSE

Con riferimento al bando di gara inviato in data 10/03/2021 all'Ufficio Pubblicazioni Ufficiali della U.E., questa Azienda USL, codice AUSA 0000202387, con determina n. 627 del 10/03/2021, ha deliberato di affidare **Il Servizio di analisi e refertazione dei tamponi per il rilevamento del RNA - RT - PCR COVID 19 per le esigenze dell'Azienda USL di Bologna.**

L'obiettivo della presente gara è strettamente correlato alla gestione dell'emergenza sanitaria da Covid-19 e rivolto alla ricerca di un Laboratorio che si affianchi alle Strutture dell'Azienda USL all'analisi e refertazione dei tamponi..

L'Accordo Quadro verrà stipulato con l'Operatore Economico che ha fissato il prezzo più basso. Tuttavia, qualora l'aggravamento della situazione di emergenza sanitaria lo richiedesse, la Stazione Appaltante si riserva la facoltà di affidare all'Operatore Economico che ha presentato la seconda migliore offerta, parte del servizio di analisi dei tamponi e più precisamente l'importo o quota parte dell'importo identificato dalla Stazione Appaltante nel quadro economico come da art. 106. Comma 1 lett.a), pari a € 2.000.000,00. Il costo riconosciuto dalla Stazione Appaltante sarà quello offerto dall'Operatore Sanitario in sede di gara.

Pertanto, la presente procedura di gara riveste carattere d'urgenza e, ai sensi dell'articolo 60 comma 3 del d.lgs. 18 aprile 2016, n. 50 - Codice dei contratti pubblici (in seguito: Codice), viene espletata con procedura accelerata.

**Per le stesse motivazioni alla base del ricorso della procedura accelerata, ai sensi dell'articolo 32 comma 8 Codice la Stazione Appaltante procederà con l'esecuzione d'urgenza del servizio.**

Il luogo di svolgimento della fornitura è Bologna, codice NUTS ITH55.

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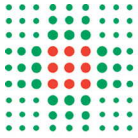
Il Responsabile del procedimento, ai sensi dell'art. 31 del Codice, è la Dott.ssa Rosanna Campa, Direttore del Servizio Acquisti Metropolitano.

La presente procedura è interamente svolta attraverso una piattaforma telematica di negoziazione ai sensi dell'art. 58 del D.lgs. n. 50 del 2016.

Per l'espletamento della presente gara l'Azienda USL si avvale del Sistema Informatico per le procedure telematiche di acquisto (Sistema) accessibile dal sito <http://intercenter.regione.emilia-romagna.it/> (d'ora in poi "Sito"). Tramite il Sito si accederà alla procedura e alla documentazione di gara.

Al fine della partecipazione alla presente procedura è indispensabile:

- un Personal Computer collegato ad internet e dotato di un browser;
- la firma digitale rilasciata da un certificatore accreditato e generata mediante un dispositivo per la creazione di una firma sicura, ai sensi di quanto previsto dall'art. 38 comma 2 del DPR n. 445/2000;
- la registrazione al Sistema con le modalità e in conformità alle indicazioni di cui al successivo paragrafo "**Registrazione delle ditte**".



## 1.1 Registrazione delle ditte

La registrazione a Sistema dovrà essere effettuata secondo le modalità esplicitate nelle guide per l'utilizzo della piattaforma accessibili dal sito <http://intercenter.regione.emilia-romagna.it/agenzia/utilizzo-del-sistema/guide/guide>.

La registrazione al Sistema deve essere richiesta unicamente dal legale rappresentante e/o procuratore generale o speciale e/o dal soggetto dotato dei necessari poteri per richiedere la Registrazione e impegnare l'operatore economico medesimo.

L'operatore economico, con la registrazione e, comunque, con la presentazione dell'offerta, dà per valido e riconosce senza contestazione alcuna quanto posto in essere all'interno del Sistema dall'account riconducibile all'operatore economico medesimo; ogni azione inerente l'account all'interno del Sistema si intenderà, pertanto, direttamente e incontrovertibilmente imputabile all'operatore economico registrato.

L'accesso, l'utilizzo del Sistema e la partecipazione alla procedura comportano l'accettazione incondizionata di tutti i termini, le condizioni di utilizzo e le avvertenze contenute nel presente Disciplinare di gara, nei relativi allegati e le guide presenti sul Sito, nonché di quanto portato a conoscenza degli utenti tramite la pubblicazione nel Sito o le eventuali comunicazioni.

Una volta ottenuta la registrazione al Sistema, le ditte, dopo aver effettuato l'accesso al sito SATER, dovranno selezionare la voce "Bandi pubblicati", nella sezione "Bandi".

È onere della ditta concorrente provvedere tempestivamente a modificare i recapiti suindicati secondo le modalità esplicitate nelle guide per l'utilizzo della nuova piattaforma "Registrazione e funzioni base" (pag. 39-40 e 45-46 per la modifica di dati non sensibili, es: tel., mail utente) e "Gestione anagrafica" (per la modifica di dati sensibili) accessibili dal sito <http://intercenter.regione.emilia-romagna.it/agenzia/utilizzo-del-sistema/guide/>.

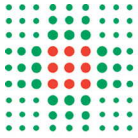
## 2. DOCUMENTAZIONE DI GARA, CHIARIMENTI E COMUNICAZIONI.

### 2.1 Documenti di gara

La documentazione di gara comprende:

- 1) Progetto ai sensi dell'art. 23 commi 14 e 15 del Codice, costituito da:
  1. Capitolato speciale da restituire firmato;
  2. Allegato 1- al Capitolato Speciale- Clausole vessatorie;
  3. Allegato 2- Domanda di partecipazione;
  4. Allegato 3 - Schema di contratto;
  5. Allegato A- Questionario;
  6. Allegato B- Interfacciamento Laboratori Esterni;
  7. Allegato C - NoemaLife HL7 Integration Policy Segments Definition;
  8. Allegato D - NoemaLife HL7 Integration Policy Use Cases;
  9. Allegato E - Scheda Offerta economica;
  10. Allegato 4 e 5 - Descrizione attività trattamento dati e istruzioni

- 2) Disciplinare di gara;



- 3) DGUE (da compilare direttamente sul portale SATER);
- 4) Bando di gara;
- 5) Patto di integrità di cui a delibera n.35 del 31.01.2019 dell'Azienda USL di Bologna di "Aggiornamento del piano triennale per la prevenzione della corruzione e del programma triennale della trasparenza e dell'integrità dell'Azienda USL di Bologna per il triennio 2019 - 2021;

La documentazione di gara è disponibile sul sito <http://intercenter.regione.emilia-romagna.it>, in quanto per l'espletamento della presente gara l'Azienda USL si avvale del Sistema Informatico per le Procedure Telematiche di Acquisto di Intercenter ed è inoltre reperibile, solo per la consultazione, sul profilo del committente dell'Azienda USL di Bologna all'indirizzo: [www.ausl.bologna.it](http://www.ausl.bologna.it) - sezione Bandi di gara e contratti - Bandi di gara.

## 2.2 Chiarimenti

Le richieste di chiarimenti da parte delle Ditte concorrenti devono essere inoltrate, entro il giorno e l'ora indicata sul portale tramite il Sistema messo a disposizione per l'espletamento del procedimento. L'Azienda USL, tramite il Sistema, risponderà alle richieste di chiarimento ricevute entro il termine indicato sullo stesso Sistema. Non verranno evase richieste di chiarimento pervenute in modo difforme. I chiarimenti dovranno essere inviati a Sistema secondo le modalità esplicitate nelle guide per l'utilizzo della nuova piattaforma accessibili dal sito <http://intercenter.regione.emilia-romagna.it/agenzia/utilizzo-del-sistema/guide/guide>. Tutte le richieste di chiarimento ricevute e le relative risposte saranno consultabili a sistema e, inoltre, pubblicate sul sito dell'Azienda USL di Bologna [www.ausl.bologna.it](http://www.ausl.bologna.it), nella sezione bandi;

## 2.3 Comunicazioni

Conformemente a quanto previsto dall'art.52 del D.Lgs. n.50/2016, l'offerta per la procedura e tutte le comunicazioni e gli scambi di informazioni relative alla procedura devono essere effettuate esclusivamente attraverso il sistema e quindi per via telematica **mediante l'invio di documenti elettronici sottoscritti con firma digitale all'indirizzo pec indicato in sede di registrazione.**

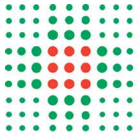
In tal senso tutte le comunicazioni tra stazione appaltante e operatori economici si intendono validamente ed efficacemente effettuate qualora rese all'indirizzo PEC indicato in sede di registrazione a Sistema.

In caso di raggruppamenti temporanei, GEIE, aggregazioni di imprese di rete o consorzi ordinari, anche se non ancora costituiti formalmente, la comunicazione recapitata alla pec del mandatario si intende validamente resa a tutti gli operatori economici raggruppati, aggregati o consorziati.

In caso di consorzi di cui all'art. 45, comma 2, lett. b e c del Codice, la comunicazione recapitata alla pec del consorzio si intende validamente resa a tutte le consorziate.

In caso di avalimento, la comunicazione recapitata alla pec dell'offerente si intende validamente resa a tutti gli operatori economici ausiliari.





In caso di subappalto, la comunicazione recapitata alla pec dell'offerente si intende validamente resa a tutti i subappaltatori indicati.

### 3. OGGETTO DELL'APPALTO, IMPORTO E SUDDIVISIONE IN LOTTI.

**Tabella n. 1 - Tabella riepilogativa** dell'appalto

1	<b>Servizio di analisi e refertazione dei tamponi per la rilevazione del RNA - RT- PCR COVID 19 per le esigenze dell'Azienda AUSL di Bologna, Lotto Unico della durata di 6 mesi</b>	33696000-5 Reagenti e mezzi di contrasto		€ 3.672.000,00
1	<b>Eventuale rinnovo di 6 mesi</b>	33696000-5		€ 3.672.000,00
1	<b>Modifiche ex art. 106, D.lgs 50/2016</b>	33696000-5		€ 2.000.000,00
<b>Importo presuntivo totale, ai fini dell'art. 35, comma 4 del Codice</b>				<b>€ 9.344.000,00</b>

L'importo a base di gara è al netto di Iva e/o di altre imposte e contributi di legge.

Il servizio oggetto della presente procedura è IVA esente ai sensi dell'articolo 452 della Legge 178/2020

### 4. DURATA DELL'APPALTO, OPZIONI E RINNOVI

#### 4.1. Durata.

La durata del Servizio (escluse le eventuali opzioni) è di mesi 6, decorrenti dalla data di attivazione del contratto.

#### 4.2. Opzioni e rinnovi

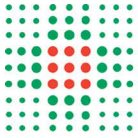
E' previsto un eventuale rinnovo di mesi 6.

La stazione appaltante si riserva la facoltà di rinnovare il servizio, alle medesime condizioni e di mese in mese, per ulteriori 6 mesi.

La durata del contratto in corso di esecuzione potrà essere modificata per il tempo strettamente necessario alla conclusione delle procedure necessarie per l'individuazione del nuovo contraente ai sensi dell'art. 106, comma 11 del Codice. In tal caso il contraente è tenuto all'esecuzione delle prestazioni oggetto del contratto agli stessi - o più favorevoli - prezzi, patti e condizioni.

Infine, Il contratto di appalto potrà essere modificato, senza una nuova procedura di affidamento, ai sensi dell'art. 106, comma 1, lett. a) del Codice, nei seguenti casi:

- adesione da parte di un'altra Azienda Sanitaria di AVEC;
- necessità di aumentare il numero dei tamponi da refertare;



- qualora l'aggravamento della situazione di emergenza sanitaria lo richiedesse, la Stazione Appaltante si riserva la facoltà di affidare all'Operatore Economico che ha presentato la seconda migliore offerta, parte del servizio di analisi dei tamponi.

In tal caso l'importo della modifica non potrà essere superiore a € 2.000.000,00 oneri fiscali esclusi; Qualora in corso di esecuzione del contratto si rendesse necessario un aumento o una diminuzione delle prestazioni, la stazione appaltante potrà imporre, ai sensi del comma 12, art. 106, D.lgs 50/2016, l'esecuzione delle stesse fino a concorrenza del quinto dell'importo del contratto, alle stesse condizioni previste nel contratto originario.

## 5. SOGGETTI AMMESSI IN FORMA SINGOLA E ASSOCIATA E CONDIZIONI DI PARTECIPAZIONE

Gli operatori economici, anche stabiliti in altri Stati membri, possono partecipare alla presente gara in forma singola o associata, secondo le disposizioni dell'art. 45 del Codice, purché in possesso dei requisiti prescritti dai successivi articoli.

Ai soggetti costituiti in forma associata si applicano le disposizioni di cui agli artt. 47 e 48 del Codice.

È **vietato** ai concorrenti di partecipare alla gara in più di un raggruppamento temporaneo o consorzio ordinario di concorrenti o aggregazione di imprese aderenti al contratto di rete (nel prosieguo, aggregazione di imprese di rete).

È **vietato** al concorrente che partecipa alla gara in raggruppamento o consorzio ordinario di concorrenti, di partecipare anche in forma individuale.

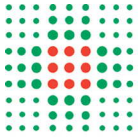
È **vietato** al concorrente che partecipa alla in aggregazione di imprese di rete, di partecipare anche in forma individuale. Le imprese retiste non partecipanti alla gara possono presentare offerta, per la medesima gara, in forma singola o associata.

I consorzi di cui all'articolo 45, comma 2, lettere b) e c) del Codice sono tenuti ad indicare, in sede di offerta, per quali consorziati il consorzio concorre; a questi ultimi è **vietato** partecipare, in qualsiasi altra forma, alla presente gara. In caso di violazione sono esclusi dalla gara sia il consorzio sia il consorziato; in caso di inosservanza di tale divieto si applica l'articolo 353 del codice penale.

Nel caso di consorzi di cui all'articolo 45, comma 2, lettere b) e c) del Codice, le consorziate designate dal consorzio per l'esecuzione del contratto non possono, a loro volta, a cascata, indicare un altro soggetto per l'esecuzione.

Le aggregazioni tra imprese aderenti al contratto di rete di cui all'art. 45, comma 2 lett. f) del Codice, rispettano la disciplina prevista per i raggruppamenti temporanei di imprese in quanto compatibile. In particolare:

- a) **nel caso in cui la rete sia dotata di organo comune con potere di rappresentanza e soggettività giuridica (cd. rete - soggetto)**, l'aggregazione di imprese di rete partecipa a mezzo dell'organo comune, che assumerà il ruolo della mandataria, qualora in possesso dei relativi requisiti. L'organo comune potrà indicare anche solo alcune tra le imprese retiste per la partecipazione alla gara ma dovrà obbligatoriamente far parte di queste;



- b) **nel caso in cui la rete sia dotata di organo comune con potere di rappresentanza ma priva di soggettività giuridica (cd. rete-contratto)**, l'aggregazione di imprese di rete partecipa a mezzo dell'organo comune, che assumerà il ruolo della mandataria, qualora in possesso dei requisiti previsti per la mandataria e qualora il contratto di rete rechi mandato allo stesso a presentare domanda di partecipazione o offerta per determinate tipologie di procedure di gara. L'organo comune potrà indicare anche solo alcune tra le imprese retiste per la partecipazione alla gara ma dovrà obbligatoriamente far parte di queste;
- c) **nel caso in cui la rete sia dotata di organo comune privo di potere di rappresentanza ovvero sia sprovvista di organo comune, oppure se l'organo comune è privo dei requisiti di qualificazione**, l'aggregazione di imprese di rete partecipa nella forma del raggruppamento costituito o costituendo, con applicazione integrale delle relative regole (cfr. Determinazione ANAC n. 3 del 23 aprile 2013).

**Per tutte le tipologie di rete**, la partecipazione congiunta alle gare deve risultare individuata nel contratto di rete come uno degli scopi strategici inclusi nel programma comune, mentre la durata dello stesso dovrà essere commisurata ai tempi di realizzazione dell'appalto (cfr. Determinazione ANAC n. 3 del 23 aprile 2013).

Il ruolo di mandante/mandataria di un raggruppamento temporaneo di imprese può essere assunto anche da un consorzio di cui all'art. 45, comma 1, lett. b), c) ovvero da una sub-associazione, nelle forme di un RTI o consorzio ordinario costituito oppure di un'aggregazioni di imprese di rete.

A tal fine, se la rete è dotata di organo comune con potere di rappresentanza (con o senza soggettività giuridica), tale organo assumerà la veste di mandataria della sub-associazione; se, invece, la rete è dotata di organo comune privo del potere di rappresentanza o è sprovvista di organo comune, il ruolo di mandataria della sub-associazione è conferito dalle imprese retiste partecipanti alla gara, mediante mandato ai sensi dell'art. 48 comma 12 del Codice, dando evidenza della ripartizione delle quote di partecipazione.

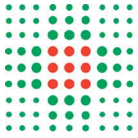
Ai sensi dell'art. 186-bis, comma 6 del R.D. 16 marzo 1942, n. 267, l'impresa in concordato preventivo con continuità aziendale può concorrere anche riunita in RTI purché non rivesta la qualità di mandataria e sempre che le altre imprese aderenti al RTI non siano assoggettate ad una procedura concorsuale.

## 6. REQUISITI GENERALI

Sono **esclusi** dalla gara gli operatori economici per i quali sussistono cause di esclusione di cui all'art. 80 del Codice.

Sono comunque **esclusi** gli operatori economici che abbiano affidato incarichi in violazione dell'art. 53, comma 16-ter, del d.lgs. del 2001 n. 165.

La mancata accettazione delle clausole contenute nel patto di integrità costituisce **causa di esclusione** dalla gara, ai sensi dell'art. 1, comma 17 della l. 190/2012.



## 7. REQUISITI SPECIALI E MEZZI DI PROVA

I concorrenti, a **pena di esclusione**, devono essere in possesso dei requisiti previsti nei commi seguenti. I documenti richiesti agli operatori economici ai fini della dimostrazione dei requisiti devono essere trasmessi mediante AVCpass in conformità alla delibera ANAC n. 157 del 17 febbraio 2016.

Ai sensi dell'art. 59, comma 4, lett. b) del Codice, sono inammissibili le offerte prive della qualificazione richiesta dal presente disciplinare.

### 7.1 Requisiti di idoneità

a) **Iscrizione** nel registro tenuto dalla Camera di commercio industria, artigianato e agricoltura oppure nel registro delle commissioni provinciali per l'artigianato per attività coerenti con quelle oggetto della presente procedura di gara.

Il concorrente non stabilito in Italia ma in altro Stato Membro o in uno dei Paesi di cui all'art. 83, comma 3 del Codice, presenta dichiarazione giurata o secondo le modalità vigenti nello Stato nel quale è stabilito.

Per la comprova del requisito la stazione appaltante acquisisce d'ufficio i documenti in possesso di pubbliche amministrazioni, previa indicazione, da parte dell'operatore economico, degli elementi indispensabili per il reperimento delle informazioni o dei dati richiesti.

### 7.2 Requisiti di capacità economica e finanziaria

Per la presente procedura di gara non sono previsti requisiti di capacità economica finanziaria.

### 7.3 Requisiti di capacità tecnica e professionale

Per la presente procedura di gara non sono previsti requisiti di capacità tecnica e professionale.

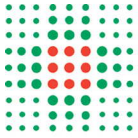
### 7.4 Indicazioni per i raggruppamenti temporanei, consorzi ordinari, aggregazioni di imprese di rete, GEIE

I soggetti di cui all'art. 45 comma 2, lett. d), e), f) e g) del Codice devono possedere i requisiti di partecipazione nei termini di seguito indicati.

Alle aggregazioni di imprese aderenti al contratto di rete, ai consorzi ordinari e dai GEIE si applica la disciplina prevista per i raggruppamenti temporanei di imprese, in quanto compatibile. Nei consorzi ordinari la consorziata che assume la quota maggiore di attività esecutive riveste il ruolo di capofila che deve essere assimilata alla mandataria.

Nel caso in cui la mandante/mandataria di un raggruppamento temporaneo di imprese sia una sub-associazione, nelle forme di un RTI costituito oppure di un'aggregazioni di imprese di rete, i relativi requisiti di partecipazione sono soddisfatti secondo le medesime modalità indicate per i raggruppamenti.

Il **requisito relativo all'iscrizione** nel registro tenuto dalla Camera di commercio industria, artigianato e agricoltura oppure nel registro delle commissioni provinciali per l'artigianato di cui al **punto 7.1. lett.a)** deve essere posseduto da:



- a. ciascuna delle imprese raggruppate/raggruppande, consorziate/consorziande o GEIE;
- b. ciascuna delle imprese aderenti al contratto di rete indicate come esecutrici e dalla rete medesima nel caso in cui questa abbia soggettività giuridica

Il **requisito di cui punto 7.3 lett.a)** dovrà essere in possesso di almeno una:

- a. delle imprese raggruppate/raggruppande, consorziate/consorziande o GEIE;
- b. delle imprese aderenti al contratto di rete indicate come esecutrici e dalla rete medesima nel caso in cui questa abbia soggettività giuridica.

#### **7.5 Indicazioni per i consorzi di cooperative e di imprese artigiane e i consorzi stabili**

I soggetti di cui all'art. art. 45 comma 2, lett. b) e c) del Codice devono possedere i requisiti di partecipazione nei termini di seguito indicati.

Il requisito relativo all'iscrizione nel registro tenuto dalla Camera di commercio industria, artigianato e agricoltura oppure nel registro delle commissioni provinciali per l'artigianato di cui al punto 7.1 lett. a) deve essere posseduto dal consorzio e dalle imprese consorziate indicate come esecutrici.

### **8. AVVALIMENTO**

Non essendo previsti requisiti di carattere economico e professionale, non è previsto l'istituto dell'avvalimento.

### **9. SUBAPPALTO**

Il concorrente indica all'atto dell'offerta le parti del servizio/fornitura che intende subappaltare o concedere in cottimo nei limiti del 40% dell'importo complessivo del contratto, in conformità a quanto previsto dall'art. 105 del Codice; in mancanza di tali indicazioni il subappalto è **vietato**.

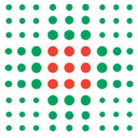
Non si configurano come attività affidate in subappalto quelle di cui all'art. 105, comma 3 del Codice.

### **10. GARANZIA PROVVISORIA**

L'offerta è corredata da:

- 1) **una garanzia provvisoria**, come definita dall'art. 93 del Codice, pari a

€ 73.440,00.



- 2) **una dichiarazione di impegno**, da parte di un istituto bancario o assicurativo o altro soggetto di cui all'art. 93, comma 3 del Codice, anche diverso da quello che ha rilasciato la garanzia provvisoria, **a rilasciare garanzia fideiussoria definitiva** ai sensi dell'articolo 93, comma 8 del Codice, qualora il concorrente risulti affidatario. Tale dichiarazione di impegno non è richiesta alle microimprese, piccole e medie imprese e ai raggruppamenti temporanei o consorzi ordinari esclusivamente dalle medesime costituiti. La dichiarazione di impegno al rilascio della garanzia di cui all'art.103, comma 1, del Codice, dovrà essere conforme all'allegato B del Decreto Ministero dello sviluppo economico 19/1/2018 n.31 (G.U.10/04/2018 n.83) e la ditta dovrà caricare a sistema la relativa scheda tecnica;

Ai sensi dell'art. 93, comma 6 del Codice, la garanzia provvisoria copre la mancata sottoscrizione del contratto, dopo l'aggiudicazione, dovuta ad ogni fatto riconducibile all'affidatario o all'adozione di informazione antimafia interdittiva emessa ai sensi degli articoli 84 e 91 del d. lgs. 6 settembre 2011, n. 159. Sono fatti riconducibili all'affidatario, tra l'altro, la mancata prova del possesso dei requisiti generali e speciali; la mancata produzione della documentazione richiesta e necessaria per la stipula del contratto. L'eventuale esclusione dalla gara prima dell'aggiudicazione, al di fuori dei casi di cui all'art. 89 comma 1 del Codice, non comporterà l'escussione della garanzia provvisoria.

La garanzia provvisoria copre, ai sensi dell'art. 89, comma 1 del Codice, anche le dichiarazioni mendaci rese nell'ambito dell'avvalimento.

La **garanzia provvisoria è costituita**, a scelta del concorrente:

- a. in titoli del debito pubblico garantiti dallo Stato depositati presso una sezione di tesoreria provinciale o presso le aziende autorizzate, a titolo di pegno, a favore della stazione appaltante; il valore deve essere al corso del giorno del deposito;
- b. fermo restando il limite all'utilizzo del contante di cui all'articolo 49, comma I del decreto legislativo 21 novembre 2007 n. 231, in contanti, con bonifico, in assegni circolari, con versamento presso il Tesoriere dell'Azienda Unità Sanitaria Locale di Bologna - Intesa San Paolo spa: codice IBAN 42A0306902480100000046067.

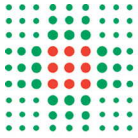
Il codice Ente assegnato all'Azienda da parte del Tesoriere è il 1040039 con sottoconto IT71Z0306902480100000300030 collegato al codice IBAN indicato.

Per pagamenti provenienti dall'estero, Codice BIC: BCITITMM.

- c. fideiussione bancaria o assicurativa rilasciata da imprese bancarie o assicurative che rispondano ai requisiti di cui all'art. 93, comma 3 del Codice. In ogni caso, la garanzia fideiussoria è conforme allo schema tipo di cui all'art. 103, comma 9 del Codice.

Gli operatori economici, prima di procedere alla sottoscrizione, sono tenuti a verificare che il soggetto garante sia in possesso dell'autorizzazione al rilascio di garanzie mediante accesso ai seguenti siti internet:

- <http://www.bancaditalia.it/compiti/vigilanza/intermediari/index.html>
- <http://www.bancaditalia.it/compiti/vigilanza/avvisi-pub/garanzie-finanziarie/>
- [http://www.bancaditalia.it/compiti/vigilanza/avvisi-pub/soggetti-non-legittimati/Intermediari\\_non\\_abilitati.pdf](http://www.bancaditalia.it/compiti/vigilanza/avvisi-pub/soggetti-non-legittimati/Intermediari_non_abilitati.pdf)



- [http://www.ivass.it/ivass/impresе\\_jsp/HomePage.jsp](http://www.ivass.it/ivass/impresе_jsp/HomePage.jsp)

In caso di prestazione di **garanzia fideiussoria**, questa dovrà:

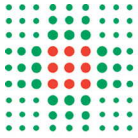
- 1) contenere espressa menzione dell'oggetto e del soggetto garantito;
- 2) essere intestata a tutti gli operatori economici del costituito/constituendo raggruppamento temporaneo o consorzio ordinario o GEIE, ovvero a tutte le imprese retiste che partecipano alla gara ovvero, in caso di consorzi di cui all'art. 45, comma 2 lett. b) e c) del Codice, al solo consorzio;
- 3) essere conforme allo schema tipo approvato con decreto del Ministro dello sviluppo economico di concerto con il Ministro delle infrastrutture e dei trasporti di cui a Decreto Ministero dello sviluppo economico 19/1/2018 n.31 (G.U.10/04/2018 n.83);
- 4) avere validità per 90 giorni;
- 5) prevedere espressamente:
  - a. la rinuncia al beneficio della preventiva escussione del debitore principale di cui all'art. 1944 del codice civile, volendo ed intendendo restare obbligata in solido con il debitore;
  - b. la rinuncia ad eccepire la decorrenza dei termini di cui all'art. 1957 del codice civile;
  - c. la loro operatività entro quindici giorni a semplice richiesta scritta della stazione appaltante;
- 6) contenere l'impegno a rilasciare la garanzia definitiva, ove rilasciata dal medesimo garante;
- 7) essere corredata dall'impegno del garante a rinnovare la garanzia ai sensi dell'art. 93, comma 5 del Codice, su richiesta della stazione appaltante per ulteriori ..... giorni, nel caso in cui al momento della sua scadenza non sia ancora intervenuta l'aggiudicazione.

La garanzia fideiussoria e la dichiarazione di impegno devono essere sottoscritte da un soggetto in possesso dei poteri necessari per impegnare il garante ed essere prodotte in una delle seguenti forme:

- documento informatico, ai sensi dell'art. 1, lett. p) del d.lgs. 7 marzo 2005 n. 82 sottoscritto con firma digitale dal soggetto in possesso dei poteri necessari per impegnare il garante;
- copia informatica di documento analogico (scansione di documento cartaceo) secondo le modalità previste dall'art. 22, commi 1 e 2, del d.lgs. 82/2005. In tali ultimi casi la conformità del documento all'originale dovrà esser attestata dal pubblico ufficiale mediante apposizione di firma digitale (art. 22, comma 1, del d.lgs. 82/2005) ovvero da apposita dichiarazione di autenticità firmata digitalmente con firma digitale dal notaio o dal pubblico ufficiale (art. 22, comma 2 del d.lgs. 82/2005).

In caso di richiesta di estensione della durata e validità dell'offerta e della garanzia fideiussoria, il concorrente potrà produrre una nuova garanzia provvisoria di altro garante, in sostituzione della precedente, a condizione che abbia espressa decorrenza dalla data di presentazione dell'offerta.

L'importo della garanzia e del suo eventuale rinnovo è ridotto secondo le misure e le modalità di cui all'art. 93, comma 7 del Codice.



Per fruire di dette riduzioni il concorrente segnala e documenta nell'offerta il possesso dei relativi requisiti fornendo copia dei certificati posseduti.

In caso di partecipazione in forma associata, la riduzione del 50% per il possesso della certificazione del sistema di qualità di cui all'articolo 93, comma 7, si ottiene:

- a. in caso di partecipazione dei soggetti di cui all'art. 45, comma 2, lett. d), e), f), g), del Codice solo se tutte le imprese che costituiscono il raggruppamento, consorzio ordinario o GEIE, o tutte le imprese retiste che partecipano alla gara siano in possesso della predetta certificazione;
- b. in caso di partecipazione in consorzio di cui all'art. 45, comma 2, lett. b) e c) del Codice, solo se la predetta certificazione sia posseduta dal consorzio e/o dalle consorziate.

Le altre riduzioni previste dall'art. 93, comma 7, del Codice si ottengono nel caso di possesso da parte di una sola associata oppure, per i consorzi di cui all'art. 45, comma 2, lett. b) e c) del Codice, da parte del consorzio e/o delle consorziate.

È sanabile, mediante soccorso istruttorio, la mancata presentazione della garanzia provvisoria e/o dell'impegno a rilasciare garanzia fideiussoria definitiva solo a condizione che siano stati già costituiti prima della presentazione dell'offerta. È onere dell'operatore economico dimostrare che tali documenti siano costituiti in data non successiva al termine di scadenza della presentazione delle offerte. Ai sensi dell'art. 20 del d.lgs. 82/2005, la data e l'ora di formazione del documento informatico sono opponibili ai terzi se apposte in conformità alle regole tecniche sulla validazione (es.: marcatura temporale).

È sanabile, altresì, la presentazione di una garanzia di valore inferiore o priva di una o più caratteristiche tra quelle sopra indicate (intestazione solo ad alcuni partecipanti al RTI, carenza delle clausole obbligatorie, etc.).

Non è sanabile - e quindi è causa di esclusione - la sottoscrizione della garanzia provvisoria da parte di un soggetto non legittimato a rilasciare la garanzia o non autorizzato ad impegnare il garante.

## 11. SOPRALLUOGO

Non è previsto il sopralluogo.

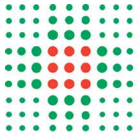
## 12. PAGAMENTO DEL CONTRIBUTO A FAVORE DELL'ANAC

I concorrenti effettuano, **a pena di esclusione**, il pagamento del contributo previsto dalla legge in favore dell'Autorità Nazionale Anticorruzione per un importo pari a **€140,00** secondo le modalità di cui alla delibera ANAC n. 1197 del 18 dicembre 2019 pubblicata *nella Gazzetta Ufficiale n. 250 del 09 ottobre 2020* pubblicata sul sito dell'ANAC nella sezione "contributi in sede di gara" .

A comprova dell'avvenuto pagamento, l'offerente deve allegare a sistema copia della ricevuta del versamento effettuato.

In caso di mancata presentazione della ricevuta la stazione appaltante accerta il pagamento mediante consultazione del sistema AVCpass.





Qualora il pagamento non risulti registrato nel sistema, la mancata presentazione della ricevuta potrà essere sanata ai sensi dell'art. 83, comma 9 del Codice, a condizione che il pagamento sia stato già effettuato prima della scadenza del termine di presentazione dell'offerta.

In caso di mancata dimostrazione dell'avvenuto pagamento, la stazione appaltante **esclude** il concorrente dalla procedura di gara, ai sensi dell'art. 1, comma 67 della l. 266/2005.

### **13. MODALITÀ DI PRESENTAZIONE DELL'OFFERTA E SOTTOSCRIZIONE DEI DOCUMENTI DI GARA**

Conformemente a quanto previsto dall'art.52 del D.Lgs. n.50/2016, l'offerta per la presente procedura e tutte le comunicazioni e gli scambi di informazioni relative alla stessa, devono essere effettuate esclusivamente attraverso il Sistema e quindi per via telematica mediante l'invio di documenti elettronici sottoscritti con firma digitale.

Quindi tutta la documentazione richiesta dovrà essere firmata digitalmente dal Legale Rappresentante o da persona abilitata a impegnare l'offerente in possesso di procura. **Quindi, nel caso in cui la documentazione sia collocata a sistema da un soggetto differente dal Legale Rappresentante, dovrà essere collocato a sistema anche copia della procura firmata digitalmente.**

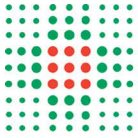
La presentazione della documentazione amministrativa, offerta tecnica ed economica deve essere effettuata a Sistema secondo le modalità esplicitate nelle guide per l'utilizzo della nuova piattaforma accessibili dal sito <http://intercenter.regione.emilia-romagna.it/agenzia/utilizzo-del-sistema/guide/guide>.

Oltre a detto termine non sarà possibile inserire a sistema alcuna offerta, anche se sostitutiva o aggiuntiva a quella precedente.

Prima della scadenza del termine perentorio per la presentazione delle offerte, l'Operatore Economico può sottoporre una nuova offerta che all'atto dell'invio invaliderà quella precedentemente inviata (funzione modifica). A tale proposito si precisa che qualora, alla scadenza della gara, risultino presenti a sistema più offerte dello stesso fornitore, salvo diversa indicazione del fornitore stesso, verrà ritenuta valida l'offerta collocata temporalmente come ultima.

L'operatore economico, con la presentazione dell'offerta, dà per valido e riconosce senza contestazione alcuna, quanto posto in essere all'interno del Sistema dall'account riconducibile all'operatore economico medesimo; ogni azione inerente l'account all'interno del Sistema si intenderà, pertanto, direttamente e incontrovertibilmente imputabile all'operatore economico registrato.

La presentazione dell'offerta mediante il Sistema è a totale ed esclusivo rischio del concorrente, il quale si assume qualsiasi rischio in caso di mancata o tardiva ricezione dell'offerta medesima, dovuta, a mero titolo esemplificativo e non esaustivo, a malfunzionamenti degli strumenti telematici utilizzati, a difficoltà di connessione e trasmissione, a lentezza dei collegamenti, o a qualsiasi altro motivo, restando esclusa qualsivoglia responsabilità dell'Azienda USL ove per ritardo o disguidi tecnici o di altra natura, ovvero per qualsiasi motivo, l'offerta non pervenga entro il previsto termine perentorio di scadenza.



In ogni caso il concorrente esonera l'Azienda USL di Bologna e l'Agenzia per lo Sviluppo dei Servizi Telematici (SATER) da qualsiasi responsabilità per malfunzionamenti di ogni natura, mancato funzionamento o interruzioni di funzionamento del Sistema.

Per i concorrenti aventi sede legale in Italia o in uno dei Paesi dell'Unione europea, le dichiarazioni sostitutive si redigono ai sensi degli articoli 46 e 47 del d.p.r.445/2000; per i concorrenti non aventi sede legale in uno dei Paesi dell'Unione europea, le dichiarazioni sostitutive sono rese mediante documentazione idonea equivalente secondo la legislazione dello Stato di appartenenza.

Tutte le dichiarazioni sostitutive rese ai sensi degli artt. 46 e 47 del d.p.r.445/2000, ivi compreso il DGUE, la domanda di partecipazione, l'offerta tecnica e l'offerta economica devono essere sottoscritte dal rappresentante legale del concorrente o suo procuratore.

La documentazione potrà essere prodotta in copia autentica o in copia conforme ai sensi, rispettivamente, degli artt. 18 e 19 del d.p.r.445/2000. Ove non diversamente specificato è ammessa la copia semplice.

In caso di concorrenti non stabiliti in Italia, la documentazione dovrà essere prodotta in modalità idonea equivalente secondo la legislazione dello Stato di appartenenza; si applicano gli articoli 83, comma 3, 86 e 90 del Codice.

Tutta la documentazione da produrre deve essere in lingua italiana o, se redatta in lingua straniera, deve essere corredata da traduzione giurata in lingua italiana. In caso di contrasto tra testo in lingua straniera e testo in lingua italiana prevarrà la versione in lingua italiana, essendo a rischio del concorrente assicurare la fedeltà della traduzione.

In caso di mancanza, incompletezza o irregolarità della traduzione dei documenti facenti parte della Documentazione Amministrativa, si applica l'art. 83, comma 9 del Codice.

Per la documentazione redatta in lingua inglese è ammessa la traduzione semplice.

È consentito presentare direttamente in lingua inglese la documentazione scientifica pubblicata in riviste ufficiali oppure a certificazioni emesse da Enti ufficiali e riconosciuti. ad es.: certificati ISO, etc.].

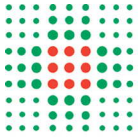
L'offerta vincolerà il concorrente ai sensi dell'art. 32, comma 4 del Codice per 180 dalla scadenza del termine indicato per la presentazione dell'offerta.

Nel caso in cui alla data di scadenza della validità delle offerte le operazioni di gara siano ancora in corso, la stazione appaltante potrà richiedere agli offerenti, ai sensi dell'art. 32, comma 4 del Codice, di confermare la validità dell'offerta sino alla data che sarà indicata e di produrre un apposito documento attestante la validità della garanzia prestata in sede di gara fino alla medesima data.

Il mancato riscontro alla richiesta della stazione appaltante sarà considerato come rinuncia del concorrente alla partecipazione alla gara.

#### **14. SOCCORSO ISTRUTTORIO**

Le carenze di qualsiasi elemento formale della domanda, e in particolare, la mancanza, l'incompletezza e ogni altra irregolarità essenziale degli elementi e del DGUE, con esclusione di



quelle afferenti all'offerta economica e all'offerta tecnica, possono essere sanate attraverso la procedura di soccorso istruttorio di cui all'art. 83, comma 9 del Codice.

L'irregolarità essenziale è sanabile laddove non si accompagni ad una carenza sostanziale del requisito alla cui dimostrazione la documentazione omessa o irregolarmente prodotta era finalizzata. La successiva correzione o integrazione documentale è ammessa laddove consenta di attestare l'esistenza di circostanze preesistenti, vale a dire requisiti previsti per la partecipazione e documenti/elementi a corredo dell'offerta. Nello specifico valgono le seguenti regole:

- il mancato possesso dei prescritti requisiti di partecipazione non è sanabile mediante soccorso istruttorio e determina l'esclusione dalla procedura di gara;
- l'omessa o incompleta nonché irregolare presentazione delle dichiarazioni sul possesso dei requisiti di partecipazione e ogni altra mancanza, incompletezza o irregolarità del DGUE e della domanda, ivi compreso il difetto di sottoscrizione, sono sanabili, ad eccezione delle false dichiarazioni;
- la mancata presentazione di elementi a corredo dell'offerta (es. garanzia provvisoria e impegno del fideiussore) ovvero di condizioni di partecipazione gara (es. mandato collettivo speciale o impegno a conferire mandato collettivo), entrambi aventi rilevanza in fase di gara, sono sanabili, solo se preesistenti e comprovabili con documenti di data certa, anteriore al termine di presentazione dell'offerta;
- la mancata presentazione di dichiarazioni e/o elementi a corredo dell'offerta, che hanno rilevanza in fase esecutiva (es. dichiarazione delle parti del servizio/fornitura ai sensi dell'art. 48, comma 4 del Codice) sono sanabili.

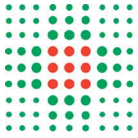
Ai fini della sanatoria la stazione appaltante assegna al concorrente un congruo termine - non superiore a dieci giorni - perché siano rese, integrate o regolarizzate le dichiarazioni necessarie, indicando il contenuto e i soggetti che le devono rendere.

Ove il concorrente produca dichiarazioni o documenti non perfettamente coerenti con la richiesta, la stazione appaltante può chiedere ulteriori precisazioni o chiarimenti, fissando un termine perentorio a pena di esclusione.

In caso di inutile decorso del termine, la stazione appaltante procede all'**esclusione** del concorrente dalla procedura.

Al di fuori delle ipotesi di cui all'articolo 83, comma 9, del Codice è facoltà della stazione appaltante invitare, se necessario, i concorrenti a fornire chiarimenti in ordine al contenuto dei certificati, documenti e dichiarazioni presentati.

**Si precisa che la richiesta alla Ditta concorrente di regolarizzazione, ai sensi del comma 9 dell'art.83 del D.lgs 50/2016, avverrà tramite il sistema.**



## 15. Contenuto della Documentazione Amministrativa

La documentazione amministrativa contiene la domanda di partecipazione e le dichiarazioni integrative, il DGUE nonché la documentazione a corredo, in relazione alle diverse forme di partecipazione.

### 15.1 Domanda di partecipazione

La domanda di partecipazione, in bollo, è redatta preferibilmente secondo il modello di cui all'Allegato 2 e contiene tutte le seguenti informazioni e dichiarazioni (assolvendo all'imposta di bollo come meglio precisato a margine del presente capoverso):

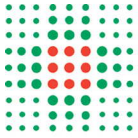
Il concorrente indica la forma singola o associata con la quale l'impresa partecipa alla gara (impresa singola, consorzio, RTI, aggregazione di imprese di rete, GEIE).

In caso di partecipazione in RTI, consorzio ordinario, aggregazione di imprese di rete, GEIE, il concorrente fornisce i dati identificativi (ragione sociale, codice fiscale, sede) e il ruolo di ciascuna impresa (mandataria/mandante; capofila/consorziata).

Nel caso di consorzio di cooperative e imprese artigiane o di consorzio stabile di cui all'art. 45, comma 2 lett. b) e c) del Codice, il consorzio indica il consorziato per il quale concorre alla gara; qualora il consorzio non indichi per quale/i consorziato/i concorre, si intende che lo stesso partecipa in nome e per conto proprio.

#### La documentazione di gara è firmata digitalmente:

- nel caso di raggruppamento temporaneo o consorzio ordinario costituiti, dalla mandataria/capofila.
- nel caso di raggruppamento temporaneo o consorzio ordinario non ancora costituiti, da tutti i soggetti che costituiranno il raggruppamento o consorzio;
- nel caso di aggregazioni di imprese aderenti al contratto di rete si fa riferimento alla disciplina prevista per i raggruppamenti temporanei di imprese, in quanto compatibile. In particolare:
  - a. **se la rete è dotata di un organo comune con potere di rappresentanza e con soggettività giuridica**, ai sensi dell'art. 3, comma 4-*quater*, del d.l. 10 febbraio 2009, n. 5, la domanda di partecipazione deve essere firmata digitalmente dal solo operatore economico che riveste la funzione di organo comune;
  - b. **se la rete è dotata di un organo comune con potere di rappresentanza ma è priva di soggettività giuridica**, ai sensi dell'art. 3, comma 4-*quater*, del d.l. 10 febbraio 2009, n. 5, la domanda di partecipazione deve essere firmata digitalmente dall'impresa che riveste le funzioni di organo comune nonché da ognuna delle imprese aderenti al contratto di rete che partecipano alla gara;
  - c. **se la rete è dotata di un organo comune privo del potere di rappresentanza o se la rete è sprovvista di organo comune, oppure se l'organo comune è privo dei requisiti di qualificazione richiesti per assumere la veste di mandataria**, la domanda di partecipazione deve essere firmata digitalmente dall'impresa aderente alla rete che riveste la qualifica di



mandataria, ovvero, in caso di partecipazione nelle forme del raggruppamento da costituirsi, da ognuna delle imprese aderenti al contratto di rete che partecipa alla gara.

Nel caso di consorzio di cooperative e imprese artigiane o di consorzio stabile di cui all'art. 45, comma 2 lett. b) e c) del Codice, **la documentazione è firmata digitalmente** dal consorzio medesimo.

#### **Il concorrente allega:**

- a) in caso di documentazione sottoscritta digitalmente dal procuratore, dovrà essere collocata a Sistema dichiarazione sostitutiva di certificazione di Procura ai sensi dell'art.46 del DPR 445/00 firmata digitalmente oppure nel solo caso in cui dalla visura camerale del concorrente risulti l'indicazione espressa dei poteri rappresentativi conferiti con la procura, la dichiarazione sostitutiva resa dal procuratore attestante la sussistenza dei poteri rappresentativi risultanti dalla visura.

**Il concorrente dovrà assolvere l'imposta di bollo sull'offerta economica** secondo quanto previsto dall'art.2, della PARTE I, dell'Allegato A - Tariffa, del DPR 26 ottobre 1972, n.642 "Disciplina dell'imposta di bollo" e dal D.L.26/04/2013, n.43, convertito con modificazioni dalla L.24/06/2013, n.71 per adeguamento dell'importo (€ 16,00), **tramite, alternativamente, le seguenti modalità:**

- Dichiarazione, firmata digitalmente dal Legale Rappresentante o da persona avente i poteri di impegnare la ditta o in possesso di Procura, di autorizzazione all'assolvimento virtuale dell'imposta di bollo ai sensi dell'art.15 del DPR 642/1972 con estremi della relativa autorizzazione,

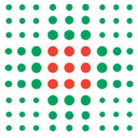
**oppure**

- Dichiarazione, firmata digitalmente dal Legale Rappresentante o da persona avente i poteri di impegnare la ditta o in possesso di Procura, di assolvimento dell'imposta di bollo mediante contrassegno con indicazione del codice numerico composto da 14 cifre e rilevabili dal "contrassegno telematico rilasciato dall'intermediario" (Risoluzione n.89/E del 06/10/2016 Agenzia dell'Entrate). L'operatore economico conserverà il contrassegno utilizzato entro il termine di decadenza triennale previsto per l'accertamento da parte dell'Amministrazione finanziaria (articolo 37 del DPR n 642 del 1972).

In caso di ditte estere:

Come da Risoluzione dell'Agenzia delle Entrate n. 332 del 07.09.2020 l'operatore economico non residente in Italia potrà assolvere l'imposta di bollo mediante bonifico bancario utilizzando il codice IBAN: IT07Y0100003245348008120501 e specificando nella causale il proprio codice fiscale (in mancanza, la denominazione) e gli estremi della procedura di gara a cui si riferisce. In questo caso presentare la dichiarazione firmata digitalmente dal Legale Rappresentante o da persona avente i poteri di impegnare la ditta o in possesso di Procura, di assolvimento dell'imposta di bollo e copia della ricevuta del bonifico.

## **15.2 Documento di gara unico europeo**



Il concorrente compila il DGUE di cui allo schema allegato al DM del Ministero delle Infrastrutture e Trasporti del 18 luglio 2016 o successive modifiche messo a disposizione sul Sistema secondo quanto di seguito indicato.

#### **Parte I\_- Informazioni sulla procedura di appalto e sull'amministrazione aggiudicatrice o ente aggiudicatore**

*[In caso di mancato ricorso al servizio DGUE in formato elettronico]* Il concorrente rende tutte le informazioni richieste relative alla procedura di appalto.

#### **Parte II - Informazioni sull'operatore economico**

Il concorrente rende tutte le informazioni richieste mediante la compilazione delle parti pertinenti.

#### **In caso di ricorso al subappalto si richiede la compilazione della sezione D**

Il concorrente, pena l'impossibilità di ricorrere al subappalto, indica l'elenco delle prestazioni che intende subappaltare con la relativa quota percentuale dell'importo complessivo del contratto (compilazione dei primi due campi).

#### **Parte III - Motivi di esclusione**

Il concorrente dichiara di non trovarsi nelle condizioni previste dal punto 6 del presente disciplinare (Sez. A-B-C-D).

Si ricorda che, fino all'aggiornamento del DGUE al decreto correttivo di cui al d.lgs. 19 aprile 2017 n. 56, e al decreto Legge n.135 del 14 dicembre 2018 convertito con modificazioni dalla L.11 febbraio 2019, n.12, ciascun soggetto che compila il DGUE allega una dichiarazione integrativa in ordine al possesso dei requisiti di cui all'art. 80, comma 5 lett. f-bis e f-ter del Codice e di cui all'art.80, comma 5 lett. c, c-bis, c-ter) del Codice - cfr. punto 15.3.1 n. 1 del presente Disciplinare.

#### **Parte IV - Criteri di selezione**

Il concorrente dichiara di possedere tutti i requisiti richiesti dai criteri di selezione barrando direttamente la sezione «**a**» ovvero compilando quanto segue:

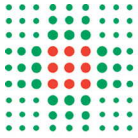
- a) la sezione A per dichiarare il possesso del requisito relativo all'idoneità professionale di cui par. 7.1 del presente disciplinare;

#### **Parte VI - Dichiarazioni finali**

Il concorrente rende tutte le informazioni richieste mediante la compilazione delle parti pertinenti.

#### **Il DGUE deve essere presentato:**

- nel caso di raggruppamenti temporanei, consorzi ordinari, GEIE, da tutti gli operatori economici che partecipano alla procedura in forma congiunta;



- nel caso di aggregazioni di imprese di rete da ognuna delle imprese retiste, se l'intera rete partecipa, ovvero dall'organo comune e dalle singole imprese retiste indicate;
- nel caso di consorzi cooperativi, di consorzi artigiani e di consorzi stabili, dal consorzio e dai consorziati per conto dei quali il consorzio concorre;

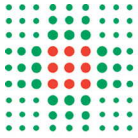
In caso di incorporazione, fusione societaria o cessione d'azienda, le dichiarazioni di cui all'art. 80, commi 1, 2 e 5, lett. l) del Codice, devono riferirsi anche ai soggetti di cui all'art. 80 comma 3 del Codice che hanno operato presso la società incorporata, fusasi o che ha ceduto l'azienda nell'anno antecedente la data di pubblicazione del bando di gara.

### **15.3 Dichiarazioni integrative e documentazione a corredo**

#### **15.3.1 Dichiarazioni integrative**

Ciascun concorrente rende, le seguenti dichiarazioni, anche ai sensi degli artt. 46 e 47 del d.p.r. 445/2000, con le quali:

1. dichiara di non incorrere nelle cause di esclusione di cui all'art. 80, comma 5 lett. f-bis) e f-ter) del Codice;
2. dichiara di non incorrere nelle cause di esclusione di cui all'art. 80, comma 5 lett. c), c-bis) e c-ter) del Codice;
3. dichiara i dati identificativi (nome, cognome, data e luogo di nascita, codice fiscale, comune di residenza etc.) dei soggetti di cui all'art. 80, comma 3 del Codice, ovvero indica la banca dati ufficiale o il pubblico registro da cui i medesimi possono essere ricavati in modo aggiornato alla data di presentazione dell'offerta;
4. dichiara remunerativa l'offerta economica presentata giacché per la sua formulazione ha preso atto e tenuto conto:
  - a) delle condizioni contrattuali e degli oneri compresi quelli eventuali relativi in materia di sicurezza, di assicurazione, di condizioni di lavoro e di previdenza e assistenza in vigore nel luogo dove devono essere svolti i servizi/fornitura;
  - b) di tutte le circostanze generali, particolari e locali, nessuna esclusa ed eccettuata che possono avere influito o influire sia sulla prestazione dei *servizi/fornitura*, sia sulla determinazione della propria offerta;
5. accetta, senza condizione o riserva alcuna, tutte le norme e disposizioni contenute nella documentazione gara;
6. accetta il Patto di Integrità di cui all'Allegato PI (approvato con delibera n.41 del 30.01.2015 dell'Azienda USL di Bologna di "Aggiornamento del piano triennale per la prevenzione della corruzione e del programma triennale della trasparenza e dell'integrità dell'Azienda USL di Bologna per il triennio 2015 - 2017 alla presente) e lo allega alla domanda di partecipazione (art.1, comma 17 della Legge 190/2012 recante "Disposizioni per la prevenzione e la repressione della corruzione e dell'illegalità nella Pubblica Amministrazione");
7. **Documento essenziale:** Dichiarazione di aver preso visione del "Codice di comportamento per il personale operante nell'Azienda USL di Bologna" di cui a Delibera del Direttore Generale



n.166 del 29.05.2018, pubblicato nella sezione amministrazione trasparente: <https://www.ausl.bologna.it/amministrazione-trasparente/disposizioni-general/atti-general/cdcc>, e si impegna, in caso di aggiudicazione, ad osservare e a far osservare ai propri dipendenti e collaboratori, per quanto applicabile, il suddetto codice, pena la risoluzione del contratto;

**Per gli operatori economici non residenti e privi di stabile organizzazione in Italia**

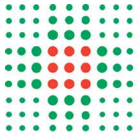
8. si impegna ad uniformarsi, in caso di aggiudicazione, alla disciplina di cui agli articoli 17, comma 2, e 53, comma 3 del d.p.r. 633/1972 e a comunicare alla stazione appaltante la nomina del proprio rappresentante fiscale, nelle forme di legge;
9. indica i seguenti dati: domicilio fiscale .....; codice fiscale .....; partita IVA .....; indica l'indirizzo PEC **oppure**, solo in caso di concorrenti aventi sede in altri Stati membri, l'indirizzo di posta elettronica ..... ai fini delle comunicazioni di cui all'art. 76, comma 5 del Codice;
10. autorizza qualora un partecipante alla gara eserciti la facoltà di "accesso agli atti", la stazione appaltante a rilasciare copia di tutta la documentazione presentata per la partecipazione alla gara **oppure** non autorizza, qualora un partecipante alla gara eserciti la facoltà di "accesso agli atti", la stazione appaltante a rilasciare copia dell'offerta tecnica e delle spiegazioni che saranno eventualmente richieste in sede di verifica delle offerte anomale, in quanto coperte da segreto tecnico/commerciale. Tale dichiarazione dovrà essere adeguatamente motivata e comprovata ai sensi dell'art. 53, comma 5, lett. a), del Codice.

La ditta concorrente, nella dichiarazione, al fine di dimostrare la sussistenza del diritto alla riservatezza delle informazioni rese in sede di presentazione dell'offerta, deve fornire un "principio di prova".

La ditta concorrente, utilizzando l'apposita sezione del modello disponibile nella documentazione di gara, è tenuta, secondo motivata e comprovata dichiarazione, anche allegando la documentazione inerente, a indicare le parti dell'offerta tecnica contenenti segreti tecnici o commerciali, procedendo nel seguente modo:

1. per quanto riguarda la documentazione tecnica presentata, occorrerà indicare tassativamente e puntualmente le parti interessate e sottratte al diritto di accesso (esempio: frasi, periodi, capoversi, paragrafi, schede, immagini, ecc.); per ognuna delle parti segnalate è necessario esplicitare la motivazione con l'individuazione della relativa tutela giuridica e commerciale (brevetto, marchio, diritto d'autore, ecc.) con i relativi riferimenti di registrazione;
2. per quanto riguarda le giustificazioni dell'offerta, ovvero le giustificazioni relative alle voci di prezzo o costi che concorrono a formare l'importo complessivo posto a base di gara nonché relative agli altri elementi di valutazione dell'offerta se presenti, in caso di offerta anormalmente bassa (art. 97 del D.Lgs 50/2016), la dichiarazione di cui sopra dovrà essere prodotta in sede di presentazione delle giustificazioni.





La ditta concorrente, già in fase di presentazione della documentazione di gara, dovrà apporre sulle parti che intende sottrarre al diritto di accesso l'indicazione di "RISERVATO", delimitandone precisamente e adeguatamente il "perimetro" di operatività.

Il Servizio Acquisti Metropolitan si riserva comunque di valutare la compatibilità dell'istanza di riservatezza con il diritto di accesso dei soggetti interessati e, in presenza di dichiarazioni che non contengano le indicazioni di cui ai precedenti punti, procederà d'ufficio a dare corso alle richieste di accesso degli operatori economici controinteressati, dando comunque comunicazione alle parti dell'avvio del procedimento.

Il S.A.M. garantirà comunque la visione e l'eventuale estrazione di copia di quella parte della documentazione richiesta dagli aventi diritto ai sensi del comma 6 dell'art. 53, comma 5, lett. a) del D. Lgs. 50/2016.

11. attesta di essere informato, ai sensi e per gli effetti dell'art.13 del Regolamento U.E.2016/679, sul trattamento dei dati personali e di essere consapevole che tali dati, anche di natura giudiziaria, sono raccolti e trattati, anche con strumenti informatici, esclusivamente nell'ambito della presente gara e per le finalità descritte al punto 26.1. del Disciplinare di gara, contenente altresì i diritti di cui agli art.15 e seguenti del regolamento sopracitato;

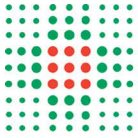
**Per gli operatori economici ammessi al concordato preventivo con continuità aziendale di cui all'art. 186 bis del R.D. 16 marzo 1942, n. 267.**

12. indica, ad integrazione di quanto indicato nella parte III, sez. C, lett. d) del DGUE, i seguenti estremi del provvedimento di ammissione al concordato e del provvedimento di autorizzazione a partecipare alle gare ..... rilasciati dal Tribunale di ..... nonché dichiara di non partecipare alla gara quale mandataria di un raggruppamento temporaneo di imprese e che le altre imprese aderenti al raggruppamento non sono assoggettate ad una procedura concorsuale ai sensi dell'art. 186 bis, comma 6 del R.D. 16 marzo 1942, n. 267.

Le suddette dichiarazioni, di cui ai punti da 1 a 12, potranno essere rese o sotto forma di allegati alla domanda di partecipazione ovvero quali sezioni interne alla domanda medesima debitamente compilate e sottoscritte dagli operatori dichiaranti nonché dal sottoscrittore della domanda di partecipazione.

### **15.3.2 Documentazione a corredo**

Il concorrente allega:



- 1) Capitolato speciale con allegato e schema di contratto sottoscritti digitalmente dal **Legale Rappresentante** della Ditta offerente o da persona avente i poteri di impegnare la Ditta o in possesso di Procura, per accettazione di tutte le norme previste.;
- 2) Clausole Vessatorie Allegato 1 al Capitolato speciale;
- 3) PASSOE di cui all'art. 2, comma 3 lett.b) della delibera ANAC n. 157/2016, relativo al concorrente; in aggiunta, nel caso in cui il concorrente ricorra all'avvalimento ai sensi dell'art. 49 del Codice, anche il PASSOE relativo all'ausiliaria; in caso di subappalto anche il PASSOE dell'impresa subappaltatrice;
- 4) Documento attestante la garanzia provvisoria con allegata dichiarazione di impegno di un fideiussore di cui all'art. 93, comma 8 del Codice;

**Per gli operatori economici che presentano la cauzione provvisoria in misura ridotta, ai sensi dell'art. 93, comma 7 del Codice**

- 5) copia conforme della certificazione di cui all'art. 93, comma 7 del Codice che giustifica la riduzione dell'importo della cauzione;
- 6) Domanda di partecipazione Allegato 2
- 7) **Assolvimento dell'imposta di bollo** dovuta sulla domanda di partecipazione;
- 8) Il Patto di Integrità firmato;
- 9) DGUE (da compilare direttamente sul portale SATER);
- 10) Descrizione dell'attività di trattamento dati;
- 11) Istruzioni trattamento dati;
- 12) Pagamento del contributo Anac;

**15.3.3 Dichiarazione e dichiarazioni ulteriori per i soggetti associati**

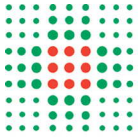
Le dichiarazioni di cui al presente paragrafo sono sottoscritte secondo le modalità di cui al punto 15.1.

**Per i raggruppamenti temporanei già costituiti**

- copia autentica del mandato collettivo irrevocabile con rappresentanza conferito alla mandataria per atto pubblico o scrittura privata autenticata.
- dichiarazione in cui si indica, ai sensi dell'art. 48, co 4 del Codice, le parti del servizio/fornitura, ovvero la percentuale in caso di servizio/forniture indivisibili, che saranno eseguite dai singoli operatori economici riuniti o consorziati.

**Per i consorzi ordinari o GEIE già costituiti**

- atto costitutivo e statuto del consorzio o GEIE, in copia autentica, con indicazione del soggetto designato quale capofila.



- dichiarazione in cui si indica, ai sensi dell'art. 48, co 4 del Codice, le parti della fornitura, ovvero la percentuale in caso di servizio/forniture indivisibili, che saranno eseguite dai singoli operatori economici consorziati.

**Per i raggruppamenti temporanei o consorzi ordinari o GEIE non ancora costituiti**

- dichiarazione attestante:
  - a. l'operatore economico al quale, in caso di aggiudicazione, sarà conferito mandato speciale con rappresentanza o funzioni di capogruppo;
  - b. l'impegno, in caso di aggiudicazione, ad uniformarsi alla disciplina vigente con riguardo ai raggruppamenti temporanei o consorzi o GEIE ai sensi dell'art. 48 comma 8 del Codice conferendo mandato collettivo speciale con rappresentanza all'impresa qualificata come mandataria che stipulerà il contratto in nome e per conto delle mandanti/consorziate;
  - c. dichiarazione in cui si indica, ai sensi dell'art. 48, co 4 del Codice, le parti del servizio/fornitura, ovvero la percentuale in caso di servizio/forniture indivisibili, che saranno eseguite dai singoli operatori economici riuniti o consorziati.

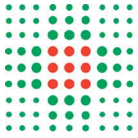
**Per le aggregazioni di imprese aderenti al contratto di rete: se la rete è dotata di un organo comune con potere di rappresentanza e soggettività giuridica**

- copia autentica o copia conforme del contratto di rete, redatto per atto pubblico o scrittura privata autenticata, ovvero per atto firmato digitalmente a norma dell'art. 25 del d.lgs. 82/2005, con indicazione dell'organo comune che agisce in rappresentanza della rete;
- dichiarazione, firmata digitalmente dal legale rappresentante dell'organo comune, che indichi per quali imprese la rete concorre;
- dichiarazione che indichi le parti del servizio o della fornitura, ovvero la percentuale in caso di servizio/forniture indivisibili, che saranno eseguite dai singoli operatori economici aggregati in rete.

**Per le aggregazioni di imprese aderenti al contratto di rete: se la rete è dotata di un organo comune con potere di rappresentanza ma è priva di soggettività giuridica**

- copia autentica del contratto di rete, redatto per atto pubblico o scrittura privata autenticata, ovvero per atto firmato digitalmente a norma dell'art. 25 del d.lgs. 82/2005, recante il mandato collettivo irrevocabile con rappresentanza conferito alla impresa mandataria; qualora il contratto di rete sia stato redatto con mera firma digitale non autenticata ai sensi dell'art. 24 del d.lgs. 82/2005, il mandato nel contratto di rete non può ritenersi sufficiente e sarà obbligatorio conferire un nuovo mandato nella forma della scrittura privata autenticata, anche ai sensi dell'art. 25 del d.lgs. 82/2005;
- dichiarazione che indichi le parti del servizio o della fornitura, ovvero la percentuale in caso di servizio/forniture indivisibili, che saranno eseguite dai singoli operatori economici aggregati in rete.

**Per le aggregazioni di imprese aderenti al contratto di rete: se la rete è dotata di un organo comune privo del potere di rappresentanza o se la rete è sprovvista di organo comune, ovvero, se l'organo comune è privo dei requisiti di qualificazione richiesti, partecipa nelle forme del RTI costituito o costituendo:**



- **in caso di RTI costituito:** copia autentica del contratto di rete, redatto per atto pubblico o scrittura privata autenticata ovvero per atto firmato digitalmente a norma dell'art. 25 del d.lgs. 82/2005 con allegato il mandato collettivo irrevocabile con rappresentanza conferito alla mandataria, recante l'indicazione del soggetto designato quale mandatario e delle parti del servizio o della fornitura, ovvero della percentuale in caso di servizio/forniture indivisibili, che saranno eseguite dai singoli operatori economici aggregati in rete; qualora il contratto di rete sia stato redatto con mera firma digitale non autenticata ai sensi dell'art. 24 del d.lgs. 82/2005, il mandato deve avere la forma dell'atto pubblico o della scrittura privata autenticata, anche ai sensi dell'art. 25 del d.lgs. 82/2005;
- **in caso di RTI costituendo:** copia autentica del contratto di rete, redatto per atto pubblico o scrittura privata autenticata, ovvero per atto firmato digitalmente a norma dell'art. 25 del d.lgs. 82/2005, con allegate le dichiarazioni, rese da ciascun concorrente aderente al contratto di rete, attestanti:
  - a. a quale concorrente, in caso di aggiudicazione, sarà conferito mandato speciale con rappresentanza o funzioni di capogruppo;
  - b. l'impegno, in caso di aggiudicazione, ad uniformarsi alla disciplina vigente in materia di raggruppamenti temporanei;
  - c. le parti del servizio o della fornitura, ovvero la percentuale in caso di servizio/forniture indivisibili, che saranno eseguite dai singoli operatori economici aggregati in rete.

Il mandato collettivo irrevocabile con rappresentanza potrà essere conferito alla mandataria con scrittura privata.

Qualora il contratto di rete sia stato redatto con mera firma digitale non autenticata ai sensi dell'art. 24 del d.lgs. 82/2005, il mandato dovrà avere la forma dell'atto pubblico o della scrittura privata autenticata, anche ai sensi dell'art. 25 del d.lgs. 82/2005.

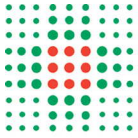
**Le dichiarazioni di cui al presente paragrafo 15.3.3 potranno essere rese o sotto forma di allegati alla domanda di partecipazione ovvero quali sezioni interne alla domanda medesima.**

## **16. CONTENUTO DELL'OFFERTA TECNICA**

**Le imprese dovranno presentare un'offerta tecnica, contenente i dati identificativi dell'Impresa/RTI/Consorzio, sottoscritta dal Legale Rappresentante e costituita a pena di esclusione dalla seguente documentazione:**

-una indicazione dettagliata dei sistemi di analisi e refertazione offerti: a tal fine le imprese dovranno compilare **l'Allegato A "Questionario"** in tutte le sue voci;

-Certificazioni, accreditamento e iscrizione nell'elenco dei laboratori autorizzati all'esecuzione dei test molecolari COVID 19, come previsto per legge: a tal fine l'impresa dovrà, oltre che rispondere alla specifica voce nel Questionario (Allegato A), presentare una **Dichiarazione** che attesti i requisiti di certificazione e accreditamento e iscrizione nell'elenco di cui sopra, come previsto da Portale SATER.



L'accertata incompletezza, insufficienza o non rispondenza dell'Offerta tecnica alle prescrizioni capitolari e, quindi, alle esigenze della Stazione Appaltante, comporterà l'esclusione dalla gara.

Si precisa che nessun elemento di costo riconducibile all'offerta economica presentata, pena l'esclusione dalla gara, dovrà essere contenuto nella suddetta documentazione amministrativa e tecnica.

Nel caso di concorrenti associati, l'offerta dovrà essere firmata digitalmente con le modalità indicate per la sottoscrizione della domanda di cui al punto 15.1.

## **17. CONTENUTO DELL'OFFERTA ECONOMICA**

La ditta dovrà compilare l'Allegato E -Schema offerta economica, così come previsto da Portale SATER.

Inoltre dovrà allegare apposita dichiarazione riguardante le giustificazioni previste dall'articolo 97 della D.Lgs 50/2016 come meglio specificato sotto.

Infatti stante l'urgenza della fornitura e per poter ridurre i tempi di conclusione della procedura di assegnazione, la Ditta partecipante dovrà allegare le giustificazioni previste dall'articolo 97 della D.Lgs 50/2016. La Stazione Appaltante procederà all'analisi delle giustificazioni della ditta aggiudicataria e della Ditta che ha presentato la seconda migliore offerta.

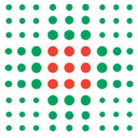
Tutta la documentazione richiesta deve essere firmata digitalmente dal legale rappresentante. Si precisa che nel caso in cui l'offerta sia collocata da un soggetto differente dal Legale Rappresentante, nel corso della collocazione dell'offerta deve essere allegata copia della procura autenticata con atto notarile e firmata digitalmente.

La Ditta è tenuta a precisare nell'offerta l'aliquota IVA a cui è assoggettato il servizio oggetto della presente procedura. Ai sensi della legge 190/2014 e dell'art.17 ter DPR 633/72 l'Azienda corrisponderà un corrispettivo equivalente all'imponibile fattura versando la quota IVA all'Erario, come sostituto d'imposta, se ed in quanto dovuta, ad eccezione dei casi di cui all'art. 17, comma 6 DPR 633/72 e successive modifiche e integrazioni.

Saranno escluse dalla gara le offerte che superano la base d'asta corrispondente ad € 34,00 per ogni tampone analizzato e refertato.

## **18. CRITERIO DI AGGIUDICAZIONE**

L'appalto è aggiudicato a lotto unico, purché completo, ai sensi dell'art. 95, comma 4 del Codice e cioè secondo il criterio del minor prezzo nell'ambito dei prodotti idonei.



## **19.SVOLGIMENTO OPERAZIONI DI GARA: SBLOCCO E VERIFICA DOCUMENTAZIONE AMMINISTRATIVA**

Come già anticipato nel punto **13 Modalità di presentazione dell'offerta e sottoscrizione dei documenti di gara**, allo scadere del termine fissato per la presentazione delle offerte, le stesse sono acquisite definitivamente dal Sistema e, oltre ad essere non più modificabili o sostituibili, sono conservate dal Sistema medesimo in modo segreto, riservato e sicuro.

In considerazione del fatto che la Piattaforma SATER garantisce la massima segretezza e riservatezza dell'offerta e dei documenti che la compongono e, altresì, la provenienza, l'identificazione e l'inalterabilità dell'offerta medesima, l'apertura delle "buste telematiche" contenenti la documentazione amministrativa, tecnica ed economica avverrà in sedute virtuali.

Pertanto, in seduta virtuale, il giorno fissato per l'apertura della documentazione caricata a sistema, il Seggio di gara, procederà alla verifica della ricezione delle offerte collocate a Sistema e allo sblocco ed esame della documentazione amministrativa.

Il Seggio di gara procederà a:

- a) verificare la conformità della documentazione amministrativa a quanto richiesto nel presente disciplinare;
- b) attivare la procedura di soccorso istruttorio di cui al precedente punto 14. Si precisa che la richiesta alla Ditta concorrente di regolarizzazione, ai sensi del comma 9 dell'art.83 del D.lgs 50/2016 avverrà tramite il sistema;
- c) redigere apposito verbale relativo alle attività svolte;
- d) proporre al RUP l'adozione del provvedimento che determina le esclusioni e le ammissioni dalla procedura di gara, provvedendo altresì agli adempimenti di cui all'art. 29, comma 1, del Codice.

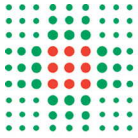
Dei risultati di tale seduta sarà data comunicazione alle ditte partecipanti tramite il portale, all'indirizzo pec indicato.

Ai sensi dell'art. 85, comma 5, primo periodo del Codice, la stazione appaltante si riserva di chiedere agli offerenti, in qualsiasi momento nel corso della procedura, di presentare tutti i documenti complementari o parte di essi, qualora questo sia necessario per assicurare il corretto svolgimento della procedura.

Tale verifica avverrà, ai sensi degli artt. 81 e 216, comma 13 del Codice, attraverso l'utilizzo del sistema AVCpass, reso disponibile dall'ANAC, con le modalità di cui alla delibera n. 157/2016.

## **20. COMMISSIONE GIUDICATRICE**

Per la Procedura in parola non è prevista una commissione giudicatrice. E' previsto un organo tecnico che valuterà le offerte tecniche dei concorrenti e la loro rispondenza ai requisiti minimi e a pena d'esclusione previsti.



## 21. APERTURA DELLE “BUSTE TELEMATICHE” B E C - VALUTAZIONE DELLE OFFERTE TECNICHE ED ECONOMICHE

Una volta effettuato il controllo della documentazione amministrativa, il seggio di gara abiliterà sul Sistema, la Commissione giudicatrice, nella persona del Presidente, per lo sblocco della documentazione tecnica.

Il giorno fissato per lo sblocco della documentazione tecnica, che sarà comunicato sul Sistema e sul profilo del committente dell'Azienda USL di Bologna, all'indirizzo [www.ausl.bologna.it](http://www.ausl.bologna.it), Sezione Bandi di gara e contratti- Procedure in corso, il Seggio di Gara, in seduta virtuale, procederà allo sblocco della documentazione tecnica. La rispondenza della documentazione tecnica a quanto previsto dai documenti di gara sarà effettuato dall'UOC di Ingegneria Clinica. Dei risultati di tale seduta sarà data comunicazione alle ditte partecipanti tramite il portale, all'indirizzo pec indicato.

Successivamente, il Seggio di gara procederà, sempre in seduta virtuale, allo sblocco della documentazione economica.

Una tabella informativa riepilogativa dei prezzi, elaborata dalla piattaforma, sarà visibile nella sezione Seduta Virtuale della Piattaforma.

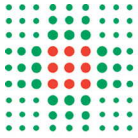
In qualsiasi fase delle operazioni di valutazione delle offerte tecniche ed economiche, il Seggio di gara, tempestivamente al RUP che procederà, sempre, ai sensi dell'art. 76, comma 5, lett. b) del Codice - i casi di **esclusione** da disporre per:

- mancata separazione dell'offerta economica dall'offerta tecnica, ovvero l'inserimento di elementi concernenti il prezzo in documenti contenuti nelle buste A e B;
- presentazione di offerte parziali, plurime, condizionate, alternative nonché irregolari, ai sensi dell'art. 59, comma 3, lett. a) del Codice, in quanto non rispettano i documenti di gara, ivi comprese le specifiche tecniche;
- presentazione di offerte inammissibili, ai sensi dell'art. 59, comma 4 lett. a) e c) del Codice, in quanto la commissione giudicatrice ha ritenuto sussistenti gli estremi per informativa alla Procura della Repubblica per reati di corruzione o fenomeni collusivi o ha verificato essere in aumento rispetto all'importo a base di gara.

## 22. VERIFICA DI ANOMALIA DELLE OFFERTE

Al ricorrere dei presupposti di cui all'art. 97, comma 3, del Codice, e in ogni altro caso in cui, in base a elementi specifici, l'offerta appaia anormalmente bassa, il RUP, avvalendosi, se ritenuto necessario, della commissione, valuta la congruità, serietà, sostenibilità e realizzabilità delle offerte che appaiono anormalmente basse.

Si procede a verificare la prima migliore offerta anormalmente bassa. Qualora tale offerta risulti anomala, si procede con le stesse modalità nei confronti delle successive offerte, fino ad individuare la migliore offerta ritenuta non anomala. È facoltà della stazione appaltante procedere contemporaneamente alla verifica di congruità di tutte le offerte anormalmente basse.



Il RUP, con il supporto della commissione, esamina in seduta riservata le spiegazioni fornite e anticipate in sede di gara dagli offerenti e, ove le ritenga non sufficienti ad escludere l'anomalia, può chiedere, anche mediante audizione orale, ulteriori chiarimenti, assegnando un termine massimo per il riscontro.

Il RUP esclude, ai sensi degli articoli 59, comma 3 lett. c) e 97, commi 5 e 6 del Codice, le offerte che, in base all'esame degli elementi forniti con le spiegazioni risultino, nel complesso, inaffidabili e procede ai sensi del seguente punto 23.

### **23. AGGIUDICAZIONE DELL'APPALTO E STIPULA DEL CONTRATTO**

Come dettagliatamente riportato in premessa e per le motivazioni ivi riportate, ai sensi dell'articolo 32 comma 8 del d.lgs. 18 aprile 2016, n. 50 del Codice, la Stazione Appaltante procederà con l'esecuzione d'urgenza della fornitura.

All'esito delle operazioni di cui sopra la commissione - o il RUP, qualora vi sia stata verifica di congruità delle offerte anomale - formulerà la proposta di aggiudicazione in favore del concorrente che ha presentato la migliore offerta, chiudendo le operazioni di gara e trasmettendo al RUP tutti gli atti e documenti della gara ai fini dei successivi adempimenti.

Qualora nessuna offerta risulti conveniente o idonea in relazione all'oggetto del contratto, la stazione appaltante si riserva la facoltà di non procedere all'aggiudicazione ai sensi dell'art. 95, comma 12 del Codice. Nessun rimborso è dovuto per la partecipazione all'appalto.

L'Azienda Appaltante si riserva il diritto di aggiudicare il servizio/la fornitura anche in presenza di una sola offerta valida.

La verifica dei requisiti generali e speciali avverrà, ai sensi dell'art. 85, comma 5 Codice, sull'offerente cui la stazione appaltante ha deciso di aggiudicare l'appalto.

Prima dell'aggiudicazione, la stazione appaltante, ai sensi dell'art. 85 comma 5 del Codice, richiede al concorrente cui ha deciso di aggiudicare l'appalto di presentare i documenti di cui all'art. 86 del Codice, ai fini della prova dell'assenza dei motivi di esclusione di cui all'art. 80 (ad eccezione, con riferimento ai subappaltatori, del comma 4) e del rispetto dei criteri di selezione di cui all'art. 83 del medesimo Codice. Tale verifica avverrà attraverso l'utilizzo del sistema AVCpass.

La stazione appaltante, previa verifica ed approvazione della proposta di aggiudicazione ai sensi degli artt. 32, comma 5 e 33, comma 1 del Codice, aggiudica l'appalto.

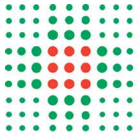
Ai sensi dell'art.76, del D.Lgs n.50/2016, nei termini e secondo le modalità dallo stesso previste, l'Azienda USL di Bologna informerà i concorrenti sull'esito della gara.

Le comunicazioni di aggiudicazione indicano la data di scadenza del termine dilatorio per la stipulazione del contratto.

Le comunicazioni di cui sopra saranno effettuate mediante il Sistema, all'indirizzo PEC dichiarato dal Fornitore in fase di registrazione.

L'aggiudicazione diventa efficace, ai sensi dell'art. 32, comma 7 del Codice, all'esito positivo della verifica del possesso dei requisiti prescritti.





In caso di esito negativo delle verifiche, la stazione appaltante procederà alla revoca dell'aggiudicazione, alla segnalazione all'ANAC nonché all'incameramento della garanzia provvisoria. La stazione appaltante aggiudicherà, quindi, al secondo graduato procedendo altresì, alle verifiche nei termini sopra indicati.

Nell'ipotesi in cui l'appalto non possa essere aggiudicato neppure a favore del concorrente collocato al secondo posto nella graduatoria, l'appalto verrà aggiudicato, nei termini sopra detti, scorrendo la graduatoria.

**La stipulazione del contratto è subordinata al positivo esito delle procedure previste dalla normativa vigente in materia di lotta alla mafia, fatto salvo quanto previsto dall'art. 88 comma 4-bis e 89 e dall'art. 92 comma 3 del d.lgs. 159/2011.**

Come da protocollo di Legalità del 19/06/2018 con la Prefettura di Bologna, in deroga alle soglie di valore previste dalla normativa vigente, quest'Azienda USL procederà a richiedere alla ditta aggiudicataria informazione antimafia ex artt.84 e 91 D.lgs 159/2011, tramite Banca Dati Nazionale Antimafia (B.D.N.A.), per tutti gli importi di aggiudicazione superiori a 50.000,00 euro.

Ai sensi dell'art. 93, commi 6 e 9 del Codice, la garanzia provvisoria verrà svincolata, all'aggiudicatario, automaticamente al momento della stipula del contratto; agli altri concorrenti, verrà svincolata tempestivamente e comunque entro trenta giorni dalla comunicazione dell'avvenuta aggiudicazione.

Trascorsi i termini previsti dall'art. 92, commi 2 e 3 d.lgs. 159/2011 dalla consultazione della Banca dati, la stazione appaltante procede alla stipula del contratto anche in assenza dell'informativa antimafia, salvo il successivo recesso dal contratto laddove siano successivamente accertati elementi relativi a tentativi di infiltrazione mafiosa di cui all'art. 92, comma 4 del d.lgs. 159/2011.

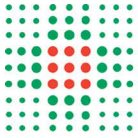
Come da protocollo di Legalità del 19/06/2018 con la Prefettura di Bologna:

- la sottoscrizione del contratto ovvero le concessioni o le autorizzazioni effettuate prima dell'acquisizione delle informazioni di cui al D.lgs 159/2011, anche al di fuori delle soglie di valore ivi previste, sono corrisposte sotto condizione risolutiva e questa Azienda USL procederà alla revoca della concessione e allo scioglimento del contratto qualora dovessero intervenire informazioni interdittive.

Il contratto, ai sensi dell'art. 32, comma 9 del Codice, non potrà essere stipulato prima di 35 giorni dall'invio dell'ultima delle comunicazioni del provvedimento di aggiudicazione.

La stipula avrà luogo entro 60 giorni dall'intervenuta efficacia dell'aggiudicazione ai sensi dell'art. 32, comma 8 del Codice, salvo il differimento espressamente concordato con l'aggiudicatario.

All'atto della stipulazione del contratto, l'aggiudicatario deve presentare la garanzia definitiva da calcolare sull'importo contrattuale, secondo le misure e le modalità previste dall'art. 103 del Codice.



Il contratto sarà stipulato in modalità elettronica.

La ditta sarà tenuta ad assolvere l'imposta di bollo, secondo quanto previsto dal DPR 26 ottobre 1972, n.642 e dal D.L.26/04/2013, n.43, convertito con modificazioni dalla L.24/06/2013, n.71. Indicazioni per l'assolvimento dell'imposta di bollo saranno fornite con l'invio del contratto.

Il contratto è soggetto agli obblighi in tema di tracciabilità dei flussi finanziari di cui alla l. 13 agosto 2010, n. 136. Ai sensi dell'art.3, della Legge 136 del 13/08/2010, il mancato utilizzo del bonifico bancario o postale ovvero degli altri strumenti idonei a consentire la piena tracciabilità delle operazioni costituisce causa di risoluzione del contratto.

Nei casi di cui all'art. 110 comma 1 del Codice la stazione appaltante interpella progressivamente i soggetti che hanno partecipato alla procedura di gara, risultanti dalla relativa graduatoria, al fine di stipulare un nuovo contratto per l'affidamento dell'esecuzione o del completamento del servizio/fornitura.

**Le spese relative alla pubblicazione** del bando e dell'avviso sui risultati della procedura di affidamento, ai sensi dell'art. 216, comma 11 del Codice e del d.m. 2 dicembre 2016 (GU 25.1.2017 n. 20), sono a carico dell'aggiudicatario e dovranno essere rimborsate alla stazione appaltante entro il termine di sessanta giorni dall'aggiudicazione. In caso di suddivisione dell'appalto in lotti, le spese relative alla pubblicazione saranno suddivise tra gli aggiudicatari dei lotti in proporzione al relativo valore.

L'importo presunto delle spese di pubblicazione è pari a € 5.373,04 La stazione appaltante comunicherà all'aggiudicatario l'importo effettivo delle suddette spese, nonché le relative modalità di pagamento.

**Sono a carico dell'aggiudicatario** anche tutte le spese contrattuali, gli oneri fiscali quali imposte e tasse - ivi comprese quelle di registro ove dovute - relative alla stipulazione del contratto.

Ai sensi dell'art. 105, comma 2, del Codice l'affidatario comunica, per ogni sub-contratto che non costituisce subappalto, l'importo e l'oggetto del medesimo, nonché il nome del sub-contraente, prima dell'inizio della prestazione.

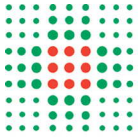
L'affidatario deposita, prima o contestualmente alla sottoscrizione del contratto di appalto, i contratti continuativi di cooperazione, servizio e/o fornitura di cui all'art. 105, comma 3, lett. c bis) del Codice.

## **24. CLAUSOLA SOCIALE E ALTRE CONDIZIONI PARTICOLARI DI ESECUZIONE**

Per la presenta procedura non sono previste clausole sociali.

## **25 DEFINIZIONE DELLE CONTROVERSIE**

Per le controversie derivanti dal contratto è competente il Foro di Bologna rimanendo espressamente esclusa la compromissione in arbitri.



## 26 TRATTAMENTO DEI DATI PERSONALI

### 26.1 Informativa

Ai sensi dell'art.13 del Regolamento UE/2016/679 (GDPR) si informa che il trattamento dei dati personali conferiti nell'ambito della procedura di acquisizione di beni o servizi, o comunque raccolti dall'Azienda USL di Bologna a tale scopo, è finalizzato unicamente all'espletamento della predetta procedura, nonché delle attività ad essa correlate e conseguenti.

L'Azienda, per le finalità sopra descritte, raccoglie e tratta: Dati personali di cui all'art. 4 paragrafo 1, Categorie particolari di dati personali di cui all'art.9 paragrafo 1 e Dati giudiziari, di cui all'art. 10 del Regolamento UE, relativi a condanne penali o a reati, il cui trattamento è effettuato esclusivamente per valutare il possesso dei requisiti e delle qualità previsti dalla vigente normativa per permettere la partecipazione alla procedura di gara e l'eventuale aggiudicazione.

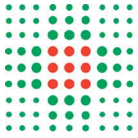
In relazione alle descritte finalità, il trattamento dei dati personali avviene mediante strumenti manuali, informatici e telematici, con logiche strettamente correlate alle finalità predette e, comunque, in modo da garantire la sicurezza e la riservatezza dei dati stessi. I dati potranno essere trattati anche in base ai criteri qualitativi, quantitativi e temporali di volta in volta individuati.

Il conferimento dei dati richiesti dall'Azienda è necessario, in base alla normativa in materia di appalti e contrattualistica pubblica, per valutare il possesso dei requisiti e delle qualità richiesti per la partecipazione alla procedura nel cui ambito i dati stessi sono acquisiti; pertanto, la loro mancata indicazione può precludere l'effettuazione della relativa istruttoria.

I dati conferiti sono trattati dagli operatori dell'Azienda individuati quali Incaricati del trattamento, a cui sono impartite idonee istruzioni in ordine a misure, accorgimenti, modus operandi, tutti volti alla concreta tutela dei dati personali.

I dati raccolti potranno altresì essere conosciuti da:

- Soggetti esterni, i cui nominativi sono a disposizione degli interessati, facenti parte della Commissione;
  
- Soggetti terzi fornitori di servizi per l'Azienda, o comunque ad essa legati da rapporto contrattuale, unicamente per le finalità sopra descritte, previa designazione in qualità di Responsabili del trattamento e comunque garantendo il medesimo livello di protezione;
  
- Altre Amministrazioni pubbliche, cui i dati potranno essere comunicati per adempimenti legali e procedimentali;
  
- Altri concorrenti che facciano richiesta di accesso ai documenti di gara, secondo le modalità e nei limiti di quanto previsto dalla vigente normativa in materia di appalti;
  
- Legali incaricati per la tutela dell'Azienda in sede giudiziaria.



I dati relativi al concorrente aggiudicatario della gara ed il prezzo di aggiudicazione dell'appalto saranno pubblicati, come da normativa sugli appalti, sul profilo del committente dell'Azienda USL di Bologna [www.ausl.bologna.it](http://www.ausl.bologna.it) - bandi di gara e contratti -.

I dati personali non saranno trasferiti al di fuori dell'Unione Europea.

I dati verranno conservati per un arco di tempo non superiore a quello necessario al raggiungimento delle finalità per i quali essi sono trattati.

Il periodo di conservazione dei dati, ad esclusione di quelli soggetti a conservazione illimitata ai sensi di legge, è di norma 10 anni dalla conclusione dell'esecuzione del contratto comunque per un arco di tempo non superiore a quello necessario all'adempimento degli obblighi normativi.

A tal fine, anche mediante controlli periodici, verrà verificata costantemente la stretta pertinenza, non eccedenza e indispensabilità dei dati rispetto al perseguimento delle finalità sopra descritte. I dati che, anche a seguito delle verifiche, risultano eccedenti o non pertinenti o non indispensabili non saranno utilizzati, salvo che per l'eventuale conservazione, a norma di legge, dell'atto o del documento che li contiene.

In qualunque momento l'interessato può esercitare i diritti previsti dagli artt 15 e seguenti del Regolamento UE/2016/679. In particolare, l'interessato ha il diritto di ottenere la conferma dell'esistenza o meno dei propri dati e di conoscerne il contenuto, l'origine e le finalità del trattamento, di verificarne l'esattezza o chiederne l'integrazione o l'aggiornamento, oppure la rettifica, i destinatari cui i dati saranno comunicati, il periodo di conservazione degli stessi; ha altresì il diritto di chiedere la cancellazione o la limitazione al trattamento, la trasformazione in forma anonima o il blocco dei dati trattati in violazione di legge, nonché di opporsi in ogni caso, per motivi legittimi, al loro trattamento ovvero revocare il trattamento. La relativa richiesta va rivolta all'Azienda USL di Bologna - Via Castiglione 29 - 40124 Bologna.

L'interessato ha altresì il diritto di proporre reclamo all'autorità Garante per la protezione dei Dati personali ([www.garanteprivacy.it](http://www.garanteprivacy.it)).

Titolare del trattamento dei dati personali di cui alla presente informativa è l'Azienda USL di Bologna, con sede in Bologna, Via Castiglione 29, CAP 40124.

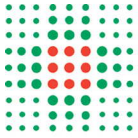
Il Referente privacy della procedura di gara è la Dott.ssa Rosanna Campa, Direttore del Servizio Acquisti Metropolitano.

Il Responsabile della protezione dei dati è la Dott.ssa Federica Banorri ([dpo@ausl.bologna.it](mailto:dpo@ausl.bologna.it)) - tel. 0516584896.

## **26.2 Responsabile del trattamento dei dati personali ai sensi del Regolamento U.E. 679/2016**

In esecuzione del presente contratto, codesta ditta effettua trattamento di dati personali di titolarità dell'Azienda.

In virtù di tale trattamento, le Parti si impegnano a formalizzare l'atto di nomina a Responsabile del trattamento al fine di disciplinare oneri e responsabilità in aderenza al Regolamento (UE) del



Parlamento e del Consiglio europeo n. 2016/679 (di seguito, anche "GDPR") e da ogni altra normativa applicabile.

Il Fornitore ha l'obbligo di mantenere riservati i dati e le informazioni, ivi comprese quelle che transitano per le apparecchiature di elaborazione dati, di cui venga in possesso e comunque a conoscenza, anche tramite l'esecuzione del contratto, di non divulgarli in alcun modo e in qualsiasi forma, di non farne oggetto di utilizzazione a qualsiasi titolo per scopi diversi da quelli strettamente necessari all'esecuzione del Contratto e di non farne oggetto di comunicazione o trasmissione senza l'espressa autorizzazione dell'Azienda. L'obbligo di cui sopra sussiste, altresì, relativamente a tutto il materiale originario o predisposto in esecuzione del Contratto. Tali obblighi non concernono i dati che siano o divengano di pubblico dominio.

Il Fornitore è responsabile per l'esatta osservanza da parte dei propri dipendenti, consulenti e collaboratori, nonché di subappaltatori e dei dipendenti, consulenti e collaboratori di questi ultimi, degli obblighi di segretezza di cui sopra e risponde nei confronti dell'Azienda Appaltante per eventuali violazioni dell'obbligo di riservatezza commesse dai suddetti soggetti.

In caso di inosservanza degli obblighi descritti l'Azienda Appaltante ha la facoltà di dichiarare risolto di diritto il Contratto, fermo restando che il Fornitore sarà tenuto a risarcire tutti i danni che ne dovessero derivare.

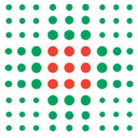
Il Fornitore può utilizzare servizi di cloud pubblici ove memorizzare i dati e le informazioni trattate nell'espletamento dell'incarico affidato, solo previa autorizzazione dell'Azienda Appaltante.

Sarà possibile ogni operazione di auditing da parte dell'Azienda attinente le procedure adottate dal Contraente in materia di riservatezza e degli altri obblighi assunti dal presente contratto.

Il Fornitore non potrà conservare copia di dati e programmi dell'Azienda Appaltante, né alcuna documentazione inerente ad essi dopo la scadenza del Contratto e dovrà, su richiesta, ritrasmetterli alle Aziende.

Il Fornitore s'impegna, altresì, a rispettare quanto previsto dal regolamento UE 2016/679 e dal D.lgs n.51/2018. Il fornitore, in relazione a quanto oggetto di prestazione e alle informazioni e documenti dei quali sia venuto in possesso, a qualsiasi titolo, nell'esecuzione delle prestazioni oggetto del presente appalto, si impegna, fatto salvo in ogni caso il diritto al risarcimento dei danni subiti dall'interessato, ad attuare nell'ambito della propria struttura e di quella degli eventuali collaboratori, sotto la propria responsabilità, ai sensi del regolamento UE 2016/679, tutte quelle misure e norme di sicurezza e di controllo atte ad evitare il rischio di alterazione, distruzione o perdita, anche parziale, nonché d'accesso non autorizzato, o di trattamento non consentito, o non conforme alle finalità del presente contratto.

Con la stipula del contratto di appalto, la ditta, ai sensi dell'art. 28 del regolamento, è nominata Responsabile del trattamento dei dati, per gli adempimenti previsti nel contratto di appalto e nei limiti e per la durata dello stesso. La nomina di Responsabile è valida per tutta la durata del contratto d'appalto e si considererà revocata a completamento dell'incarico.



Con riferimento all'attività di trattamento dei dati personali cui concorre la Ditta, la stessa assicura massima cooperazione e assistenza al fine di consentire la redazione da parte del Titolare della eventuale DPIA e, in ogni caso, garantisce l'applicazione delle azioni di mitigazione previste nella DPIA o comunque ritenute idonee dall'Azienda.

La Ditta dovrà garantire all'Azienda, tenuto conto dello stato della tecnica, dei costi, della natura, dell'ambito e della finalità del relativo trattamento, l'adozione, sia nella fase iniziale di determinazione dei mezzi di trattamento, che durante il trattamento stesso, di ogni misura tecnica ed organizzativa che riterrà opportuna per garantire ed attuare i principi previsti in materia di protezione dati e a tutelare i diritti degli interessati.

In linea con i principi di privacy by default, dovranno essere trattati, per impostazione predefinita, esclusivamente quei dati personali necessari per ogni specifica finalità del trattamento, e che in particolare non siano accessibili dati personali ad un numero indefinito di soggetti senza l'intervento di una persona fisica.

La Ditta assicura, altresì, la tenuta di apposito registro dei trattamenti che, su richiesta, viene messo a disposizione dell'Azienda e/o dell'Autorità di controllo.

Le Parti riconoscono e convengono che il rispetto delle istruzioni di cui all'atto di nomina, nonché alle prescrizioni della normativa applicabile, non producono l'insorgere di un diritto in capo al Responsabile del trattamento al rimborso delle eventuali spese che lo stesso potrebbe dover sostenere per conformarsi.

## **27 DISPOSIZIONI FINALI**

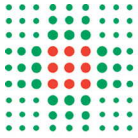
In caso di modificazione dell'assetto societario o gestionale dell'impresa la ditta aggiudicataria nel termine di trenta giorni dall'intervenuta modificazione, dovrà trasmettere all'Ufficio Territoriale del Governo di Bologna, copia degli atti dai quali risulta l'intervenuta modificazione relativamente ai soggetti destinatari di verifiche antimafia (art. 86 D.lgs 6/9/11 n.159).

La Ditta aggiudicataria è tenuta a inoltrare tale comunicazione anche all'Azienda USL di Bologna.

La Ditta aggiudicataria è tenuta a iscriversi, qualora non lo avesse già fatto, al portale Net4market - Albo fornitori.it al link [www.ausl.bologna.it](http://www.ausl.bologna.it) utilizzato dall'Azienda USL di Bologna ai fini degli adempimenti previsti dalla legge sull'anticorruzione (L.190/2012) e nel processo di rilevazione del monitoraggio dei contratti stipulati.

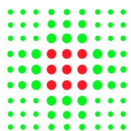
Se i contratti stipulati, prevedono una parte manutentiva affidata a una ditta di cui si avvale l'aggiudicataria, anche la Ditta che svolge la manutenzione dovrà iscriversi all'anagrafe fornitori di cui al precedente capoverso.

S'informa, inoltre, che gli atti amministrativi sono resi pubblici, per opportuna conoscenza, dalla data di pubblicazione all'Albo Informatico consultabile sul sito istituzionale dell'Azienda USL di Bologna.



Distinti saluti.

IL DIRETTORE DEL  
SERVIZIO ACQUISTI METROPOLITANO  
(Dott.ssa Rosanna Campa)



**SERVIZIO SANITARIO REGIONALE**  
**EMILIA-ROMAGNA**  
Azienda Unità Sanitaria Locale di Bologna

**Istituto delle Scienze Neurologiche**  
Istituto di Ricovero e Cura a Carattere Scientifico

**Dipartimento Amministrativo**

Servizio Acquisti Metropolitan  
Settore Servizi Appaltati e Prodotti Economici

**Il direttore**

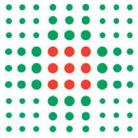
**CAPITOLATO SPECIALE**

**GARA EUROPEA A PROCEDURA APERTA ACCELERATA FINALIZZATA ALLA  
STIPULA DI UN ACCORDO QUADRO CON UN OPERATORE ECONOMICO PER IL  
SERVIZIO DI ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DEL  
RNA - RT-PCR COVID 19**

**Servizio Acquisti Metropolitan**  
Via Gramsci, 12 - 40121 Bologna  
Tel. +39.051.6079638...fax +39.051.6079989  
Servizio.acquisti@ausl.bologna.it

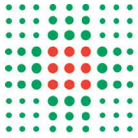
**Azienda USL di Bologna**  
Sede Legale: Via Castiglione, 29 - 40124 Bologna  
Tel. +39.051.6225111 fax +39.051.6584923  
Codice fiscale e Partita Iva 02406911202





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## **Sezione I – Parte normativa**

### **Premessa**

L'obiettivo della presente Accordo Quadro è strettamente correlato alla gestione dell'emergenza sanitaria da Covid-19 e rivolto alla ricerca di un Laboratorio che si affianchi, in caso di bisogno, alle Strutture dell'Azienda USL (di seguito Stazione Appaltante) all'analisi e refertazione dei tamponi.

In quanto Accordo Quadro, la Stazione Appaltante ricorre al servizio di analisi dei tamponi in caso di necessità, secondo le modalità organizzative di cui al successivo articolo 5.

L'Accordo Quadro verrà stipulato con l'Operatore Economico che ha fissato il prezzo più basso. Tuttavia, qualora l'aggravamento della situazione di emergenza sanitaria lo richiedesse, la Stazione Appaltante si riserva la facoltà di affidare all'Operatore Economico che ha presentato la seconda migliore offerta, parte del servizio di analisi dei tamponi e più precisamente l'importo o quota parte dell'importo identificato dalla Stazione Appaltante nel quadro economico come 106. Comma 1 lett.a). pari a € 2.000.000,00. Il costo riconosciuto dalla Stazione Appaltante sarà quello offerto dall'Operatore Sanitario in sede di gara.

Pertanto con l'accettazione della documentazione di gara, ed in particolare del presente Capitolato Speciale, l'Operatore Economico si impegna, nel caso risultasse secondo classificato, ad effettuare il servizio di analisi di lettura dei tamponi per conto della Stazione Appaltante.

Le modalità di attivazione sono descritte nel successivo articolo 5.

Pertanto, la presente procedura di gara riveste carattere d'urgenza e, ai sensi dell'articolo 60 comma 3 del d.lgs. 18 aprile 2016, n. 50 – Codice dei contratti pubblici (in seguito: Codice), viene espletata con procedura accelerata.

**Per le stesse motivazioni alla base del ricorso della procedura accelerata, ai sensi dell'articolo 32 comma 8 Codice la Stazione Appaltante procederà con l'esecuzione d'urgenza del servizio.**

### **1) Oggetto del Servizio**

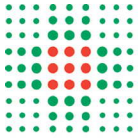
Il presente capitolato speciale disciplina il servizio di lettura e refertazione dei tamponi per la rilevazione del RNA - RT-PCR COVID 19 per le esigenze della Stazione Appaltante.

### **2) Durata dell'Accordo Quadro**

L'Accordo Quadro avrà durata di 6 mesi, eventualmente rinnovabili di ulteriori 6 mesi (anche singolarmente considerati), previo interpello della Ditta Aggiudicataria.

### **3) Norme e Direttive di riferimento**

Vedasi allegato A- punto 1



#### **4) Interfacciamento con il Sistema Informativo di Laboratorio (LIS)**

La ditta aggiudicataria dovrà attivare l'interfacciamento con il sistema Informativo di Laboratorio (LIS) della Stazione Appaltante.

A tal proposito si allegano i seguenti documenti

Allegato B- InterfacciamentoLabEsterni\_1,

Allegato C- nl-hl7-ip-hl725msg e

Allegato D- nl-hl7:

Trattandosi di un contratto dove è prevista l'esecuzione d'urgenza, la ditta aggiudicataria dovrà attivare l'interfacciamento entro 5 giorni dalla data di comunicazione di aggiudicazione.

#### **5) Modalità di espletamento del Servizio**

La ditta ha l'obbligo della refertazione entro le **24 ore solari** dall'orario di consegna per i tamponi conferiti dal lunedì al venerdì, ed entro le **48 ore solari** per quelli conferiti il sabato. In caso di ritardo si applicano le penali indicate nel successivo articolo 13

La fornitura delle provette e del trasporto sarà a carico della Stazione Appaltante.

Pertanto, essendo a cura e spese della Stazione Appaltante il trasporto dei tamponi, la sede del Laboratorio non può superare la distanza di 200 km da Bologna, pena l'esclusione dalla gara.

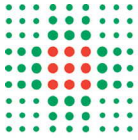
Il Laboratorio deve, pena l'esclusione dalla gara, garantire l'accettazione dei tamponi dal lunedì al sabato.

La consegna dei tamponi presso la sede del Laboratorio avverrà entro le ore 20.00 dal lunedì al venerdì, mentre il sabato entro le ore 18.00.

La Stazione Appaltante comunicherà via mail al referente del servizio, entro la giornata del venerdì il numero dei tamponi giornalieri che saranno inviati nella settimana successiva.

Il numero giornaliero dei tamponi da inviare, al momento attuale, non è quantificabile con esattezza in quanto è subordinato all'andamento dell'epidemia. Tuttavia si precisa che il numero dei tamponi giornalieri non sarà superiore ai 1500. Qualora si rendesse necessario superare tale limite giornaliero, la Stazione Appaltante lo comunicherà con un preavviso di 3 giorni.

Il referto deve contenere il nome del responsabile del laboratorio esterno



Qualora la situazione relativa all'emergenza sanitaria lo rendesse necessario, come indicato in premessa, la Stazione Appaltante può ricorrere all'Operatore Economico che ha presentato la seconda migliore offerta. In tal caso la Stazione Appaltante, con un preavviso di 5 giorni, concorda il numero dei tamponi giornalieri da analizzare: Restano invariate sia le tempistiche di refertazione sia le modalità e tempistiche di accettazione dei campioni.

L'Operatore Economico aggiudicatario dovrà inviare all' Ingegneria Clinica della Stazione Appaltante con cadenza settimanale un report di attività riferite alla settimana precedente contenente ID paziente - data e ora accettazione campione - data e ora invio referto test; pertanto nel report non devono essere indicati né dati personali né esito test. Sulla base dei dati inviati e verificati con l'ausilio del DSP verrà emesso un ordine alle tariffe da offerta aggiudicataria o scontate qualora si siano verificati ritardi di refertazione.

### **6) Modifiche del contratto**

La stazione appaltante si riserva la facoltà di rinnovare il servizio, alle medesime condizioni e di mese in mese, per ulteriori 6 mesi.

La durata del contratto in corso di esecuzione potrà essere modificata per il tempo strettamente necessario alla conclusione delle procedure necessarie per l'individuazione del nuovo contraente ai sensi dell'art. 106, comma 11 del Codice. In tal caso il contraente è tenuto all'esecuzione delle prestazioni oggetto del contratto agli stessi - o più favorevoli - prezzi, patti e condizioni.

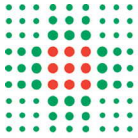
Infine, Il contratto di appalto potrà essere modificato, senza una nuova procedura di affidamento, ai sensi dell'art. 106, comma 1, lett. a) del Codice, nei seguenti casi:

- adesione da parte di un'altra Azienda Sanitaria di AVEC;
- necessità di aumentare il numero dei tamponi da refertare;
- qualora l'aggravamento della situazione di emergenza sanitaria lo richiedesse, la Stazione Appaltante si riserva la facoltà di affidare all'Operatore Economico che ha presentato la seconda migliore offerta, parte del servizio di analisi dei tamponi

In tal caso l'importo della modifica non potrà essere superiore a € 2.000.000,00 oneri fiscali esclusi;

Durante tali periodi, la ditta aggiudicataria è impegnata ad eseguire il servizio alle stesse condizioni e modalità previste dal presente capitolato speciale

Qualora in corso di esecuzione del contratto si rendesse necessario un aumento o una diminuzione delle prestazioni, la stazione appaltante potrà imporre, ai sensi del comma 12, art. 106, D.lgs 50/2016, l'esecuzione delle stesse fino a concorrenza del quinto dell'importo del contratto, alle stesse condizioni previste nel contratto originario.



## 7) Periodo di prova

L'impresa aggiudicataria è soggetta ad un periodo di prova di **due mesi** a far data dall'inizio effettivo del servizio. Qualora, durante tale periodo, l'esecuzione della prestazione non risponda alle norme previste dal presente Capitolato e/o all'offerta tecnica proposta dall'impresa in fase di gara, la Stazione appaltante comunicherà alla Ditta le motivazioni che ostano al superamento del periodo di prova, con diffida ad adempiere.

Persistendo i motivi che ostano al superamento positivo del periodo di prova, la Stazione Appaltante ha la facoltà di risolvere il contratto, con lettera raccomandata A/R, e di aggiudicare il servizio all'impresa che segue in classifica, senza che l'Impresa precedentemente aggiudicataria possa richiedere danni (**Art. 1456** Clausola risolutiva espressa).

In tal caso la ditta aggiudicataria:

- dovrà proseguire nel servizio fino alla data comunicata dall'Azienda interessata;
- avrà diritto esclusivamente al pagamento delle prestazioni eseguite;

## 8) Obblighi della ditta aggiudicataria

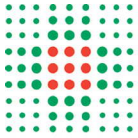
La Ditta aggiudicataria si obbliga:

- a predisporre i mezzi, gli strumenti, gli impianti, le attrezzature e le risorse necessari per far sì che il servizio affidato sia eseguito in conformità a quanto definito:
  - a) siano applicati gli standard di qualità in uso nel settore;
  - b) a prestare la migliore diligenza nel rispettare o nel far rispettare le regolamentazioni inerenti allo svolgimento dei servizi oggetto del contratto, anche tutte le istruzioni di volta in volta impartite dal Committente in ordine allo svolgimento dell'incarico;
  - c) ad ottemperare a tutti gli obblighi verso i propri dipendenti derivanti da disposizioni legislative e regolamentari vigenti in materia di lavoro, ivi compresi quelli in tema di igiene e sicurezza, nonché la disciplina previdenziale e infortunistica, assumendo a proprio carico tutti i relativi oneri;
  - d) ad applicare, nei confronti dei propri dipendenti occupati nelle attività contrattuali, le condizioni normative e retributive non inferiori a quelle risultanti dai Contratti Collettivi ed Integrativi di Lavoro applicabili alla data di stipula della presente Convenzione alla categoria e nelle località di svolgimento delle attività, nonché le condizioni risultanti da successive modifiche ed integrazioni.

In qualità di custode il Fornitore si assume tutte le responsabilità previste dagli Articoli 1766 e ss. del Codice Civile.

## 9) Obblighi di riservatezza dei dati

Il Fornitore ha l'obbligo di mantenere riservati i dati e le informazioni, ivi comprese quelle che transitano per le apparecchiature di elaborazione dati, di cui venga in possesso e comunque a conoscenza, anche tramite l'esecuzione del contratto, di non divulgarli in alcun modo e in qualsiasi forma, di non farne oggetto di utilizzazione a qualsiasi titolo per scopi diversi da quelli strettamente necessari all'esecuzione del Contratto e di non farne oggetto di comunicazione o trasmissione senza l'espressa autorizzazione dell'Azienda. L'obbligo di cui sopra sussiste, altresì, relativamente a tutto il materiale originario o



predisposto in esecuzione del Contratto. Tali obblighi non concernono i dati che siano o divengano di pubblico dominio.

Il Fornitore è responsabile per l'esatta osservanza da parte dei propri dipendenti, consulenti e collaboratori, nonché di subappaltatori e dei dipendenti, consulenti e collaboratori di questi ultimi, degli obblighi di segretezza di cui sopra e risponde nei confronti dell'Azienda Appaltante per eventuali violazioni dell'obbligo di riservatezza commesse dai suddetti soggetti.

In caso di inosservanza degli obblighi descritti l'Azienda Appaltante ha la facoltà di dichiarare risolto di diritto il Contratto, fermo restando che il Fornitore sarà tenuto a risarcire tutti i danni che ne dovessero derivare.

Il Fornitore può utilizzare servizi di cloud pubblici ove memorizzare i dati e le informazioni trattate nell'espletamento dell'incarico affidato, solo previa autorizzazione dell'Azienda Appaltante.

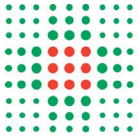
Sarà possibile ogni operazione di auditing da parte dell'Azienda attinente le procedure adottate dal Contraente in materia di riservatezza e degli altri obblighi assunti dal presente contratto.

Il Fornitore non potrà conservare copia di dati e programmi dell'Azienda Appaltante, né alcuna documentazione inerente ad essi dopo la scadenza del Contratto e dovrà, su richiesta, ritrasmetterli alle Aziende.

Il Fornitore s'impegna, altresì, a rispettare quanto previsto dal regolamento UE 2016/679 e dal D.lgs n.51/2018. Il fornitore, in relazione a quanto oggetto di prestazione e alle informazioni e documenti dei quali sia venuto in possesso, a qualsiasi titolo, nell'esecuzione delle prestazioni oggetto del presente appalto, si impegna, fatto salvo in ogni caso il diritto al risarcimento dei danni subiti dall'interessato, ad attuare nell'ambito della propria struttura e di quella degli eventuali collaboratori, sotto la propria responsabilità, ai sensi del regolamento UE 2016/679, tutte quelle misure e norme di sicurezza e di controllo atte ad evitare il rischio di alterazione, distruzione o perdita, anche parziale, nonché d'accesso non autorizzato, o di trattamento non consentito, o non conforme alle finalità del presente contratto.

Con la stipula del contratto di appalto, la ditta, ai sensi dell'art. 28 del regolamento, è nominata Responsabile del trattamento dei dati, per gli adempimenti previsti nel contratto di appalto e nei limiti e per la durata dello stesso. La nomina di Responsabile è valida per tutta la durata del contratto d'appalto e si considererà revocata a completamento dell'incarico.

Con riferimento all'attività di trattamento dei dati personali cui concorre la Ditta, la stessa assicura massima cooperazione e assistenza al fine di consentire la redazione da parte del Titolare della eventuale DPIA e, in ogni caso, garantisce l'applicazione delle azioni di mitigazione previste nella DPIA o comunque ritenute idonee dall'Azienda



La Ditta dovrà garantire all'Azienda, tenuto conto dello stato della tecnica, dei costi, della natura, dell'ambito e della finalità del relativo trattamento, l'adozione, sia nella fase iniziale di determinazione dei mezzi di trattamento, che durante il trattamento stesso, di ogni misura tecnica ed organizzativa che riterrà opportuna per garantire ed attuare i principi previsti in materia di protezione dati e a tutelare i diritti degli interessati.

In linea con i principi di privacy by default, dovranno essere trattati, per impostazione predefinita, esclusivamente quei dati personali necessari per ogni specifica finalità del trattamento, e che in particolare non siano accessibili dati personali ad un numero indefinito di soggetti senza l'intervento di una persona fisica.

La Ditta assicura, altresì, la tenuta di apposito registro dei trattamenti che, su richiesta, viene messo a disposizione dell'Azienda e/o dell'Autorità di controllo.

Le Parti riconoscono e convengono che il rispetto delle istruzioni di cui all'atto di nomina, nonché alle prescrizioni della normativa applicabile, non producono l'insorgere di un diritto in capo al Responsabile del trattamento al rimborso delle eventuali spese che lo stesso potrebbe dover sostenere per conformarsi.

#### **10) Referente della ditta**

La ditta aggiudicataria dovrà comunicare il nominativo di un Referente del servizio cui fare costante riferimento per tutte le problematiche che dovessero insorgere. Di tale Referente la Ditta dovrà fornire il recapito telefonico (cellulare) per immediata disponibilità dell'incaricato, per ogni comunicazione urgente che dovesse rendersi necessaria anche al di fuori delle ore di servizio.

Tutte le comunicazioni e le eventuali contestazioni sul servizio svolto circa inadempienze e/o altro, saranno eseguite in contraddittorio con il Referente de quo e andranno regolarmente documentate.

In caso di assenza o impedimento del Referente, la ditta dovrà comunicare tempestivamente il nominativo di un sostituto.

#### **11) Scioperi e cause di forza maggiore**

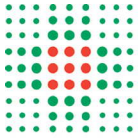
In caso di conflitto sindacale tra la ditta aggiudicataria e il proprio personale, la ditta è obbligata a garantire tutte le prestazioni essenziali se e in quanto previste.

I servizi non effettuati a seguito degli scioperi dei dipendenti della ditta aggiudicataria saranno detratti dal computo mensile. L'Aggiudicatario provvederà, tramite avviso scritto e con un anticipo di 5 (cinque) giorni, a segnalare all'Azienda la data effettiva dello sciopero programmato e/o la data dell'assemblea sindacale interna e/o esterna.

La Ditta dovrà comunque garantire, anche in tali periodi, la reperibilità del Referente del servizio.

#### **12) Acquisto in danno**

Qualora l'Azienda Sanitaria riscontrasse, anche in sede di prima fornitura, la non conformità, sia nella qualità sia nella quantità, l'espletamento del servizio ai requisiti



richiesti e pattuiti e qualora non venissero rispettati i termini previsti dal capitolato, invierà formale contestazione con specifica delle motivazioni e con invito a conformarsi nel termine che sarà ritenuto congruo.

Inoltre l'Azienda Sanitaria avrà il diritto di effettuare il servizio presso altre ditte a danno del fornitore inadempiente; resterà cioè a carico dell'inadempiente sia la differenza per l'eventuale maggiore prezzo rispetto a quello convenuto sia ogni altro maggiore onere o danno comunque derivante all'Azienda a causa dell'Inadempienza stessa

### **13)Penalità**

In caso di inosservanza delle obbligazioni contrattuali o di non puntuale adempimento delle stesse che non comportino per la loro gravità l'immediata risoluzione del contratto, la stazione appaltante contesterà per iscritto all'aggiudicatario le inadempienze riscontrate e assegnerà un termine, non inferiore a 5 giorni, per la presentazione di controdeduzioni e memorie scritte. Trascorso tale termine, l'eventuale penale sarà applicata dal RUP, previa adeguata istruttoria.

Le penali sono di seguito indicate:

- Ritardo nell'interfacciamento con i sistemi attivazione con il Sistema Informativo di Laboratorio (LIS) della Stazione Appaltante; penale di 200,00 per ogni giorno di ritardo :

#### **PER I TAMPONI CONSEGNATI DAL LUNEDI AL VENERDI'**

- Ritardo nella refertazione dei tamponi > di 24 ore ed =< a 48 ore ; sconto del 5% rispetto al costo offerto;
- Ritardo nella refertazione dei tamponi > di 48 ore ed =< a 72 ore ; sconto del 30% rispetto al costo offerto;
- Ritardo nella refertazione dei tamponi > di 72 ore ed =< a 96 ore ; sconto del 50% rispetto al costo offerto;
- Ritardo nella refertazione dei tamponi > di 96 ore nessun rimborso;

#### **PER I TAMPONI CONSEGNATI IL SABATO**

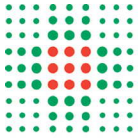
- Ritardo nella refertazione dei tamponi > di 48 ore ed =< a 72 ore ; sconto del 5% rispetto al costo offerto;
- Ritardo nella refertazione dei tamponi > di 72 ore ed =< a 96 ore ; sconto del 30% rispetto al costo offerto;
- Ritardo nella refertazione dei tamponi > di 96 ore ed =< a 120 ore ; sconto del 50% rispetto al costo offerto;
- Ritardo nella refertazione dei tamponi > di 120 ore nessun rimborso;

Le penali dovute per il ritardato adempimento, ai sensi dell'articolo 113 bis comma 2, non possono comunque superare, complessivamente, il 10 per cento di detto ammontare netto contrattuale.

### **14)Risoluzione del contratto**

L'Azienda Sanitaria avrà la facoltà di risolvere "ipso facto et jure" il contratto, mediante semplice dichiarazione stragiudiziale intimata via pec, secondo quanto stabilito all'art.108





del Codice e nelle seguenti ipotesi:

- a) avvalendosi della facoltà di recesso consentita dall'art.1671 c.c.;
- b) per motivi di interesse pubblico, adeguatamente specificati nell'atto dispositivo;
- c) in caso di frode, di grave negligenza, di contravvenzione nell'esecuzione degli obblighi e condizioni contrattuali;
- d) in caso di cessazione dell'attività, oppure in caso di procedure concorsuali o fallimentari intraprese a carico dell'aggiudicatario;
- e) in caso di cessione del contratto senza comunicazione all'Azienda Sanitaria;
- f) in caso di subappalto non autorizzato dall'Azienda Sanitaria;
- g) qualora l'Azienda Sanitaria notifichi n.2 diffide ad adempiere senza che la Ditta ottemperi a quanto intimato;
- h) in caso di violazione dell'obbligo di riservatezza

In caso di risoluzione del contratto l'Azienda Sanitaria applicherà quanto previsto all'art.110 del Codice.

Nei casi di violazione degli obblighi contrattuali (ritardo o mancata consegna, non conformità o altro) l'Azienda Sanitaria incamererà il deposito cauzionale, salvo e impregiudicato il risarcimento degli eventuali maggiori oneri e danni, senza che la parte concorrente possa pretendere risarcimenti, indennizzi o compensi di sorta.

#### **15)Recesso dal contratto**

Qualora l'impresa aggiudicataria dovesse recedere dal contratto prima della scadenza convenuta, l'Azienda USL, oltre a incamerare il deposito cauzionale, si riserva di addebitare le eventuali maggiori spese insorgenti per l'assegnazione ad altra ditta.

L'Ente Appaltante potrà altresì recedere dal contratto ai sensi dell'art.109 del D.lgs 50/2016.

#### **16) Fatturazione, Pagamento, Ordini e documenti di trasporto**

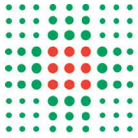
Ai sensi di quanto previsto dall'art.1, commi da 209 a 213 della Legge 24/12/2007 n. 244, e successive modificazioni, e dal Regolamento in materia di emissione, trasmissione e ricevimento della fattura elettronica da applicarsi alle amministrazioni pubbliche di cui al Decreto del Ministero dell'Economia e delle Finanze 3 aprile 2013, n. 55, le fatture devono essere trasmesse all'AUSL di Bologna e all'Azienda Ospedaliera Universitaria di Bologna esclusivamente in formato elettronico, attraverso il Sistema Di Interscambio (SDI).

L'obbligo di fatturazione elettronica ricade nei confronti dei soggetti italiani titolari di Partita IVA. Sono pertanto esclusi dall'applicazione tutti i fornitori privi di Partita IVA e i fornitori esteri.

Di seguito si riportano i dati essenziali per la trasmissione delle fatture:

#### **Azienda USL di Bologna:**

I.P.A. (indice delle Pubbliche Amministrazioni) asl\_bo



codice univoco ufficio (per ricevimento fatture) UFVSRG

Gli originali delle fatture dovranno essere così intestati:

AZIENDA U.S.L. DI BOLOGNA

Codice fiscale: 02406911202

Sede Legale: Via Castiglione 29 – 40124 BOLOGNA

Inoltre, ai sensi dell'art. 25 del Decreto Legge n. 66/2014, al fine di garantire l'effettiva tracciabilità dei pagamenti da parte delle pubbliche amministrazioni, le fatture elettroniche emesse verso le PA devono riportare:

- Il codice identificativo di gara (CIG), tranne i casi di esclusione dall'obbligo di tracciabilità di cui alla Legge n. 136 del 13 agosto 2010;
- Il codice unico di progetto (CUP), (solo per gli investimenti).

Non si potrà procedere al pagamento delle fatture elettroniche qualora le stesse non riportino CIG e CUP ove previsto.

Per l'Azienda USL di Bologna inserire:

Le fatture dovranno, inoltre, contenere **tassativamente** gli importanti seguenti elementi:

- indicazione dettagliata della merce consegnata/servizio prestato
- indicazione della determina dell'Ente appaltante che ha dato luogo all'ordine
- indicazione del numero dell'ordine aziendale informatizzato

In caso di aggiudicazione a fornitore non residente in Italia, le fatture dovranno essere inviate a mezzo posta elettronica al seguente indirizzo: [bilancio.fattureestere@ausl.bo.it](mailto:bilancio.fattureestere@ausl.bo.it); al fornitore estero aggiudicatario saranno date ulteriori indicazioni sulla fatturazione nella comunicazione di aggiudicazione.

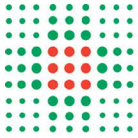
PER L'AZIENDA OSPEDALIERO-UNIVERSITARIA DI BOLOGNA:

I documenti contabili (fatture, documenti di trasporto, verbali, ecc.) dovranno, inoltre, contenere **tassativamente** gli importanti seguenti elementi:

- indicazione degli estremi dell'ordine (numero, data, sigle dell'operatore, i riferimenti del sottoconto, della richiesta e del progetto),
- indicazione di: referente, telefono, Direzione/Dipartimento/Unità Operativa presso cui è stato consegnato il bene o svolto il servizio

I documenti contabili (fatture e documenti di trasporto) dovranno rispettare l'articolazione prevista dall'ordine nella sua specificazione in righe d'ordine, importo unitario e importo totale.

Inoltre, ai sensi della Legge 23 dicembre 2014, n.190 (legge di stabilità per il 2015), le Aziende Sanitarie rientrano fra le Pubbliche Amministrazioni tenute ad applicare lo Split Payment IVA, pertanto il pagamento delle fatture per la cessione di beni e le prestazioni di servizi dei fornitori sarà effettuato separando i pagamenti, ossia versando l'imponibile al fornitore e l'IVA (ancorché regolarmente esposta in fattura) direttamente all'Erario.



A tale scopo dovrà essere riportata in fattura la dicitura seguente “Scissione dei pagamenti – art.17 TER DPR 633/72 (Decreto MEF 23/01/2015).

L'applicazione dello splt payment non si applica ai fornitori esteri.

Il mancato rispetto delle disposizioni sopra esplicitate non consentirà il pagamento delle fatture.

Per ulteriori informazioni, relative al pagamento delle fatture, contattare direttamente il Servizio Unico Metropolitan Contabilità e Finanza (SUMCF) - Ufficio Contabilità Fornitori – tel.n.0516079538 per l'Azienda USL di Bologna e l'Azienda Ospedaliero-Universitaria di Bologna.

Le Aziende Sanitarie procederanno ai pagamenti delle fatture secondo le normative vigenti in materia.

La Ditta aggiudicataria avrà l'obbligo di assicurare lo svolgimento del servizio anche in caso di ritardato pagamento.

La ditta rinuncia a far valere, nei casi previsti dal presente articolo, qualsiasi eccezione d'inadempimento di cui all'art.1460 del Codice Civile. Ogni caso di arbitraria interruzione delle prestazioni contrattuali sarà ritenuto contrario alla buona fede e la ditta sarà considerata diretta responsabile di eventuali danni causati all'Azienda Sanitaria e dipendenti da tale interruzione. Tale divieto nasce dalla necessità e dall'importanza di garantire il buon andamento dell'Ente Pubblico, nonché di tutelare gli interessi collettivi dei quali l'Azienda USL è portatrice.

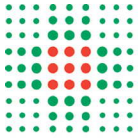
I corrispettivi saranno pagati con le modalità previste dal presente capitolato e saranno subordinati:

- alla regolarità contributiva della ditta (qualora la ditta aggiudicataria risultasse debitrice il pagamento delle fatture sarà in ogni caso subordinato alla regolarizzazione del debito stesso; è fatto salvo, in caso di mancata regolarizzazione dei debiti verso l'INPS il diritto dell'Istituto di trattenere dalle somme dovute alla ditta appaltatrice gli importi di contributi omessi e relativi accessori);
- alla verifica di cui all'articolo 48 bis del DPR 602/73.

La Ditta aggiudicataria, ai sensi dell'art.3, della Legge 136 del 13/08/2010 e s.m., assume l'obbligo di tracciabilità dei flussi finanziari.

In base alle disposizioni della legge regionale n.11/2004 e s.m.i. e dei successivi atti attuativi, le Aziende Sanitarie di cui alla presente gara devono emettere, dal 30 giugno 2016, gli ordini esclusivamente in forma elettronica. Inoltre, da tale data il fornitore deve garantire l'invio dei documenti di trasporto elettronici a fronte degli ordini ricevuti e delle consegne effettuate.

Il fornitore deve, pertanto, dotarsi degli strumenti informatici idonei alla gestione dei nuovi adempimenti telematici. Per i dettagli tecnici si rinvia alla sezione dedicata al sito dell'Agenzia Intercent-ER <http://intercenter.regione.emilia-romagna.it>, che contiene tutti i riferimenti del Sistema Regionale per la dematerializzazione del Ciclo Passivo degli Acquisti (formato dei dati, modalità di colloquio, regole tecniche, ecc.), nonché al Nodo telematico di Interscambio No TI-ER.



In alternativa, le imprese possono utilizzare le funzionalità per la ricezione degli ordini e l'invio dei documenti di trasporto elettronici che sono messe a disposizione sulla piattaforma di Intercent-ER all'indirizzo <https://piattaformaintercenter.regione.emilia-romagna.it/portale/> previa registrazione.

Le spese di bonifico applicate dall'Istituto Tesoriere, secondo quanto previsto dalla convenzione in essere alla data di pagamento, sono a carico della ditta aggiudicataria.

Inoltre, ai sensi delle disposizioni previste dall'art 9-ter, comma 8, del Decreto Legge 19 giugno 2015 n. 78, come modificato dall'articolo 1, comma 557 della legge 30 dicembre 2018, n.145 e dalle indicazioni operative di cui alla circolare interministeriale prot. 2051-P-08/02/2019, le fatture elettroniche relative ai Dispositivi Medici dovranno altresì riportare la valorizzazione degli elementi componenti il codice articolo, come sotto dettagliato:

<Codice Tipo>	'DMX, con X=[1 2 0] a seconda del tipo di dispositivo medico oggetto dell'operazione. Quindi: 1 per "Dispositivo medico o Dispositivo diagnostico in vitro" 2 per "Sistema o kit Assemblato" 0 nel caso in cui non si sia in grado di identificare il numero di repertorio
<Codice Valore>	Numero di registrazione attribuito al dispositivo medico nella Banca dati e Repertorio Dispositivi Medici, ai sensi del decreto del Ministro della salute 21 dicembre 2009 (GU n.17 del 22 gennaio 2010) o decreto del Ministro della salute 23 dicembre 2013 (G.U. Serie Generale, n. 103 del 06 maggio 2014). Per i dispositivi medici e i dispositivi diagnostici in vitro che, sulla base delle disposizioni previste, dal decreto del Ministro della salute 21 dicembre 2009 e dal decreto del Ministro della salute 23 dicembre 2013 non sono tenuti all'iscrizione nella Banca dati/ Repertorio dei dispositivi medici, o per i quali le aziende fornitrici di dispositivi medici alle strutture del Servizio Sanitario Nazionale non sono in grado di identificare il numero di repertorio, il campo è trasmesso con il valore 0.

## 17) Subappalto

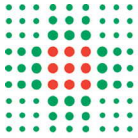
E' ammesso il subappalto nei limiti e con le modalità previste dall'art.105 del D.Lgs.50/2016.

Il contratto tra appaltatore e subappaltatore/subcontraente ai sensi della legge 13 agosto 2010, n.136 e s.m., dovrà contenere le seguenti clausole:

*Art. (...)*

*(Obblighi del subappaltatore/subcontraente relativi alla tracciabilità dei flussi finanziari)*

- 1. L'impresa (...), in qualità di subappaltatore/subcontraente dell'impresa (...) nell'ambito del contratto sottoscritto con l'Ente (...), identificato con il CIG n.*



- (...)/CUP n. (...), assume tutti gli obblighi di tracciabilità dei flussi finanziari di cui all'articolo 3 della legge 13 agosto 2010, n. 136 e successive modifiche.
2. L'impresa (...), in qualità di subappaltatore/subcontraente dell'impresa (...), si impegna a dare immediata comunicazione all'Ente (...) della notizia dell'inadempimento della propria controparte agli obblighi di tracciabilità finanziaria.
  3. L'impresa (...), in qualità di subappaltatore/subcontraente dell'impresa (...), si impegna ad inviare copia del presente contratto all'Ente (...).

## **18) Clausole contrattuali di cui all'Intesa per la Legalità del 19.06.2018 della Prefettura di Bologna**

### **Clausola n. 1**

L'impresa dichiara di essere a conoscenza di tutte le norme pattizie di cui alla Intesa per la Legalità, sottoscritta il 19.06.2018 con la Prefettura di Bologna, tra l'altro consultabile al sito <http://www.prefettura.it/bologna/multidip/index.htm>, e che qui si intendono integralmente riportate, e di accettarne incondizionatamente il contenuto e gli effetti.

### **Clausola n. 2**

L'impresa si impegna a comunicare alla stazione appaltante l'elenco delle imprese coinvolte nel piano di affidamento nell'esecuzione dei lavori, servizi o forniture con riguardo alle forniture ed ai servizi di cui all'art. 3, lett. a) dell'Intesa, nonché ogni eventuale variazione successivamente intervenuta per qualsiasi motivo.

Ove i suddetti affidamenti riguardino i settori di attività a rischio di cui all'art. 1, comma 53, della L. 190/2012, la sottoscritta impresa si impegna ad accertare preventivamente l'avvenuta o richiesta iscrizione della ditta subaffidataria negli elenchi prefettizi dei fornitori, prestatori di servizi ed esecutori di lavori non soggetti a tentativi di infiltrazione mafiosa.

### **Clausola n. 3**

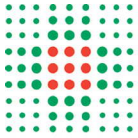
L'impresa si impegna a denunciare immediatamente alle Forze di Polizia o all'Autorità Giudiziaria ogni illecita richiesta di denaro, prestazione o altra utilità ovvero offerta di protezione nei confronti dell'imprenditore, degli eventuali componenti la compagine sociale o dei rispettivi familiari (richiesta di tangenti, pressioni per indirizzare l'assunzione di personale o l'affidamento di lavorazioni, forniture o servizi a determinate imprese, danneggiamenti, furti di beni personali o di cantiere).

### **Clausola n. 4**

La sottoscritta impresa si impegna a segnalare alla Prefettura l'avvenuta formalizzazione della denuncia di cui alla precedente clausola 3 e ciò al fine di consentire, nell'immediato, eventuali iniziative di competenza.

### **Clausola n. 5**

La sottoscritta impresa dichiara di conoscere e di accettare la clausola risolutiva espressa che prevede la risoluzione immediata ed automatica del contratto, ovvero la revoca dell'autorizzazione al subappalto o subcontratto, qualora dovessero essere comunicate dalla Prefettura, successivamente alla stipula del contratto o subcontratto, informazioni interdittive analoghe a quelle di cui agli artt. 91 e 94 del D.Lgs. 159/2011, ovvero la



sussistenza di ipotesi di collegamento formale e/o sostanziale o di accordi con altre imprese partecipanti alle procedure concorsuali d'interesse.

Qualora il contratto sia stato stipulato nelle more dell'acquisizione delle informazioni del Prefetto, sarà applicata a carico dell'impresa, oggetto dell'informativa interdittiva successiva, anche una penale nella misura del 10% del valore del contratto ovvero, qualora lo stesso non sia determinato o determinabile, una penale pari al valore delle prestazioni al momento eseguite; le predette penali saranno applicate mediante automatica detrazione, da parte della stazione appaltante, del relativo importo dalle somme dovute all'impresa in relazione alle prestazioni eseguite.

#### **Clausola n. 6**

La sottoscritta impresa dichiara di conoscere e di accettare la clausola risolutiva espressa che prevede la risoluzione immediata ed automatica del contratto, ovvero la revoca dell'autorizzazione al subappalto o subcontratto, in caso di grave e reiterato inadempimento delle disposizioni in materia di collocamento, igiene e sicurezza sul lavoro anche con riguardo alla nomina del responsabile della sicurezza e di tutela dei lavoratori in materia contrattuale e sindacale.

#### **Clausola n. 7**

La sottoscritta impresa dichiara di essere a conoscenza del divieto per le stazioni appaltanti pubbliche, come previsto dall'art. 105, comma 4 del Codice degli Appalti, di autorizzare subappalti a favore delle imprese partecipanti alle operazioni di selezione e non risultate aggiudicatarie, salvo le ipotesi di lavorazioni altamente specialistiche o nei casi in cui l'accordo per l'affidamento del subappalto sia intervenuto successivamente all'aggiudicazione.

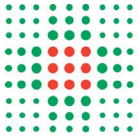
#### **Clausola n. 8**

La sottoscritta impresa si impegna a dare comunicazione tempestiva alla Prefettura e all'Autorità giudiziaria di tentativi di concussione che si siano, in qualsiasi modo, manifestati nei confronti dell'imprenditore, degli organi sociali o dei dirigenti di impresa. Dichiara altresì di essere a conoscenza che il predetto adempimento ha natura essenziale ai fini dell'esecuzione del contratto e che il relativo inadempimento darà luogo alla risoluzione espressa del contratto stesso, ai sensi dell'art. 1456 c.c. ogni qualvolta nei confronti di pubblici amministratori e di funzionari che abbiano esercitato funzioni relative alla stipula ed esecuzione del contratto, sia stata disposta misura cautelare e sia intervenuto rinvio a giudizio per il delitto previsto dall'art. 317 c.p.

#### **Clausola n. 9**

La sottoscritta impresa dichiara di conoscere e di accettare la clausola risolutiva espressa, di cui all'art. 1456 c.c., ogni qualvolta nei confronti dell'imprenditore o dei componenti la compagine sociale o dei dirigenti dell'impresa, sia stata disposta misura cautelare o sia intervenuto rinvio a giudizio per taluno dei delitti di cui agli artt. 317 c.p., 318 c.p., 319 c.p., 319 bis c.p., 319 ter c.p., 319 quater c.p., 320 c.p., 322 c.p., 322 bis c.p., 346 bis c.p., 353 c.p. e 353 bis c.p.”.

#### **Clausola n. 10**



La sottoscritta impresa si obbliga ad inserire in tutti i subcontratti la clausola risolutiva espressa nel caso in cui emergano informative interdittive a carico dell'altro subcontraente; tale clausola dovrà essere espressamente accettata dalla impresa subcontraente.

**Clausola n. 11**

La sottoscritta impresa dichiara di conoscere e di accettare la clausola risolutiva espressa ovvero la revoca dell'autorizzazione al subappalto o subcontratto, in caso di grave e reiterato inadempimento delle disposizioni in materia di collocamento, igiene e sicurezza sul lavoro anche con riguardo alla nomina del responsabile della sicurezza e di tutela dei lavoratori in materia contrattuale e sindacale

**19) Controversie e Foro competente**

Le controversie su diritti soggettivi, derivanti dall'esecuzione del presente contratto, non saranno deferite ad arbitri.

Per ogni controversia giudiziale relativa alla presente gara è competente esclusivamente il Foro di Bologna, mentre per le controversie che dovessero insorgere nell'esecuzione della fornitura/servizio è competente, esclusivamente, il Foro in cui ha sede l'Azienda Sanitaria che è parte in causa.

Per accettazione  
**(firma digitale del Legale Rappresentante)**

**Allegato 1 - Capitolato speciale:**

CLAUSOLE VESSATORIE RELATIVE AL CAPITOLATO SPECIALE D'APPALTO DELLA GARA A PROCEDURA APERTA ACCELERATA FINALIZZATA ALLA STIPULA DI UN ACCORDO QUADRO CON OPERATORE ECONOMICO PER IL SERVIZIO DI ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DELL'RNA-RT-PCR COVID 19 PER L'AZIENDA USL DI BOLOGNA

**Il sottoscritto** \_\_\_\_\_

**quale procuratore e legale rappresentante della ditta** \_\_\_\_\_

\_\_\_\_\_

**Dichiara di avere particolareggiata e perfetta conoscenza di tutte le clausole contrattuali e dei documenti ed atti richiamati nel capitolato speciale di cui alla presente gara di appalto e, ai sensi e per gli effetti di cui agli artt.1341 e 1342, del vigente Codice Civile, dichiara di accettare espressamente gli articoli 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15 e 16.**

**Per accettazione  
Il Legale Rappresentante della ditta**



## Allegato A - Domanda di partecipazione

**BOLLO**

\*

Spett.le

AZIENDA U.S.L. di BOLOGNA  
Servizio Acquisti Metropolitano  
Via Gramsci, 12 -  
40121 Bologna - ITALIA

GARA A PROCEDURA APERTA ACCELERATA FINALIZZATA ALLA STIPULA DI UN ACCORDO QUADRO CON OPERATORE ECONOMICO PER IL SERVIZIO DI ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DELL’RNA-RT-PCR COVID 19 PER L’AZIENDA USL DI BOLOGNA

**Il Concorrente** \_\_\_\_\_

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*[Il concorrente indica la forma singola o associata con la quale l'impresa partecipa alla gara (impresa singola, consorzio, RTI, aggregazione di imprese di rete, GEIE).*

*In caso di partecipazione in RTI, consorzio ordinario, aggregazione di imprese di rete, GEIE, il concorrente fornisce i dati identificativi (ragione sociale, codice fiscale, sede) e il ruolo di ciascuna impresa (mandataria/mandante; capofila/consorziata).*

*Nel caso di consorzio di cooperative e imprese artigiane o di consorzio stabile di cui all'art. 45, comma 2 lett. b) e c) del Codice, il consorzio indica il consorziato per il quale concorre alla gara; qualora il consorzio non indichi per quale/i consorziato/i concorre, si intende che lo stesso partecipa in nome e per conto proprio].*

con sede legale in \_\_\_\_\_

e sede amministrativa (se diversa) in \_\_\_\_\_

P.IVA \_\_\_\_\_ CODICE FISCALE \_\_\_\_\_

N. tel. Ufficio gare \_\_\_\_\_

Indirizzo di posta elettronica certificata (PEC) inserito a Sistema in sede di registrazione

\_\_\_\_\_

**Nella persona del suo Legale Rappresentante /Procuratore Speciale** \_\_\_\_\_

\_\_\_\_\_

nato a \_\_\_\_\_ il \_\_\_\_\_

residente a \_\_\_\_\_

Via \_\_\_\_\_

C.F. \_\_\_\_\_

Estremi procura speciale (se procuratore) \_\_\_\_\_

## CHIEDE

### Di potere partecipare alla gara di cui all'oggetto e a tal fine

Avvalendosi delle disposizioni di cui agli art. 46 e 47 del D.P.R.28/12/00 n.445, nel rilascio delle dichiarazioni sostitutive di certificazione e di notorietà che seguono, con la consapevolezza delle sanzioni previste dall'art.76 della Legge indicata, per le ipotesi di falsità in atti e dichiarazioni mendaci ivi indicate, sotto la propria personale responsabilità

## DICHIARA:

1. di non incorrere nelle cause di esclusione di cui all'art. 80, comma 5 lett. f-bis) e f-ter) del Codice;
2. di non incorrere nelle cause di esclusione di cui all'art. 80, comma 5 lett. c), c-bis) c-ter del Codice;
3. i dati identificativi (nome, cognome, data e luogo di nascita, codice fiscale, comune di residenza etc.) dei soggetti di cui all'art. 80, comma 3 del Codice, ovvero indica la banca dati ufficiale o il pubblico registro da cui i medesimi possono essere ricavati in modo aggiornato alla data di presentazione dell'offerta;
4. remunerativa l'offerta economica presentata giacché per la sua formulazione ha preso atto e tenuto conto:
  - a) delle condizioni contrattuali e degli oneri compresi quelli eventuali relativi in materia di sicurezza, di assicurazione, di condizioni di lavoro e di previdenza e assistenza in vigore nel luogo dove devono essere svolti i servizi/fornitura ;
  - b) di tutte le circostanze generali, particolari e locali, nessuna esclusa ed eccettuata che possono avere influito o influire sia sulla prestazione della *fornitura*, sia sulla determinazione della propria offerta;
5. di accettare, senza condizione o riserva alcuna, tutte le norme e disposizioni contenute nella documentazione gara;
6. di accettare il Patto di Integrità di cui all'Allegato PI, allegandolo alla presente domanda di partecipazione
7. di aver preso visione del "Codice di comportamento per il personale operante nell'Azienda USL di Bologna" di cui a Delibera del Direttore Generale n.166 del 29.05.2018, pubblicato nella sezione amministrazione trasparente:

<https://www.ausl.bologna.it/amministrazione-trasparente/disposizioni-general/atti-general/cdcc> , e si impegna, in caso di aggiudicazione, ad osservare e a far osservare ai propri dipendenti e collaboratori, per quanto applicabile, il suddetto codice, pena la risoluzione del contratto;

8. di accettare, ai sensi dell'art. 100, comma 2 del Codice, i requisiti particolari per l'esecuzione del contratto nell'ipotesi in cui risulti aggiudicatario;

**Per gli operatori economici non residenti e privi di stabile organizzazione in Italia**

9. di impegnarsi ad uniformarsi, in caso di aggiudicazione, alla disciplina di cui agli articoli 17, comma 2, e 53, comma 3 del d.p.r. 633/1972 e a comunicare alla stazione appaltante la nomina del proprio rappresentante fiscale, nelle forme di legge;
10. i seguenti dati: domicilio fiscale .....; codice fiscale ....., partita IVA .....; indica l'indirizzo PEC **oppure**, solo in caso di concorrenti aventi sede in altri Stati membri, l'indirizzo di posta elettronica ..... ai fini delle comunicazioni di cui all'art. 76, comma 5 del Codice, che è il medesimo indicato in sede di registrazione sul Sistema;
11. di autorizzare qualora un partecipante alla gara eserciti la facoltà di "accesso agli atti", la stazione appaltante a rilasciare copia di tutta la documentazione presentata per la partecipazione alla gara **oppure** non autorizza, qualora un partecipante alla gara eserciti la facoltà di "accesso agli atti", la stazione appaltante a rilasciare copia dell'offerta tecnica e delle spiegazioni che saranno eventualmente richieste in sede di verifica delle offerte anomale, in quanto coperte da segreto tecnico/commerciale. Tale dichiarazione dovrà essere adeguatamente motivata e comprovata ai sensi dell'art. 53, comma 5, lett. a), del Codice.
12. di essere informato ai sensi e per gli effetti dell'art.13 del Regolamento U.E.2016/679, sul trattamento dei dati personali e di essere consapevole che tali dati, anche di natura giudiziaria, sono raccolti e trattati, anche con strumenti informatici, esclusivamente nell'ambito della presente gara e per le finalità descritte al punto 26.1. del Disciplinare di gara, contenente altresì i diritti di cui agli art.15 e seguenti del regolamento sopracitato;

**Per gli operatori economici ammessi al concordato preventivo con continuità aziendale di cui all'art. 186 bis del R.D. 16 marzo 1942, n. 267**

13. ad integrazione di quanto indicato nella parte III, sez. C, lett. d) del DGUE, i seguenti estremi del provvedimento di ammissione al concordato e del provvedimento di autorizzazione a partecipare alle gare ..... rilasciati dal Tribunale di ..... nonché dichiara di non partecipare alla gara quale mandataria di un raggruppamento temporaneo di imprese e che le altre imprese aderenti al raggruppamento non sono assoggettate ad una procedura concorsuale ai sensi dell'art. 186 bis, comma 6 del R.D. 16 marzo 1942, n. 267.
14. di aver preso visione del fascicolo informativo/dei fascicoli informativi sui rischi specifici dell'Azienda Usl di Bologna, come indicato all'art.7 del capitolato speciale di appalto;

**Le suddette dichiarazioni, di cui ai punti da 1 a 14, potranno essere rese o sotto forma di allegati alla domanda di partecipazione ovvero quali sezioni interne alla domanda medesima debitamente compilate e sottoscritte dagli operatori dichiaranti nonché dal sottoscrittore della domanda di partecipazione.**

**Domanda di partecipazione e allegati dovranno essere collocati a sistema.**

**LUOGO E DATA**

**(Sottoscrizione digitale) \* \***

\* [Assolvimento imposta di bollo secondo quanto previsto dall'art.2, della PARTE I, dell'Allegato A – Tariffa, del DPR 26 ottobre 1972, n.642 "Disciplina dell'imposta di bollo" e dal D.L.26/04/2013, n.43, convertito con modificazioni dalla L.24/06/2013, n.71 per adeguamento dell'importo (€ 16,00), **tramite, alternativamente, le seguenti modalità:**

- Dichiarazione, firmata digitalmente dal Legale Rappresentante o da persona avente i poteri di impegnare la ditta o in possesso di Procura, di autorizzazione all'assolvimento virtuale dell'imposta di bollo ai sensi dell'art.15 del DPR 642/1972 con estremi della relativa autorizzazione; in questo caso riportare estremi anche nella domanda di partecipazione in alto a destra "casella bollo".

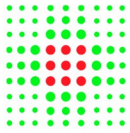
**oppure**

- assolvimento dell'imposta di bollo mediante contrassegno con indicazione sull'offerta del codice numerico composto da 14 cifre e rilevabili dal "contrassegno telematico rilasciato dall'intermediario" (Risoluzione n.89/E del 06/10/2016 Agenzia dell'Entrate). In quest'ultimo caso, si chiede di inserire a sistema, copia del contrassegno con dichiarazione di conformità all'originale resa ai sensi del DPR 445/00, firmata digitalmente. L'operatore economico conserverà il contrassegno utilizzato entro il termine di decadenza triennale previsto per l'accertamento da parte dell'Amministrazione finanziaria (articolo 37 del DPR n 642 del 1972). ]

\* \* [La domanda è firmata digitalmente:

- nel caso di raggruppamento temporaneo o consorzio ordinario costituiti, dalla mandataria/capofila.
- nel caso di raggruppamento temporaneo o consorzio ordinario non ancora costituiti, da tutti i soggetti che costituiranno il raggruppamento o consorzio;
- nel caso di aggregazioni di imprese aderenti al contratto di rete si fa riferimento alla disciplina prevista per i raggruppamenti temporanei di imprese, in quanto compatibile. In particolare:
  - a. **se la rete è dotata di un organo comune con potere di rappresentanza e con soggettività giuridica**, ai sensi dell'art. 3, comma 4-*quater*, del d.l. 10 febbraio 2009, n. 5, la domanda di partecipazione deve essere firmata digitalmente dal solo operatore economico che riveste la funzione di organo comune;
  - b. **se la rete è dotata di un organo comune con potere di rappresentanza ma è priva di soggettività giuridica**, ai sensi dell'art. 3, comma 4-*quater*, del d.l. 10 febbraio 2009, n. 5, la domanda di partecipazione deve essere firmata digitalmente dall'impresa che riveste le funzioni di organo comune nonché da ognuna delle imprese aderenti al contratto di rete che partecipano alla gara;
  - c. **se la rete è dotata di un organo comune privo del potere di rappresentanza o se la rete è sprovvista di organo comune, oppure se l'organo comune è privo dei requisiti di qualificazione richiesti per assumere la veste di mandataria**, la domanda di partecipazione deve essere firmata digitalmente dall'impresa aderente alla rete che riveste la qualifica di mandataria, ovvero, in caso di partecipazione nelle forme del raggruppamento da costituirsi, da ognuna delle imprese aderenti al contratto di rete che partecipa alla gara.

Nel caso di consorzio di cooperative e imprese artigiane o di consorzio stabile di cui all'art. 45, comma 2 lett. b) e c) del Codice, **la domanda è firmata digitalmente dal consorzio medesimo]**



**Dipartimento Amministrativo**

Servizio Acquisti Metropolitan

Settore

Il direttore

**Schema contratto di fornitura per accettazione**

**Bollo  
virtuale**

**CONTRATTO PER L'APPALTO DI FORNITURA DEL SERVIZIO DI ANALISI E  
REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DELL'RNA-RT-PCR COVID 19  
PER L'AZIENDA USL DI BOLOGNA**

TRA

L'Azienda USL di Bologna, P.I. n. 02406911202, con sede legale in via Castiglione, 29, rappresentata, per delega del Direttore Generale, di cui alle deliberazioni nn. 52 del 13/02/2017 e 146 del 30/06/2011, dal Direttore del Servizio Acquisti Metropolitan, D.ssa Rosanna Campa, per la carica domiciliata in via Gramsci n.12, dal 01.12.2019 Sub-Commissario Amministrativo dell'Azienda USL di Bologna, con Direzione ad interim del Servizio Acquisti Metropolitan

E

La ditta ....., P.I. n. 0000000000000000, Registro delle Imprese n.xxxxxxxxxxxxxx – CCIAA di XXXXXXXX n. con sede legale a ....., via ....., rappresentata dal Legale Rappresentante/**Procuratore munito di apposita procura**, nato a.....

PREMESSO

⇒ Che l'Azienda USL di Bologna a seguito della procedura aperta per la fornitura divisa in lotti del servizio di check point presso le strutture sanitarie dell'Azienda Usl di Bologna e dell'Azienda Ospedaliero Universitaria di Bologna .



⇒ ha aggiudicato, con det.n.xxxxxxx del xxxxxxxxxxxx la fornitura di per un importo di € .....(oneri fiscali esclusi),

⇒ Che con nota prot.n. xxxxxx del xx/xx/xxxxx è stata inviata comunicazione di aggiudicazione di fornitura /servizio

#### TUTTO CIO' PREMESSO

Le parti convengono e stipulano quanto segue:

#### ARTICOLO 1. VALORE DELLA PREMESSA

Si richiamano gli atti che sono ad ogni effetto parte integrante del presente contratto:

1. il Capitolato speciale d'appalto sottoscritto dalla ditta;
2. gli allegati tecnici al capitolato speciale d'appalto, sottoscritti dalla ditta;
3. lettera di comunicazione di aggiudicazione;
4. l'offerta economica presentata dalla Ditta;
5. l'offerta tecnica, e il progetto presentati dalla Ditta;

Si allegano al presente contratto:

- il capitolato speciale d'appalto sottoscritto dalla ditta, (bollo)
- l'offerta economica presentata dalla ditta, (ha già il bollo),
- il codice di comportamento aziendale (bollo in caso d'uso),
- il patto di integrità (bollo in caso d'uso),

#### ARTICOLO 2. OGGETTO DEL CONTRATTO

Il contratto ha per oggetto la fornitura del servizio di check point presso le strutture sanitarie dell'Azienda Usl di Bologna e dell'Azienda Ospedaliero Universitaria di Bologna . da parte della ditta .....

#### ARTICOLO 3. NORME REGOLATRICI DEL CONTRATTO.



Il contratto è regolato dalle norme del Capitolato Speciale allegato alla presente e .....  
(eventuali altre condizioni emerse in sede di valutazione delle offerte da parte della  
Commissione)

Ulteriori successive variazioni dovranno essere poste per iscritto e sottoscritte dalle parti

#### ARTICOLO 4. AMMONTARE DEL CONTRATTO

L'importo contrattuale ammonta a € ..... (euro .....) al netto dell'I.V.A.,  
I prezzi unitari offerti dall'Appaltatore in sede di gara costituiscono prezzi contrattuali.

#### ARTICOLO 5. DURATA DEL CONTRATTO

La durata del Servizio (escluse le eventuali opzioni) è di mesi 6, decorrenti dalla data di .....

#### ARTICOLO 6. ORDINI E DOCUMENTI DI TRASPORTO

In base alle disposizioni della legge regionale n.11/2004 e s.m.i. e dei successivi atti attuativi, l'Azienda USL di Bologna deve emettere gli ordini esclusivamente in formato elettronico; altresì il fornitore deve garantire l'invio dei documenti di trasporto elettronici a fronte degli ordini ricevuti e delle consegne effettuate.

Il fornitore deve, pertanto, dotarsi degli strumenti informatici idonei alla gestione dei nuovi adempimenti telematici. Per i dettagli tecnici si rinvia alla sezione dedicata al sito dell'Agenzia Intercent-ER <http://intercenter.regione.emilia-romagna.it>, che contiene tutti i riferimenti del Sistema Regionale per la dematerializzazione del Ciclo Passivo degli Acquisti (formato dei dati, modalità di colloquio, regole tecniche, ecc.), nonché al Nodo telematico di Interscambio No TI-ER.

In alternativa, le imprese potranno utilizzare le funzionalità per la ricezione degli ordini e l'invio dei documenti di trasporto elettronici che saranno messe a disposizione sulla piattaforma di Intercent-ER all'indirizzo <https://piattaformaintercenter.regione.emilia-romagna.it/portale/> previa registrazione.

#### ARTICOLO 8. OBBLIGHI DELL'APPALTATORE RELATIVI ALLA TRACCIABILITA' DEI FLUSSI FINANZIARI

L'appaltatore (...) assume tutti gli obblighi di tracciabilità dei flussi finanziari di cui all'articolo 3 della legge 13 agosto 2010, n.136 e successive modifiche.



L'appaltatore si impegna a dare immediata comunicazione alla stazione appaltante ed alla prefettura-ufficio territoriale del Governo della provincia di Bologna della notizia dell'inadempimento della propria controparte (subappaltatore/subcontraente) agli obblighi di tracciabilità finanziaria.

Il mancato utilizzo del bonifico bancario o postale ovvero degli altri strumenti idonei a consentire la piena tracciabilità delle operazioni costituisce causa di risoluzione del contratto.

Si indica/no il/i codice/i CIG relativo/i al presente contratto:

Lotto 1 AUSL BO CIG 838170736D

Lotto 2 AOUBO CIG **8383774D28**

#### ARTICOLO 9. SUBAPPALTO

Il contratto non può essere ceduto, a pena di nullità, fatto salvo quanto previsto dall'articolo 106, comma 1, lettera d).

Ai sensi dell'art. 105 del Codice dei contratti e stante la dichiarazione rilasciata dalla ditta in sede di gara, per questo contratto **è ammesso/non è ammesso il subappalto**.

#### ARTICOLO 10. CODICE DI COMPORTAMENTO

Ai sensi dell'art.2 del D.P.R. n.62/2013 e del Codice di Comportamento Aziendale adottato con Delibera del Direttore Generale n.7 del 31 gennaio 2014, la violazione degli obblighi derivanti dal Codice stesso può essere causa di risoluzione o decadenza del rapporto contrattuale.

#### ARTICOLO 11. PATTO DI INTEGRITA'

La violazione da parte dell'aggiudicatario di uno degli impegni previsti a suo carico dall'articolo 2 del Patto di Integrità sottoscritto in sede di partecipazione alla gara, può comportare, secondo la gravità della violazione accertata, la risoluzione del contratto.

Questa amministrazione potrà non avvalersi della risoluzione del contratto qualora la ritenga pregiudizievole agli interessi pubblici, è fatto salvo in ogni caso l'eventuale diritto al risarcimento del danno.

#### ARTICOLO 12. SPESE DI CONTRATTO

Tutte le spese di bollo inerenti il presente contratto sono a totale carico dell'Appaltatore.

Il contratto d'appalto sarà registrato solo in caso d'uso e la relativa imposta di registro sarà a carico dell'Appaltatore.





### ARTICOLO 13. TRATTAMENTO DEI DATI

Con la sottoscrizione del presente contratto, le parti, in relazione ai trattamenti di dati personali effettuati in esecuzione del contratto medesimo, dichiarano di essersi reciprocamente comunicate tutte le informazioni previste dal Regolamento UE/2016/679 (GDPR), ivi comprese quelle relative alle modalità di esercizio dei diritti dell'interessato.

In particolare il Fornitore dichiara di aver preso visione, prima della sottoscrizione del presente contratto, le informazioni di cui all'art. 13 del Regolamento UE/2016/679 circa la raccolta ed il trattamento dei dati personali conferiti per la sottoscrizione e l'esecuzione del contratto stesso, nonché di essere pienamente a conoscenza dei diritti riconosciuti ai sensi della predetta normativa.

L'informativa è contenuta al punto 26.1 del Disciplinare di Gara che deve intendersi integralmente trascritto in questa sede.

Con la sottoscrizione del contratto il rappresentante legale del Fornitore si impegna ad adempiere agli obblighi di rilascio dell'informativa e di richiesta del consenso, ove necessario, nei confronti delle persone fisiche interessate di cui sono forniti dati personali nell'ambito dell'esecuzione del contratto, per le finalità descritte nel Disciplinare di gara in precedenza richiamate.

I trattamenti dei dati sono improntati, in particolare, ai principi di correttezza, liceità e trasparenza ed avvengono nel rispetto delle misure di sicurezza previste dall' art 32 Regolamento UE/2016/679. Ai fini della suddetta normativa, le parti dichiarano che i dati personali forniti con il presente atto sono esatti e corrispondono al vero, esonerandosi reciprocamente da qualsivoglia responsabilità per errori materiali di compilazione ovvero per errori derivanti da una inesatta imputazione dei dati stessi negli archivi elettronici e cartacei, fermi restando i diritti dell'interessato di cui agli artt. 15 e seguenti del Regolamento UE/2016/679 (GDPR).

Qualora, in relazione all'esecuzione del presente contratto, vengano affidati al Fornitore trattamenti di dati personali di cui l'Azienda risulta titolare, il Fornitore stesso è da ritenersi designato quale Responsabile del trattamento ai sensi e per gli effetti dell'art. 28, Regolamento UE/2016/679 (GDPR). In coerenza con quanto previsto dalla normativa richiamata, il Fornitore si impegna ad improntare il trattamento dei dati ai principi di correttezza, liceità e trasparenza nel pieno rispetto di quanto disposto dall'art. 5 del Regolamento UE/2016/679 e dalle ulteriori norme regolamentari in materia, limitandosi ad eseguire i soli trattamenti funzionali, necessari e pertinenti all'esecuzione delle prestazioni contrattuali e, in qualsiasi caso, non incompatibili con le finalità per cui i dati sono stati raccolti.

1. Il Fornitore qualora venga nominato "Responsabile del trattamento" si impegna inoltre a:



- a) adempiere all'incarico attribuito adottando idonee e preventive misure di sicurezza, con particolare riferimento a quanto stabilito dall'art. 32 Regolamento UE/2016/679 (GDPR);
  - b) tenere un registro del trattamento conforme a quanto previsto dall'art. 30 del Regolamento UE/2016/679 ed a renderlo tempestivamente consultabile dal Titolare del trattamento. Il Fornitore dovrà consentire all'Azienda contraente di eseguire, anche tramite terzi incaricati, le verifiche sulla corretta applicazione delle norme in materia di trattamento dei dati personali;
  - c) predisporre, qualora l'incarico comprenda la raccolta di dati personali, l'informativa di cui all'art 13 del Regolamento UE/2016/679 (GDPR) e verificare che siano adottate le modalità operative necessarie affinché la stessa sia effettivamente portata a conoscenza degli interessati;
  - d) dare direttamente riscontro orale, anche tramite propri incaricati, alle richieste verbali dell'interessato;
  - e) trasmettere all'Azienda, con la massima tempestività, le istanze dell'interessato per l'esercizio dei diritti di cui agli artt. 15 e seguenti del Regolamento UE/2016/679 (GDPR) che necessitino di riscontro scritto, in modo da consentire all'Azienda di dare riscontro all'interessato nei termini; nel fornire altresì all'Azienda tutta l'assistenza necessaria, nell'ambito dell'incarico affidato, per soddisfare le predette richieste;
  - f) individuare le persone autorizzate al trattamento dei dati personali, impartendo agli stessi le istruzioni necessarie per il corretto trattamento dei dati, sovrintendendo e vigilando sull'attuazione delle istruzioni impartite;
  - g) consentire all'Azienda, in quanto Titolare del trattamento, l'effettuazione di verifiche periodiche circa il rispetto delle vigenti disposizioni in materia di trattamento dei dati personali, fornendo alla stessa piena collaborazione;
  - h) richiedere al Titolare del trattamento specifica autorizzazione scritta, qualora ricorra ad altro Responsabile del Trattamento (c.d. Sub-responsabile del trattamento) per l'esecuzione di specifiche attività di trattamento per conto del Titolare, connesse al presente contratto.
2. Il Fornitore si impegna ad adottare le misure di sicurezza di natura fisica, tecnica e organizzativa necessarie a garantire un livello di sicurezza adeguato al rischio, nonché ad osservare le vigenti disposizioni in materia di sicurezza e privacy ed a farle osservare ai propri dipendenti e collaboratori, opportunamente autorizzati al trattamento dei Dati personali.
  3. Si richiamano gli Obblighi stabiliti nel punto 26.2 del Disciplinare e nell'art. 9 del Capitolato.

#### ARTICOLO 14. FORO COMPETENTE



Le controversie su diritti soggettivi, derivanti dall'esecuzione del presente contratto, non saranno deferite ad arbitri.

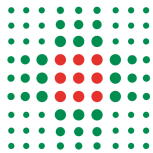
Per la risoluzione di eventuali controversie che dovessero insorgere tra l'Azienda USL e la Ditta nell'esecuzione del contratto, unico Foro competente è quello di Bologna

Il presente contratto si compone di **quattro** pagine e di **quattro** allegati da ritenersi a tutti gli effetti parte integrante ed essenziale del presente atto.

Letto confermato e sottoscritto.

***Firma e timbro per accettazione***

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**ALLEGATO 1**

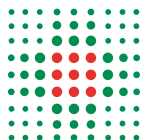
**DESCRIZIONE DELLE ATTIVITÀ DI TRATTAMENTO**

(Ambito del trattamento - art. 28, paragrafo 3, GDPR a cura del Titolare del trattamento)

**PROCEDURA APERTA ACCELERATA FINALIZZATA ALLA STIPULA DI UN ACCORDO QUADRO CON UN OPERATORE ECONOMICO PER IL SERVIZIO DI ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DEL RNA - RT-PCR COVID 19**

<b>Categorie di interessati</b> (ad es. persone fisiche pazienti/clienti/utenti del Titolare del trattamento)
<ul style="list-style-type: none"> <li>• Pazienti/utenti che effettuano prestazioni sanitarie presso l'AUSL di Bologna.....</li> <li>• Operatori – dipendenti AUSLBO che utilizzano l' applicativo/i – limitatamente ai dati oggetto abilitazione alle funzionalità applicative</li> <li>• Collaboratori, consulenti e altro personale che a qualunque titolo svolge attività lavorativa per conto dell'Azienda.....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> </ul>
<b>Tipo di dati personali oggetto di trattamento</b> (indicare se dati comuni, categorie particolari, dati relativi a condanne penali e reati)
<ul style="list-style-type: none"> <li>• Dati anagrafici, dati sanitari, dati relativi alla salute, dati funzionali alla profilazione applicativa</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> </ul>
<b>Oggetto, natura e finalità del trattamento</b> (ad es. descrizione sintetica del servizio di trattamento dati reso dal Responsabile del trattamento al Titolare del trattamento o fare specifico rinvio all'oggetto del contratto principale - se presente - stipulato con il Responsabile del trattamento: esecuzione di servizi in ambito sistemi informativi)
<ul style="list-style-type: none"> <li>• Trattamento dati relativi all'analisi dei tamponi per la ricerca del nuovo coronavirus COVID 19</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> <li>• .....</li> </ul>





## ALLEGATO 2

### ISTRUZIONI PER IL RESPONSABILE DEL TRATTAMENTO DEI DATI PERSONALI

#### **Regolamento (UE) 2016/679 e D.Lgs 196/2003 come modificato dal D.Lgs 101/2018**

Il Responsabile del trattamento tratta i dati personali per conto del Titolare del trattamento solo ed esclusivamente ai fini dell'esecuzione dei servizi oggetto dell'accordo nel rispetto della normativa vigente in materia di protezione dei dati personali, nonché delle seguenti istruzioni impartite dal Titolare del trattamento.

#### **Misure di sicurezza (art. 32 GDPR)**

Il Responsabile del trattamento, per quanto di propria competenza, è tenuto in forza di legge e del presente accordo, per sé e per le persone autorizzate al trattamento che collaborano con la sua organizzazione, a dare attuazione alle misure di sicurezza previste dalla normativa vigente in materia di trattamento di dati personali fornendo assistenza al Titolare del trattamento nel garantire il rispetto della medesima.

Il Responsabile del trattamento, tenendo conto dello stato dell'arte e dei costi di attuazione, nonché della natura, dell'oggetto, del contesto e delle finalità del trattamento, come anche del rischio di varia probabilità e gravità per i diritti e le libertà delle persone fisiche, deve assicurarsi che le misure di sicurezza predisposte ed adottate siano adeguate a garantire un livello di sicurezza adeguato al rischio, in particolare contro:

- distruzione, perdita, modifica, divulgazione non autorizzata o accesso, in modo accidentale o illegale, a dati personali trasmessi, conservati o comunque trattati;
- trattamento dei dati non consentito o non conforme alle finalità delle operazioni di trattamento.

Il Responsabile del trattamento applica le misure di sicurezza, di cui al punto precedente, al fine di garantire:

- se del caso, la pseudonimizzazione e la cifratura dei dati personali;
- la capacità di assicurare su base permanente la riservatezza, l'integrità, la disponibilità e la resilienza dei sistemi e dei servizi di trattamento;
- la capacità di ripristinare tempestivamente la disponibilità e l'accesso dei dati personali in caso di incidente fisico o tecnico.

Il Responsabile del trattamento è tenuto a implementare una procedura per testare, verificare e valutare regolarmente l'efficacia delle misure tecniche e organizzative al fine di garantire la sicurezza del trattamento, trasmettendo tempestivamente al Titolare del trattamento la documentazione tecnica relativa sia alle misure di sicurezza in atto sia alle modifiche in seguito adottate.

Il Responsabile del trattamento assicura l'utilizzo di strumenti, applicazioni e/o servizi che rispettino i principi di protezione dei dati personali fin dalla progettazione (privacy by design) e per impostazione predefinita (privacy by default).

#### **Valutazione di impatto (art. 35 GDPR)**

Il Responsabile del trattamento, tenendo conto della natura del trattamento e delle informazioni a disposizione dello stesso, assiste il Titolare del trattamento nel garantire il rispetto degli obblighi di cui agli artt. 35 e 36 del GDPR.

Nello specifico:

- fornisce tutte le informazioni e tutti gli elementi utili al Titolare del trattamento per la effettuazione della valutazione di impatto sulla protezione dei dati, nonché dell'eventuale consultazione preventiva alla Autorità Garante;
- assicurare la massima cooperazione e assistenza per dare effettività alle azioni di mitigazione eventualmente previste dal Titolare del trattamento per affrontare possibili rischi identificati a

seguito degli esiti della valutazione di impatto effettuata sui trattamenti di dati personali cui il Responsabile del trattamento concorre.

### **Registro delle attività di trattamento (art. 30 GDPR)**

Il Responsabile del trattamento, ove ricorrano le ipotesi di cui all'art. 30 del Regolamento, dovrà tenere un registro ex art. 30.2 nel quale identifica e censisce i trattamenti di dati personali svolti per conto del Titolare del trattamento, le banche dati e gli archivi gestiti con supporti informatici e/o cartacei necessari all'espletamento delle attività oggetto del presente accordo.

Tale registro, da esibire, in caso di ispezione della Autorità Garante, deve contenere:

- il nome e i dati di contatto del Responsabile del trattamento, del Titolare del trattamento per conto del quale il Responsabile agisce e, ove applicabile, del Data Protection Officer (DPO);
- le categorie dei trattamenti effettuati per conto del Titolare del trattamento;
- se del caso, i trasferimenti di dati personali verso paesi terzi, compresa l'identificazione del paese terzo e la relativa documentazione di garanzia;
- la descrizione generale delle misure di sicurezza tecniche ed organizzative applicate a protezione dei dati.

### **Data Breach (art. 33 GDPR)**

Il Responsabile del trattamento deve fornire tutto il supporto necessario al Titolare del trattamento ai fini delle indagini e sulle valutazioni in ordine alla violazione di dati, al fine di individuare, prevenire e limitare gli effetti negativi della stessa, conformemente ai suoi obblighi ai sensi del presente articolo e svolgere qualsiasi azione che si renda necessaria per porre rimedio alla violazione stessa. Nella misura in cui la violazione dei dati personali sia causata da una violazione del Responsabile del trattamento o dei suoi Sub-responsabili delle disposizioni del presente atto di nomina, dell'accordo o delle Leggi sulla protezione dei dati applicabili, tenendo conto della natura della violazione dei dati personali e del rischio di varia probabilità e gravità per i diritti e le libertà delle persone fisiche coinvolte, il Responsabile del trattamento, su istruzione di Titolare del trattamento, opererà tutti gli sforzi necessari per identificare e porre rimedio alla causa della violazione dei dati personali, per mitigare i rischi per i diritti e le libertà delle persone fisiche coinvolte e per assistere ulteriormente il Titolare del trattamento con ogni ragionevole richiesta nel rispetto delle leggi sulla protezione dei dati relative alle violazioni dei dati personali.

Si rinvia all'**ALLEGATO 2** per quanto di competenza.

Il Responsabile del trattamento non deve rilasciare, né pubblicare alcun comunicato stampa o relazione riguardante eventuali data breach o violazioni di trattamento senza aver ottenuto il previo consenso scritto del Titolare del trattamento.

### **Soggetti autorizzati allo svolgimento di operazioni di trattamento dei dati personali - Designazione**

Il Responsabile del trattamento:

- provvede ad individuare le persone fisiche da nominare autorizzati al trattamento, attribuendo loro specifici compiti e funzioni e fornendo loro adeguate istruzioni scritte circa le modalità del trattamento dei dati;
- assicura competenze ed affidabilità dei propri dipendenti e collaboratori autorizzati al trattamento dei dati personali effettuati per conto del Titolare del trattamento;
- assicura che gli autorizzati abbiano ricevuto adeguata formazione in materia di protezione dei dati personali e sicurezza informatica consegnando al Titolare del trattamento, per il tramite dei Referenti privacy aziendali di riferimento, le evidenze di tale formazione;
- vigila sull'operato degli autorizzati, vincolandoli alla riservatezza su tutte le informazioni acquisite nello svolgimento delle loro attività, anche successivamente alla cessazione del rapporto di lavoro/collaborazione con il Responsabile del trattamento. In ogni caso, il Responsabile del trattamento è ritenuto direttamente responsabile per qualsiasi divulgazione di dati personali da parte degli autorizzati.

## **Amministratori di sistema**

Il Responsabile del trattamento, per quanto concerne i trattamenti effettuati per fornire il servizio oggetto del accordo dai propri incaricati con mansioni di "amministratore di sistema", è tenuto altresì al rispetto delle previsioni contenute nel provvedimento del Garante per la protezione dei dati personali del 27 novembre 2008 modificato in base al provvedimento del 25 giugno 2009, in quanto applicabili. Il Responsabile del trattamento, in particolare, si impegna a:

- designare quali amministratori di sistema le figure professionali da individuare e dedicare alla gestione e alla manutenzione di impianti di elaborazione o di loro componenti con cui vengono effettuati trattamenti di dati personali;
- predisporre e conservare l'elenco contenente gli estremi identificativi delle persone fisiche qualificate ed individuate quali amministratori di sistema e le funzioni ad essi attribuite, unitamente all'attestazione delle conoscenze, dell'esperienza, della capacità e dell'affidabilità degli stessi soggetti, i quali devono fornire idonea garanzia del pieno rispetto delle vigenti disposizioni in materia di trattamento, ivi compreso il profilo relativo alla sicurezza;
- fornire il suddetto elenco al Titolare del trattamento, e comunicare ogni eventuale aggiornamento allo stesso;
- verificare annualmente l'operato degli amministratori di sistema, informando il Titolare del trattamento, circa le risultanze di tale verifica;
- mantenere i file di log previsti in conformità alle disposizioni contenute nel provvedimento dell'Autorità Garante sopra richiamato.

## **Sub-responsabile del trattamento**

Per l'esecuzione di specifiche attività di trattamento per conto del Titolare del trattamento e previa autorizzazione scritta specifica da richiedere a quest'ultimo, il Responsabile del trattamento può ricorrere ad altro responsabile (c.d. Sub-responsabile del trattamento). In questi casi il Responsabile del trattamento si obbliga ad imporre per iscritto al Sub-responsabile del trattamento, mediante atto giuridico vincolante, gli stessi obblighi in materia di protezione dei dati personali cui lo stesso è soggetto, in particolare rispetto agli obblighi in materia di sicurezza. Nel caso in cui il Responsabile del trattamento ricorra ad un Sub-responsabile stabilito in un Paese extra-UE, sarà suo onere adottare adeguati strumenti per legittimare il trasferimento ai sensi degli artt. 44 e ss. del GDPR.

Il Titolare del trattamento può chiedere al Responsabile del trattamento:

- il rilascio di copia degli accordi stipulati tra Responsabile e Sub-responsabile del trattamento (omettendo le sole informazioni strettamente confidenziali e gli accordi economici, se del caso);
- l'esperimento di audit nei confronti dei propri Sub-responsabili del trattamento;
- conferma che gli audit sono stati condotti per dimostrare la conformità dei Sub-responsabili del trattamento alla normativa in materia di protezione dei dati personali, nonché alle istruzioni impartite dal Titolare del trattamento.

Il Responsabile del trattamento si impegna espressamente ad informare il Titolare del trattamento di eventuali modifiche riguardanti l'aggiunta o la sostituzione di eventuali Sub-responsabili del trattamento, dandogli così l'opportunità di opporsi a tali modifiche. Il Responsabile del trattamento non può ricorrere ai Sub-responsabili del trattamento nei cui confronti il Titolare del trattamento abbia manifestato la sua opposizione.

Qualora il Sub-responsabile ometta di adempiere ai propri obblighi, il Responsabile del trattamento conserva nei confronti del Titolare del trattamento l'intera responsabilità dell'inadempimento degli obblighi del Sub-responsabile del trattamento. In tutti i casi, il Responsabile del trattamento si assume la responsabilità nei confronti del Titolare del trattamento per qualsiasi violazione od omissione realizzati da un Sub-responsabile del trattamento o da altri terzi soggetti incaricati dallo stesso, indipendentemente dal fatto

## **Data Protection Officer (DPO)**

Il Responsabile del trattamento comunica al Titolare del trattamento il nome e i dati di contatto del proprio Data Protection Officer (DPO), ove designato all'indirizzo: [privacy@ausl.bologna.it](mailto:privacy@ausl.bologna.it)



Tale comunicazione deve contenere il nome del Responsabile del trattamento, l'accordo di riferimento.

Il Titolare del trattamento comunica con la presente i riferimenti del proprio DPO:

[dpo@ausl.bologna.it](mailto:dpo@ausl.bologna.it) (Via Castiglione 29 - 40134 Bologna -BO) - Tel: 051.6584896 - Mobile: 360.1029935

#### **Attività di audit da parte del Titolare del trattamento**

Il Responsabile del trattamento mette a disposizione del Titolare del trattamento tutte le informazioni necessarie per dimostrare il rispetto degli obblighi di cui al presente contratto e della normativa applicabile, consentendo e contribuendo alle attività di revisione, compresi gli audit, realizzati dal Titolare del trattamento o da un altro soggetto da questi incaricato. A tale scopo il Responsabile del trattamento riconosce al Titolare del trattamento, e dai terzi incaricati ai sensi dell'art. 28, par. 3, lett. h) GDPR, il diritto di accedere ai locali di sua pertinenza ove hanno svolgimento le operazioni di trattamento o dove sono custoditi dati o documentazione relativa al presente contratto. In ogni caso il Titolare del trattamento si impegna per sé e per i terzi incaricati da quest'ultimo, a che le informazioni raccolte durante le operazioni di verifica siano utilizzate solo per tali finalità. Tale attività può essere svolta dal Titolare del trattamento nei confronti del Sub-responsabile del trattamento o delegata dal Titolare stesso al Responsabile del trattamento.

Nel caso in cui all'esito degli audit effettuati dal Titolare del trattamento o da terzi incaricati, le misure tecniche, organizzative e/o di sicurezza adottate dal Responsabile del trattamento e/o Sub-responsabile del trattamento risultino inadeguate o, comunque, vengano riscontrate evidenze di violazioni gravi (ad es. la mancata informazione e formazione da parte del Responsabile al trattamento dei dati nei confronti dei propri soggetti autorizzati, la rilevazione di violazione a livello applicativo del sistema fornito) commesse dal Responsabile del trattamento o Sub-responsabile del trattamento dei dati personali, Il Titolare del trattamento ha facoltà di applicare una penale nelle modalità e nei termini stabiliti del accordo. Il rifiuto del Responsabile del trattamento e Sub-responsabile di consentire l'audit al Titolare del Trattamento comporta la risoluzione del contratto.

#### **Trasferimento e trattamento di dati personali fuori dall'Unione Europea**

Il Titolare del trattamento non autorizza il trasferimento dei dati personali oggetto di trattamento al di fuori dell'Unione Europea, salvo casi eccezionali legati alla tipologia contrattuale, per i quali la specifica autorizzazione da richiedere al Titolare del trattamento è sottoposta alla valutazione del DPO.

#### **Conservazione o cancellazione dei dati e loro restituzione**

Al termine delle operazioni di trattamento affidate, nonché all'atto della cessazione per qualsiasi causa del trattamento da parte del Responsabile del trattamento o del rapporto sottostante, il Responsabile del trattamento a discrezione del Titolare del trattamento sarà tenuto a:

- restituire al Titolare del trattamento i dati personali oggetti del trattamento
- provvedere alla loro integrale distruzione, salvi solo i casi in cui la conservazione dei dati sia richiesta da norme di legge od altri fini (contabili, fiscali, ecc.).

In entrambi i casi il Responsabile del trattamento provvederà a rilasciare al Titolare del trattamento apposita dichiarazione per iscritto contenente l'attestazione che presso il Responsabile del trattamento non esista alcuna copia dei dati personali di titolarità del Titolare del trattamento. Il Titolare del trattamento si riserva il diritto di effettuare controlli e verifiche volte ad accertare la veridicità della dichiarazione.

#### **Ulteriori eventuali obblighi, se applicabili in base alla tipologia contrattuale in essere**

Il Responsabile del trattamento:

- provvede al rilascio dell'informativa di cui all'art. 13 del GDPR, qualora il trattamento dei dati oggetto dell'accordo comporti la raccolta di dati personali per conto del Titolare del trattamento da parte del Responsabile del trattamento;
- collabora con il Titolare del trattamento per fornire tempestivamente tutte le informazioni necessarie e/o i documenti utili al fine di soddisfare l'obbligo in capo a quest'ultimo di dare seguito alle richieste degli interessati di cui al Capo III del GDPR (ad es.: esercizio dei diritti di accesso, rettifica, limitazione, opposizione al trattamento dei dati);

- collabora con il Data Protection Officer (DPO) del Titolare del trattamento, provvedendo a fornire ogni informazione dal medesimo richiesta;
- provvede ad informare immediatamente il Titolare del trattamento di ogni richiesta, ordine ovvero attività di controllo da parte dell'Autorità Garante per la protezione dei dati personali o dell'Autorità Giudiziaria;
- coadiuva, se richiesto dal Titolare del trattamento lo stesso nella difesa in caso di procedimenti dinanzi dalla suddette Autorità che riguardino il trattamento dei dati oggetto del contratto. A tal fine il Responsabile del trattamento fornisce, in esecuzione del contratto e, quindi, gratuitamente, tutta la dovuta assistenza al Titolare del trattamento per garantire che la stessa possa rispondere a tali istanze o comunicazioni nei termini temporali previsti dalla normativa e dai regolamentari applicabili.

### **Responsabilità e manleve**

Il Responsabile del trattamento tiene indenne e manleva il Titolare del trattamento da ogni perdita, costo, sanzione, danno e da ogni responsabilità di qualsiasi natura derivante o in connessione con una qualsiasi violazione da parte del Responsabile del trattamento delle disposizioni contenute nel presente accordo.

A fronte della ricezione di un reclamo relativo alle attività oggetto del presente accordo, il Responsabile del trattamento:

- avverte, prontamente ed in forma scritta, il Titolare del trattamento del reclamo ricevuto;
- non fornisce dettagli al reclamante senza la preventiva interazione con il Titolare del trattamento;
- non transige la controversia senza il previo consenso scritto del Titolare del trattamento;
- fornisce al Titolare del trattamento tutta l'assistenza che potrebbe ragionevolmente richiedere nella gestione del reclamo.

A fronte della ricezione di un reclamo relativo alle attività oggetto del presente accordo, il Responsabile del trattamento contatterà tempestivamente il Titolare del trattamento attendendo specifiche istruzioni sulle azioni da intraprendere.

Allegati n. 2

ALLEGATO 1: DESCRIZIONE DELLE ATTIVITÀ DI TRATTAMENTO

ALLEGATO 2: ISTRUZIONI PER IL RESPONSABILE DEL TRATTAMENTO DEI DATI PERSONALI

**ALLEGATO A**

**QUESTIONARIO**

ID	Fornitura del servizio di analisi dei tamponi per l'accertamento del nuovo coronavirus COVID 19	SI/NO	note
1	I sistemi utilizzati (strumentazione e materiale) devono essere certificati IVD ai sensi della direttiva CE 98/79		
2	La tecnica deve essere di tipo molecolare (rilevazione RNA - RT-PCR) con amplificazione contemporanea dei geni secondo le indicazioni di ISS e Min Salute		indicare i geni amplificati
3	Il laboratorio deve essere certificato o accreditato e deve essere presente nell'elenco dei laboratori autorizzati all'esecuzione dei test molecolari COVID 19 Disponibilità a fornire, su richiesta dell'amministrazione, evidenze sulla qualità del prodotto (controlli qualità interni, VEQ, confronti Interlab)		allegare dichiarazioni
4	Di aver letto e preso visione delle indicazioni contenute nei documenti nei file classificati Allegato B- InterfacciamentoLabEsterni_1, Allegato C- nl-hl7-ip-hl725msg e Allegato D- nl-hl7-ip-usecases		
	Di garantire l'applicazione delle indicazioni contenute nei documenti sopracitati entro la data di attivazione del servizio		
5	Di precisare l'organizzazione del lavoro è la seguente: da lunedì a venerdì (indicare l'orario): sabato (indicare l'orario): Se contemplato dall'organizzazione del lavoro, Domenica e festivi (indicare l'orario):		
6	Di accettare tutte le condizioni contenute nei documenti di gara ed nello specifico le penali in caso di ritardata consegna del referto		
7	Indirizzo del Laboratorio dove vengono analizzati i tamponi (distanza da Bologna non superiore a 200 km, pena l'esclusione)		

**Fornitura di sistemi completi e relativo materiale di consumo dedicato per rilevamento del RNA de**  
**Durata: 6 mesi con ulteriore possibile rinnovo di ulteriori 3 + 3 mesi**

**Valutazione: la tipologia di fornitura richiede la presenza di almeno due tipologie di sistemi: di conseguenza è prevista l'aggiudicazione per il primo e secondo classificato, con possibilità di chiedere anche al terzo classificato la disponibilità in caso di crescente fabbisogno/carenze dei primi due classificato.**

**La graduatoria verrà fatta sulla base di**

**1) Rispondenza ai requisiti minimi richiesti (entro fine ottobre fornitura per almeno 700 test/giorno; entro novembre completamento fornitura - 1500 test/giorno)**

**2) Minor prezzo**

Sistema analitico completo per il rilevamento del RNA del virus SARS COV 2 con tecnica RT -PCR con

- 1) esecuzione di almeno 1500 test nelle 16 ore (esclusi di controlli calibrazioni) con
- 2) Qualora i sistemi proposti siano da banco devono essere completi di adeguato su
- 3) Massima automazione e minima manipolazione da parte dell'operatore

4) collegamento al LIS con tracciabilità completa dal campione primario mediante riconoscimento del barcode , tracciabilità di tutte le fasi intermedie fino al dato in refertazione attraverso software interpretativo

5) Flessibilità del sistema in grado di eseguire anche test di screening per i virus resp

6) L'intero processo, dalla estrazione alla produzione dei risultati *non deve essere superiore a 270 minuti per il primo ciclo di lavoro*; la produttività nelle 16 ore può essere garantita con più strumenti

- 7) Amplificazione contemporanea dei 3 geni di riferimento includendo RdRp
- 8) Compatibilità con i sistemi di tampone ora in uso (eNat, UTM ref 358C)
- 9) Certificazione CE IVD *del sistema proposto*

10) *Disponibilità consegna anche frazionabile con prima consegna entro il mese di ottobre 2020 per garantire produttività di almeno 700 test/giorno nelle 16 ore e completamento fornitura entro il mese di novembre 2020 per garantire la produttività complessiva di 1500 test/giorno nelle 16 ore*

- 11) *Garanzia di fornitura del materiale consumabile e reagenti necessari alla esecuzione*
- 12) *Disponibilità a formazione del personale*
- 13) *Garantire assistenza tecnica con risoluzione del problema (eventuale sostituzione*

*La ditta dovrà presentare: risposta ai questionari, dati tecnici e schede tecniche prodo*

**I Virus SARS - Cov-2 con tecnica RT-PCR su campioni respiratori delle alte e basse vie da installare presso il**

le seguenti caratteristiche:  
caratteristiche di massima flessibilità e minimo ingombro.  
pporto.

iratori (FLUA/B)

*one di suddetti test per l'intero periodo contrattuale*

*dei dispositivi componenti guaste) entro 24h solari dalla richiesta*

*tti e requisiti installazione strumenti.*



# Interfacciamento dei laboratori che esternamente alle aziende sanitarie processano Tamponi per la rilevazione del COVID-19

## Versione e stato dal documento

Versione del documento	Versione 0.2
Data di redazione del documento	09/12/2020
Redattore del documento	Servizio Tecnologie Informatiche e di comunicazione dell'Azienda USL di Bologna

## Sommario

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## Scenario

In questo paragrafo si descrive un tipico scenario in cui un laboratorio analisi di una Azienda Sanitaria X si avvale di un laboratorio esterno Y per la effettuazione di un sottoinsieme di esami, in particolare la processazione di tamponi COVID.

In questo contesto si prendono in esame i tamponi COVID.19, ma il caso può essere facilmente generalizzato altri tipi di indagine.

Lo scenario può essere così schematizzato:

1. L'Azienda Sanitaria X della Regione Emilia Romagna richiede l'effettuazione di un tampone per un certo paziente, in una certa data; il tampone dovrà essere processato presso il laboratorio analisi esterno Y;
2. Nella data prevista per l'effettuazione del tampone - o in data immediatamente precedente -, vengono stampate le etichette idonee ad essere processate dal laboratorio esterno Y e vengono apposte sugli appositi contenitori;
3. Vengono inviati i campioni al laboratorio esterno Y;
4. Il laboratorio esterno Y restituisce i referti alla azienda sanitaria X, sia sotto forma di dati strutturati che sotto forma di documento PDF.

Il passo 1) sarà portato a termini con il sistema di gestione delle richieste in uso nella Azienda X.

La stampa delle etichette dovrà poter essere fatta collegandosi al sistema WEB del Laboratorio Esterno Y e dovrà poter essere effettuata da una stazione di lavoro della Azienda X che si colleghi in

internet e che disponga di una stampante ZEBRA per etichette ed eventualmente di una Java Virtual Machine in versione ultima stabile – non versioni precedenti della Java Virtual Machine -.  
ATTENZIONE: il sistema proposto per la stampa delle etichette deve obbligatoriamente, a pena di inadempienza contrattuale, poter funzionare in multiutenza, in contemporanea fra più stazioni sparse sul territorio aziendale dell'Azienda USL bolognese.

NOTA BENE: costituirà elemento favorevolmente valutato la possibilità per il laboratorio esterno Y di accettare provette identificate da etichette direttamente prodotte dall'azienda USL di Bologna mediante il sistema in uso di accettazione campioni del laboratorio analisi AUSL BO. In altri termini sarà favorevolmente valutato il laboratorio esterno Y che abbia la possibilità di processare campioni etichettati con etichette di AUSL BO con range di numeri opportunamente lottizzato da convenire.

I campioni di cui al passo 3), correttamente etichettati, vengono fisicamente inviati al laboratorio esterno Y.

Il laboratorio esterno Y, una volta che avrà processato i campioni pervenuti, restituirà gli esiti con un flusso HL7, così come descritto nel punto 4).

Il sistema di laboratorio dell'Azienda X, ricevuto il risultato in forma strutturata dal Laboratorio Esterno Y, provvede a confezionare un referto a validazione automatica e ad inviarlo alla rete regionale SOLE/FSE, oltre che ad instradarlo al sistema informativo aziendale della Azienda X nelle modalità usuali di processazione dei risultati di laboratorio analisi.

Nel referto prodotto dalla Azienda Sanitaria X comparirà una dicitura del tipo “Esame eseguito presso il laboratorio Esterno Y” ad indicare il laboratorio di produzione del risultato.

Il sistema di laboratorio della Azienda sanitaria X memorizzerà i PDF restituiti dal laboratorio Analisi esterno per documentazione e future verifiche.

## Specifiche di interoperabilità

Per gli scambi informativi descritti nel paragrafo denominato “Scenario” si utilizzeranno i seguenti messaggi HL7:

1. Invio richiesta di esecuzione tampone dall'Azienda X al Laboratorio esterno Y: MSG HL7 OML\_O21;
2. Ricezione di risultati strutturati da Laboratorio Esterno Y ad Azienda X : MSG HL7 OUL\_R22;
3. Ricezione referto PDF da Laboratorio Esterno Y ad Azienda X: MSG HL7 MDM\_T02.

La stampa delle etichette avverrà da stazioni di lavoro poste nella Azienda X, con accesso internet, eventualmente dotate di Java Virtual Machine nella versione stabile più aggiornata e dotate di stampante Zebra per etichette.

Non sarà accettabile la richiesta di dotare la stazione di lavoro di versioni meno recenti della Java Virtual Machine o l'installazione di software client particolari e/o proprietari.

## Specifiche di dettaglio della messaggistica HL7

Parte integrante della presente documentazione sono i due file:

- nl-hl7-ip-usecases.pdf - descrizione dettagliata dei messaggi HL7;



- nl-hl7-ip-hl725msg.pdf -descrizione dei casi d'uso e relativa struttura del messaggio HL7.

Tali documenti, forniti sotto la condizione di NON DISCLOSURE AGREEMENT, contengono specifiche tecniche di dettaglio dei messaggi richiamati nel presente documento.

I documenti di specifica sono di proprietà della ditta Dedalus che fornisce i sistemi gestionali di laboratorio analisi della quasi totalità delle aziende sanitarie della Regione Emilia Romagna. I sistemi di laboratorio non forniti dalla ditta Dedalus sono forniti dalla Ditta Engineering.

Tutte le aziende della regione si atterranno alle modalità di interfacciamento descritte nel presente documento e nei relativi allegati.

# **NoemaLife HL7 Integration Policy**

## **HL7 2.5 Segments Definition**

**Davide Musiani  
Francesco Masotti**

---

# **NoemaLife HL7 Integration Policy: HL7 2.5 Segments Definition**

by Davide Musiani and Francesco Masotti

Version number: HEAD - Build number: 726 (2016-11-07\_01-05-59) - Source code revision: 104016

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# Chapter 1. Preface

## 1. Purpose of this document

The aim of this document is to specify the structure of the HL7 v2.5 segments used by the HL7 messages described in the integration use cases.

Just like any software artifact, this document will be fixed, updated and tested as needed. Any feedback is welcome.

## 2. How to read this document

Aside the first sections, this document leans to a double purpose of giving all the informations that are needed at the first time and, subsequently, be accessed as a reference manual. To this sake, we will follow a bottom-up approach, which also allows to jump back and forth in the document, examining specific subjects once at a time.

The document *NoemaLife HL7 Integration Policy - Use Cases and Integration Scenarios* [NL-HL7-IP-UC] is meant to add to this one all of the functional informations and specifications related to use cases definition, and must be considered an integral part of the NoemaLife HL7 Integration Policy.

*Note:* For more informations concerning localizations for CRS-SISS regional project, refer to CRS-SISS technical documentation [CRS-SISS-HL7]

## 3. Intended audience

This document should be read by anyone having some role within:

- the software production and maintenance process (analysts and developers), in order to have a common basis between all NoemaLife products for "internal" legacy integrations amongst products
- the cutomers' projects deployment of internal legacy integrations, to understand their logics and features.

## 4. Compliance against this document

As of this writing a wide variety of projects is in progress within the NoemaLife group. This document is binding for all the projects started from the final release of this document; projects that are already active are expected to tend to this specification and possibly schedule converging activities.

## 5. Future directions

No specific issues, at present.

## 6. Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, and “MAY” in this document are to be interpreted as described in *RFC 2119* [RFC-2119].

## 7. Changes log

Revision History

Revision **HEAD (0.6 RC)** (under development) Davide Musiani

- Segment IAM added for advanced allergies support
- Segment RXO added for Pharmacy/Treatment order details
- Segment RXR added for Pharmacy/Treatment management, administration route definition

- Added new specific version of NTE segment for Pharmacy/Treatment management
- Extended TQ1 segment definition to fit Pharmacy/Treatment management needs
- ORC segment changes:
  - Added new specialization of ORC segment for Pharmacy/Treatment management
  - Introduced in ORC-12 field the use of XCN.4 (Second and Further Given Names or Initials), when available

Revision **0.5.1**

**14 May 2013**

Davide Musiani

- BLG segment changes:
  - The use of segment BLG is now recommended in all messages where is has been included (OMG^O19, OML^O21 and OML^O33).
- OBR segment changes:
  - OBR for Laboratory Testing Management, OBR-4: better specified the use of alternate identifier (required only for Order Result Management scenario)
- ORC segment changes:
  - Introduced in ORC for Document Management the use of ORC-4 (Placer Group Number), when available
- TQ1 segment changes:
  - Segment format has been unified (no more dedicated formats for Document Management, Order Management and Laboratory Testing Management)
- TXA segment changes:
  - TXA-14 may include the Placer Order Number or the Placer Group Number, according to circumstances.

Revision **0.5.0**

**14 March 2013**

Davide Musiani Francesco Masotti

- PID segment changes:
  - PID-3, repetition "HC": better specified that the repetition is used only for Card Identification Number (CIN) of the EHS Card [IT: TEAM Card].
  - PID-3, CX.4, repetition "HC": generalized the use of HD.1 and HD.2 subfields for non-italian institutions.
  - PID-3, CX.6, repetition "HC": the Nation Code is now ISO 3166 alpha-2 (formerly alpha-3), for better compliance with EHS Card data [IT:TEAM Card].  
  
Note that in all other cases where ISO 3166 nation codes are adopted, the alpha-3 version is used. PID-3 CX.6 is the only exception.
  - PID-3: added picture of EHS Card [IT: TEAM Card] with explanation of fields transmitted in HL7 messages.
  - PID-3: added management of repetition "PN" to manage the Person Identification Number (PIN) of the EHS Card [IT: TEAM Card].
  - PID-3, usage clarification of CX.7 (Effective Date) and CX.8 (Expiration Date)
  - PID-5, XPN.14 (Professional Suffix) changed from Loc CRS-SISS to Loc IT (CRS-SISS codings have been adopted as standard)
  - PID-26: Citizenship coding requirements have been relaxed; now it is not necessary to transmit both ISO 3166 alpha-3 and ISTAT code but is enough one of the two.
  - PID-32, changed from Loc CRS-SISS to Loc IT (CRS-SISS specifications have been adopted as standard)

- PID-34: separation in two distinct subfields of concepts: 'Last update application' and 'Source of demographic data'
- PD1 segment changes:
  - PD1-4 field , removed (previously used as Loc CRS-SISS for 'Data Decorrenza/Scadenza iscrizione AUSL')
- PV1 segment changes:
  - PV1-3, PL.10 changed from Loc CRS-SISS to Loc IT (CRS-SISS specifications have been adopted as standard)
  - PV1-7, PV1-8, PV1-17: more repetitions of doctor are allowed, but only to transmit different identifiers of the same doctor
- PV2 segment changes:
  - Introduced the use of PV2.31 (Recurring Service Code) instead of EVN-4 to transmit information related to the type of event in Short-stay encounters.
- EVN segment changes:
  - Changed the usage of EVN-4, now containing the HL7 event type of the message to be modified by an ADT^A08 message. Information previously transported in EVN-4 has been moved to PV2.31 (Recurring Service Code).
- NK1 segment changes:
  - NK1-11: enhanced codings for job type and job sector
  - NK1-34: enhanced codings for job status
- OBR segment changes:
  - OBR for Document and Order Management: OBR-18 changed to standard 'Physician Prescription Identifier'
  - OBR for Laboratory Testing Management, OBR-16: more repetitions of doctor are allowed, but only to transmit different identifiers of the same doctor
- ORC segment changes:
  - ORC for Document Management: ORC-8 changed from Loc CRS SISS to standard 'Order Booking Identifier'
  - ORC for Document and Order Management:
    - ORC-25 changed from Loc CRS-SISS to Loc IT (CRS-SISS specifications have been adopted as standard)
    - ORC-25, separation in two distinct subfields of concepts: 'Stato erogazione della prestazione' and 'Notifica evento a sistema esterno'
  - ORC for Order and Laboratory Testing Management, ORC-12: more repetitions of doctor are allowed, but only to transmit different identifiers of the same doctor
- TQ1 segment changes:
  - TQ1 for Document Management: TQ1-2 changed from Loc CRS-SISS to standard 'Quantity of supplied observation'
- TXA segment changes:

- TXA-2, standard value list merged with localized value lists. New document types added: 'Evaluation Notes', 'Medical Sickness Certificate' and 'Pathology Information Collection Report'
- TXA-9: more repetitions of doctor are allowed, but only to transmit different identifiers of the same doctor
- TXA-12, TXA-13: removed CRS-SISS localization for the identifier of the structured document.
- TXA-20, extended possible values to easily satisfy CRS-SISS requirements
- TXA-21 is now a required field
- TXA-22, more repetitions are introduced to allow different authenticators for the clinical document and the privacy document (DAO document in CRS-SISS projects). Also the date-time of the legal timestamp (Marca Temporale) is supported.
- DG1 segment changes:
  - DG1-17: more repetitions of doctor are allowed, but only to transmit different identifiers of the same doctor
- OBX segment changes:
  - OBX for Laboratory Testing Management, OBX-16: more repetitions of doctor are allowed, but only to transmit different identifiers of the same doctor
  - OBX for Document Management: OBX-3, removed CRS-SISS localization for physical document type in CE.6 (mapped to MIME subtypes in OBX-5.3)
  - OBX for Document Management: OBX-11, added 'LA' value for Legally Authenticated document
- MSA segment changes:
  - MSA-3 usage has been redefined in order to guarantee backward compatibility

Revision **0.4.0**

**11 January 2013**

Davide Musiani , Francesco Masotti

- MSH segment changes:
  - MSH-21 references the revision number of the *NoemaLife Integration Policy specifications*; the field is now Required
- PID segment changes:
  - PID-11 field: extended XAD.4 length to 3 chars for "ISTAT Regione" (Loc IT).
- PV1 segment changes:
  - PV1-3 field, changes for Loc CRS-SISS: 'Azienda Ospedaliera' in PL-10 and 'Struttura Conservazione Documento' in PL.11
  - PV1-19 field, CX.6 and CX.10 used for Loc SOLE requirements.
- PV2 segment changes:
  - Added new field PV2-8, "Expected Admission Date/Time"
  - Added new field PV2-9, "Expected Discharge Date/Time"
  - Added new field PV2-12, "Visit Description"
- ORC segment changes:
  - ORC for Document Management: ORC-3 has been declared as "required", ORC-2 as "required conditional"

- OBR segment changes:
  - New repetition has been introduced in OBR-46 to allow transmission, in Placer Order Management scenarios, of patients call-order identifier (queue processing order and patient anonymity during calls)
  - Modified the format of OBR-24 for Laboratory testing Management for an easier implementation in DNLab
  - Informed Consent moved from OBR-39 to OBR-46
  - Extended use of OBR-46 to specify the Agenda Code where a required service has been booked
  - In Laboratory Testing Management, field OBR-6 Requested Date/Time (containing *dtmdataaccettazione* for DNLab) has been moved to, TQ1-7
  - Suspected diagnosis has been moved from OBR-13 to OBR-31, and diagnosis code can be specified (e.g. ICD9 code)
  - OBR for Document Management: OBR-3 has been declared as "required", OBR-2 as "required conditional"
- TXA segment changes:
  - Extended possible values in TXA-21 for a better and easier compliance with CRS-SISS project
- OBX segment changes:
  - Table 0291, used during documents transmission for values in OBX-5 ED-3 (the document structure and format), has been extended to include custom MIME subtypes used in Noemalife projects (e.g. SISS and SOLE XML CDA enveloped formats, etc.)
  - OBX-7 for Laboratory Testing Management: extended the use to unformatted strings for representing reference values for non-numeric results
  - OBX-7 for Laboratory Testing Management: extended the use for representing EUCAST's MicS, MicR and Wild Type cut-off values
  - OBX-8 for Laboratory Testing Management: introduced management of repetitions to allow management of EUCAST's "Wild Type alert" flag.
  - OBX-11 for Laboratory Testing Management: added the result status "P" (Preliminary result)
  - Extended the use of OBX-17 for transmitting comments related to an identified microorganism or an antibiotic
  - Clarifications on usage of OBX-5 and OBX-8 in case of antibiotics testing (Laboratory Testing Management scenario).

Revision **0.3.0**

**28 September 2012**

Davide Musiani , Francesco Masotti

- Improved management of LIS result (DNLab "risultato corto") and LIS result comment (DNLab "risultato lungo") by better specifying the usage of OBX-2, OBX-5 and OBX-17
- Introduced the usage of OBX.10 in Laboratory Observation Result Management to easily identify the OBX segment carrying Antibiotic testing results
- Fixed TXA-20 and EVN-4 values for document messages in SISS environment
- Fixed OBX-5 description for Laboratory Results Management (wrong pointer to field structure in case data type = CE)

Revision **0.2.0**

**28 June 2012**

Davide Musiani , Francesco Masotti

FIRST OFFICIAL RELEASE

Revision **0.1.0**

**21 May 2012**

Davide Musiani , Francesco Masotti

RequestForComment version (RFC)

# Chapter 2. HL7 Messages definition conventions

This chapter explains the rules and conventions adopted in tables describing the HL7 2.5 segments' structure.

## 1. Segments and Fields description conventions

Column "#"	Represents the standard HL7 2.5 SEQ (sequence) number (ordinal position of field in segment).
Column "Name"	Standard HL7 2.5 field's name
Column "Set"	This column merges two information that usually are separated in HL7 segments definitions: field optionality and field repeatability.

**Table 2.1. Optionality types**

SET	Meaning	Description
R	mandatory	
RE	mandatory if available/recommended	The element may be missing from the message, but it is recommended that the sending application transmit the information if available
RC	conditional mandatory	field item <i>mandatory</i> if condition laid out in Description column is true, else <i>optional</i>
O	optional	
OC	conditional optional	field item <i>optional</i> if condition laid out in Description column is true, else <i>ignored</i>
n/a	ignored	the field is ignored

Information related to repeatability of fields is added as a suffix to optionality codes using the following syntax:

No suffix	field is not repeatable
..N	field is repeatable to a maximum of N times
..*	field is repeatable an unlimited number of times

### Example 2.1. Examples of optionality and repeatability syntax

R	Required field, not repeatable
O..2	Optional field, repeatable to a maximum of 2 times
RC..*	Field required under specific conditions (exposed in column "Description"), repeatable an unlimited number of times

Column "Description"	This column explains the usage and content of the field in details. Whenever needed, the field is structured in specific sections whose meaning is explained hereafter. If information related to the field is complex, a link to external specific sections/paragraphs MAY be given.
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Section "Format"	<p>Includes specific representation formats and structures the data <b>MUST</b> adhere and comply (e.g. date format "YYYYMMDD").</p> <p>Simple format is expanded inline inside the table, otherwise a link is provided to the field structure inside the Field definition section</p>
Section "Conditions"	<p>Explains conditions of usage or optionality of the field (e.g. PV1.2 = I)</p>
Section "Values"	<p>Specifies directives on values to set in the field, like values of sub-components, possible coded values, references to external sources defining the possible values (e.g. laws, standards, etc.).</p> <p>In case of composite fields, the value is intended to be assigned to the first component, if not stated differently.</p> <p>When value lists are applicable, they are expanded inline when having a short length, otherwise a link is provided to the table content inside the Table definition section</p>
Section "Loc"	<p>Explains values or usages that must be used in specific localizations (usually national or regional). Where possible, the nation code is expressed as ISO-3166 Alpha-3 format. For example, <i>Loc ITA</i> stands for Italian localization; <i>Loc CRS-SISS</i> stands for localization for Regione Lombardia regional project; <i>Loc SOLE</i> stands for localization for Regione Emilia-Romagna regional project.</p> <p>National or Regional localizations may be described in the national language for better comprehension.</p>

## 2. Exclusions and exceptions

- In segments definition tables included in the next chapters, **fields that are not explicitly mentioned MUST be considered as not supported.**
- Where not explicitly defined, the length of fields is intended to adhere to HL7 standard specifications (column "LEN" of standard HL7 tables). Nonetheless, upon specific needs and approved local agreement, different values MAY be adopted



# Chapter 3. AL1 - Allergy

The AL1 segment contains patient allergy information of various types. Each AL1 segment describes a single patient allergy

## 1. Segment definition

#	Name	Set	Description																
01	Set ID - AL1	R	Identifier of each occurrence of the segment																
02	Allergen Type Code	O	<p>This field indicates a general allergy category (drug, food, pollen, etc.).</p> <p><b>Values:</b> CE.1=Allergen type code. <i>ValueList</i> &lt;see below&gt;. <b>Req</b></p> <p>CE.2=Allergen type description</p> <p>CE.3=<i>Constant</i>: HL70127 <b>Req</b>.</p> <p><b>Table 3.1. User Table 0127 - Allergen Type</b></p> <table border="1"> <tbody> <tr> <td>DA</td> <td>Drug Allergy</td> </tr> <tr> <td>FA</td> <td>Food Allergy</td> </tr> <tr> <td>MA</td> <td>Miscellaneous allergy</td> </tr> <tr> <td>MC</td> <td>Miscellaneous contraindication</td> </tr> <tr> <td>EA</td> <td>Environmental Allergy</td> </tr> <tr> <td>AA</td> <td>Animal Allergy</td> </tr> <tr> <td>PA</td> <td>Plant Allergy</td> </tr> <tr> <td>LA</td> <td>Pollen Allergy</td> </tr> </tbody> </table>	DA	Drug Allergy	FA	Food Allergy	MA	Miscellaneous allergy	MC	Miscellaneous contraindication	EA	Environmental Allergy	AA	Animal Allergy	PA	Plant Allergy	LA	Pollen Allergy
DA	Drug Allergy																		
FA	Food Allergy																		
MA	Miscellaneous allergy																		
MC	Miscellaneous contraindication																		
EA	Environmental Allergy																		
AA	Animal Allergy																		
PA	Plant Allergy																		
LA	Pollen Allergy																		
03	Allergen Code/Mnemonic/Description	R	<p>This field uniquely identifies a particular allergen. This element may conform to some external, standard coding system (that must be identified), or it may conform to local, largely textual or mnemonic descriptions</p> <p><b>Values:</b> CE.1=Allergen code.</p> <p>CE.2=Allergen description</p> <p>CE.3=Name of coding system. <i>ValueList</i>: User Table 0396 - Coding System <b>Req</b> if CE.1 &lt;&gt; null</p>																
04	Allergy Severity Code	O	<p>This field indicates the general severity of the allergy</p> <p><b>Values:</b> CE.1=Severity code. <i>ValueList</i> &lt;see below&gt;. <b>Req</b></p> <p>CE.2=Severity description</p> <p>CE.3=<i>Constant</i>: HL70128 . <b>Req</b></p> <p><b>Table 3.2. User Table 0128 - Allergy Severity</b></p> <table border="1"> <tbody> <tr> <td>SV</td> <td>Severe</td> </tr> <tr> <td>MO</td> <td>Moderate</td> </tr> <tr> <td>MI</td> <td>Mild</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> </tbody> </table>	SV	Severe	MO	Moderate	MI	Mild	U	Unknown								
SV	Severe																		
MO	Moderate																		
MI	Mild																		
U	Unknown																		

AL1 - Allergy

#	Name	Set	Description						
			<table border="1"> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>DL</td> <td>Pericolo di vita</td> </tr> <tr> <td>DE</td> <td>Morte</td> </tr> </table>	<b>Loc ITA</b>		DL	Pericolo di vita	DE	Morte
<b>Loc ITA</b>									
DL	Pericolo di vita								
DE	Morte								
05	Allergy Reaction Code	O	Description of the specific allergic reaction that was documented						

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# Chapter 4. BLG - Billing segment

The BLG segment is used to provide billing information, on the ordered service, to the filling application.

## 1. Segment definition

### 1.1. BLG for Order Management and Laboratory Testing Management

#### Note

At present, BLG segment is **not actually used for the purpose of transmitting billing information**, as it is ment to, but rather to resolve a well-known HL7 messages' ambiguity.

In particular, the definition of messages OMG^O19, OML^O21 and OML^O33<sup>1</sup> includes the "ORDER\_PRIOR" group of segments, used for the transmission of previous results. Several HL7 gateways may experience problems in parsing the above-mentioned messages, confusing the normal "ORDER" groups of segments with "ORDER\_PRIOR" groups. To workaround this problem, a **"dummy" segment** may be added at the end of "ORDER" groups, to force the correct segments parsing and segments groups recognition; in NoemaLife HL7 Integration Policy it has been decided to use a "fake" BLG segment to this sake.

Despite the segment is optional in use cases' messages definitions, its use is RECOMMENDED.

#	Name	Set	Description						
02	Charge Type	RC	<table border="1"><tr><td><b>Values:</b></td><td>ZZ</td><td>States that the BLG is just a "dummy" segment to allow correct message parsing, and any data in it MUST NOT be used for any other purpose.</td></tr><tr><td><b>Conditions:</b></td><td colspan="2">Required when orders' messages parsing issues arise, due to ORDER_PRIOR group misunderstanding and wrong parsing</td></tr></table>	<b>Values:</b>	ZZ	States that the BLG is just a "dummy" segment to allow correct message parsing, and any data in it MUST NOT be used for any other purpose.	<b>Conditions:</b>	Required when orders' messages parsing issues arise, due to ORDER_PRIOR group misunderstanding and wrong parsing	
<b>Values:</b>	ZZ	States that the BLG is just a "dummy" segment to allow correct message parsing, and any data in it MUST NOT be used for any other purpose.							
<b>Conditions:</b>	Required when orders' messages parsing issues arise, due to ORDER_PRIOR group misunderstanding and wrong parsing								

---

<sup>1</sup>In OML^O35 too, not currently used in NoemaLife integration policy

# Chapter 5. DG1 - Diagnosis

The DG1 segment contains patient diagnosis information of various types, for example, admitting, primary, etc.

## 1. Segment definition

#	Name	Set	Description										
01	Set ID - DG1	R	Identifier of each occurrence of the segment										
02	Diagnosis Coding Method	n/a	Deprecated. Use DG1-3.										
03	Diagnosis Code - DG1	R	<p>Code assigned to the diagnosis</p> <p><b>Format:</b> CE.1=Diagnosis Code.</p> <p>CE.2=Diagnosis Description</p> <p>CE.3=Name of Coding system. <i>ValueList:</i> &lt;see below&gt; <b>Req if CE.1</b> &lt;&gt; null</p> <table border="1"> <tr> <td>I10</td> <td>ICD-10</td> </tr> <tr> <td>I10P</td> <td>ICD-10 Procedure Codes</td> </tr> <tr> <td>I9</td> <td>ICD-9</td> </tr> <tr> <td>I9C</td> <td>ICD-9CM</td> </tr> <tr> <td>99zzz or L</td> <td>Local general code</td> </tr> </table> <p>(Ref. User Table 0396 - Coding System )</p>	I10	ICD-10	I10P	ICD-10 Procedure Codes	I9	ICD-9	I9C	ICD-9CM	99zzz or L	Local general code
I10	ICD-10												
I10P	ICD-10 Procedure Codes												
I9	ICD-9												
I9C	ICD-9CM												
99zzz or L	Local general code												
04	Diagnosis Description	n/a	Deprecated. Use DG1-3.										
05	Diagnosis Date/Time	O	<p>This field contains the date/time that the diagnosis was determined.</p> <p><b>Format:</b> YYYYMMDD[HH[MM[SS]]]</p>										
06	Diagnosis Type	O	<p>This field contains a code that identifies the type of diagnosis being sent</p> <p><b>Values:</b> <b>Table 5.1. User Table 0052 - Diagnosis Type</b></p> <table border="1"> <tr> <td>A</td> <td>Admitting [IT: Diagnosi di ammissione]</td> </tr> <tr> <td>W</td> <td>Working [IT: Non definitiva]</td> </tr> <tr> <td>F</td> <td>Final [IT: Diagnosi di dimissione]</td> </tr> <tr> <td>C</td> <td>Chronic [IT: In caso di patologia conclamata]</td> </tr> </table>	A	Admitting [IT: Diagnosi di ammissione]	W	Working [IT: Non definitiva]	F	Final [IT: Diagnosi di dimissione]	C	Chronic [IT: In caso di patologia conclamata]		
A	Admitting [IT: Diagnosi di ammissione]												
W	Working [IT: Non definitiva]												
F	Final [IT: Diagnosi di dimissione]												
C	Chronic [IT: In caso di patologia conclamata]												
15	Diagnosis Priority	OC	<p>Number that identifies the significance or priority of the diagnosis code</p> <p><b>Values:</b> <b>Table 5.2. HL7 Table 0359 - Diagnosis Priority</b></p> <table border="1"> <tr> <td>0</td> <td>Not included in diagnosis ranking [IT: diagnosi di ammissione]</td> </tr> <tr> <td>1</td> <td>Primary diagnosis</td> </tr> <tr> <td>2,..</td> <td>For ranked secondary diagnosis</td> </tr> </table> <p><b>Conditions:</b> DG1-6=F</p>	0	Not included in diagnosis ranking [IT: diagnosi di ammissione]	1	Primary diagnosis	2,..	For ranked secondary diagnosis				
0	Not included in diagnosis ranking [IT: diagnosi di ammissione]												
1	Primary diagnosis												
2,..	For ranked secondary diagnosis												

#	Name	Set	Description										
16	Diagnosis Clinician	O..*	<p>Contains the doctor responsible for generating the diagnosis information.</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p><b>Format:</b> XCN.1=Doctor identifier. <b>Req.</b></p> <p>XCN.2=Doctor Surname <b>Recomm.</b></p> <p>XCN.3=Doctor Forename <b>Recomm.</b></p> <p>XCN.13=Doctor identifier Type. <b>Req.</b></p> <p><b>Values:</b></p> <table border="1"> <tr> <td>NN</td> <td>National Personal Identifier</td> </tr> <tr> <td>RRI</td> <td>Regional Registry ID</td> </tr> <tr> <td>LR</td> <td>Local Registry ID (<i>Not Compliant CRS-SISS</i>)</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>NNITA</td> <td>Tax Code</td> </tr> </table> <p>(Ref. HL7 Table 0203 - Identifier Type: IT)</p>	NN	National Personal Identifier	RRI	Regional Registry ID	LR	Local Registry ID ( <i>Not Compliant CRS-SISS</i> )	<b>Loc ITA</b>		NNITA	Tax Code
NN	National Personal Identifier												
RRI	Regional Registry ID												
LR	Local Registry ID ( <i>Not Compliant CRS-SISS</i> )												
<b>Loc ITA</b>													
NNITA	Tax Code												
20	Diagnosis Identifier	RC	<p>This field contains a value that uniquely identifies a single diagnosis for an encounter</p> <p><b>Format:</b> EI.1=Unique Diagnosis identifier for an encounter. <b>Req.</b></p> <p>EI.3=Identifier of event/movement to which the Diagnosis belongs</p> <p><b>Conditions:</b> <i>Event=Update Diagnosis/Procedures</i></p>										
21	Diagnosis Action Code	RC	<p>This field defines the action to be taken for this diagnosis</p> <p><b>Values:</b> <b>Table 5.3. HL7 Table 0206 - Segment Action Code</b></p> <table border="1"> <tr> <td>A</td> <td>Add</td> </tr> <tr> <td>U</td> <td>Update</td> </tr> <tr> <td>D</td> <td>Delete</td> </tr> </table> <p><b>Conditions:</b> <i>Event=Update Diagnosis/Procedures</i></p>	A	Add	U	Update	D	Delete				
A	Add												
U	Update												
D	Delete												

**Example 5.1. Sample DG1 segment**

- *Diagnosis Type*: Final diagnosis, Primary
- *Diagnosis Code* : 155.0
- *Diagnosis description*: Malignant neoplasm of liver primary,
- *Diagnosis coding system*: ICD-9-CM

DG1|001||155.0^Malignant neoplasm of liver primary^I9C||19880501103005|F|||||||1

# Chapter 6. ERR - Error

The ERR segment is used to add error comments to acknowledgment messages.

## 1. Segment definition

#	Name	Set	Description						
03	HL7 Error Code	R	<p>Identifies the HL7 (communications) error code</p> <p><b>Format:</b> CWE.1=HL7 error code. <i>ValueList:</i> <u>HL7 Table 0357 - Message Error Condition Codes</u>. <b>Req.</b></p> <p>CWE.2=HL7 error description</p> <p>CWE.3=Coding System. <i>Constant:</i> HL70357. <b>Req.</b></p>						
04	Severity	R	<p>Identifies the severity of an application error</p> <p><b>Values:</b> <b>Table 6.1. HL7 Table 0516 – Error severity</b></p> <table border="1"> <tr> <td>W</td> <td>Warning</td> </tr> <tr> <td>E</td> <td>Error</td> </tr> <tr> <td>I</td> <td>Information</td> </tr> </table>	W	Warning	E	Error	I	Information
W	Warning								
E	Error								
I	Information								
05	Application Error Code	O	<p>Application specific code identifying the specific error that occurred.</p> <p><b>Format:</b> CWE.1=Error code.</p> <p>CWE.2=Error description</p> <p>CWE.3=Application that generated the error, must be equal to MSH-04 (sending application). <i>ValueList:</i> <u>User Table 0361 - Application</u><b>Req.</b></p>						
08	User Message	O	The text message to be displayed to the application user						

### Example 6.1. Sample ERR segment

```
ERR|||100^Segment sequence error^HL70357|E|||^Missing required OBR segment^PICASSO|
```

## 2. Tables

**Table 6.2. HL7 Table 0357 - Message Error Condition Codes**

Value	Description	Comment
0	Message accepted	Success. Optional, as the AA conveys success. Used for systems that must always return a status code.
100	Segment sequence error	Error: The message segments were not in the proper order, or required segments are missing.

<b>Value</b>	<b>Description</b>	<b>Comment</b>
101	Required field missing	Error: A required field is missing from a segment
102	Data type error	Error: The field contained data of the wrong data type, e.g. an NM field contained "FOO"
103	Table value not found	Error: A field of data type ID or IS was compared against the corresponding table, and no match was found
200	Unsupported message type	Rejection: The Message Type is not supported
201	Unsupported event code	Rejection: The Event Code is not supported.
202	Unsupported processing id	Rejection: The Processing ID is not supported.
203	Unsupported version id	Rejection: The Version ID is not supported
204	Unknown key identifier	Rejection: The ID of the patient, order, etc., was not found. Used for transactions other than additions, e.g. transfer of a non-existent patient
205	Duplicate key identifier	Rejection: The ID of the patient, order, etc., already exists. Used in response to addition transactions (Admit, New Order, etc.).
206	Application record locked	Rejection: The transaction could not be performed at the application storage level, e.g., database locked.
207	Application internal error	Rejection: A catchall for internal errors not explicitly covered by other codes.



# Chapter 7. EVN - Event Type

The EVN segment is used to communicate necessary trigger event information to receiving applications.

## 1. Segment definition

#	Name	Set	Description
01	Event Type Code	n/a	<i>Deprecated, use MSH-9 instead</i>
02	Recorded Date/Time	<b>R</b>	System date/time when the transaction was entered in the sending application. For example, on a transfer (A02), this field would contain the date/time the transfer was registered in the system, it might be before the patient was actually transferred  <b>Format:</b> YYYYYMMDDHHMM[SS]
04	Event Reason Code	<b>RC</b>	In Patient Encounter scenario, for ADT^A08 messages only, this field is required to notify the type of HL7 event the A08 is ment to update (e.g. a previously sent A01, A02, etc.)  In Document Management scenario, the field defines the notification type for Document Status Change Notification (T03) messages (e.g. "SISS_NOTIFY" )  <b>Values:</b> <u>User Table 0062 - Event Reason: IT</u>  <b>Conditions:</b> ( <i>Scenario=PatientEncounter and message = ADT^A08</i> ) OR ( <i>Scenario=DocumentManagement and Event= Document Status Change Notification</i> )  <b>Note</b>  <i>The use of this field to transmit the Day Hospital or Recurring Outpatient event subtype (e.g. notify if event is related to a DH access opening or closure) has been <b>DEPRECATED</b>. Use <b>PV2-31</b> instead.</i>
06	Event Occurred	O	This field contains the date/time that the event actually occurred. For example, on a transfer (A02), this field would contain the date/time the patient was actually transferred.  <b>Format:</b> YYYYYMMDDHHMM[SS]

### Example 7.1. Sample EVN segment

```
//Inpatient, patient admission
EVN||20120305091158|||20120305091000
```

```
//Inpatient, patient admission update (ADT^A08 message)
EVN||20120305091210||A01||20120305091000
```

## 2. Tables

**Table 7.1. User Table 0062 - Event Reason: IT**

Value	Description	Comment
	Patient Encounter, ADT^A08 messages only	

EVN - Event Type

<b>Value</b>	<b>Description</b>	<b>Comment</b>
A01	States that the ADT^A08 message aims to update a previously sent ADT^A01 message	
A02	States that the ADT^A08 message aims to update a previously sent ADT^A02 message	
A03	States that the ADT^A08 message aims to update a previously sent ADT^A03 message	
A04	States that the ADT^A08 message aims to update a previously sent ADT^A04 message	
<i>Document Management</i>		
SISS_NOTIFY	The message is related to a notification to CRS-SISS	
	<i>&lt;Additional values to be agreed on local project agreements&gt;</i>	

# Chapter 8. IAM - Patient Adverse Reaction Information Segment - Unique Identifier

The IAM segment contains person/patient adverse reaction information of various types. Each IAM segment describes a single person/patient adverse reaction.

This segment is typically used in lieu of the AL1 - Patient Allergy Information Segment to support action code/unique identifier mode update definition of repeating segments, while the AL1 segment should be used to support Snapshot mode update definition.

IAM segment may be also used in a combined "Snapshot plus Unique Identifier" mode, in order to guarantee that all allergies data available is sent in each message including allergies info, even the deleted allergies. This to ensure that no data mismatch occurs in case some of the allergies messages are lost or fail to process, for any reason.

## 1. Segment definition

#	Name	Set	Description																		
01	Set ID - AL1	<b>R</b>	Identifier of each occurrence of the segment within the message.  MUST NOT be used as unique allergy identifier, since the same allergy may have different values in this field if transmitted on different messages																		
02	Allergen Type Code	O	This field indicates a general allergy category (drug, food, pollen, etc.).  <b>Values:</b> CE.1=Allergen type code. <i>ValueList</i> <see below>. <b>Req</b>  CE.2=Allergen type description  CE.3= <i>Constant</i> : HL70127 <b>Req</b> .  <b>Table 8.1. User Table 0127 - Allergen Type</b> <table border="1"> <tbody> <tr> <td>DA</td> <td>Drug Allergy</td> </tr> <tr> <td>FA</td> <td>Food Allergy</td> </tr> <tr> <td>MA</td> <td>Miscellaneous allergy / Other allergy</td> </tr> <tr> <td>NA</td> <td>NO KNOWN ALLERGIES</td> </tr> <tr> <td>MC</td> <td>Miscellaneous contraindication (<i>currently not supported</i>)</td> </tr> <tr> <td>EA</td> <td>Environmental Allergy (<i>currently not supported</i>)</td> </tr> <tr> <td>AA</td> <td>Animal Allergy (<i>currently not supported</i>)</td> </tr> <tr> <td>PA</td> <td>Plant Allergy (<i>currently not supported</i>)</td> </tr> <tr> <td>LA</td> <td>Pollen Allergy (<i>currently not supported</i>)</td> </tr> </tbody> </table>	DA	Drug Allergy	FA	Food Allergy	MA	Miscellaneous allergy / Other allergy	NA	NO KNOWN ALLERGIES	MC	Miscellaneous contraindication ( <i>currently not supported</i> )	EA	Environmental Allergy ( <i>currently not supported</i> )	AA	Animal Allergy ( <i>currently not supported</i> )	PA	Plant Allergy ( <i>currently not supported</i> )	LA	Pollen Allergy ( <i>currently not supported</i> )
DA	Drug Allergy																				
FA	Food Allergy																				
MA	Miscellaneous allergy / Other allergy																				
NA	NO KNOWN ALLERGIES																				
MC	Miscellaneous contraindication ( <i>currently not supported</i> )																				
EA	Environmental Allergy ( <i>currently not supported</i> )																				
AA	Animal Allergy ( <i>currently not supported</i> )																				
PA	Plant Allergy ( <i>currently not supported</i> )																				
LA	Pollen Allergy ( <i>currently not supported</i> )																				
03	Allergen Code/Mnemonic/Description	<b>R</b>	This field uniquely identifies a specific allergen. This element may conform to some external, standard coding system (that must be identified), or it may conform to local, largely textual or mnemonic descriptions  <b>Values:</b> CE.1=Allergen code <i>ValueList</i> : "NA" as a dummy allergen code if no allergies are known; otherwise, values according to coding system.  CE.2=Allergen description																		

IAM - Patient Adverse  
Reaction Information  
Segment - Unique Identifier

#	Name	Set	Description														
			CE.3=Name of coding system. <i>ValueList</i> : User Table 0396 - Coding System <b>Req</b> if CE.1 <> null														
04	Allergy Severity Code	O	<p>This field indicates the general severity of the allergy</p> <p><b>Values:</b> CE.1=Severity code. <i>ValueList</i> &lt;see below&gt;. <b>Req</b></p> <p>CE.2=Severity description</p> <p>CE.3=<i>Constant</i>: HL70128 . <b>Req</b></p> <p><b>Table 8.2. User Table 0128 - Allergy Severity</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>SV</td> <td>Severe</td> </tr> <tr> <td>MO</td> <td>Moderate</td> </tr> <tr> <td>MI</td> <td>Mild</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>DL</td> <td>Life danger (Pericolo di vita)</td> </tr> <tr> <td>DE</td> <td>Death (Morte)</td> </tr> </table>	SV	Severe	MO	Moderate	MI	Mild	U	Unknown	<b>Loc ITA</b>		DL	Life danger (Pericolo di vita)	DE	Death (Morte)
SV	Severe																
MO	Moderate																
MI	Mild																
U	Unknown																
<b>Loc ITA</b>																	
DL	Life danger (Pericolo di vita)																
DE	Death (Morte)																
05	Allergy Reaction Code	O..*	<p>Includes information on the reaction code.</p> <p><b>Format:</b> Since HL7 does not allow for transmission of reaction code and reaction description in separate fields, then the following format will be used:</p> <p style="text-align: center;"><i>reaction-code@reaction-description</i></p> <p><b>Values:</b> Standard coding systems are RECOMMENDED if existing; otherwise locally-agreed coding systems may be used.</p> <p>If coded values are used, then the reaction description is REQUIRED.</p> <p>If reaction is recorded just as free text, then the reaction code subfield is optional.</p> <p>E.g. CON@Convulsions</p>														
06	Allergy Action Code	R	<p>Defines the action that occurred at the sending system while recording allergy information.</p> <p><b>Values:</b> <b>Table 8.3. HL7 Table 0323 - Action Code</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>U</td> <td>Update (also means Add/Insert, or Update, or No Change; it's up to the receiving system to manage data properly)</td> </tr> <tr> <td>D</td> <td>Delete (also used when an allergy is date-ended)</td> </tr> <tr> <td>A</td> <td>Add/insert (<i>currently not supported</i>)</td> </tr> <tr> <td>X</td> <td>No Changes (<i>currently not supported</i>)</td> </tr> </table>	U	Update (also means Add/Insert, or Update, or No Change; it's up to the receiving system to manage data properly)	D	Delete (also used when an allergy is date-ended)	A	Add/insert ( <i>currently not supported</i> )	X	No Changes ( <i>currently not supported</i> )						
U	Update (also means Add/Insert, or Update, or No Change; it's up to the receiving system to manage data properly)																
D	Delete (also used when an allergy is date-ended)																
A	Add/insert ( <i>currently not supported</i> )																
X	No Changes ( <i>currently not supported</i> )																
07	Allergy Unique Identifier	R	<p>Unique identifier of an allergy recording.</p> <p>At the receiver, it is REQUIRED to use this field (not IAM-3) to uniquely identify a specific allergy.</p>														

IAM - Patient Adverse  
Reaction Information  
Segment - Unique Identifier

#	Name	Set	Description								
			<p>An allergy recording revision number may also be included, in order to allow the receiver to check if modifications occurred.</p> <p><b>Format:</b> EI.1 = Allergy identifier; unique across Patient data <b>Req</b></p> <p>EI.3 = Allergy revision number</p>								
08	Action reason	O	<p>Reason for the allergy deletion or date-ending.</p> <p><b>Conditions:</b> Managed only when IAM-6 = D (allergy deleted or date-ended)</p>								
09	Sensitivity to Causative Agent Code	O	<p>This field contains the reason why the patient should not be exposed to a substance.</p> <p><b>Values:</b> CE.1=Sensitivity code. <i>ValueList</i> &lt;see below&gt;. <b>Req</b></p> <p>CE.2=Sensitivity description</p> <p>CE.3=<i>Constant</i>: HL70436 . <b>Req</b></p> <p><b>Table 8.4. User-defined Table 0436 - Sensitivity to Causative Agent Code</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>AD</td> <td>Adverse Reaction</td> </tr> <tr> <td>AL</td> <td>Allergy</td> </tr> <tr> <td>IN</td> <td>Intolerance</td> </tr> <tr> <td>CT</td> <td>Contraindication (<i>currently not supported</i>)</td> </tr> </table>	AD	Adverse Reaction	AL	Allergy	IN	Intolerance	CT	Contraindication ( <i>currently not supported</i> )
AD	Adverse Reaction										
AL	Allergy										
IN	Intolerance										
CT	Contraindication ( <i>currently not supported</i> )										
11	Onset Date	O	<p>Start date of allergy; is the actual start date of the first known reaction</p> <p><b>Format:</b> YYYYMMDD</p>								
12	Onset Date Text	O	<p>End date of allergy</p> <p><i>NOTE: this field is used in conscious violation of HL7 standard</i></p> <p><b>Format:</b> YYYYMMDD</p>								
13	Reported Date/Time	O	<p>Timestamp of the registration of allergy at the source system</p> <p><b>Format:</b> YYYYMMDDHHMMSS</p>								
14	Reported by	O	<p>Source of allergy information (e.g. the patient itself, a parent, etc.)</p> <p><b>Format:</b> XPN.1 FN.1 = Family name</p> <p>XPN.2 = Given name</p> <p>XPN.3 = Second and Further Given Names or Initials Thereof</p> <p>In case the information is not structured in separate fields for name components, but rather given as a plain string, it <b>MUST</b> be set in the first subfield (XPN.1 FN.1)</p>								
17	Allergy Clinical Status code	O	<p>Status of recorded allergy.</p> <p><b>Format:</b> CE.1 = Status code</p> <p>CE.2 = Status description</p> <p>CE.3=<i>Constant</i>: HL70438 . <b>Req</b></p>								

IAM - Patient Adverse  
Reaction Information  
Segment - Unique Identifier

#	Name	Set	Description																		
			<p><b>Values:</b>    <b>Table 8.5. User-defined Table 0438 - Allergy Clinical Status</b></p> <table border="1"> <tr><td>U</td><td>Unconfirmed</td></tr> <tr><td>P</td><td>Pending</td></tr> <tr><td>S</td><td>Suspect</td></tr> <tr><td>C</td><td>Confirmed or Verified</td></tr> <tr><td>V</td><td>Validated</td></tr> <tr><td>I</td><td>Confirmed but inactive</td></tr> <tr><td>E</td><td>Erroneous</td></tr> <tr><td>D</td><td>Doubt raised</td></tr> <tr><td>T</td><td>Terminated</td></tr> </table>	U	Unconfirmed	P	Pending	S	Suspect	C	Confirmed or Verified	V	Validated	I	Confirmed but inactive	E	Erroneous	D	Doubt raised	T	Terminated
U	Unconfirmed																				
P	Pending																				
S	Suspect																				
C	Confirmed or Verified																				
V	Validated																				
I	Confirmed but inactive																				
E	Erroneous																				
D	Doubt raised																				
T	Terminated																				
18	Stated by Person	O	<p>Last User who recorded/amended the allergy.</p> <p><b>Format:</b>    XCN.1 = Identifier <b>Req</b></p> <p>                  XCN.2 FN.1 = Family name</p> <p>                  XCN.3 = Given Name</p> <p>                  XCN.4 = Second and Further Given Names or Initials Thereof</p>																		
20	Stated at Date/Time	O	<p>Last Date and time when the allergy was recorded/amended.</p> <p><b>Format:</b>    YYYYMMDDHHMMSS</p>																		

---

# Chapter 9. MRG - Merge patient

The MRG segment provides receiving applications with information necessary to the merging of patient data (event A40) or the moving of visit data to a different patient (A45).

## 1. Segment definition

#	Name	Set	Description
01	Prior Patient Identifier List	<b>R</b>	This field contains the old patient identifier list that must be merged to the patient identified by the PID segment in the message.  <b>Format:</b> Same format of PID-3: see <a href="#">Patient Identifier List</a> for details
05	Prior Visit Number	<b>RC</b>	This field contains the prior visit number that must be moved to the patient identified by the PID segment in the message.  <b>Format:</b> CX.1=prior visit/episode number. <b>Req.</b>  CX.4=application that assigned the visit/episode number. <i>ValueList:</i> <a href="#">User Table 0363 - Assigning Authority: IT</a> . <b>Req.</b>  CX.5= <i>Constant</i> : VN <b>Req.</b>  <b>Conditions:</b> <i>Event</i> =Move Visit

### Example 9.1. Sample MRG segment

Merge Patient:

MRG|0000000009400547^^^PK^PI

# Chapter 10. MSA - Message Acknowledgment

The MSA segment contains information sent while acknowledging another message.

## 1. Segment definition

#	Name	Set	Description
01	Acknowledgment Code	R	This field contains an acknowledgment code.  <b>Values:</b> HL7 Table 0008 - Acknowledgment code
02	Message Control ID	R	This field contains the message control ID of the message sent by the sending system. It allows the sending system to associate this response with the message sent.  <b>Values:</b> Value of MSH-10 from the message that is acknowledged.
03	Text Message	RC	Textual description of the transmission/processing error occurred.  <b>Condition:</b> Error in message reception/processing and ERR segment not supported by Receiver system  <b>Note</b>  <i>In HL7 standard, MSA-3 was deprecated as of v. 2.4.</i>  The field is retained for backward compatibility only; if the receiving system supports the <b>ERR - Error</b> segment, then it <b>MUST</b> be used instead of MSA-3, allowing a richer description of the error conditions and a wider compliance to HL7 standard.

### Example 10.1. Sample MSA segment

```
MSA|AA|SG54DJ4JS9J38FN39|
MSA|AE|MM5D83ND8754BNF83|Patient-Visit constraint error
```

## 2. Tables

**Table 10.1. HL7 Table 0008 - Acknowledgment code**

Value	Description	Comment
AA	Original mode: Application Accept - Enhanced mode: Application acknowledgment: Accept	
AE	Original mode: Application Error - Enhanced mode: Application acknowledgment: Error	
AR	Original mode: Application Reject - Enhanced mode: Application acknowledgment: Reject	
CA	Enhanced mode: Accept acknowledgment: Commit Accept	
CE	Enhanced mode: Accept acknowledgment: Commit Error	



MSA - Message Acknowledgment

---

<b>Value</b>	<b>Description</b>	<b>Comment</b>
CR	Enhanced mode: Accept acknowledgment: Commit Reject	

# Chapter 11. MSH - Message Header

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

## 1. Segment definition

#	Name	Set	Description
01	Field Separator	R	Field separator character  <b>Values:</b>
02	Encoding Characters	R	This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator.  <b>Values:</b> ^~\&
03	Sending Application	R	This field uniquely identifies the sending application among all other applications within the network enterprise.  <b>Values:</b> <u>User Table 0361 - Application</u>
04	Sending Facility	O	Name of the owner company of the sending application.  <i>(Def. HL7: This field identifies the sending application among multiple identical instances of the application running on behalf of different organizations).</i>  <b>Values:</b> Company Name (e.g. NoemaLife)
05	Receiving Application	O	This field uniquely identifies the receiving application among all other applications within the network enterprise.  <b>Values:</b> <i>Original message:</i>  HD.1= <u>User Table 0361 - Application</u>  <i>Acknowledge message:</i>  HD.1=MSH-03 from original message
06	Receiving Facility	O	Name of the owner company of the receiving application.  <i>(Def. HL7: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations).</i>  <b>Values:</b> <i>Original message</i>  Company Name (e.g. NoemaLife)  <i>Acknowledge message:</i>  HD.1=MSH-04 from original message
07	Date/Time Of Message	R	Message creation date  <b>Format:</b> YYYYMMDDHHMMSS
09	Message Type	R	This field contains the message type and trigger event for the message.  <b>Format:</b> MSG.1=Message type code. <i>ValueList:</i> <u>HL7 Table 0076 - Message type. Req.</u>  MSG.2=Trigger Event. <i>ValueList:</i> <u>HL7 Table 0003 - Event. Req.</u>

#	Name	Set	Description						
10	Message control ID	R	This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA).  <b>Values:</b> <i>Original message:</i> Message identifier  <i>Acknowledge message:</i> MSH-10 from original message						
11	Processing ID	R	Defines the intent for processing the message.  <b>Values:</b> <i>Original message:</i> <table border="1"> <tr> <td>P</td> <td>Production message. <b>Mandatory value for integrations running in a production environment.</b></td> </tr> <tr> <td>T</td> <td>Training message. <i>Not used.</i></td> </tr> <tr> <td>D</td> <td>Debug message. <i>Reserved for future monitoring messages.</i></td> </tr> </table>  <i>Acknowledge message:</i>  MSH-11 from original message	P	Production message. <b>Mandatory value for integrations running in a production environment.</b>	T	Training message. <i>Not used.</i>	D	Debug message. <i>Reserved for future monitoring messages.</i>
P	Production message. <b>Mandatory value for integrations running in a production environment.</b>								
T	Training message. <i>Not used.</i>								
D	Debug message. <i>Reserved for future monitoring messages.</i>								
12	Version ID	R	HL7 version used  <b>Values:</b> 2.5						
18	Character Set	O	This field contains the character set for the entire message  <b>Values:</b> <table border="1"> <tr> <td>8859/15</td> <td>ISO 8859-15 (Latin 9). (<i>Compliance: IHE</i>)</td> </tr> </table>	8859/15	ISO 8859-15 (Latin 9). ( <i>Compliance: IHE</i> )				
8859/15	ISO 8859-15 (Latin 9). ( <i>Compliance: IHE</i> )								
21	Message Profile Identifier	R..*	Definition of the revision number of the <i>NoemaLife Integration Policy specifications</i> the message is adherent to.  <b>Format:</b> EI.1= Revision number <i>Format: nlip-x.y.z</i> <b>Req.</b>  EI.2=NoemaLife. <b>Req.</b>						

**Example 11.1. Sample MSH segment**

```
MSH|^~\&|DNLAB|NOEMALIFE|PEOPLE|NOEMALIFE|20120227053539|
|ADT^A31|HL7Gtw0135BD17AA9100|P|2.5|||||8859/1|||nlip-0.3.0^NoemaLife|
```

## 2. Tables

**Table 11.1. User Table 0361 - Application**

Value	Description	Comment
HELIOS	ADT	
SOLDANELLA	CUP	
GALILEO	EEMR	
ATHENA	Anatomic Pathology	
DNLAB	LIS	
POWERLAB	LIS	

Value	Description	Comment
PEOPLE	MPI	
ELEKTRA	RIS	
PICASSO	Middleware	
JCAPS	Middleware	

The table contains an entry for each NoemaLife application in the integration domain. In case of multiple instances of the same application running in the integration domain, add the suffix -1,2.... to the application name listed in the table (e.g. DNLAB-1, DNLAB-2 in case of two instances of DNLAB).

**Table 11.2. HL7 Table 0076 - Message type**

Value	Description	Comment
ACK	General acknowledgment message	
ADT	Patient Administration message	
MDM	Medical document management message	
ORM	General Order Request message	
ORR	General Order Response message	
OML	Laboratory Order message	
ORL	Laboratory Order Response message	
OMG	General Clinical Order message	
ORG	General Clinical Order Acknowledge message	
OUL	Unsolicited laboratory observation message	
ORL	Laboratory acknowledgment message (unsolicited)	
ORU	Order Result Unsolicited message	

**Table 11.3. HL7 Table 0003 - Event**

Value	Description	Comment
A28	Add person information	
A31	Update person information	
A40	Merge patient	
A01	Admit/visit notification	
A11	Cancel admit/visit notification	
A02	Transfer a patient	
A12	Cancel transfer	
A03	Discharge/end visit	
A13	Cancel discharge/end visit	
A04	Register a patient	
A05	Pre-admit a patient	
A38	Cancel pre-admit	
A45	Move Visit	
O01	ORM - Order message	
O02	ORR - Order response	
O19	OMG – General clinical order	

MSH - Message Header

<b>Value</b>	<b>Description</b>	<b>Comment</b>
O20	ORG/ORL – General clinical order response	
O21	OML - Laboratory order	
O22	ORL - General laboratory order response message to any OML	
O33	OML – Laboratory order for multiple orders related to a single specimen	
O34	ORL – Laboratory order response message to a multiple order related to single specimen OML	
O35	OML – Laboratory order for multiple orders related to a single container of a specimen	
O36	ORL - Laboratory order response message to a single container of a specimen OML	
R01	ORU/ACK - Unsolicited transmission of an observation message	
R22	OUL – Unsolicited Specimen Oriented Observation Message	
R24	OUL – Unsolicited Order Oriented Observation Message	
T01	MDM/ACK - Original document notification	
T02	MDM/ACK - Original document notification and content	
T05	MDM/ACK - Document addendum notification	
T06	MDM/ACK - Document addendum notification and content	
T09	MDM/ACK - Document replacement notification	
T10	MDM/ACK - Document replacement notification and content	
T11	MDM/ACK - Document cancel notification	

# Chapter 12. NK1 - Next Of Kin/ Associated Parties

The NK1 segment contains information about the patient's other related parties. Any associated parties may be identified.

When NK1-3=SEL, the segment is used to extend patient data in segments PID and PD1, to provide informations about his job.

## 1. Segment definition

#	Name	Set	Description										
01	Set ID	R	Identifier of the occurrence of the segment inside the message										
02	Name	OC	This field contains the name of the next of kin or associated party, whose relationship with the patient is defined in NK1-3  <b>Format:</b> Same format of PID-5: see <u>Patient Name</u> for details  <b>Conditions:</b> NK1-3<>SEL										
03	Relationship	R	Actual personal relationship that the next of kin/associated party has to the patient.  <b>Values:</b> <u>User Table 0063 - Relationship</u>										
04	Address	OC.4	This field contains the address of the next of kin/associated party  <b>Format:</b> Same format of PID-11: see <u>Patient Address</u> for details  <b>Conditions:</b> NK1-3<>SEL										
05	Phone Number	OC.*	This field contains the phone number of the next of kin/associated party  <b>Format:</b> Same format of PID-13: see <u>Phone Number - Home</u> for details  <b>Conditions:</b> NK1-3<>SEL										
11	Next of Kin / Associated Parties Job Code/ Class	OC	Patient's Job code/classification. This field is used together with NK1.34 to give a detailed description of patient's job type and status.  <b>Format:</b> JCC.1=Patient's job code. <i>ValueList:</i> <u>User Table 0327 - Job Code</u> .  JCC.2=Patient's job sector.  <i>ValueList:</i> <table border="1"> <tbody> <tr> <td>A</td> <td>Agriculture, phishing, hunting</td> </tr> <tr> <td>I</td> <td>Industry</td> </tr> <tr> <td>C</td> <td>Commerce, service, tourism</td> </tr> <tr> <td>G</td> <td>Government, public administration</td> </tr> <tr> <td>O</td> <td>Other</td> </tr> </tbody> </table> JCC.3=Patient's job free textual description  <b>Conditions:</b> NK1-3=SEL	A	Agriculture, phishing, hunting	I	Industry	C	Commerce, service, tourism	G	Government, public administration	O	Other
A	Agriculture, phishing, hunting												
I	Industry												
C	Commerce, service, tourism												
G	Government, public administration												
O	Other												
13	Organization name	OC	This field may be used to communicate the name of the organization at which the patient works.										

NK1 - Next Of Kin/  
Associated Parties

#	Name	Set	Description																														
			<b>Conditions:</b> NK1-3=SEL																														
33	Associated Party's Identifiers	OC	<p>This field contains the identifiers for the next of kin/associated party.</p> <p><b>Format:</b> Same format of PID-3: see <a href="#">Patient Identifier List</a> for details</p> <p><b>Conditions:</b> NK1-3&lt;&gt;SEL</p>																														
34	Job Status	OC	<p>Patient's job status. This field is used together with NK1.11 to give a detailed description of patient's job type and status.</p> <p><b>Values:</b> <b>Table 12.1. User Table 0311 - Job Status</b></p> <table border="1" style="margin-left: 40px;"> <tbody> <tr> <td>P</td> <td>Permanent [IT:Occupato, a tempo indeterminato ]</td> <td>Ref. HL7</td> </tr> <tr> <td>T</td> <td>Temporary [IT: Occupato, a tempo determinato ]</td> <td>"</td> </tr> <tr> <td>O</td> <td>Other</td> <td>"</td> </tr> <tr> <td>U</td> <td>Unknown</td> <td>"</td> </tr> <tr> <td>I</td> <td>Unemployed, never worked/looking for first job [IT: In cerca di prima occupazione]</td> <td>Ref. HL7 Italia</td> </tr> <tr> <td>D</td> <td>Unemployed at present [IT: Attualmente disoccupato]</td> <td>"</td> </tr> <tr> <td>S</td> <td>Student [IT: Studente/minore]</td> <td>"</td> </tr> <tr> <td>R</td> <td>Retired [IT: Pensionato]</td> <td>Def. NoemaLife</td> </tr> <tr> <td>PEN</td> <td>Pensionato</td> <td>"</td> </tr> <tr> <td>CAS</td> <td>Casalinga</td> <td>"</td> </tr> </tbody> </table> <p><b>Conditions:</b> NK1-3=SEL</p>	P	Permanent [IT:Occupato, a tempo indeterminato ]	Ref. HL7	T	Temporary [IT: Occupato, a tempo determinato ]	"	O	Other	"	U	Unknown	"	I	Unemployed, never worked/looking for first job [IT: In cerca di prima occupazione]	Ref. HL7 Italia	D	Unemployed at present [IT: Attualmente disoccupato]	"	S	Student [IT: Studente/minore]	"	R	Retired [IT: Pensionato]	Def. NoemaLife	PEN	Pensionato	"	CAS	Casalinga	"
P	Permanent [IT:Occupato, a tempo indeterminato ]	Ref. HL7																															
T	Temporary [IT: Occupato, a tempo determinato ]	"																															
O	Other	"																															
U	Unknown	"																															
I	Unemployed, never worked/looking for first job [IT: In cerca di prima occupazione]	Ref. HL7 Italia																															
D	Unemployed at present [IT: Attualmente disoccupato]	"																															
S	Student [IT: Studente/minore]	"																															
R	Retired [IT: Pensionato]	Def. NoemaLife																															
PEN	Pensionato	"																															
CAS	Casalinga	"																															

### Example 12.1. Sample NK1 segment

- *Name:* Bianchi Maria
- *Relationship:* Mother
- *Phones:*

*Working:* +39 064855344

*Home:* +39 34822334455

```
NK1 | 2 | BIANCHI^MARIA | MTH | | ^WPN^^^+39^^^^^^^064855344~
^PRN^CP^^+39^^^^^^^34822334455 | |
```

## 2. Tables

**Table 12.2. User Table 0063 - Relationship**

Value	Description	Comment (from HL7 Italia)
SEL	Self	Il paziente stesso

NK1 - Next Of Kin/  
Associated Parties

Value	Description	Comment (from HL7 Italia)
SPO	Spouse	Coniuge
DOM	Life partner	Convivente
CHD	Child	Figlio
GCH	Grandchild	Nipote
NCH	Natural child	Figlio naturale
SCH	Stepchild	Figlio naturale del coniuge nato in un precedente matrimonio
FCH	Foster child	Figlio adottivo
DEP	Handicapped dependent	Il paziente è diversamente abile e dipende quindi da questa persona.
WRD	Ward of court	Tutore legale (per minorenni o persone incapaci di intenedere o di volere)
PAR	Parent	Genitore
MTH	Mother	Madre
FTH	Father	Padre
CGV	Care giver	Persona che si prende cura del paziente (non solo infermiere professionale)
GRD	Guardian	Tutore
GRP	Grandparent	Nonno o nonna
EXF	Extended family	Famiglia allargata
SIB	Sibling	Fratello o sorella
BRO	Brother	Fratello
SIS	Sister	Sorella
FND	Friend	Amico
OAD	Other adult	Altro adulto
EME	Employee	Dipendente
EMR	Employer	Datore di lavoro
ASC	Associate	Associato (Socio nella stessa società)
EMC	Emergency contact	Contatto in caso di emergenza
OWN	Owner	Proprietario (in caso di pazienti animali)
TRA	Trainer	Allenatore
MGR	Manager	Manager
NON	None	Nessuno
UNK	Unknown	Sconosciuto
OTH	Other	Altro

**Table 12.3. User Table 0327 - Job Code**

Value	Description	Comment
AP	Apprentice, trainee	[IT: Apprendista]
BM	Businessman	[IT: Imprenditore]



NK1 - Next Of Kin/  
Associated Parties

<b>Value</b>	<b>Description</b>	<b>Comment</b>
CL	Clerk, teacher	[IT: Impiegato, Insegnante]
CP	Cooperative Partner	[IT: Socio di cooperativa]
CW	Co-worker	[IT: Coadiuvante]
EX	Executive	[IT: Dirigente]
FL	Freelance	[IT: Libero professionista]
HC	Handicapped	[IT: Disabile]
HW	Home worker	[IT: Lavoratore domiciliare]
MG	Manager	[IT: Direttivo, Quadro]
MI	Military	[IT: Forze Armate]
OT	Other	[IT: Altro]
SC	Special categories workers	[IT: Categorie speciali]
SE	Self-employed	[IT: Lavoratore in proprio]
WK	Worker, workman	[IT: Operaio]

# Chapter 13. NTE - Notes and Comments

The Note segment is used to communicate additional informations about Documents.

## 1. Segment definition

### 1.1. NTE for Document Management

Current use is about authorization to publication of clinical documents to external systems (e.g. Portal application). Can be extended to include additional uses.

#	Name	Set	Description				
01	Set ID - NTE	R	Identifier of each occurrence of the segment.				
02	Source of comment	O	<b>Values:</b> O = Other System is source of comment				
03	Comment	R	Variable content depending on the value of NTE-4.2				
04	Comment Type	R	<p>This field identifies the type of information included in NTE-3</p> <p><b>Values:</b></p> <p>CE.1=GI</p> <p>CE.2=</p> <table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2">Publication to external systems</th> </tr> </thead> <tbody> <tr> <td style="width: 30%;">PORTAL</td> <td> <p>Authorization to publication in the "Document Portal" application.</p> <p><i>Note 1:</i> user credentials for access to the Portal can be specified in OBR-46</p> <p><i>Note 2:</i> When scenario &lt; &gt; Document Management, consent to publication can be defined in PV2-45</p> <p><b>ValueList in NTE-3:</b></p> <p>Y = Yes, Authorization given</p> <p>N = No, Authorization NOT given</p> </td> </tr> </tbody> </table>	Publication to external systems		PORTAL	<p>Authorization to publication in the "Document Portal" application.</p> <p><i>Note 1:</i> user credentials for access to the Portal can be specified in OBR-46</p> <p><i>Note 2:</i> When scenario &lt; &gt; Document Management, consent to publication can be defined in PV2-45</p> <p><b>ValueList in NTE-3:</b></p> <p>Y = Yes, Authorization given</p> <p>N = No, Authorization NOT given</p>
Publication to external systems							
PORTAL	<p>Authorization to publication in the "Document Portal" application.</p> <p><i>Note 1:</i> user credentials for access to the Portal can be specified in OBR-46</p> <p><i>Note 2:</i> When scenario &lt; &gt; Document Management, consent to publication can be defined in PV2-45</p> <p><b>ValueList in NTE-3:</b></p> <p>Y = Yes, Authorization given</p> <p>N = No, Authorization NOT given</p>						

#### Example 13.1. Sample NTE segment

```
//Authorization to publication in Document Portal
NTE|1|O|Y|GI^PORTAL|
```

## 1.2. NTE for Loc=CRS-SISS and Document Management

As required by CRS-SISS project, NTE segment is used to convey attributes about the main clinical document (DCE) and the associated privacy document (DAO) in MDM messages (refer to CRS-SISS technical documentation [CRS-SISS-HL7]).

#	Name	Set	Description																								
01	Set ID - NTE	<b>R</b>	Identifier of each occurrence of the segment.																								
02	Source of comment	<b>O</b>	<b>Values:</b> O = Other System is source of comment																								
03	Comment	<b>R</b>	Variable content depending on the value of NTE-4.2																								
04	Comment Type	<b>R</b>	<p>This field identifies the type of information included in NTE-3</p> <p><b>Values:</b></p> <p>CE.1=GI</p> <p>CE.2=</p> <table border="1"> <thead> <tr> <th colspan="2"><b>Attributi DCE: negli NTE relativi all'OBX del DCE</b></th> </tr> </thead> <tbody> <tr> <td>hashReferto / hashCDA</td> <td>Contiene l'output ottenuto applicando la funzione hash al referto testuale/strutturato e permette di identificare il documento attraverso una stringa. <b>Req</b></td> </tr> <tr> <td>algoritmoHashReferto / algoritmoHashCDA</td> <td>Contiene l'algoritmo utilizzato per il calcolo dell'hash del documento testuale/strutturato. <b>Req</b></td> </tr> <tr> <td>validazioneSchema</td> <td>Contiene la versione dello schema del documento strutturato. <b>Req</b></td> </tr> <tr> <td>sizeDocumentoReferto / sizeDocumentoCDA</td> <td>Contiene la dimensione del documento testuale/strutturato. <b>Req</b></td> </tr> <tr> <td>linguaggioDocumentoReferto / linguaggioDocumentoCDA</td> <td>Contiene il codice del linguaggio del documento testuale/strutturato. <b>Req</b></td> </tr> <tr> <td>notaReperibilità</td> <td>testo della nota di reperibilità</td> </tr> <tr> <th colspan="2"><b>Attributi DAO: negli NTE relativi all'OBX del DAO</b></th> </tr> <tr> <td>versioneXSLT</td> <td>Contiene la versione del file di transform utilizzata per la generazione del documento di autorizzazione</td> </tr> <tr> <th colspan="2"><b>Attributi Amministrativi: in coda agli NTE dell'ultimo OBX</b></th> </tr> <tr> <td>consultazioneElettronica</td> <td>Il dipartimentale indica se il DCE verrà consultato dal cittadino attraverso i servizi SISS oppure se richiederà la stampa del referto all'azienda (Opzionale)  <b>ValueList in NTE-3: SI/NO</b></td> </tr> <tr> <td>sezioneFascicolo</td> <td>indica a quale/i sezione/i del Fascicolo Sanitario Elettronico del SISS viene registrato il link del documento.  <b>ValueList in NTE-3:</b></td> </tr> </tbody> </table>	<b>Attributi DCE: negli NTE relativi all'OBX del DCE</b>		hashReferto / hashCDA	Contiene l'output ottenuto applicando la funzione hash al referto testuale/strutturato e permette di identificare il documento attraverso una stringa. <b>Req</b>	algoritmoHashReferto / algoritmoHashCDA	Contiene l'algoritmo utilizzato per il calcolo dell'hash del documento testuale/strutturato. <b>Req</b>	validazioneSchema	Contiene la versione dello schema del documento strutturato. <b>Req</b>	sizeDocumentoReferto / sizeDocumentoCDA	Contiene la dimensione del documento testuale/strutturato. <b>Req</b>	linguaggioDocumentoReferto / linguaggioDocumentoCDA	Contiene il codice del linguaggio del documento testuale/strutturato. <b>Req</b>	notaReperibilità	testo della nota di reperibilità	<b>Attributi DAO: negli NTE relativi all'OBX del DAO</b>		versioneXSLT	Contiene la versione del file di transform utilizzata per la generazione del documento di autorizzazione	<b>Attributi Amministrativi: in coda agli NTE dell'ultimo OBX</b>		consultazioneElettronica	Il dipartimentale indica se il DCE verrà consultato dal cittadino attraverso i servizi SISS oppure se richiederà la stampa del referto all'azienda (Opzionale)  <b>ValueList in NTE-3: SI/NO</b>	sezioneFascicolo	indica a quale/i sezione/i del Fascicolo Sanitario Elettronico del SISS viene registrato il link del documento.  <b>ValueList in NTE-3:</b>
<b>Attributi DCE: negli NTE relativi all'OBX del DCE</b>																											
hashReferto / hashCDA	Contiene l'output ottenuto applicando la funzione hash al referto testuale/strutturato e permette di identificare il documento attraverso una stringa. <b>Req</b>																										
algoritmoHashReferto / algoritmoHashCDA	Contiene l'algoritmo utilizzato per il calcolo dell'hash del documento testuale/strutturato. <b>Req</b>																										
validazioneSchema	Contiene la versione dello schema del documento strutturato. <b>Req</b>																										
sizeDocumentoReferto / sizeDocumentoCDA	Contiene la dimensione del documento testuale/strutturato. <b>Req</b>																										
linguaggioDocumentoReferto / linguaggioDocumentoCDA	Contiene il codice del linguaggio del documento testuale/strutturato. <b>Req</b>																										
notaReperibilità	testo della nota di reperibilità																										
<b>Attributi DAO: negli NTE relativi all'OBX del DAO</b>																											
versioneXSLT	Contiene la versione del file di transform utilizzata per la generazione del documento di autorizzazione																										
<b>Attributi Amministrativi: in coda agli NTE dell'ultimo OBX</b>																											
consultazioneElettronica	Il dipartimentale indica se il DCE verrà consultato dal cittadino attraverso i servizi SISS oppure se richiederà la stampa del referto all'azienda (Opzionale)  <b>ValueList in NTE-3: SI/NO</b>																										
sezioneFascicolo	indica a quale/i sezione/i del Fascicolo Sanitario Elettronico del SISS viene registrato il link del documento.  <b>ValueList in NTE-3:</b>																										

#	Name	Set	Description										
			<p>01=Generalista 02=Rete patologia 03=Generalista e Rete patologia</p>										
			<p>flagInviareAISiss Il dipartimentale indica se il DCE dovrà essere notificato o meno al SISS . <b>Req</b></p> <p><b>ValueList in NTE-3:</b></p> <p>01 = da inviare 02 = invio in carico al dipartimentale 03 = da non inviare</p>										
			<p>retePatologia Codice della rete di patologia di appartenenza del referto</p> <p><b>ValueList in NTE-3:</b></p> <p>01 = Rete Oncologica 02 = Rete di Epilessia 03 = Rete di Ematologia 04 = Rete di Nefrologia e Dialisi 05 = Rete IMA</p>										
			<p>marcaTemporale Indica se il documento DCE è marcato o da marcare- obbligatorio</p> <p><b>ValueList in NTE-3:</b></p> <p>01=Marcato 02=Da marcare (sul Repository) 03=Da non marcare</p>										
			<p>notaReperibilità testo della nota di reperibilità. <b>Req</b>if al DCE è associato un DAO <i>and</i> autorizzazioneConsultazione=SI</p>										
			<p><i>Autorizzazione e Oscuramento:</i> (vedi elenco attributi sotto)</p> <p><b>Obbligatorio</b> se al DCE è associato un DAO, e in tal caso vanno specificati <i>tutti</i> gli attributi in ripetizioni NTE distinte.</p> <p><b>ValueList in NTE-3: SI/NO</b></p>										
			<table border="1"> <tr> <td>10</td> <td>tossicodipendenza</td> </tr> <tr> <td>20</td> <td>HIV</td> </tr> <tr> <td>30</td> <td>violenze subite</td> </tr> <tr> <td>40</td> <td>interruzione volontaria gravidanza</td> </tr> <tr> <td>50</td> <td>oscuramento volontario richiesto dal cittadino</td> </tr> </table>	10	tossicodipendenza	20	HIV	30	violenze subite	40	interruzione volontaria gravidanza	50	oscuramento volontario richiesto dal cittadino
10	tossicodipendenza												
20	HIV												
30	violenze subite												
40	interruzione volontaria gravidanza												
50	oscuramento volontario richiesto dal cittadino												
			<table border="1"> <tr> <td>autorizzazioneConsultazione</td> <td>indicazione dell'autorizzazione alla consultazione in autonomia</td> </tr> </table>	autorizzazioneConsultazione	indicazione dell'autorizzazione alla consultazione in autonomia								
autorizzazioneConsultazione	indicazione dell'autorizzazione alla consultazione in autonomia												

### Example 13.2. Sample NTE segment

```
// per hashReferto
NTE|1|O|PkikvIAZST9SosxxWmQJ218GXWQ=|GI^hashReferto|

// per Oscuramento e autorizzazione
NTE|1|O|SI|GI^10|
NTE|2|O|SI|GI^20|
NTE|3|O|NO|GI^30|
NTE|4|O|NO|GI^40|
NTE|5|O|NO|GI^50|
NTE|6|O|SI|GI^autorizzazioneConsultazione|
```

## 1.3. NTE for Pharmacy/Treatment management

Current use is about various types of notes related to Pharmacy/Treatment management.

#	Name	Set	Description										
01	Set ID - NTE	<b>R</b>	Identifier of each occurrence of the segment.										
02	Source of comment	<b>O</b>	Used to identify the source of comment.  <b>Values:</b> <table border="1" style="margin-left: 20px;"> <tr> <td colspan="2">Scenario = Medicine on Discharge</td> </tr> <tr> <td>P</td> <td>Prescribing system (placer) is source of comment</td> </tr> </table>	Scenario = Medicine on Discharge		P	Prescribing system (placer) is source of comment						
Scenario = Medicine on Discharge													
P	Prescribing system (placer) is source of comment												
03	Comment	<b>R</b>	Free text containing the comment/note itself; its meaning and use is defined in NTE-4 CE.1										
04	Comment Type	<b>R</b>	This field identifies the type of information included in NTE-3  <b>Format:</b> CE.1 = Comment/Note type or category. <i>ValueList: Req</i>  <table border="1" style="margin-left: 20px;"> <tr> <td colspan="2">Scenario = Medicine on Discharge</td> </tr> <tr> <td>GR</td> <td>Reason for changing or stopping the prescription</td> </tr> <tr> <td>MD</td> <td>Medicines notes</td> </tr> <tr> <td>GP</td> <td>Notes to General Practitioner</td> </tr> <tr> <td>PH</td> <td>Pharmacy note</td> </tr> </table>	Scenario = Medicine on Discharge		GR	Reason for changing or stopping the prescription	MD	Medicines notes	GP	Notes to General Practitioner	PH	Pharmacy note
Scenario = Medicine on Discharge													
GR	Reason for changing or stopping the prescription												
MD	Medicines notes												
GP	Notes to General Practitioner												
PH	Pharmacy note												

### Example 13.3. Sample NTE segment

```
// Comment for General practitioner
NTE|1|P|Administer only in case of sharp pain|GP|
```

# Chapter 14. OBR - Observation Request

The Observation Request segment defines the attributes of a particular request for diagnostic services (e.g., laboratory, EKG) or clinical observations (e.g., vital signs or physical exam). When a placer requests a given set of observations, always include an order segment.

## 1. Segment definition

### 1.1. OBR for Document Management

#	Name	Set	Description
02	Placer Order Number	RC	Placer application's order number. It identifies an order uniquely among all orders from a particular ordering application. If available, MUST be set and equal to ORC-2.  <b>Format:</b> EI.1=order identifier  EI.2=placer application. <i>ValueList:</i> <u>User Table 0361 - Application</u>  <b>Condition:</b> <i>Scenario</i> =Document Management and Placer Order Number available
03	Filler Order Number	R	Order number associated with the filling application. It must uniquely identify the order from other orders in a particular filling application. Must be equal to ORC-3  <b>Format:</b> EI.1=order identifier  EI.2=filler application. <i>ValueList:</i> <u>User Table 0361 - Application</u>
04	Universal Service Identifier	R	This field contains the identifier code for the requested observation  <b>Format:</b> CE.1=observation identifier assigned by filler application . <b>Req.</b>  CE.2=description of observation identifier  CE.3=name of coding system. <i>ValueList:</i> <u>User Table 0396 - Coding System</u> <b>Req.</b>  CE.4=alternate observation identifier  CE.5=description of alternate observation identifier  CE.6=name of alternate coding system. <i>ValueList:</i> <u>User Table 0396 - Coding System</u>
18	Placer Field 1	O	Physician prescription identifier [ITA: Codice RUR della prescrizione]
27	Quantity/timing	n/a	<i>Deprecated, use TQ1 segment</i>
32	Principal Result Interpreter	R	NoemaLife usage of the field is intended to specification of the facility that produced the document.  <b>Format</b> NDL.7=Facility  <b>Loc ITA</b> Struttura in cui viene prodotto il referto <sup>a</sup>

#	Name	Set	Description
			<p><i>Format</i> NDL.7.1=Codice Azienda Ospedaliera</p> <p>NDL.7.2=Codice del Presidio (8 cifre)</p> <p>NDL.7.3=Codice Reparto/Ambulatorio</p>
46	Placer Supplemental Service Information	OC..*	<p>This field contains supplemental service information sent from the placer system to the filler system.</p> <p>Current usages include:</p> <ul style="list-style-type: none"> <li>User credentials for access to Document Distribution applications</li> </ul> <p>Authorization and consent to document publishing is given in NTE segment for Document Management, else in PV2-45</p> <p><b>Format:</b> see <u>Placer Supplemental Service Information</u></p> <p><b>Conditions:</b> <i>Scenario</i>= Document Management</p>

<sup>a</sup>Le specifiche CRS-SISS prevedono l'utilizzo di PV1-3 per specificare la struttura in cui viene prodotto il referto; noi preferiamo preservare PV1-3 al significato di 'Assigned Patient Location' e utilizzare invece OBR-32.

## 1.2. OBR for Order Management

### Important

Following specifications for OBR segment do *NOT* apply to the Laboratory system, that must refer instead to OBR for Laboratory Testing Management

#	Name	Set	Description
01	Set ID – OBR	O	Identifier of each occurrence of the segment.
02	Placer Order Number	RC	<p>Placer application's order number. It identifies an order uniquely among all orders from a particular ordering application. Must be equal to ORC-2</p> <p><b>Format:</b> EI.1=order identifier</p> <p>EI.2=placer application. <i>ValueList:</i> <u>User Table 0361 - Application</u></p> <p><b>Condition:</b> <i>Scenario</i>=Placer Order Management</p>
03	Filler Order Number	RC	<p>Order number associated with the filling application. It must uniquely identify the order from other orders in a particular filling application. Must be equal to ORC-3</p> <p><b>Format:</b> EI.1=order identifier</p> <p>EI.2=filler application. <i>ValueList:</i> <u>User Table 0361 - Application</u></p> <p><b>Condition:</b> <i>Scenario</i>=Filler Order Management</p>
04	Universal Service Identifier	R	<p>This field contains the identifier code for the requested observation</p> <p><b>Format:</b> CE.1=observation identifier assigned by filler application . <b>Req.</b></p> <p>CE.2=description of observation identifier</p> <p>CE.3=name of coding system. <i>ValueList:</i> <u>User Table 0396 - Coding System</u> <b>Req.</b></p>

OBR - Observation Request

#	Name	Set	Description										
			<p>CE.4=alternate observation identifier</p> <p>CE.5=description of alternate observation identifier</p> <p>CE.6=name of alternate coding system. <i>ValueList</i>: <u>User Table 0396 - Coding System</u></p>										
13	Relevant Clinical Information	O	<p>This field is used to report additional clinical information about the patient in textual and unstructured format (ex. textual anamnesis)</p> <p><i>Notes</i>:</p> <ul style="list-style-type: none"> <li>clinical informations MAY be sent in a structured form using OBX segments.</li> <li>suspected diagnosis MUST be specified in OBR-31</li> </ul>										
15	Specimen Source	OC	<p>This field identifies the site where the specimen should be obtained or where the service should be performed.</p> <p><b>Note:</b> for Laboratory Order Management, SPM (Specimen) segment MUST be used instead of OBR-15</p> <p><b>Format:</b> SPS.5=Site Modifier. <i>ValueList</i>: see below</p> <table border="1"> <tr> <td>R</td> <td>Right</td> </tr> <tr> <td>L</td> <td>Left</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>DX</td> <td>Destra</td> </tr> <tr> <td>SX</td> <td>Sinistra</td> </tr> </table> <p>(Ref. HL7 Table 0495 - Body Site Modifier)</p> <p><b>Condition:</b> <i>Scenario</i> &lt;&gt; Laboratory Order Management</p>	R	Right	L	Left	<b>Loc ITA</b>		DX	Destra	SX	Sinistra
R	Right												
L	Left												
<b>Loc ITA</b>													
DX	Destra												
SX	Sinistra												
18	Placer Field 1	O	Physician prescription identifier [ITA: Codice RUR della prescrizione]										
19	Placer Field 2	O	Generic notes about the Order										
20	Filler Field 1	OC	<p>StudyUID</p> <p><b>Conditions:</b> Scenario=Radiology Filler Order Management</p>										
21	Filler Field 2	OC	<p>AccessionNumber</p> <p><b>Conditions:</b> Scenario=Radiology Filler Order Management</p>										
24	Diagnostic Serv Sect ID	O	<p>Diagnostic service where the observation was performed.</p> <p><b>Values:</b> Ref. <u>HL7 Table 0074 - Diagnostic Service Section</u></p>										
25	Result Status	RC	<p>This field contains the status of results for this order</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>I</td> <td>Working (no results available; specimen received, procedure incomplete)</td> </tr> <tr> <td>P</td> <td>Preliminary: A verified early result is available, final results not yet obtained</td> </tr> <tr> <td>F</td> <td>Final Results (results stored and verified. Can only be changed with a corrected result)</td> </tr> </table>	I	Working (no results available; specimen received, procedure incomplete)	P	Preliminary: A verified early result is available, final results not yet obtained	F	Final Results (results stored and verified. Can only be changed with a corrected result)				
I	Working (no results available; specimen received, procedure incomplete)												
P	Preliminary: A verified early result is available, final results not yet obtained												
F	Final Results (results stored and verified. Can only be changed with a corrected result)												



#	Name	Set	Description								
			<table border="1"> <tr> <td>X</td> <td>Order Deleted (no results available; Order canceled)</td> </tr> </table> <p>(Ref. HL7 Table 0123 - Result Status)</p> <p><b>Conditions:</b> <i>Scenario</i> in (Filler Order Management; Observation Reporting)</p>	X	Order Deleted (no results available; Order canceled)						
X	Order Deleted (no results available; Order canceled)										
27	Quantity/timing	RC	<p>This field determines the priority, quantity, frequency, and timing of an atomic service.</p> <p>This field <b>MUST</b> have the same value of ORC-7.</p> <p><b>Note:</b> although this field is deprecated in HL7 2.5 and usage of TQ1 segment is recommended, we keep this field for usage with ORM messages in Radiology scenario, where TQ1 segment is not available.</p> <p><b>Format:</b> TQ.1=quantity of required service (default=1)</p> <p>TQ.4=it indicates the earliest date/time at which the services should be started. <b>Req.</b></p> <p>TQ.6=priority <i>ValueList</i>: &lt;see below&gt;</p> <p><b>Table 14.1. User Table 0485 – Extended Priority Codes</b></p> <table border="1"> <tr> <td>S</td> <td>Emergency (highest priority)</td> </tr> <tr> <td>A</td> <td>Urgent (highest priority after S)</td> </tr> <tr> <td>R</td> <td>Routine</td> </tr> </table> <p><b>Conditions:</b> <i>Scenario</i> = Placer Order Management</p>	S	Emergency (highest priority)	A	Urgent (highest priority after S)	R	Routine		
S	Emergency (highest priority)										
A	Urgent (highest priority after S)										
R	Routine										
30	Transportation Mode	O	<p>This field identifies how (or whether) to transport a patient, when applicable.</p> <p><b>Table 14.2. HL7 Table 0124 - Transportation Mode</b></p> <table border="1"> <tr> <td>CART</td> <td>Cart - patient travels on cart or gurney</td> </tr> <tr> <td>PORT</td> <td>The examining device goes to patient's location</td> </tr> <tr> <td>WALK</td> <td>Patient walks to diagnostic service</td> </tr> <tr> <td>WHLC</td> <td>Wheelchair</td> </tr> </table>	CART	Cart - patient travels on cart or gurney	PORT	The examining device goes to patient's location	WALK	Patient walks to diagnostic service	WHLC	Wheelchair
CART	Cart - patient travels on cart or gurney										
PORT	The examining device goes to patient's location										
WALK	Patient walks to diagnostic service										
WHLC	Wheelchair										
31	Reason for Study	O..*	<p>Defines the reason why the study is required. If the <b>suspected diagnosis/pathology</b> is available, it <b>MUST</b> be specified in this field; if available, specify the diagnosis code with associated coding system.</p> <p><b>Format:</b> CE.1=Code</p> <p>CE.2=Description</p> <p>CE.3=Coding System <b>Req</b> if CE.1 &lt;&gt; null</p> <p><b>Loc CRS-SISS:</b> Nel caso CRS-SISS è possibile utilizzare una ripetizione aggiuntiva del campo per definire la "Modalità di erogazione", secondo le specifiche del progetto SISS.</p>								

#	Name	Set	Description
			In tal caso qualificare la ripetizione con CE.3='99SISS'.
39	Collector's comment	n/a	<i>Note: Informed Consent has moved to OBR-46</i>
46	Placer Supplemental Service Information	OC..*	<p>This field contains supplemental service information sent from the placer system to the filler system.</p> <p>Current usages include:</p> <ul style="list-style-type: none"> <li>• <i>User credentials</i> for access to Document Distribution applications.</li> </ul> <p>Authorization and consent to document publishing is given in NTE segment for Document Management, else in PV2-45.</p> <ul style="list-style-type: none"> <li>• <i>Patient call order identifier</i>, defined upon outpatient order confirmation on patient arrival, used by Order Filler to ensure the correct patients call (and patient queue processing) order and anonymity of calls.</li> <li>• <i>Informed Consent</i>, for services that require patient's consent.</li> <li>• <i>Agenda code</i>, for identification of the filler's agenda where services have been booked.</li> </ul> <p><b>Format:</b> see <u>Placer Supplemental Service Information</u></p> <p><b>Conditions:</b> <i>Scenario= Placer Order Management</i></p>

### 1.3. OBR for Laboratory Testing Management

#### Important

Following specifications for OBR segment are for the Laboratory system *ONLY*, and apply to the Placer Order Management and Order Result Management scenarios.

#	Name	Set	Description
01	Set ID – OBR	O	Identifier of each occurrence of the segment.
02	Placer Order Number	RC	<p>Placer application's order number. It identifies an order uniquely among all orders from a particular ordering application. MUST be equal to ORC-2.</p> <p><b>Format:</b> EI.1=order identifier</p> <p>EI.2=placer application. <i>ValueList: <u>User Table 0361 - Application</u></i></p> <p><b>Condition:</b> <i>Scenario=Placer Order Management</i></p>
03	Filler Order Number	RC	<p>Order number associated with the filling application. It must uniquely identify the order from other orders in a particular filling application. MUST be equal to ORC-3</p> <p><b>Format:</b> EI.1=filler local order identifier</p> <p>EI.2=filler application. <i>ValueList: <u>User Table 0361 - Application</u></i></p>

#	Name	Set	Description
			<p>EI.3=enterprise-wide, unique, filler-generated identifier of the order</p> <p><b>Loc DNLAB</b></p> <p>format &lt;bytidlab&gt;-&lt;stridrichiesta&gt;-&lt;dtmdataaccettazione, YYYYMMDDHHMM&gt; is REQUIRED for EI.3</p> <p><b>Condition:</b> Scenario in (Filler Order Management; Order Result Management)</p>
04	Universal Service Identifier	R	<p>This field contains the identifier code for the requested observation</p> <p><b>Format:</b> CE.1=observation identifier assigned by filler application . <b>Req.</b></p> <p><i>Loc DNLAB:</i> Values:</p> <ul style="list-style-type: none"> <li>• "LIS_MIC" if the OBR is related to a Microorganism identification</li> <li>• "LIS_ATB" if the OBR is related to an Antibiotic testing</li> <li>• the <i>requested</i> observation identifier in all other cases (may be a <i>complex test</i> as well as a <i>elementary test</i>, accordingly to what the placer required)</li> </ul> <p>CE.2=description of observation identifier</p> <p>CE.3=name of coding system. <i>ValueList: User Table 0396 - Coding System</i> <b>Req.</b></p> <p>CE.4=alternate observation identifier</p> <p><i>Loc DNLAB:</i> if the OBR is not related to Microorganisms nor Antibiotics, MUST include the <i>requested</i> observation identifier including observation <i>version</i>, in format &lt;id_observation&gt;@&lt;version&gt; <b>Req. if Scenario = Order Result Management</b></p> <p>CE.5=description of alternate observation identifier</p> <p>CE.6=name of alternate coding system. <i>ValueList: User Table 0396 - Coding System</i> <b>Req. if Scenario = Order Result Management</b></p>
16	Ordering provider	O	<p>Identity of the person who is responsible for creating the request (i.e., ordering physician).</p>

#	Name	Set	Description								
			<p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p><b>Format:</b> see <u>Ordering Provider</u></p>								
18	Placer Field 1	OC	<p><b>Loc DNLAB</b> Zona di lavorazione del campione</p> <p><b>Condition:</b> <i>Scenario</i> in (Placer Order Management, Filler Order Management)</p>								
19	Placer Field 2	OC	<p><b>Loc: DNLAB</b> Sede di lavorazione del campione</p> <p><b>Condition:</b> <i>Scenario</i> in (Placer Order Management, Filler Order Management)</p>								
24	Diagnostic Serv Sect ID	O	<p>Diagnostic service where the observation was performed.</p> <p><b>Values:</b> Ref. <u>HL7 Table 0074 - Diagnostic Service Section</u></p> <p>In case more Diagnostic Services of the same type exists, the code from HL7 table 0074 <b>SHOULD</b> be completed and specified using a numeric "instance identifier" for each, using format &lt;ID from table 0074&gt;-&lt;Diagnostic Service Instance/ID Number&gt;.</p>								
25	Result Status	RC	<p>This field contains the status of results for this order. <b>MUST</b> match OBX.11 in the same results group</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>I</td> <td>Working (no results available; specimen received, procedure incomplete)</td> </tr> <tr> <td>R</td> <td>Results entered (not verified yet)</td> </tr> <tr> <td>F</td> <td>Final Results (results stored and verified. Can only be changed with a corrected result)</td> </tr> <tr> <td>C</td> <td>Record coming over is a correction and thus replaces a final result</td> </tr> </table> <p><b>Conditions:</b> <i>Scenario</i>= Order Result management</p>	I	Working (no results available; specimen received, procedure incomplete)	R	Results entered (not verified yet)	F	Final Results (results stored and verified. Can only be changed with a corrected result)	C	Record coming over is a correction and thus replaces a final result
I	Working (no results available; specimen received, procedure incomplete)										
R	Results entered (not verified yet)										
F	Final Results (results stored and verified. Can only be changed with a corrected result)										
C	Record coming over is a correction and thus replaces a final result										
26	Parent Result	RC	<p>This field contains the link to the <i>parent results</i> when results need to be represented accordingly to a multi-level structure (e.g. microbiology).</p> <p><b>Format:</b> CE.1= contains the <i>elementary</i> test<sup>3</sup>identifier of the parent result (e.g. the Microorganism identification for an Antibiotic testing) <b>Req.</b></p> <p><b>MUST</b> match the parent observation identifier in OBX.3 CE.1 of parent segments group</p> <p><b>Conditions:</b> <i>Scenario</i>= Order Result management and result is related to a Microorganism Identification or an Antibiotic testing</p> <p>See also details in paragraph <i>Microbiology results representation</i> inside document <i>NoemaLife HL7 Integration Policy - Use Cases and Integration Scenarios</i> [NL-HL7-IP-UC]</p>								

#	Name	Set	Description
29	Parent	RC	<p>This field contains the link to the <i>parent results group</i> when results need to be represented accordingly to a multi-level structure (e.g. microbiology).</p> <p><b>Format:</b> EIP.2 EI.1= contains the <i>complex test</i><sup>b</sup> identifier of the parent result (e.g. for a Microorganism identification, should be the complex test required) <b>Req.</b></p> <p>MUST match the parent observation identifier in OBR.4 CE.1 of parent segments group</p> <p><b>Conditions:</b> <i>Scenario</i>= Order Result management and result is related to a Microorganism Identification or an Antibiotic testing</p> <p>See also details in paragraph <i>Microbiology results representation</i> inside document <i>NoemaLife HL7 Integration Policy - Use Cases and Integration Scenarios</i> [NL-HL7-IP-UC]</p>
46	Placer Supplemental Service Information	OC.*	<p>This field contains supplemental service information sent from the placer system to the filler system.</p> <p>Current usages include:</p> <ul style="list-style-type: none"> <li>"Tests Profile" identifier</li> </ul> <p>If the test whose result is being transmitted was originally requested using a "<i>Test Profile</i>" code (a single code allowing to order many different tests together), then this repetition MAY be used to transmit the original Test Profile code</p> <p><b>Format:</b> see <u>Placer Supplemental Service Information</u></p> <p><b>Conditions:</b> <i>Scenario</i>= Order Result Management</p>

<sup>a</sup>In DNLAB, relates to "analisi elementare"

<sup>b</sup>In DNLAB, relates to "analisi multipla"

## 2. Fields definition

### 2.1. OBR-16

Ordering physician

#	Name	Set	Description						
XCN.1	ID Number	R	<p>Doctor's identifier</p> <p><b>Values</b> Depends on XCN.13</p>						
XCN.2 FN.1	family name	O	Surname						
XCN.3	given name	O	First name						
XCN.13	identifier type code	R	<p>It defines the type of identifier specified in XCN.1</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>NN</td> <td>National Personal Identifier</td> </tr> <tr> <td>RRI</td> <td>Regional Registry ID</td> </tr> <tr> <td>LR</td> <td>Local Registry ID (<i>Not Compliant CRS-SISS</i>)</td> </tr> </table>	NN	National Personal Identifier	RRI	Regional Registry ID	LR	Local Registry ID ( <i>Not Compliant CRS-SISS</i> )
NN	National Personal Identifier								
RRI	Regional Registry ID								
LR	Local Registry ID ( <i>Not Compliant CRS-SISS</i> )								

#	Name	Set	Description						
			<table border="1"> <tr> <td></td> <td>It is RECOMMENDED to use standard, enterprise-wide adopted identifiers.</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>NNITA</td> <td>Tax Code (<i>Note:</i> for CRS-SISS use: NN)</td> </tr> </table> <p>(Ref. HL7 Table 0203 - Identifier Type: IT)</p>		It is RECOMMENDED to use standard, enterprise-wide adopted identifiers.	<b>Loc ITA</b>		NNITA	Tax Code ( <i>Note:</i> for CRS-SISS use: NN)
	It is RECOMMENDED to use standard, enterprise-wide adopted identifiers.								
<b>Loc ITA</b>									
NNITA	Tax Code ( <i>Note:</i> for CRS-SISS use: NN)								

## 2.2. OBR-46

### Placer Supplemental Service Information

#	Name	Set	Description										
CE.1	Identifier	R	<p>Value assigned to the information identified by CE.3.</p> <p><b>Important</b></p> <p>When CE.1 contains <i>sensitive data</i> (e.g. credentials, accounts, etc.), some form of data obfuscation is REQUIRED during transmission. The following guidelines are given:</p> <ul style="list-style-type: none"> <li>• since the encryption capabilities may depend on the technological stack used to implement the HL7 gateways, the specific encryption algorithm SHOULD be defined on local agreement, to guarantee a reliable and effective implementation at the sender and receiver applications. The use of standard, widely-adopted and secure algorithms is RECOMMENDED (e.g. AES128, AES256, 3DES, etc.)</li> <li>• encryption password SHOULD be agreed locally, and may be a static password or a dynamic password calculated from data contained in the message itself (e.g. concatenation of some of the <i>required</i> fields in the message, like name, surname, etc.)</li> <li>• since encryption algorithms results are likely to produce strings containing HL7-forbidden characters, it is REQUIRED to encode CE.1 using Base64.</li> </ul>										
CE.3	Name of Coding System	R	<p>Identifier of information. <i>ValueList:</i> &lt;see below&gt;.</p> <p><b>Table 14.3. User Table 0411 - Supplemental service information values</b></p> <table border="1"> <tr> <td>PortalUser</td> <td>Credentials for accessing Portal/Document Distribution application - Username</td> </tr> <tr> <td>PortalPassword</td> <td>Credentials for accessing Portal/Document Distribution application - Password</td> </tr> <tr> <td>PortalControlkey</td> <td>Credentials for accessing Portal/Document Distribution application - Control Key</td> </tr> <tr> <td>TestProfile</td> <td>The Tests Profile code, if used for requesting many single tests together in a single operation</td> </tr> <tr> <td>PatientCallOrderID</td> <td>Patient call order identifier, used to call patients (outpatients especially) in the correct processing sequence (defined by check-in/order confirmation operation on patient arrival)</td> </tr> </table>	PortalUser	Credentials for accessing Portal/Document Distribution application - Username	PortalPassword	Credentials for accessing Portal/Document Distribution application - Password	PortalControlkey	Credentials for accessing Portal/Document Distribution application - Control Key	TestProfile	The Tests Profile code, if used for requesting many single tests together in a single operation	PatientCallOrderID	Patient call order identifier, used to call patients (outpatients especially) in the correct processing sequence (defined by check-in/order confirmation operation on patient arrival)
PortalUser	Credentials for accessing Portal/Document Distribution application - Username												
PortalPassword	Credentials for accessing Portal/Document Distribution application - Password												
PortalControlkey	Credentials for accessing Portal/Document Distribution application - Control Key												
TestProfile	The Tests Profile code, if used for requesting many single tests together in a single operation												
PatientCallOrderID	Patient call order identifier, used to call patients (outpatients especially) in the correct processing sequence (defined by check-in/order confirmation operation on patient arrival)												

#	Name	Set	Description
			InformedConsent Patient's consent, for observations that require it.  <b>ValueList in CE.1:</b>  1 = consent given  0 = consent NOT given
			AgendaCode Identifier of filler's agenda where services have been booked.

### 3. Tables

**Table 14.4. HL7 Table 0074 - Diagnostic Service Section**

Value	Description	Comment
BG	Blood Gases	
BLB	Blood Bank	
CH	Chemistry	
CP	Cytopathology	
CT	CAT Scan	
CTH	Cardiac Catheterization	
CUS	Cardiac Ultrasound	
EC	Electrocardiac (e.g., EKG, EEC, Holter)	
EN	Electroneuro (EEG, EMG,EP,PSG)	
HM	Hematology	
ICU	Bedside ICU Monitoring	
IMM	Immunology	
LAB	Laboratory	
MB	Microbiology	
MCB	Mycobacteriology	
MYC	Mycology	
NMR	Nuclear Magnetic Resonance	
NMS	Nuclear Medicine Scan	
NRS	Nursing Service Measures	
OSL	Outside Lab	
OT	Occupational Therapy	
OTH	Other	
OUS	OB Ultrasound	
PF	Pulmonary Function	
PHR	Pharmacy	
PHY	Physician (Hx. Dx, admission note, etc.)	
PT	Physical Therapy	
RAD	Radiology	
RC	Respiratory Care (therapy)	

OBR - Observation Request

<b>Value</b>	<b>Description</b>	<b>Comment</b>
RT	Radiation Therapy	
RUS	Radiology Ultrasound	
RX	Radiograph	
SP	Surgical Pathology	
SR	Serology	
TX	Toxicology	
VR	Virology	
VUS	Vascular Ultrasound	
XRC	Cineradiograph	
<i>&lt;The table can be extended with additional codes to be agreed&gt;</i>		



# Chapter 15. OBX - Observation/Result

The OBX segment is used in several scenarios and with different purposes; the basic role, anyway, is to transmit a single observation or observation fragment. In the following will be explained the usage of OBX for:

- transmitting encapsulated data (e.g., a PDF document, a CDA document, a DICOM image, etc.)
- transmitting relevant clinical information upon order requests
- transmitting structured results of observations

## 1. Segment definition

### 1.1. OBX for Document Management

#	Name	Set	Description						
01	Set ID - OBX	<b>R</b>	Identifier of each occurrence of the segment.						
02	Value Type	<b>R</b>	<p>This field defines the format of OBX-5</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>ED</td> <td>Encapsulated Data (if document encapsulated inside the message)</td> </tr> <tr> <td>RP</td> <td>Reference Pointer (if external document referenced by link)</td> </tr> </table> <p>(Ref. HL7 Table 0125 - Value Type)</p>	ED	Encapsulated Data (if document encapsulated inside the message)	RP	Reference Pointer (if external document referenced by link)		
ED	Encapsulated Data (if document encapsulated inside the message)								
RP	Reference Pointer (if external document referenced by link)								
03	Observation Identifier	<b>R</b>	<p>Document identifier.</p> <p><b>Format:</b> CE.1=Unique document identifier; in case a single OBX, it is equal to TXA-12.1 <b>Req</b></p> <p>CE.2=Document type; in case of a single OBX in the message, it is equal to TXA-2. <i>ValueList:</i> User Table 0270 - Document Type. <b>Req</b></p> <p><b>Loc CRS-SISS:</b></p> <p>CE.3=Tipologia contenuto. <i>ValueList:</i> &lt;vedi sotto&gt;. <b>Req</b></p> <table border="1"> <tr> <td>REF</td> <td>Referto</td> </tr> <tr> <td>DAO</td> <td>Documento di autorizzazione</td> </tr> <tr> <td>CDA2</td> <td>Documento strutturato CDA2 per referto specialistico generico</td> </tr> </table> <p>CE.5= Tipologia interna del documento. <i>ValueList:</i> Vedi specifiche HL7-SISS [CRS-SISS-HL7] <b>Req.</b> if CE.3 &lt;&gt; DAO</p>	REF	Referto	DAO	Documento di autorizzazione	CDA2	Documento strutturato CDA2 per referto specialistico generico
REF	Referto								
DAO	Documento di autorizzazione								
CDA2	Documento strutturato CDA2 per referto specialistico generico								
05	Observation Value	<b>R</b>	<p>This field contains the document content. The data type for this field depends on the value specified in OBX.2</p> <p><b>Format:</b> see OBX-5 for Data Type = ED for details</p>						
11	Observation result status	<b>R</b>	<p>Defines the state of the document contained in OBX.5.</p> <p><b>Value:</b></p> <table border="1"> <tr> <td>F</td> <td>Final results (i.e. Validated document)</td> </tr> <tr> <td>R</td> <td>Results entered - not verified (i.e. Draft document)</td> </tr> <tr> <td>LA</td> <td>Legally Authenticated document</td> </tr> </table>	F	Final results (i.e. Validated document)	R	Results entered - not verified (i.e. Draft document)	LA	Legally Authenticated document
F	Final results (i.e. Validated document)								
R	Results entered - not verified (i.e. Draft document)								
LA	Legally Authenticated document								

#	Name	Set	Description
			Ref. HL7 Table 0085 - Observation result status codes interpretation

## 1.2. OBX for Order Management and Patient Encounter

#	Name	Set	Description								
01	Set ID - OBX	R	Identifier of each occurrence of the segment.								
02	Value Type	R	<p>This field contains the format of the observation value in OBX-5</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>ST</td> <td>For Short Textual results (e.g "Positive", etc.)</td> </tr> <tr> <td>NM</td> <td>For Numeric results(e.g. "210")</td> </tr> <tr> <td>SN</td> <td>For Structured Numeric results (e.g. "&gt;300")</td> </tr> <tr> <td>CE</td> <td>Coded Entry (e.g. "NEG^Negative^LN")</td> </tr> </table>	ST	For Short Textual results (e.g "Positive", etc.)	NM	For Numeric results(e.g. "210")	SN	For Structured Numeric results (e.g. ">300")	CE	Coded Entry (e.g. "NEG^Negative^LN")
ST	For Short Textual results (e.g "Positive", etc.)										
NM	For Numeric results(e.g. "210")										
SN	For Structured Numeric results (e.g. ">300")										
CE	Coded Entry (e.g. "NEG^Negative^LN")										
03	Observation Identifier	R	<p>This field contains a unique identifier for the observation. The format is that of the Coded Element (CE).</p> <p><b>Format:</b></p> <p>CE.1=identifier <b>Req.</b></p> <p>CE.2=description <b>Req.</b></p> <p>CE.3=name of coding system (eg. LOINC). <i>ValueList:</i> <u>User Table 0396 - Coding System</u> <b>Req.</b></p> <p>CE.4=alternate identifier</p> <p>CE.5=alternative description</p> <p>CE.6=name of alternate coding system (eg. LOINC). <i>ValueList:</i> <u>User Table 0396 - Coding System</u></p> <p><b>Example:</b> 29463^Body Weight^LN</p>								
05	Observation Value	R	<p>This field contains the value observed by the observation producer. The data type for this field depends on the value specified in OBX.2</p> <p><b>Format:</b> see OBX-5 for <u>Data Type = ED</u> for details</p>								
06	Units	RC	<p>Unit of measure. Common ISO Derived Units &amp; ISO+ Extensions</p> <p><b>Conditions:</b> Required if an observation's value is measured on a continuous scale</p>								
11	Observation result status	R	<p>Defines the state of the observation contained in OBX.5</p> <p><b>Value:</b></p> <table border="1"> <tr> <td>F</td> <td>Final results. Can only be changed with a corrected result.</td> </tr> </table> <p>Ref. HL7 Table 0085 - Observation result status codes interpretation</p>	F	Final results. Can only be changed with a corrected result.						
F	Final results. Can only be changed with a corrected result.										

### Example 15.1. Sample OBX segment

Numeric Results:

OBX|1|NM|2164-2^CREATININECLEARANCE^LN||52.7|ml/min|88-174|L|||F|||200510060830

## 1.3. OBX for Laboratory Testing Management

#	Name	Set	Description										
01	Set ID - OBX	<b>R</b>	Identifier of each occurrence of the segment.										
02	Value Type	<b>R</b>	<p>This field contains the format of the observation value in OBX-5</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>ST</td> <td>For Short Textual results (e.g "Positive", etc.).</td> </tr> <tr> <td>NM</td> <td>For Numeric results (also suitable for antibiotics susceptibility measure) (e.g. "210")</td> </tr> <tr> <td>SN</td> <td>For Structured Numeric results (also suitable for antibiotics susceptibility measure) (e.g. "&gt;300")</td> </tr> <tr> <td>CE</td> <td>Coded Entry (e.g. "NEG^Negative^LN"; also used for identified microorganisms, e.g. "412643004^Beta hemolytic Streptococcus A^SCT")</td> </tr> <tr> <td>TX</td> <td>For Long Textual results (e.g. a long descriptive report or result). (<b>Loc DNLAB</b>: see notes in <u>OBX-5</u>)</td> </tr> </table>	ST	For Short Textual results (e.g "Positive", etc.).	NM	For Numeric results (also suitable for antibiotics susceptibility measure) (e.g. "210")	SN	For Structured Numeric results (also suitable for antibiotics susceptibility measure) (e.g. ">300")	CE	Coded Entry (e.g. "NEG^Negative^LN"; also used for identified microorganisms, e.g. "412643004^Beta hemolytic Streptococcus A^SCT")	TX	For Long Textual results (e.g. a long descriptive report or result). ( <b>Loc DNLAB</b> : see notes in <u>OBX-5</u> )
ST	For Short Textual results (e.g "Positive", etc.).												
NM	For Numeric results (also suitable for antibiotics susceptibility measure) (e.g. "210")												
SN	For Structured Numeric results (also suitable for antibiotics susceptibility measure) (e.g. ">300")												
CE	Coded Entry (e.g. "NEG^Negative^LN"; also used for identified microorganisms, e.g. "412643004^Beta hemolytic Streptococcus A^SCT")												
TX	For Long Textual results (e.g. a long descriptive report or result). ( <b>Loc DNLAB</b> : see notes in <u>OBX-5</u> )												
03	Observation Identifier	<b>R</b>	<p>This field contains a unique identifier for the observation</p> <p><b>Format:</b> CE.1=identifier <b>Req.</b> (<b>Loc DNLAB</b>: per i risultati di laboratorio, <i>analisi singola</i>)</p> <p>CE.2=description <b>Req.</b></p> <p>CE.3=name of coding system (e.g. LOINC). <i>ValueList</i>: <u>User Table 0396 - Coding System</u></p> <p>CE.4=alternate identifier <b>Req.</b> (<b>Loc DNLAB</b>: in lab results not related to microorganisms and antibiotics, set to <i>analisi singola@versione</i>)</p> <p>CE.5=alternative description</p> <p>CE.6=name of alternate coding system (eg. LOINC). <i>ValueList</i>: <u>User Table 0396 - Coding System</u></p>										
04	Observation subID	<b>RC</b>	<p>This field is used to distinguish between multiple microorganisms identified in microbiology results representation</p> <p><b>Conditions:</b> Required if OBX is related to a microorganism identification or an antibiotic testing</p> <p>See also details in paragraph <i>Microbiology results representation</i> inside document <i>NoemaLife HL7 Integration Policy - Use Cases and Integration Scenarios</i> [NL-HL7-IP-UC]</p>										
05	Observation Value	<b>R</b>	<p>This field contains the value observed by the observation producer. The result may be a number, a structured number, a coded value, a short text (e.g. "Positive") or a long text (descriptive comment).</p> <p>The data structure for this field depends on the value specified in OBX-2.</p> <p>In case of antibiotic testing results, this field is dedicated to the MIC result.</p> <p><b>Format:</b></p> <ul style="list-style-type: none"> <li>If OBX-2 in (ST, SN, NM, TX) then OBX-5 MUST contain a plain, simple string representing a number, a structured number or an alphanumeric text; HL7 sub-fields (separated by HL7 character ^) MUST NOT be used</li> </ul>										

#	Name	Set	Description
			<ul style="list-style-type: none"> <li>if OBX-2 = "CE", see <u>OBX-5 for Data Type = CE</u> for details</li> </ul> <p><b>Loc DNLAB:</b> Usage according to values in "risultato corto" and "risultato lungo":</p> <ul style="list-style-type: none"> <li>If "risultato corto" is not empty, then OBX-5 <b>MUST</b> be used for "risultato corto" and OBX-2 set accordingly (ST, NM, SN, CE). If "risultato lungo" is not empty too, OBX-17 <b>MUST</b> be used for it.</li> <li>If "risultato corto" is empty and "risultato lungo" is not, then OBX-5 <b>MUST</b> be used to transmit "risultato lungo", and OBX-2 <b>MUST</b> be set to TX; OBX.17 will be empty.</li> </ul>
06	Units	<b>RE</b>	Unit of measure. Common ISO Derived Units & ISO+ Extensions
07	References Range	<b>RE</b>	<p>Reference ranges for observations. Only the reference range that actually apply to patient condition (e.g. according to sex, age, etc.) should be notified.</p> <p><b>Format:</b></p> <ul style="list-style-type: none"> <li>In case of <u>numeric results</u>, allowed formats are as per HL7 standard: <ul style="list-style-type: none"> <li>LowerLimit-UpperLimit</li> <li>&gt;LowerLimit</li> <li>&lt;UpperLimit</li> </ul> </li> <li>In case of <u>non-numeric results</u>, an unformatted string can also be used to transmit reference ranges. This may include reference values stating the "normal" value (e.g. "Negative"), or more complex textual reference indications</li> <li>In case of <u>antibiotics testing</u>, the EUCAST's susceptibility, resistance and Wild Type reference values (cut-offs) <b>SHOULD</b> be transmitted as a string composed using the following format: <p style="text-align: center;"><i>S&lt;=MicS;R&gt;MicR;WT=WildType</i></p> <p>where <i>MicS</i> is MIC Susceptibility cut-off value, <i>MicR</i> is MIC Resistance cut-off value, <i>WildType</i> is WildType cut-off value.</p> </li> </ul>
08	Abnormal flags	<b>RE..2</b>	<p>Normalcy status of the observations.</p> <p>In case of antibiotic testing results, this field is used to transmit the Interpreted Susceptibility result (R-S-I) and the "Wild Type alert" flag.</p> <p><b>Format:</b> Since Normalcy status, Interpreted Susceptibility and "Wild Type alert" flag may be present at the same time, two repetitions of this fields are used. Field repetitions does not have a qualifying subfield, thus the following <u>positional assignment of repetitions</u> <b>MUST</b> be respected to allow a proper data interpretation at the receiver:</p> <ul style="list-style-type: none"> <li>First repetition: <b>MUST</b> be used <u>only</u> for general ab-normalcy flags and Interpreted Susceptibility flags, if available</li> <li>Second repetition: <b>MUST</b> be used <u>only</u> for "Wild Type alert" flag, if available</li> </ul> <p><i>Examples:</i></p>

#	Name	Set	Description																														
			<ul style="list-style-type: none"> <li>• Only Interpreted Susceptibility "S" is present: ... S ...</li> <li>• Both Interpreted Susceptibility "S" and "Wild Type alert" flags are present: ... S~WT ...</li> <li>• Only "Wild Type alert" flag is present: ... ~WT ...</li> </ul> <p><b>Values:</b> <b>Table 15.1. User Table 0078 - Abnormal flags</b></p> <table border="1"> <tr> <td colspan="2"><i>Common results values:</i></td> </tr> <tr> <td>L</td> <td>Below low normal</td> </tr> <tr> <td>H</td> <td>Above high normal</td> </tr> <tr> <td>LL</td> <td>Below lower panic limits</td> </tr> <tr> <td>HH</td> <td>Above upper panic limits</td> </tr> <tr> <td>N</td> <td>Normal (for non numeric results)</td> </tr> <tr> <td>A</td> <td>Abnormal (for non numeric results)</td> </tr> <tr> <td>AA</td> <td>Very abnormal (for non numeric results)</td> </tr> <tr> <td colspan="2"><i>Microbiology results values (antibiotics testing):</i></td> </tr> <tr> <td>S</td> <td>Susceptible</td> </tr> <tr> <td>R</td> <td>Resistant</td> </tr> <tr> <td>I</td> <td>Intermediate</td> </tr> <tr> <td>MS</td> <td>Moderately susceptible</td> </tr> <tr> <td>VS</td> <td>Very susceptible</td> </tr> <tr> <td>WT</td> <td>Used to notify the "Wild Type alert" flag has been raised</td> </tr> </table>	<i>Common results values:</i>		L	Below low normal	H	Above high normal	LL	Below lower panic limits	HH	Above upper panic limits	N	Normal (for non numeric results)	A	Abnormal (for non numeric results)	AA	Very abnormal (for non numeric results)	<i>Microbiology results values (antibiotics testing):</i>		S	Susceptible	R	Resistant	I	Intermediate	MS	Moderately susceptible	VS	Very susceptible	WT	Used to notify the "Wild Type alert" flag has been raised
<i>Common results values:</i>																																	
L	Below low normal																																
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I	Intermediate																																
MS	Moderately susceptible																																
VS	Very susceptible																																
WT	Used to notify the "Wild Type alert" flag has been raised																																
10	Nature of Abnormal Test	RC	<p>This field is used to define the nature of abnormalcy of test or the type of result</p> <p><b>Conditions:</b> Required if OBX is related to an <i>antibiotic testing</i>.</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>AB</td> <td>MUST be used if OBX is carrying results of Antibiotic testing</td> </tr> </table> <p>See also details in paragraph <i>Microbiology results representation</i> inside document <i>NoemaLife HL7 Integration Policy - Use Cases and Integration Scenarios</i> [NL-HL7-IP-UC]</p>	AB	MUST be used if OBX is carrying results of Antibiotic testing																												
AB	MUST be used if OBX is carrying results of Antibiotic testing																																
11	Observation result status	R	<p>Defines the state of the observation contained in OBX.5</p> <p><b>Value:</b> <b>Table 15.2. HL7 Table 0085 - Observation result status codes interpretation</b></p> <table border="1"> <tr> <td>R</td> <td>Results entered - not verified (<b>Loc DNLAB:</b> risultati validati tecnicamenti)</td> </tr> <tr> <td>F</td> <td>Final results. Can only be changed with a corrected result. (<b>Loc DNLAB:</b> risultati validati clinicamente e ufficialmente pubblicati)</td> </tr> <tr> <td>D</td> <td>Deletes the OBX record</td> </tr> <tr> <td>C</td> <td>Record coming over is a correction and thus replaces a final result</td> </tr> <tr> <td>X</td> <td>Results cannot be obtained for this observation</td> </tr> </table>	R	Results entered - not verified ( <b>Loc DNLAB:</b> risultati validati tecnicamenti)	F	Final results. Can only be changed with a corrected result. ( <b>Loc DNLAB:</b> risultati validati clinicamente e ufficialmente pubblicati)	D	Deletes the OBX record	C	Record coming over is a correction and thus replaces a final result	X	Results cannot be obtained for this observation																				
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D	Deletes the OBX record																																
C	Record coming over is a correction and thus replaces a final result																																
X	Results cannot be obtained for this observation																																

#	Name	Set	Description
			P Preliminary results. ( <b>Loc DNLAB:</b> sigle di tipo "esame in corso")
13	User Defined Access Checks	RC	Number of microorganisms identified. <b>Condition:</b> Applies only to microbiology result groups including the top-level microbiology observation (e.g. "Positive", "Negative", etc.).
14	Date/Time of the Observation	R	Date and time when the result included in OBX-5 was clinically validated. <b>Format:</b> YYYYMMDDHHMM[SS]
16	Responsible Observer	RE	It should contain the identity of the observer responsible of correctness and clinical validity of published result.  <b>Note</b>  It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u> ; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.  <b>Format:</b> see <a href="#">OBX-16</a> for details
17	Observation Method	RE	This field is used to transmit a comment related to the result in OBX-5; this apply both to numerical/textual results, as well as results representing an identified microorganism or an antibiotic.  <b>Note</b>  This usage is a conscious violation of HL7 standard.  <b>Format:</b> CE.2 = comment to the result (free, long text) <b>Req. (Loc DNLAB:</b> see notes in <a href="#">OBX-5</a> )  CE.3 = name of coding system. <b>Req. Value:</b> "COM"

## 2. Fields definition

### 2.1. OBX-5 for Data Type = ED

#	Name	Set	Description				
ED.2	type of data	R	MIME Type  <i>Note:</i> Here we follow HL7 2.7.1 specifications, and use HL7 table 0834 (containing MIME Types) instead of 0191.  <b>Values:</b> In case of a single OBX, same value of TXA-3. <i>ValueList:</i> <a href="#">HL7 Table 0834 - Type Of Data (MIME Types)</a> <sup>a</sup>				
ED.3	data subtype	R	MIME Subtype  <b>Values:</b> See <a href="#">HL7 Table 0291 - Subtype of referenced data</a> <sup>b</sup>				
ED.4	encoding	R	<b>Values:</b> <table border="1"> <tr> <td>A</td> <td>no encoding - data are displayable ASCII characters.</td> </tr> <tr> <td>Hex</td> <td>hexadecimal encoding</td> </tr> </table>	A	no encoding - data are displayable ASCII characters.	Hex	hexadecimal encoding
A	no encoding - data are displayable ASCII characters.						
Hex	hexadecimal encoding						

#	Name	Set	Description
			Base64 <sup>a</sup> encoding as defined by MIME (Multipurpose Internet Mail Extensions) standard RFC 1521. <sup>a</sup> CRS-SISS preferred value
ED.5	data	R	Document content, encoded as specified in ED.4

<sup>a</sup> CRS-SISS preferred value: "multipart"

<sup>b</sup> CRS-SISS preferred value: "octet-stream"

<sup>a</sup> CRS-SISS preferred value

## 2.2. OBX-5 for Data Type = RP

#	Name	Set	Description
RP.1	pointer	R	Pointer, assigned by the system that stores the data, used to identify and access the data.
RP.2	application ID	O	A unique designator of the system that stores the data.
RP.3	type of data	O	MIME Type <b>Format:</b> <u>HL7 Table 0834 - Type Of Data (MIME Types)</u>
RP.4	data subtype	O	MIME Subtype <b>Format:</b> <u>HL7 Table 0291 - Subtype of referenced data</u>

## 2.3. OBX-5 for Data Type = CE

#	Name	Set	Description
CE.1	identifier	R	The unique identifier representing the coded result (e.g. "POS", "esccol")
CE.2	description	O	The textual description of the result (e.g. "Positive", "Escherichia Coli")
CE.3	type of data	O	<b>Format:</b> <u>User Table 0396 - Coding System</u>

## 2.4. OBX-16

#	Name	Set	Description										
XCN.1	ID Number	R	Doctor's identifier <b>Values</b> Depends on XCN.13										
XCN.2 FN.1	family name	RE	Surname										
XCN.3	given name	RE	First name										
XCN.13	identifier type code	R	It defines the type of identifier specified in XCN.1 <b>Values:</b> <table border="1" style="margin-left: 20px;"> <tr> <td>NN</td> <td>National Personal Identifier</td> </tr> <tr> <td>RRI</td> <td>Regional Registry ID</td> </tr> <tr> <td>LR</td> <td>Local Registry ID (<i>Not Compliant</i> CRS-SISS)  It is RECOMMENDED to use standard, enterprise-wide adopted identifiers.</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>NNITA</td> <td>Tax Code (<i>Note:</i> for CRS-SISS use: NN)</td> </tr> </table>	NN	National Personal Identifier	RRI	Regional Registry ID	LR	Local Registry ID ( <i>Not Compliant</i> CRS-SISS)  It is RECOMMENDED to use standard, enterprise-wide adopted identifiers.	<b>Loc ITA</b>		NNITA	Tax Code ( <i>Note:</i> for CRS-SISS use: NN)
NN	National Personal Identifier												
RRI	Regional Registry ID												
LR	Local Registry ID ( <i>Not Compliant</i> CRS-SISS)  It is RECOMMENDED to use standard, enterprise-wide adopted identifiers.												
<b>Loc ITA</b>													
NNITA	Tax Code ( <i>Note:</i> for CRS-SISS use: NN)												

#	Name	Set	Description
			(Ref. HL7 Table 0203 - Identifier Type: IT)

### 3. Tables

**Table 15.3. HL7 Table 0291 - Subtype of referenced data**

Value	Description	Full MIMEtype name	Superseded values (old NoemaLife values)
octet-stream	Binary Data	application/octet-stream	
pdf	Adobe Portable Document Format	application/pdf	ZPDF
mword	Microsoft Word	application/mword	ZDOC
zip	Zip Archive	application/zip	
xml	XML - Extensible Markup Language	application/xml	
mpeg	Mpeg Audio or Video	video/mpeg audio/mpeg	
mp4	MPEG-4 Video	video/mp4	
bmp	Bitmap Image File	image/bmp	
gif	Graphics Interchange Format	image/gif	
jpeg	JPEG Image	image/jpeg	
tiff	Tagged Image File Format	image/tiff	
html	HyperText Markup Language (HTML)	text/html	
plain	Text File	text/plain	
x-hl7-cda-level-one	HL7 Clinical Document Architecture Level One document	application/x-hl7-cda-level-one	
x-p7m_pdf	PDF digitally signed (using PKCS standard)	application/x-p7m_pdf	ZP7M, ZP7M_PDF
x-p7m_txt	Text document, digitally signed (using PKCS standard)	application/x-p7m_txt	ZP7M_TXT
x-m7m_pdf	PDF digitally signed (using PKCS standard). Includes authenticated timestamp	application/x-m7m_pdf	ZM7M, ZM7M_PDF
vnd.ita-er.sole.cda22_mime_pdf	An XML-CDA (ballot 2.2) defined by SOLE Italian project (Emilia Romagna)	application/vnd.ita-er.sole.cda22_mime_pdf	ZCDASOLE2.2(MIME(PDF)) (short form: zCdaSoleMimePdf)
vnd.nl.dnlab.medir.cdaml0+sig	An XML-CDA defined by MEDIR Italian project specifications,	application/vnd.nl.dnlab.medir.cdaml0+sig	ZDNLABMEDIR_CDAML0-SIG (short form: zdnlabmedir_cdaml0Sig)



Value	Description	Full MIMEtype name	Superseded values (old NoemaLife values)
	enveloped in a DNLAB structure, with a signed element (enveloped XML-signature). NOTE: to be compliant with NoemaLife specification, it shouldn't have "_SIG" suffix, because "_" implicates the necessity to apply a transformation to extract and view data content. Next versions may have a "-" instead of "_" (e.g. ZDNLAB_CDAM1.1-SIG). It substitutes ZDNLAB_CDAM1.0_SIG already used in real Sardegna installations		
vnd.nl.dnlab.medir.cdam10	An XML-CDA defined by MEDIR Italian project specifications, enveloped in a DNLAB structure, without any signed element.	application/ vnd.nl.dnlab.medir.cdam10	ZDNLABMEDIR_CDAM1.0 (short form: zdnlabmedir_cdam10).  Also supersedes ZDNLAB_CDAM1.0 already used in running Sardegna installations.
vnd.nl.dnlab.themis.cda20+sig	Used in Italian LAURO installation where CDA are signed with THEMIS system. This is signed CDA version	application/ vnd.nl.dnlab.themis.cda20+sig	ZDNLABTHEMIS_CDA2.0-SIG (short form: zdnlabthemis_cda20Sig)
vnd.nl.dnlab.themis.cda20	Used in Italian LAURO installation where CDA are signed with THEMIS system	application/ vnd.nl.dnlab.themis.cda20	ZDNLABTHEMIS_CDA2.0 (short form: zdnlabthemis_cda20)
vnd.ita-lomb.rel.zip_cda2+xsl-html	A CDA version 2 for Lombardia Haematology Network (REL), zipped together with a style-sheet for rendering it to HTML format.	application/vnd.ita-lomb.rel.zip_cda2+xsl-html	ZZIP(CDAREL2) (short form: zzipcdarel2)
vnd.ita-lomb.rol.zip_cda2+xsl-html	A CDA version 2 for Lombardia Oncology Network (ROL), zipped together with a style-sheet for	application/vnd.ita-lomb.rol.zip_cda2+xsl-html	ZZIP(CDAROL2) (short form: zzipcdarol2)

Value	Description	Full MIMEtype name	Superseded values (old NoemaLife values)
	rendering it to HTML format.		
vnd.nl.zip_cda2	A zipped CDA version 2	application/vnd.nl.zip_cda2	ZZIP(CDA) (short form: zzipcda)
vnd.nl.mime_cda2+xsl-pdf	A multipart MIME object including Xml Cda 2 and the XSL needed to fop it into a PDF	application/vnd.nl.mime_cda2+xsl-pdf	ZMIME(CDA2.0+XSL) (short form: zmimeCdaXsl)
vnd.nl.pem_mime_cda2+xsl-pdf	A multipart MIME object including Xml Cda 2 and the XSL needed to fop it into a PDF. The MIME object containing the two files is encapsulated into a Base64 envelope	application/vnd.nl.pem_mime_cda2+xsl-pdf	ZPEM_MIME(CDA2.0+XSL) (short form: zpem_mimeCdaXsl)
vnd.nl.p7m_mime_cda2+xsl-pdf	A multipart MIME object including Xml Cda 2 and the XSL needed to fop it into a PDF. The MIME object containing the two files is digitally signed using PKCS standard	application/vnd.nl.p7m_mime_cda2+xsl-pdf	ZP7M_MIME(CDA2.0+XSL) (short form: zp7m_mimeCdaXsl)

The content of this table is pre-adopted from HL7 Version 2.7.1, using MIME media subtypes established in accordance with RFC 2046 (<http://ietf.org/rfc/rfc2046.txt>).

Standard MIME subtypes are registered with the "Internet Assigned Numbers Authority" (IANA); non standard (custom, locally agreed) MIME Types MUST use the "x-" or "vnd." prefixes.

Superseded values MUST NOT be used, and their value is given just for reference to previous installations and uses.

# Chapter 16. ORC - Common Order

The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested).

ORC is an optional segment in Document messages (MDM) to convey informations about the order associated to the document.

## 1. Segment definition

### 1.1. ORC for Document Management

#	Name	Set	Description		
01	Order Control	<b>R</b>	Determines the function of the order segment  <b>Values:</b> NW		
02	Placer Order Number	<b>RC</b>	Placer application's order number. It identifies an order uniquely among all orders from a particular ordering application. If available, <b>MUST</b> be set and equal to OBR-2.  <b>Format:</b> EI.1=order identifier  EI.2=placer application. <i>ValueList:</i> <u>User Table 0361 - Application</u>  <b>Condition:</b> <i>Scenario</i> =Document Management and Placer Order Number available		
03	Filler Order Number	<b>R</b>	Order number associated with the filling application. It must uniquely identify the order from other orders in a particular filling application. Must be equal to OBR-3.  <b>Format:</b> EI.1=order identifier assigned by filler application  <i>Loc: DNLAB:</i> format <bytidlab>-<stridrichiesta>-<dtmdataaccettazione, YYYYMMDDHHMM> is REQUIRED  EI.2=filler application. <i>ValueList:</i> <u>User Table 0361 - Application</u>		
04	Placer Group Number	<b>RC</b>	This field allows an order placing application to group sets of orders together and subsequently identify them.  <b>Format:</b> EI.1=order group identifier  EI.2=placer application. <i>ValueList:</i> <u>User Table 0361 - Application</u>  <b>Condition:</b> <i>Scenario</i> =Document Management and Placer Group Number available		
08	Parent	<b>O</b>	Order booking identifier from the order booking facility [IT: codice prenotazione CUP] <sup>a</sup>		
25	Order Status Modifier	<b>O</b>	<b>Loc ITA:</b> Indica se la prestazione è stata erogata e se è aggiuntiva rispetto alla prescrizione originaria. <i>ValueList:</i> <vedi sotto> <table border="1"> <tr> <td>PE</td> <td>Prestazione erogata</td> </tr> </table>	PE	Prestazione erogata
PE	Prestazione erogata				

#	Name	Set	Description
			PA Prestazione aggiuntiva erogata

<sup>a</sup>CRS-SISS valorizza il campo con il codice IUP della prescrizione associata al documento

## 1.2. ORC for Order Management

#	Name	Set	Description																												
01	Order Control	R	<p>Determines the function of the order segment</p> <p><b>Values:</b></p> <table border="1"> <tr> <td colspan="2">Scenario = <b>Placer Order Management</b></td> </tr> <tr> <td>NW</td> <td>New Order</td> </tr> <tr> <td>CA</td> <td>Cancel Order</td> </tr> <tr> <td>SC</td> <td>Status changed.</td> </tr> <tr> <td colspan="2">Scenario = <b>Placer Order Management</b> and Message=application acknowledge</td> </tr> <tr> <td>OK</td> <td>Order accepted</td> </tr> <tr> <td>UA</td> <td>Unable to accept order</td> </tr> <tr> <td>CR</td> <td>Order cancelled as required</td> </tr> <tr> <td>UC</td> <td>Unable to cancel order</td> </tr> <tr> <td colspan="2">Scenario = <b>Filler Order Management</b></td> </tr> <tr> <td>SN</td> <td>Send order number</td> </tr> <tr> <td>NA</td> <td>Number Assigned</td> </tr> <tr> <td>OC</td> <td>Order Cancelled</td> </tr> <tr> <td>SC</td> <td>Status changed</td> </tr> </table> <p>Ref. HL7 Table 0119 - Order control codes</p>	Scenario = <b>Placer Order Management</b>		NW	New Order	CA	Cancel Order	SC	Status changed.	Scenario = <b>Placer Order Management</b> and Message=application acknowledge		OK	Order accepted	UA	Unable to accept order	CR	Order cancelled as required	UC	Unable to cancel order	Scenario = <b>Filler Order Management</b>		SN	Send order number	NA	Number Assigned	OC	Order Cancelled	SC	Status changed
Scenario = <b>Placer Order Management</b>																															
NW	New Order																														
CA	Cancel Order																														
SC	Status changed.																														
Scenario = <b>Placer Order Management</b> and Message=application acknowledge																															
OK	Order accepted																														
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CR	Order cancelled as required																														
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Scenario = <b>Filler Order Management</b>																															
SN	Send order number																														
NA	Number Assigned																														
OC	Order Cancelled																														
SC	Status changed																														
02	Placer Order Number	RC	<p>Placer application's order number. It identifies an order uniquely among all orders from a particular ordering application. Must be equal to OBR-2</p> <p><b>Format:</b> EI.1=order identifier EI.2=placer application. <i>ValueList:</i> <a href="#">User Table 0361 - Application</a></p> <p><b>Condition:</b> <i>Scenario</i>=Placer Order Management</p>																												
03	Filler Order Number	RC	<p>Order number associated with the filling application. It must uniquely identify the order from other orders in a particular filling application. Must be equal to OBR-3</p> <p><b>Format:</b> EI.1=order identifier EI.2=filler application. <i>ValueList:</i> <a href="#">User Table 0361 - Application</a></p> <p><b>Condition:</b> <i>Scenario</i>=Filler Order Management</p>																												
04	Placer Group Number	OC	<p>This field allows an order placing application to group sets of orders together and subsequently identify them.</p> <p><b>Format:</b> EI.1=order group identifier EI.2=placer application. <i>ValueList:</i> <a href="#">User Table 0361 - Application</a></p>																												

#	Name	Set	Description												
			<b>Condition:</b> <i>Scenario=Placer Order Management</i>												
05	Order Status	OC	<p>The purpose of this field is to report the status of an order.</p> <table border="1"> <tr> <td>CM</td> <td>Order is completed</td> </tr> <tr> <td>IP</td> <td>In process, unspecified</td> </tr> <tr> <td>CA</td> <td>Order was canceled</td> </tr> <tr> <td>DC</td> <td>Order was discontinued (i.e. canceled after it was in IP state)</td> </tr> <tr> <td>SC</td> <td>Order scheduled</td> </tr> <tr> <td>A</td> <td>Some, but not all, results available</td> </tr> </table> <p>Ref. HL7 Table 0038 - Order status</p> <p><b>Condition:</b> <i>Scenario=Filler Order Management</i></p>	CM	Order is completed	IP	In process, unspecified	CA	Order was canceled	DC	Order was discontinued (i.e. canceled after it was in IP state)	SC	Order scheduled	A	Some, but not all, results available
CM	Order is completed														
IP	In process, unspecified														
CA	Order was canceled														
DC	Order was discontinued (i.e. canceled after it was in IP state)														
SC	Order scheduled														
A	Some, but not all, results available														
07	Quantity/Timing	RC	<p>This field determines the priority, quantity, frequency, and timing of an atomic service.</p> <p>It <b>MUST</b> have the same value of OBR-27</p> <p><b>Note:</b> although this field is deprecated in HL7 2.5 and usage of TQ1 segment is recommended, we keep this field for usage with ORM messages for Radiology, where TQ1 segment is not available.</p> <p><b>Format:</b> TQ.1=quantity of required service (default=1)</p> <p>TQ.4=earliest date/time at which the services should be started. <b>Req.</b></p> <p>TQ.6=priority <i>ValueList</i>: see below</p> <p><b>Table 16.1. User Table 0485 – Extended Priority Codes</b></p> <table border="1"> <tr> <td>S</td> <td>Emergency (highest priority)</td> </tr> <tr> <td>A</td> <td>Urgent (highest priority after S)</td> </tr> <tr> <td>R</td> <td>Routine</td> </tr> </table> <p><b>Condition:</b> <i>Scenario=Placer Order Management</i></p>	S	Emergency (highest priority)	A	Urgent (highest priority after S)	R	Routine						
S	Emergency (highest priority)														
A	Urgent (highest priority after S)														
R	Routine														
08	Parent	O	Order booking identifier from the order booking facility [IT: codice prenotazione CUP] <sup>a</sup>												
09	Date/Time of Transaction	O	<p>Date/time when order was entered in the placer application [IT: data di richiesta dell'ordine]</p> <p><b>Format:</b> YYYYMMDD[HH[MM[SS]]]</p>												
12	Ordering Provider	RC..*	<p>Identity of the person who is responsible for creating the request (i.e., ordering physician).</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same</u></p>												

#	Name	Set	Description				
			<p><u>doctor</u>; each repetition and its identifier MUST be clearly qualified according to the rules exposed below.</p> <p><b>Format:</b> see <u>Ordering Provider</u></p> <p><b>Conditions:</b> <i>Scenario</i>=Placer Order Management</p>				
13	Enterer's location	RC	<p>Point of care requesting the order</p> <p><i>Note:</i> duplicates ORC-17 for compatibility with existing NoemaLife specifications.</p> <p><b>Format:</b> PL.1=Code of Ward/Ambulatory <b>Req.</b> PL.9=Ward/Ambulatory description</p> <p><b>Conditions:</b> <i>Scenario</i>=Placer Order Management</p>				
16	Order Control Code Reason	OC	<p>Reason for order cancelation</p> <p><i>Note:</i> the diagnostic hypothesis [IT: quesito diagnostico] must not be set here but in OBR-13</p> <p><b>Format:</b> XCN.2=description</p> <p><b>Conditions:</b> <i>Scenario</i>=Filler Order Management <i>and</i> ORC-1=CA</p>				
17	Entering Organization	RC	<p>Point of care requesting the order.</p> <p><i>Note:</i> duplicates ORC-13 for compatibility with existing NoemaLife specifications.</p> <p><b>Format:</b> CE.1=Code of Ward/Ambulatory <b>Req.</b> CE.2=Ward/Ambulatory description</p> <p><b>Conditions:</b> <i>Scenario</i>=Placer Order Management</p>				
25	Order Status Modifier	OC	<p><b>Loc ITA:</b> Indica lo stato di erogazione di una prestazione, e l'eventuale notifica dell'evento ad un sistema esterno</p> <p><b>Format:</b> CW.1=Stato di erogazione della prestazione <i>ValueList</i>: &lt;vedi sotto&gt;</p> <table border="1"> <tr> <td>PE</td> <td>Prestazione erogata</td> </tr> <tr> <td>PA</td> <td>Prestazione aggiuntiva erogata</td> </tr> </table> <p>CW.4=Flag evento notificato. <i>ValueList</i>: Y=Yes; N=No.</p> <p>CW.6=Identificativo del sistema esterno destinatario della notifica (es. 'SISS')</p> <p><b>Condition:</b> <i>Scenario</i>=Filler Order Management</p>	PE	Prestazione erogata	PA	Prestazione aggiuntiva erogata
PE	Prestazione erogata						
PA	Prestazione aggiuntiva erogata						

<sup>a</sup>CRS-SISS valorizza il campo con il codice IUP della prescrizione associata all'ordine

### 1.3. ORC for Laboratory Testing Management

#	Name	Set	Description																																
01	Order Control	R	<p>Determines the function of the order segment</p> <p><b>Values:</b></p> <table border="1"> <tr> <td colspan="2">Scenario = <b>Placer Order Management</b></td> </tr> <tr> <td>NW</td> <td>New Order</td> </tr> <tr> <td>CA</td> <td>Cancel Order</td> </tr> <tr> <td>SC</td> <td>Status changed.</td> </tr> <tr> <td colspan="2">Scenario = <b>Filler Order Management</b></td> </tr> <tr> <td>SN</td> <td>Send order number</td> </tr> <tr> <td>OC</td> <td>Order Cancelled</td> </tr> <tr> <td>SC</td> <td>Status changed</td> </tr> <tr> <td colspan="2">Scenario = <b>Order Result Management</b></td> </tr> <tr> <td>SC</td> <td>Status changed</td> </tr> <tr> <td colspan="2">Message=<b>ACK</b></td> </tr> <tr> <td>OK</td> <td>Order accepted</td> </tr> <tr> <td>UA</td> <td>Unable to accept order</td> </tr> <tr> <td>CR</td> <td>Order cancelled as required</td> </tr> <tr> <td>UC</td> <td>Unable to cancel order</td> </tr> <tr> <td>NA</td> <td>Number Assigned</td> </tr> </table> <p>Ref. HL7 Table 0119 - Order control codes</p>	Scenario = <b>Placer Order Management</b>		NW	New Order	CA	Cancel Order	SC	Status changed.	Scenario = <b>Filler Order Management</b>		SN	Send order number	OC	Order Cancelled	SC	Status changed	Scenario = <b>Order Result Management</b>		SC	Status changed	Message= <b>ACK</b>		OK	Order accepted	UA	Unable to accept order	CR	Order cancelled as required	UC	Unable to cancel order	NA	Number Assigned
Scenario = <b>Placer Order Management</b>																																			
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Scenario = <b>Order Result Management</b>																																			
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OK	Order accepted																																		
UA	Unable to accept order																																		
CR	Order cancelled as required																																		
UC	Unable to cancel order																																		
NA	Number Assigned																																		
02	Placer Order Number	RC	<p>Placer application's order number. It identifies an order uniquely among all orders from a particular ordering application. Must be equal to OBR.2</p> <p><b>Format:</b> EI.1=order identifier EI.2=placer application. <i>ValueList: User Table 0361 - Application</i></p> <p><b>Condition:</b> <i>Scenario=Placer Order Management</i></p>																																
03	Filler Order Number	RC	<p>Order number associated with the filling application. It must uniquely identify the order from other orders in a particular filling application. Must be equal to OBR.3</p> <p><b>Format:</b> EI.1=filler local order identifier EI.2=filler application. <i>ValueList: User Table 0361 - Application</i> EI.3=enterprise-wide, unique, filler-generated identifier of the order</p> <p><b>Loc DNLAB</b></p> <p>format &lt;bytidlab&gt;-&lt;stridrichiesta&gt;-&lt;dtmdataaccettazione, YYYYMMDDHHMM&gt; is REQUIRED for EI.3</p> <p><b>Condition:</b> <i>Scenario in (Filler Order Management, Order Result management)</i></p>																																

#	Name	Set	Description												
04	Placer Group Number	OC	<p>This field allows an order placing application to group sets of orders together and subsequently identify them.</p> <p><b>Format:</b> EI.1=order group identifier EI.2=placer application. <i>ValueList:</i> <u>User Table 0361 - Application</u></p> <p><b>Condition:</b> <i>Scenario</i> in (Placer Order Management, Order Result Management)</p>												
05	Order Status	OC	<p>The purpose of this field is to report the status of an order.</p> <table border="1"> <tr> <td>CM</td> <td>Order is completed</td> </tr> <tr> <td>IP</td> <td>In process, unspecified</td> </tr> <tr> <td>CA</td> <td>Order was canceled</td> </tr> <tr> <td>DC</td> <td>Order was discontinued (i.e. canceled after it was in IP state)</td> </tr> <tr> <td>SC</td> <td>Order scheduled</td> </tr> <tr> <td>A</td> <td>Some, but not all, results available</td> </tr> </table> <p>Ref. HL7 Table 0038 - Order status</p> <p><b>Condition:</b> <i>Scenario</i> in (Filler Order Management, Order Result Management)</p>	CM	Order is completed	IP	In process, unspecified	CA	Order was canceled	DC	Order was discontinued (i.e. canceled after it was in IP state)	SC	Order scheduled	A	Some, but not all, results available
CM	Order is completed														
IP	In process, unspecified														
CA	Order was canceled														
DC	Order was discontinued (i.e. canceled after it was in IP state)														
SC	Order scheduled														
A	Some, but not all, results available														
07	Quantity/Timing	RC	<p>This field determines the priority, quantity, frequency, and timing of an atomic service.</p> <p>It MUST have the same value of OBR.27</p> <p><b>Note:</b> although this field is deprecated in HL7 2.5 and usage of TQ1 segment is recommended, we keep this field for usage with ORM messages for Radiology, where TQ1 segment is not available.</p> <p><b>Format:</b> TQ.1=quantity. Default=1 TQ.4=earliest date/time at which the services should be started. <b>Req. for Radiology.</b> TQ.6=priority <i>ValueList:</i> see below</p> <p><b>Table 16.2. User Table 0485 – Extended Priority Codes</b></p> <table border="1"> <tr> <td>S</td> <td>Emergency (highest priority)</td> </tr> <tr> <td>A</td> <td>Urgent (highest priority after S)</td> </tr> <tr> <td>R</td> <td>Routine</td> </tr> </table> <p><b>Condition:</b> <i>Scenario</i>= Radiology Placer Order Management</p>	S	Emergency (highest priority)	A	Urgent (highest priority after S)	R	Routine						
S	Emergency (highest priority)														
A	Urgent (highest priority after S)														
R	Routine														
09	Date/Time of Transaction	O	<p>Date/time when order was entered in the placer application [IT: data di richiesta dell'ordine]</p> <p><b>Format:</b> YYYYMMDD[HH[MM[SS]]]</p>												



#	Name	Set	Description
12	Ordering Provider	RC.*	<p>Identity of the person who is responsible for creating the request (i.e., ordering physician).</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p><b>Format:</b> see <u>Ordering Provider</u></p> <p><b>Conditions:</b> <i>Scenario=Placer Order Management</i></p>
21	Ordering Facility Name	RC	<p>Point of care requesting the order</p> <p><b>Format:</b> XON.1=Description of Ward/Ambulatory. XON.7=type of code in XON.9. <i>Constant:</i> FI (Ref. HL7 Table 0203 - Identifier Type: <u>IT</u>) <b>Req.</b> XON.9=Code of Ward/Ambulatory <b>Req.</b></p> <p><b>Conditions:</b> <i>Scenario=Placer Order Management</i></p>

## 1.4. ORC for Pharmacy/Treatment management

#	Name	Set	Description										
01	Order Control	R	<p>Determines the function of the order segment</p> <p><b>Values:</b></p> <table border="1"> <tr> <td colspan="2">Scenario = Medicines on Discharge</td> </tr> <tr> <td>NW</td> <td>New prescription line</td> </tr> <tr> <td>CA</td> <td>Cancel prescription line</td> </tr> <tr> <td>XO</td> <td>Change prescription line</td> </tr> <tr> <td>OP</td> <td>Prescription line unchanged<sup>a</sup></td> </tr> </table> <p><sup>a</sup>This usage of OP value is a conscious violation of HL7 standard</p> <p>Ref. HL7 Table 0119 - Order control codes</p>	Scenario = Medicines on Discharge		NW	New prescription line	CA	Cancel prescription line	XO	Change prescription line	OP	Prescription line unchanged <sup>a</sup>
Scenario = Medicines on Discharge													
NW	New prescription line												
CA	Cancel prescription line												
XO	Change prescription line												
OP	Prescription line unchanged <sup>a</sup>												
02	Placer Order Number	RC	<p>Placer application's order number. It uniquely identifies a prescription line.</p> <p><b>Format:</b> EI.1 = prescription line identifier EI.2 = placer application. <i>ValueList:</i> <u>User Table 0361 - Application</u></p> <p><b>Condition:</b> <i>Scenario=Medicines on Discharge</i></p>										
05	Order Status	RC	<p>The purpose of this field is to report the status of a prescription.</p> <table border="1"> <tr> <td colspan="2">Scenario = Medicines on Discharge<sup>a</sup></td> </tr> <tr> <td>SC</td> <td>Medicine was started during the current episode (indication mandatory)</td> </tr> </table>	Scenario = Medicines on Discharge <sup>a</sup>		SC	Medicine was started during the current episode (indication mandatory)						
Scenario = Medicines on Discharge <sup>a</sup>													
SC	Medicine was started during the current episode (indication mandatory)												

#	Name	Set	Description								
			<table border="1"> <tr> <td>DC</td> <td>Patient medicine discontinued (reason mandatory)</td> </tr> <tr> <td>RP</td> <td>Patient medicine changed (reason mandatory)</td> </tr> <tr> <td>IP</td> <td>Patient medicine continued</td> </tr> <tr> <td>HD</td> <td>General Practitioner to start</td> </tr> </table> <p><sup>a</sup>The usage of listed values is a conscious violation of HL7 standard and HL7 Table 0038</p> <p><b>Condition:</b> <i>Scenario=Medicines on Discharge</i></p>	DC	Patient medicine discontinued (reason mandatory)	RP	Patient medicine changed (reason mandatory)	IP	Patient medicine continued	HD	General Practitioner to start
DC	Patient medicine discontinued (reason mandatory)										
RP	Patient medicine changed (reason mandatory)										
IP	Patient medicine continued										
HD	General Practitioner to start										
09	Date/Time of Transaction	O	<p>This field contains the date and time of the event that initiated the current transaction.</p> <p><b>Format:</b> <i>YYYYMMDDHHMM[SS]</i></p>								
12	Ordering Provider	R..*	<p>Identity of the person who is responsible for creating the request (i.e. prescriber).</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p><b>Format:</b> <i>see Ordering Provider</i></p>								
25	Order Status Modifier	RC	<p>This field is used to report the stage of the authorization process.</p> <p>Code is actually composed by two parts: prescriber authorization status (prefix P) and validator/pharmacist authorization status (prefix V). A number following the prefix states the authorization status; codes are separated by a semi-colon. Refer to IHE for greater details.</p> <table border="1"> <tr> <td colspan="2"><i>Scenario = Medicines on Discharge<sup>a</sup></i></td> </tr> <tr> <td>P3;V1</td> <td>                     Prescription line completed by the prescriber.                      Prescription line to be validated by the pharmacist                 </td> </tr> <tr> <td>P3;V3</td> <td>                     Prescription line completed by the prescriber.                      Prescription line validated by the pharmacist                 </td> </tr> </table> <p><sup>a</sup>The usage of listed values is a conscious violation of HL7 standard and HL7 Table 0038</p> <p><b>Condition:</b> <i>Scenario = Medicines on Discharge</i></p>	<i>Scenario = Medicines on Discharge<sup>a</sup></i>		P3;V1	Prescription line completed by the prescriber. Prescription line to be validated by the pharmacist	P3;V3	Prescription line completed by the prescriber. Prescription line validated by the pharmacist		
<i>Scenario = Medicines on Discharge<sup>a</sup></i>											
P3;V1	Prescription line completed by the prescriber. Prescription line to be validated by the pharmacist										
P3;V3	Prescription line completed by the prescriber. Prescription line validated by the pharmacist										

<sup>a</sup>This usage of OP value is a conscious violation of HL7 standard

<sup>a</sup>The usage of listed values is a conscious violation of HL7 standard and HL7 Table 0038

<sup>a</sup>The usage of listed values is a conscious violation of HL7 standard and HL7 Table 0038

## 2. Fields definition

### 2.1. ORC-12

Ordering physician

#	Name	Set	Description
<i>XCN.1</i>	ID Number	R	Doctor's identifier

#	Name	Set	Description										
			<b>Values</b> Depends on XCN.13										
XCN.2 FN.1	family name	RE	Surname										
XCN.3	given name	RE	First name										
XCN.4	second and further given names or initials thereof	RE	Further given names or initials										
XCN.13	identifier type code	R	<p>It defines the type of identifier specified in XCN.1</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>NN</td> <td>National Personal Identifier</td> </tr> <tr> <td>RRI</td> <td>Regional Registry ID</td> </tr> <tr> <td>LR</td> <td>Local Registry ID (<i>Not Compliant</i> CRS-SISS)</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>NNITA</td> <td>Tax Code (<i>Note:</i> for CRS-SISS use: NN)</td> </tr> </table> <p>(Ref. HL7 Table 0203 - Identifier Type: IT)</p>	NN	National Personal Identifier	RRI	Regional Registry ID	LR	Local Registry ID ( <i>Not Compliant</i> CRS-SISS)	<b>Loc ITA</b>		NNITA	Tax Code ( <i>Note:</i> for CRS-SISS use: NN)
NN	National Personal Identifier												
RRI	Regional Registry ID												
LR	Local Registry ID ( <i>Not Compliant</i> CRS-SISS)												
<b>Loc ITA</b>													
NNITA	Tax Code ( <i>Note:</i> for CRS-SISS use: NN)												

# Chapter 17. PD1 - Patient Additional Demographic

The patient additional demographic segment contains demographic information that is likely to change about the patient.

## 1. Segment definition

#	Name	Set	Description								
03	Patient Primary Facility	R..2	<p>This field contains the name and identifier that specifies the “primary care” healthcare facility selected by the patient</p> <p><b>Loc ITA:</b> Ripetizione contenente informazioni sulle AUSL/Distretti di Assistenza e/o Residenza</p> <p><b>Values:</b></p> <p>XON.1=Descrizione AUSL</p> <p>XON.7= <i>ValueList</i>: &lt;vedi sotto&gt;. <b>Req.</b></p> <table border="1"> <tr> <td>ASLR</td> <td>ASL di Residenza</td> </tr> <tr> <td>ASLA</td> <td>ASL di Assistenza</td> </tr> <tr> <td>DASLR</td> <td>Distretto ASL di Residenza</td> </tr> <tr> <td>DASLA</td> <td>Distretto ASL di Assistenza</td> </tr> </table> <p>XON.10=codice identificativo dell’AUSL di 6 cifre (3 cifre del codice della Regione + 3 cifre del Codice regionale dell’ Azienda Sanitaria). <b>Req.</b></p>	ASLR	ASL di Residenza	ASLA	ASL di Assistenza	DASLR	Distretto ASL di Residenza	DASLA	Distretto ASL di Assistenza
ASLR	ASL di Residenza										
ASLA	ASL di Assistenza										
DASLR	Distretto ASL di Residenza										
DASLA	Distretto ASL di Assistenza										
12	Protection Indicator	O	<p>This field determines whether access to information about this person should be kept from users who do not have adequate authority for the patient. [ITA: Campo che indica se le informazioni anagrafiche della persona sono riservate per richiesta di <i>anonimato</i>]</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>Y</td> <td>Protect access to information [ITA: Accesso ai dati anagrafici protetto]</td> </tr> <tr> <td>N</td> <td>Normal access [ITA: Accesso normale]</td> </tr> </table>	Y	Protect access to information [ITA: Accesso ai dati anagrafici protetto]	N	Normal access [ITA: Accesso normale]				
Y	Protect access to information [ITA: Accesso ai dati anagrafici protetto]										
N	Normal access [ITA: Accesso normale]										

### Example 17.1. Sample PD1 segment

```
PD1|||ASL Bologna^^^^^^ASLA^^^080105~
ASL Bergamo^^^^^^ASLR^^^030301
```

# Chapter 18. PID - Patient Identification

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

## 1. Segment definition

#	Name	Set	Description								
03	Patient Identifier List	R..*	<p>This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient. Below is the list of identifier types that must be handled in NoemaLife integrations:</p> <ul style="list-style-type: none"> <li>• Patient Internal Identifier (PI)</li> <li>• National Person Identifier (NNxxx, where xxx is the ISO table 3166 3-character (alphabetic) country code)</li> <li>• Social Security Number (SS)</li> </ul> <p><b>Loc ITA</b> National Personal Identifier for Italy is NNITA, and will contain the Tax Code (IIT: Codice Fiscale)</p> <p>Additional identifier types that must be handled :</p> <ul style="list-style-type: none"> <li>• PNT: codice STP</li> <li>• HC: tessera TEAM</li> </ul> <p><b>Format:</b> see <u>Patient Identifier List</u> for details</p>								
04	Alternate Patient ID	n/a	<i>Deprecated</i> <sup>01</sup>								
05	Patient Name	R	<p>Patient Name and Surname. Only one occurrence of this field is handled for integrations between NoemaLife applications</p> <p><b>Format:</b> see <u>Patient Name</u> for details</p>								
06	Mother's Maiden Name	O	<p>Mother's name, for newborn babies</p> <p><b>Format:</b> XPN.1=Mother's name XPN.2=Mother's surname</p>								
07	Date/Time of Birth	RE	<b>Format:</b> YYYYMMDD[HH[MM[SS]]]								
08	Administrative Sex	R	<p><b>Values:</b></p> <table border="1"> <tbody> <tr> <td>M</td> <td>Male</td> </tr> <tr> <td>F</td> <td>Female</td> </tr> <tr> <td>O</td> <td>Other</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> </tbody> </table>	M	Male	F	Female	O	Other	U	Unknown
M	Male										
F	Female										
O	Other										
U	Unknown										
11	Patient Address	RE..4	<p>Repetition used to specify following patient informations:</p> <ul style="list-style-type: none"> <li>• Birthplace</li> <li>• Residence address</li> <li>• Domicile address</li> <li>• Temporary address</li> <li>• Mailing address</li> </ul> <p><b>Format:</b> see <u>Patient Address</u> for details</p>								

#	Name	Set	Description												
13	Phone Number - Home	O..*	<p>Patient's personal phone numbers</p> <p><b>Format:</b> see <u>Phone Number - Home</u> for details</p>												
16	Marital Status	O	<p>Patient's marital (civil) status</p> <p><b>Values:</b> <b>Table 18.1. User Table 0002 - Marital Status</b></p> <table border="1"> <tr> <td>A</td> <td>Separated</td> </tr> <tr> <td>D</td> <td>Divorced</td> </tr> <tr> <td>M</td> <td>Married</td> </tr> <tr> <td>S</td> <td>Single</td> </tr> <tr> <td>W</td> <td>Widowed</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> </table>	A	Separated	D	Divorced	M	Married	S	Single	W	Widowed	U	Unknown
A	Separated														
D	Divorced														
M	Married														
S	Single														
W	Widowed														
U	Unknown														
18	Patient Account Number	RC	<p><b>Loc ITA:</b> Per indicazione di IHE Italia, il campo è valorizzato con il codice fiscale, già inserito in PID-3 con tipo NNITA</p> <p>CX.1=Codice fiscale. <b>Req.</b></p> <p>CX.4, HD.1=CF. <b>Req.</b></p> <p>CX.5=NNITA. <b>Req.</b></p> <p><b>Conditions:</b> <i>Loc=IT</i></p>												
21	Mother's Identifier	O	<p>Mother's identifier for newborn.</p> <p><b>Format:</b> see <u>Patient Identifier List</u> for details</p>												
26	Citizenship	O..*	<p>Patient's citizenship. This field repeats since persons can be citizens of more than one country</p> <p><b>Values:</b> CE.1= Nation. <i>CodedValue:</i> ISO table 3166 alpha-3. <b>Req. if CE.4 and CE.6 are empty</b></p> <p>CE.2= Nation ISO description</p> <p>CE.3=ISO3166 <b>Req if CE.4 and CE.6 are empty.</b></p> <p><i>Loc ITA:</i> CE.4= Nation.<i>CodedValue:</i> ISTAT Nazioni. (3 chars). Valore 100 se nazionalità italiana, oppure codice ISTAT dello stato estero se nazionalità estera. <b>Req. if CE.1 and CE.3 are empty</b></p> <p>CE.5= Nation ISTAT description</p> <p>CE.6=99ISTAT <b>Req if CE.1 and CE.3 are empty.</b></p> <p>Even if it is not required to set both codes, it is RECOMMENDED.</p>												
29	Patient Death Date and Time	O	<p>Date and time at which the patient death occurred</p> <p><b>Format:</b> YYYYMMDD[HH[MM[SS]]]</p>												
30	Patient death indicator	O	<p>This field indicates whether the patient is deceased.</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>Y</td> <td>the patient is deceased</td> </tr> <tr> <td>N</td> <td>the patient is not deceased</td> </tr> </table>	Y	the patient is deceased	N	the patient is not deceased								
Y	the patient is deceased														
N	the patient is not deceased														

#	Name	Set	Description										
31	Identity unknown indicator	O	<p>This field indicates whether or not the patient's/person's identity is known.</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>Y</td> <td>the patient identity is unknown</td> </tr> <tr> <td>N</td> <td>the patient identity is known</td> </tr> </table>	Y	the patient identity is unknown	N	the patient identity is known						
Y	the patient identity is unknown												
N	the patient identity is known												
32	Identity Reliability Code	O..*	<p>This field contains a coded value used to communicate information regarding the reliability of patient/ person identifying data</p> <p><b>Loc ITA</b> Viene utilizzata la ripetibilità del campo per elencare le certificazioni associate alla posizione anagrafica, in termini di ente certificatore e data di certificazione.<sup>02</sup></p> <p><b>Format:</b> &lt;Certificazione&gt;@YYYYMMDD</p> <p><b>Values:</b> &lt;Certificazione&gt; può assumere i seguenti valori::</p> <table border="1"> <tr> <td>MEF</td> <td>Ministero Economia e Finanze (dati afferenti alla composizione del Codice Fiscale)</td> </tr> <tr> <td>ASL</td> <td>Anagrafe Sanitaria (dati domicilio sanitario)</td> </tr> <tr> <td>NAR</td> <td>Anagrafe Regionale (dati domicilio sanitario)</td> </tr> <tr> <td>COM</td> <td>Anagrafe Comunale (dati di residenza)</td> </tr> <tr> <td>AZI</td> <td>Anagrafe Aziendale</td> </tr> </table>	MEF	Ministero Economia e Finanze (dati afferenti alla composizione del Codice Fiscale)	ASL	Anagrafe Sanitaria (dati domicilio sanitario)	NAR	Anagrafe Regionale (dati domicilio sanitario)	COM	Anagrafe Comunale (dati di residenza)	AZI	Anagrafe Aziendale
MEF	Ministero Economia e Finanze (dati afferenti alla composizione del Codice Fiscale)												
ASL	Anagrafe Sanitaria (dati domicilio sanitario)												
NAR	Anagrafe Regionale (dati domicilio sanitario)												
COM	Anagrafe Comunale (dati di residenza)												
AZI	Anagrafe Aziendale												
33	Last Update Date/Time	O	<p>This field contains the last update date and time for the patient's/person's identifying and demographic data.</p> <p><b>Format:</b> YYYYMMDD[HH[MM[SS]]]</p>										
34	Last Update Facility	O	<p>Name of the Application of the last update to a patient's/person's identifying and demographic data.</p> <p><b>Values:</b> HD.1=Name of the Application of last update. <i>ValueList:</i> User Table 0361 - Application</p> <p><b>Loc CRS-SISS:</b> HD.2=Anagrafe di provenienza dei dati dell#assistito</p> <table border="1"> <tr> <td>CRS</td> <td>Smartcard</td> </tr> <tr> <td>NAR</td> <td>Archivio assistiti</td> </tr> <tr> <td>SISS</td> <td>Archivio ex-assistiti e contatti</td> </tr> </table>	CRS	Smartcard	NAR	Archivio assistiti	SISS	Archivio ex-assistiti e contatti				
CRS	Smartcard												
NAR	Archivio assistiti												
SISS	Archivio ex-assistiti e contatti												

<sup>01</sup>Nelle specifiche CRS-SISS per i messaggi A28 (Create Person), l'Anagrafica centralizzata (BDA) valorizza il campo con l'id paziente del dipartimentale che ha creato la posizione anagrafica. Nelle specifiche NoemaLife tutti gli identificativi paziente sono gestiti in PID-3

<sup>02</sup>Ci si scosta da HL7 Italia per aderire alle specifiche del progetto Regionale CRS-SISS in quanto introducono il concetto di certificazione del dato anagrafico.

### Example 18.1. Sample PID segment

- *Patient Name:* Ing. Mario Rossi
- *Identifier generated by MPI:* 000000009400547
- *Tax code (CF):* RSMRA54A12A944M
- *Social security number (SSN):* 999AV098
- *Birthdate:* 01-DEC-1954
- *Birthplace:* Bologna
- *Sex:* Male
- *Marital status:* Single
- *Residence:* Piazza Marconi 9, 20123, Milano
- *Phone Number:* +39 026463789
- *eMail:* rossimario@gmail.com
- *Citizenship:* Italiana
- *Certificazione:* MEF

```
PID|||000000009400547^^^PK^PI~RSMRA54A12A944M^^^CF^NNITA~999AV098^^^CS^SS|
|ROSSI^MARIO^^^Ing.^L||19541201|M||
|^BOLOGNA^^^ITA^BDL^^037006~Piazza Marconi, 9^^MILANO^^20123^ITA^L^^015146|
|^PRN^^^+39^^^^^^026463789~^NET^^rossimario@gmail.com^^^^^^^||S|
|RSMRA54A12A944M^^^CF^NNITA|||IT^ITALIA^^~|||MEF@20060724
```

## 2. Fields definition

### 2.1. PID-3

This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient.

#	Name	Set	Description	
CX.1	ID Number	R	<b>Values:</b>	
			<i>If CX.5=</i>	<i>Value</i>
			<i>PI</i>	Patient identifier
			<i>NNITA</i>	Tax Code [IT: Codice Fiscale]
			<i>SS</i>	Social Security Number [IT: Codice Tessera Sanitaria]
			<i>PNT</i>	Patient Temporary code [IT: Codice STP]
			<i>HC</i>	Health Card Identification Number. Used to transmit the <u>card</u> identifier (CIN) of the European Health Insurance Card (EHIC, [IT: TEAM])
<i>PN</i>	Person number Used to transmit the <u>person</u> identifier (PIN) of the European Health Insurance Card (EHIC, [IT: TEAM])			
CX.4	Assigning Authority	R	Code of Authority that created CX.1 code	
			<b>Loc ITA:</b>	
			<i>If CX.5=</i>	<i>Value</i>
			<i>PI</i>	<i>if CX.1 assigned by MPI:</i>



#	Name	Set	Description														
			<table border="1"> <tr> <td></td> <td>PK <i>else:</i> Application that assigned the identifier. User Table 0361 - Application</td> </tr> <tr> <td>NNITA</td> <td>CF</td> </tr> <tr> <td>SS</td> <td>CS</td> </tr> <tr> <td>PNT</td> <td>STP</td> </tr> <tr> <td>HC, PN</td> <td>                     HD.1=Code of Authority/Institution who released the EHIS Card [<i>Loc IT:</i> TEAM card, <i>Value:</i> 500001]                       HD.2= Name of Authority/Institution who released the EHIS Card [<i>Loc ITA:</i> TEAM card, <i>Value:</i> SSN-MIN SALUTE]                 </td> </tr> </table>		PK <i>else:</i> Application that assigned the identifier. User Table 0361 - Application	NNITA	CF	SS	CS	PNT	STP	HC, PN	HD.1=Code of Authority/Institution who released the EHIS Card [ <i>Loc IT:</i> TEAM card, <i>Value:</i> 500001]  HD.2= Name of Authority/Institution who released the EHIS Card [ <i>Loc ITA:</i> TEAM card, <i>Value:</i> SSN-MIN SALUTE]				
	PK <i>else:</i> Application that assigned the identifier. User Table 0361 - Application																
NNITA	CF																
SS	CS																
PNT	STP																
HC, PN	HD.1=Code of Authority/Institution who released the EHIS Card [ <i>Loc IT:</i> TEAM card, <i>Value:</i> 500001]  HD.2= Name of Authority/Institution who released the EHIS Card [ <i>Loc ITA:</i> TEAM card, <i>Value:</i> SSN-MIN SALUTE]																
CX.5	Identifier Type Code	R	Qualifier of CX.1 code.  <b>Values:</b> <table border="1"> <tr> <td>PI</td> <td>Patient Internal Identifier</td> </tr> <tr> <td>SS</td> <td>Social Security Number (SSN)</td> </tr> <tr> <td>PNT</td> <td>Temporary Living Subject Number</td> </tr> <tr> <td>HC</td> <td>Health Card Number (<i>Loc ITA, HL7 Italia::</i> identifies the TEAM Card Number, CIN)</td> </tr> <tr> <td>PN</td> <td>Person Number.  Identifies the TEAM Card Person Identifier (PIN) (<i>Loc ITA::</i> equivale al Codice Fiscale)</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>NNITA</td> <td>National Person Identifier for Italy (<i>Compliant HL7 Italia</i>).</td> </tr> </table> <p>(Ref. HL7 Table 0203 - Identifier Type)</p>	PI	Patient Internal Identifier	SS	Social Security Number (SSN)	PNT	Temporary Living Subject Number	HC	Health Card Number ( <i>Loc ITA, HL7 Italia::</i> identifies the TEAM Card Number, CIN)	PN	Person Number.  Identifies the TEAM Card Person Identifier (PIN) ( <i>Loc ITA::</i> equivale al Codice Fiscale)	<b>Loc ITA</b>		NNITA	National Person Identifier for Italy ( <i>Compliant HL7 Italia</i> ).
PI	Patient Internal Identifier																
SS	Social Security Number (SSN)																
PNT	Temporary Living Subject Number																
HC	Health Card Number ( <i>Loc ITA, HL7 Italia::</i> identifies the TEAM Card Number, CIN)																
PN	Person Number.  Identifies the TEAM Card Person Identifier (PIN) ( <i>Loc ITA::</i> equivale al Codice Fiscale)																
<b>Loc ITA</b>																	
NNITA	National Person Identifier for Italy ( <i>Compliant HL7 Italia</i> ).																
CX.6	Assigning Facility	RE	<b>Values:</b> <table border="1"> <tr> <td><i>If CX.5=</i></td> <td><i>Value</i></td> </tr> <tr> <td>PI</td> <td>n/a<sup>01</sup></td> </tr> <tr> <td>NNITA</td> <td>n/a</td> </tr> <tr> <td>SS</td> <td><b>Loc IT:</b> ISTAT code of emitting Region</td> </tr> <tr> <td>PNT</td> <td>n/a</td> </tr> <tr> <td>HC</td> <td>Nation code: ISO 3166 alpha-2 (e.g.: "IT" for ITALY)</td> </tr> <tr> <td>PN</td> <td>n/a</td> </tr> </table> <p><sup>01</sup>CRS-SISS richiede il codice dell'applicazione che ha generato l'id paziente, che noi invece specifichiamo in CX.4</p>	<i>If CX.5=</i>	<i>Value</i>	PI	n/a <sup>01</sup>	NNITA	n/a	SS	<b>Loc IT:</b> ISTAT code of emitting Region	PNT	n/a	HC	Nation code: ISO 3166 alpha-2 (e.g.: "IT" for ITALY)	PN	n/a
<i>If CX.5=</i>	<i>Value</i>																
PI	n/a <sup>01</sup>																
NNITA	n/a																
SS	<b>Loc IT:</b> ISTAT code of emitting Region																
PNT	n/a																
HC	Nation code: ISO 3166 alpha-2 (e.g.: "IT" for ITALY)																
PN	n/a																
CX.7	Effective Date	O	Release date of identifier  <b>Format:</b> YYYYMMDD[HH[MM[SS]]]  <b>Values:</b> <table border="1"> <tr> <td><i>If CX.5=</i></td> <td><i>Value</i></td> </tr> </table>	<i>If CX.5=</i>	<i>Value</i>												
<i>If CX.5=</i>	<i>Value</i>																

#	Name	Set	Description						
			<table border="1"> <tr> <td>SS</td> <td>Loc IT: data di decorrenza dell'assistenza sanitaria.<sup>02</sup></td> </tr> </table> <p><sup>02</sup>CRS-SISS prevede l'utilizzo di PD1-4</p>	SS	Loc IT: data di decorrenza dell'assistenza sanitaria. <sup>02</sup>				
SS	Loc IT: data di decorrenza dell'assistenza sanitaria. <sup>02</sup>								
CX.8	Expiration Date	O	Expiration date of identifier  <b>Format:</b> YYYYMMDD[HH[MM[SS]]]  <b>Values:</b> <table border="1"> <thead> <tr> <th>If CX.5=</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>SS</td> <td>Loc IT: data di scadenza dell'assistenza sanitaria.<sup>03</sup></td> </tr> <tr> <td>HC, PN</td> <td>Expiration date of European Health Insurance Card (EHIC, [IT: TEAM])</td> </tr> </tbody> </table> <p><sup>03</sup>CRS-SISS prevede l'utilizzo di PD1-4</p>	If CX.5=	Value	SS	Loc IT: data di scadenza dell'assistenza sanitaria. <sup>03</sup>	HC, PN	Expiration date of European Health Insurance Card (EHIC, [IT: TEAM])
If CX.5=	Value								
SS	Loc IT: data di scadenza dell'assistenza sanitaria. <sup>03</sup>								
HC, PN	Expiration date of European Health Insurance Card (EHIC, [IT: TEAM])								
CX.9	Assigning Jurisdiction	O	n/a						

<sup>01</sup>CRS-SISS richiede il codice dell'applicazione che ha generato l'id paziente, che noi invece specifichiamo in CX.4

<sup>02</sup>CRS-SISS prevede l'utilizzo di PD1-4

<sup>03</sup>CRS-SISS prevede l'utilizzo di PD1-4

### Example 18.2. Sample PID-3 field

- Identifier generated by MPI: 000000009400547
- Tax code (CF): RSSMRA54A12A944M
- Social security number (SSN): 999AV098

000000009400547^^^PK^PI~RSSMRA54A12A944M^^^CF^NNITA~999AV098^^^CS^SS

### 2.1.1. Fields for European Health Insurance Card (EHIC, [IT: TEAM])

The following picture gives a deeper description of European Health Insurance Card (EHIC, [IT: TEAM]) and information it carries.



## 2.2. PID-5

This field contains Patient Name and Surname

#	Name	Set	Description												
XPN.1	Family Name	R	Person Surname												
XPN.2	Given Name	R	Person Name												
XPN.5	Prefix	O	Name prefix (e.g. Mr,..)												
XPN.6	Degree	O	Name Title (e.g. Dr,..)												
XPN.7	Name Type Code	R	Name Type.  <b>Values:</b> <table border="1" style="margin-left: 20px;"> <tr> <td>L</td> <td>Legal Name</td> </tr> <tr> <td>S</td> <td>Coded Pseudo-Name to ensure anonymity</td> </tr> </table> (Ref. HL7 Table 0200 - Name Type)	L	Legal Name	S	Coded Pseudo-Name to ensure anonymity								
L	Legal Name														
S	Coded Pseudo-Name to ensure anonymity														
XPN.14	Professional Suffix	O	Used to specify an abbreviation, or a string of abbreviations denoting qualifications that support the person's profession, (e.g., licenses, certificates, degrees, affiliations with professional societies, etc.).  <b>Loc ITA:</b> Titolo di studio. <sup>a</sup> <table border="1" style="margin-left: 20px;"> <tr> <td>1</td> <td>Nessuno</td> </tr> <tr> <td>2</td> <td>Elementare</td> </tr> <tr> <td>3</td> <td>Media inferiore</td> </tr> <tr> <td>4</td> <td>Media superiore</td> </tr> <tr> <td>5</td> <td>Laurea</td> </tr> <tr> <td>6</td> <td>Laurea breve</td> </tr> </table>	1	Nessuno	2	Elementare	3	Media inferiore	4	Media superiore	5	Laurea	6	Laurea breve
1	Nessuno														
2	Elementare														
3	Media inferiore														
4	Media superiore														
5	Laurea														
6	Laurea breve														

<sup>a</sup>CRS-SISS compliant

## 2.3. PID-11

This field contains a list of Patient Addresses; the type of address is defined by XAD.7:

#	Name	Set	Description
XAD.1	Street Address	OC	Street and dwelling number.  <b>Format:</b> SAD.1= Street name and dwelling number [IT: Via e numero civico]  <i>OR</i>  SAD.2= Street name [IT: Via]  SAD.3= Dwelling number [IT: numero civico]  <b>Conditions:</b> XAD.7 <> BDL
XAD.2	Other Designation	OC	Second line of address [IT: Descrizione frazione/località ]  <b>Conditions:</b> XAD.7 <> BDL
XAD.3	City	R	City description [IT: descrizione comune]

#	Name	Set	Description										
XAD.4	State or Province	O	State or province where the addressee is located. <b>Loc ITA:</b> Regione dell'indirizzo. <i>CodedValue:</i> ISTAT Regioni (3 cifre)										
XAD.5	Zip or Postal Code	OC	Address ZIP or postal code [IT: CAP del comune di residenza/domicilio/recapito temporaneo] <b>Conditions:</b> XAD.7 <> BDL										
XAD.6	Country	O	Country where the address is located. <i>CodedValue:</i> ISO 3166 alpha-3 Nation code										
XAD.7	Address Type	O	Kind or type of address. <b>Value:</b> <b>Table 18.2. HL7 Table 0190 - Address Type</b> <table border="1" style="margin-left: 40px;"> <tr> <td>BDL</td> <td>Birth Place</td> </tr> <tr> <td>L</td> <td>Residence address (Legal address)</td> </tr> <tr> <td>H</td> <td>Domicile address (Home address)</td> </tr> <tr> <td>C</td> <td>Temporary living address</td> </tr> <tr> <td>M</td> <td>Mailing address</td> </tr> </table>	BDL	Birth Place	L	Residence address (Legal address)	H	Domicile address (Home address)	C	Temporary living address	M	Mailing address
BDL	Birth Place												
L	Residence address (Legal address)												
H	Domicile address (Home address)												
C	Temporary living address												
M	Mailing address												
XAD.8	Other geographic designation	O	This component specifies any other geographic designation <b>Loc ITA:</b> Provincia. <i>CodedValue:</i> Sigla automobilistica (2 caratteri)										
XAD.9	County/Parish Code	O	Parish Code of address <b>Loc ITA:</b> Comune. <i>CodedValue:</i> ISTAT comuni. Nel caso di pazienti nati/residenti all'estero, utilizzare il prefisso 999 seguito dal codice ISTAT dello stato estero.										
XAD.13	Effective Date	OC	Starting validity date of address <b>Format:</b> YYYYMMDD[HH[MM[SS]]] <b>Conditions:</b> XAD.7 <> BDL										
XAD.14	Expiration Date	OC	Ending validity date of address <b>Format:</b> YYYYMMDD[HH[MM[SS]]] <b>Conditions:</b> XAD.7 <> BDL										

### Example 18.3. Sample PID-11 field

- *Birthplace:* Bologna, Italia
- *Residence:* Piazza Marconi 9, 20123, Milano, Italia

```
^^BOLOGNA^^^ITA^BDL^^037006~Piazza Marconi,9^^MILANO^^20123^ITA^L^^015146
```

## 2.4. PID-13

This field contains a list of Patient's phone numbers and email address.

#	Name	Set	Description										
XTN.2	Telecommunication Use Code	RC	<b>Value:</b> <b>Table 18.3. HL7 Table 0201 - Telecommunication use code</b> <table border="1"> <tr> <td>PRN</td> <td>Primary residence phone number</td> </tr> <tr> <td>ORN</td> <td>Other residence phone number</td> </tr> <tr> <td>WPN</td> <td>Work phone number</td> </tr> <tr> <td>NET</td> <td>Email address</td> </tr> <tr> <td>EMR</td> <td>Emergency number</td> </tr> </table>	PRN	Primary residence phone number	ORN	Other residence phone number	WPN	Work phone number	NET	Email address	EMR	Emergency number
PRN	Primary residence phone number												
ORN	Other residence phone number												
WPN	Work phone number												
NET	Email address												
EMR	Emergency number												
XTN.3	Telecommunication Equipment Type	OC	<b>Value:</b> <b>Table 18.4. HL7 Table 0202 - Telecommunication equipment type</b> <table border="1"> <tr> <td>CP</td> <td>Cellular Phone</td> </tr> <tr> <td>PH</td> <td>Telephone</td> </tr> <tr> <td>FX</td> <td>Fax</td> </tr> </table> <b>Conditions:</b> XTN.2 <> NET	CP	Cellular Phone	PH	Telephone	FX	Fax				
CP	Cellular Phone												
PH	Telephone												
FX	Fax												
XTN.4	Email Address	RC	Email address <b>Conditions:</b> XTN.2 = NET										
XTN.5	Country Code	OC	International prefix, without heading '+' (e.g. 39 for Italy) <b>Conditions:</b> XTN.2 <> NET										
XTN.12	Unformatted Telephone number	RC	Fax or Phone number, including national prefix (e.g. 026463789) <b>Conditions:</b> XTN.2 <> NET										

**Example 18.4. Sample PID-13 field**

- *Phone Number (primary):* +39 026463789
- *eMail:* rossimario@gmail.com

^PRN^^^39^^^^^^^026463789~^NET^^rossimario@gmail.com^^^^^^^

### 3. Tables

**Table 18.5. User Table 0363 - Assigning Authority: IT**

Value	Description	Comment
<i>Authorities for Patient ID generation: use application names (see User Table 0361 - Application)</i>		
PK	Master patient Index	
DNLAB		
ATHENA		
...		
<i>Authorities for Visit ID generation:</i>		
ADT	Inpatient registration application	
ED	Emergency department application	

Value	Description	Comment
AMB	Ambulatory patients application	

**Table 18.6. User Table 0396 - Coding System**

Value	Description	Comment
99zzz or L	Local general code	
LN	Logical Observation Identifier Names and Codes (LOINC®)	
AS4	ASTM E1238/ E1467 Universal	
I9C	ICD-9CM	
ISO+	ISO 2955.83 (units of measure) with HL7 extensions	
ISOnnnn	ISO Defined Codes where nnnn is the ISO table number	
SNT	SNOMED topology codes (anatomic sites)	
I10P	ICD-10 Procedure Codes	
...	<Additional values to be added based on local needs>	
99SISS	Codifiche SISS	
99ISTAT	Codifiche ISTAT	
99<application name>	Local codes defined by <application name> (see User Table 0361 - Application)	Example: 99DNLAB, 99ATHENA,...

# Chapter 19. PR1 - Procedures

The PR1 segment contains information relative to various types of procedures that can be performed on a patient.

## 1. Segment definition

#	Name	Set	Description								
01	Set ID - PR1	R	Identifier of each occurrence of the segment								
02	Procedure Coding Method	n/a	Deprecated. Use PR1-3.								
03	Procedure Code	R	<p>Code assigned to the procedure</p> <p><b>Format:</b> CE.1=Procedure Code.</p> <p>CE.2=Procedure Description</p> <p>CE.3=Name of Coding system. <i>ValueList</i>: &lt;see below&gt;. <b>Req if</b> CE.1 &lt;&gt; null</p> <table border="1"> <tr> <td>I10P</td> <td>ICD-10 Procedure Codes</td> </tr> <tr> <td>I9C</td> <td>ICD-9CM</td> </tr> <tr> <td>99zzz or L</td> <td>Local general code</td> </tr> </table> <p>(Ref. User Table 0396 - Coding System )</p>	I10P	ICD-10 Procedure Codes	I9C	ICD-9CM	99zzz or L	Local general code		
I10P	ICD-10 Procedure Codes										
I9C	ICD-9CM										
99zzz or L	Local general code										
04	Procedure Description	n/a	Deprecated. Use PR1-3.								
05	Procedure Date/Time	O	<p>This field contains the date/time that the procedure was performed.</p> <p><b>Format:</b> YYYYMMDD[HH[MM[SS]]]</p>								
06	Procedure Functional Type	O	<p>This field contains the optional code that further defines the type of procedure.</p> <p><b>Values:</b> <b>Table 19.1. User Table 0230 - Procedure Functional Type</b></p> <table border="1"> <tr> <td>A</td> <td>Anesthesia</td> </tr> <tr> <td>P</td> <td>Procedure for treatment (therapeutic, including operations)</td> </tr> <tr> <td>I</td> <td>Invasive procedure not classified elsewhere [IT: Procedura invasiva (intervento chirurgico)]</td> </tr> <tr> <td>D</td> <td>Diagnostic procedure</td> </tr> </table>	A	Anesthesia	P	Procedure for treatment (therapeutic, including operations)	I	Invasive procedure not classified elsewhere [IT: Procedura invasiva (intervento chirurgico)]	D	Diagnostic procedure
A	Anesthesia										
P	Procedure for treatment (therapeutic, including operations)										
I	Invasive procedure not classified elsewhere [IT: Procedura invasiva (intervento chirurgico)]										
D	Diagnostic procedure										
14	Procedure Priority	O	<p>Number that identifies the significance or priority of the procedure code</p> <p><b>Values:</b> <b>Table 19.2. HL7 Table 0418 - Procedure Priority</b></p> <table border="1"> <tr> <td>0</td> <td>the admitting procedure [IT: procedura da non inserire nella SDO]</td> </tr> <tr> <td>1</td> <td>primary procedure [IT: procedura da inserire nella SDO come principale]</td> </tr> <tr> <td>2,...</td> <td>for ranked secondary procedures [IT: procedura da inserire nella SDO come secondaria]</td> </tr> </table>	0	the admitting procedure [IT: procedura da non inserire nella SDO]	1	primary procedure [IT: procedura da inserire nella SDO come principale]	2,...	for ranked secondary procedures [IT: procedura da inserire nella SDO come secondaria]		
0	the admitting procedure [IT: procedura da non inserire nella SDO]										
1	primary procedure [IT: procedura da inserire nella SDO come principale]										
2,...	for ranked secondary procedures [IT: procedura da inserire nella SDO come secondaria]										

#	Name	Set	Description						
19	Procedure Identifier	RC	<p>This field contains a value that uniquely identifies a single procedure for an encounter</p> <p><b>Format:</b> EI.1=Unique Procedure identifier for an encounter. <b>Req.</b> EI.3=Identifier of event/movement to which the Procedure belongs</p> <p><b>Conditions:</b> <i>Event</i>=Update Diagnosis/Procedures</p>						
20	Procedure Action Code	RC	<p>This field defines the action to be taken for this procedure</p> <p><b>Values:</b> <b>Table 19.3. HL7 Table 0206 - Segment Action Code</b></p> <table border="1"> <tbody> <tr> <td>A</td> <td>Add</td> </tr> <tr> <td>U</td> <td>Update</td> </tr> <tr> <td>D</td> <td>Delete</td> </tr> </tbody> </table> <p><b>Conditions:</b> <i>Event</i>=Update Diagnosis/Procedures</p>	A	Add	U	Update	D	Delete
A	Add								
U	Update								
D	Delete								

### Example 19.1. Sample PR1 segment

- *Procedure Priority:* Primary
- *Procedure Code :* 12.22
- *Procedure description:* Biopsia dell'iride
- *Procedure coding system:* ICD-9-CM

```
PR1|1||12.22^Biopsia dell'iride^I9C|||P|||||||1
```



# Chapter 20. PV1 - Patient Visit

## 1. Segment definition

The PV1 segment is used by Registration/Patient Administration applications to communicate information on an account or visit-specific basis.

In *Person Management scenario* the segment is not used to convey visit informations, and, according to IHE, PV1-2 will be given the 'N' value

#	Name	Set	Description																											
02	Patient Class	R	<p>Classification of patient encounter</p> <p><b>Values:</b>    <b>Table 20.1. User Table 0004 - Patient Class</b></p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> <th>Context</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>Not Applicable</td> <td>Patient Identity Management</td> </tr> <tr> <td>O</td> <td>Ambulatory (Outpatients)</td> <td>Outpatients scenario</td> </tr> <tr> <td>I</td> <td>Inpatients</td> <td>Inpatient scenario</td> </tr> <tr> <td>E</td> <td>Emergency</td> <td>Emergency scenario</td> </tr> <tr> <td>P</td> <td>Preadmit</td> <td>Pre-admission scenario</td> </tr> <tr> <td>C</td> <td>Follow-Up [IT: Post Ricovero]</td> <td>Follow-up/Post admission scenario</td> </tr> <tr> <td colspan="3"><b>Loc ITA (compliant HL7 Italia)</b></td> </tr> <tr> <td>D</td> <td>Day Hospital</td> <td>Short-stay scenario</td> </tr> </tbody> </table>	Value	Description	Context	N	Not Applicable	Patient Identity Management	O	Ambulatory (Outpatients)	Outpatients scenario	I	Inpatients	Inpatient scenario	E	Emergency	Emergency scenario	P	Preadmit	Pre-admission scenario	C	Follow-Up [IT: Post Ricovero]	Follow-up/Post admission scenario	<b>Loc ITA (compliant HL7 Italia)</b>			D	Day Hospital	Short-stay scenario
Value	Description	Context																												
N	Not Applicable	Patient Identity Management																												
O	Ambulatory (Outpatients)	Outpatients scenario																												
I	Inpatients	Inpatient scenario																												
E	Emergency	Emergency scenario																												
P	Preadmit	Pre-admission scenario																												
C	Follow-Up [IT: Post Ricovero]	Follow-up/Post admission scenario																												
<b>Loc ITA (compliant HL7 Italia)</b>																														
D	Day Hospital	Short-stay scenario																												
03	Assigned Patient Location	RC	<p>Current patient's location, typically a ward for Inpatients or an ambulatory for Outpatients.</p> <p>In case of Cancel Transfer or Cancel Discharge events, it contains the prior patient's location.</p> <p><b>Format:</b>    see <u>Assigned Patient Location</u> for details</p> <p><b>Loc ITA:</b>    Per gli Inpatients, si intende il reparto giuridico di ricovero .</p> <p><b>Conditions:</b>    <i>Scenario</i>=Patient Encounter Management</p>																											
04	Admission Type	OC	<p>Circumstances under which the patient was or will be admitted</p> <p><b>Loc ITA:</b></p> <table border="1"> <thead> <tr> <th>Significato (compliant HL7 Italia)</th> <th>Contesto</th> </tr> </thead> <tbody> <tr> <td>Tipo Ricovero</td> <td><i>Scenario</i>=Inpatient</td> </tr> <tr> <td>Modalità con la quale il paziente viene ammesso</td> <td><i>Scenario</i>=Outpatient</td> </tr> </tbody> </table> <p><b>Format:</b>    IS.1=Admission Type: <i>ValueList</i>: <u>User Table 0007 - Admission types: IT (Compliant HL7 Italia)</u></p> <p><b>Conditions:</b>    (PV1-2 &lt;&gt; N)</p>	Significato (compliant HL7 Italia)	Contesto	Tipo Ricovero	<i>Scenario</i> =Inpatient	Modalità con la quale il paziente viene ammesso	<i>Scenario</i> =Outpatient																					
Significato (compliant HL7 Italia)	Contesto																													
Tipo Ricovero	<i>Scenario</i> =Inpatient																													
Modalità con la quale il paziente viene ammesso	<i>Scenario</i> =Outpatient																													
05	Preadmit number	O	<p>Used in Admit Inpatient event to communicate the number of previous Preadmit or Emergency encounter (PV1.19).</p>																											

#	Name	Set	Description								
			<p><b>Values:</b> CX.1=Visit number (PV1-19) of previous encounter. <b>Req.</b></p> <p>CX.4=Application that opened the previous encounter. <i>ValueList:</i> User Table 0363 - Assigning Authority: IT. <b>Req.</b></p> <p>CX.5=<i>Constant:</i> VN</p>								
06	Prior Patient Location	RC	<p>This field contains the prior patient location if the patient is being transferred</p> <p><b>Format:</b> Same format of PV1-3: see <u>Assigned Patient Location</u> for details</p> <p><b>Conditions:</b> <i>Event</i> = Transfer Inpatient</p>								
07	Attending Doctor	OC..*	<p>Attending physician information.</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p><b>Loc ITA:</b> Medico responsabile della cura del paziente.</p> <table border="1"> <thead> <tr> <th>Meaning</th> <th>Context</th> </tr> </thead> <tbody> <tr> <td>Medico di base</td> <td>Scenario=PatientIdentity or Scenario&lt;&gt; Inpatients</td> </tr> <tr> <td>Medico ospedaliero che ha in cura il paziente</td> <td>Scenario=Inpatients</td> </tr> <tr> <td>Medico che effettua la dimissione</td> <td>Scenario=Inpatients and Event=Discharge Patient</td> </tr> </tbody> </table> <p><b>Format:</b></p> <p>see <u>Attending Doctor</u> for details</p> <p><b>Conditions:</b></p> <p><i>Scenario</i>=PatientIdentity OR <i>Scenario</i>=PatientEncounter</p>	Meaning	Context	Medico di base	Scenario=PatientIdentity or Scenario<> Inpatients	Medico ospedaliero che ha in cura il paziente	Scenario=Inpatients	Medico che effettua la dimissione	Scenario=Inpatients and Event=Discharge Patient
Meaning	Context										
Medico di base	Scenario=PatientIdentity or Scenario<> Inpatients										
Medico ospedaliero che ha in cura il paziente	Scenario=Inpatients										
Medico che effettua la dimissione	Scenario=Inpatients and Event=Discharge Patient										
08	Referring Doctor	OC..*	<p>Referring physician information; doctor who required the visit/consultation/health services</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p><b>Format:</b> Same format of PV1-7: see <u>Attending Doctor</u> for details</p> <p><b>Conditions:</b> (PV1-2 &lt;&gt; N)</p>								

#	Name	Set	Description								
10	Hospital Service	OC	<p><b>Loc ITA:</b> Tipo di Trattamento o di Intervento che il paziente deve ricevere. In caso di pazienti degenti in regime diurno (day hospital), indica il Motivo del Ricovero</p> <p><b>Values:</b></p> <p><b>Table 20.2. User Table 0069 - HospitalService</b></p> <table border="1"> <tr> <td>1</td> <td>Ricovero diurno diagnostico (ivi compreso il follow up)</td> </tr> <tr> <td>2</td> <td>Ricovero diurno chirurgico (day surgery)</td> </tr> <tr> <td>3</td> <td>Ricovero diurno terapeutico</td> </tr> <tr> <td>4</td> <td>Ricovero diurno riabilitativo</td> </tr> </table> <p><b>Conditions:</b></p> <p><i>Scenario=PatientEncounter and PV1-2=D</i></p>	1	Ricovero diurno diagnostico (ivi compreso il follow up)	2	Ricovero diurno chirurgico (day surgery)	3	Ricovero diurno terapeutico	4	Ricovero diurno riabilitativo
1	Ricovero diurno diagnostico (ivi compreso il follow up)										
2	Ricovero diurno chirurgico (day surgery)										
3	Ricovero diurno terapeutico										
4	Ricovero diurno riabilitativo										
11	Temporary location	OC	<p>Temporary patient location.</p> <p><b>Format:</b> Same format of PV1-3: see <u>Assigned Patient Location</u> for details</p> <p><b>Loc ITA:</b> Reparto temporaneo o assistenziale (eventuale locazione alternativa assistenziale in caso in cui il paziente non possa essere collocato al letto descritto in PV1-3)</p> <p><b>Conditions:</b></p> <p><i>Scenario=PatientEncounter</i></p>								
14	Admit Source	OC	<p>Source of admission (IT: Provenienza del paziente)</p> <p><b>Values:</b> <u>User Table 0023 - Admit Source: IT (Compliant HL7 Italia)</u></p> <p><b>Conditions:</b> <i>Scenario=PatientEncounter AND Event in (Admit, Register, Preadmit)</i></p>								
17	Admitting doctor	OC..*	<p>Admitting physician information</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p>Same format of PV1-7: see <u>Attending Doctor</u> for details</p> <p><b>Conditions:</b> <i>Scenario=PatientEncounter</i></p>								
19	Visit Number	RC	<p>This field contains the unique number assigned to each patient visit. <sup>01</sup></p> <p><b>Format:</b> CX.1 = Visit number. <b>Req.</b></p> <p>CX.4 = Application that is registering the visit. <i>ValueList:</i> User Table 0363 - Assigning Authority: IT. <b>Req.</b></p> <p>CX.5 =</p>								

#	Name	Set	Description						
			<table border="1"> <tr> <td>VN</td> <td>Inpatients</td> </tr> <tr> <td>MR</td> <td>Outpatients</td> </tr> </table> <p>CX.6 = Facility assigning the Visit number. <b>Loc ITA:</b> Codice presidio ospedaliero / substruttura (2 caratteri)</p> <p>CX.10 = Agency responsible for definition and assignment of Visit number. <b>Loc ITA:</b> Codice ministeriale Azienda Ospedaliera (6 caratteri)</p> <p><b>Conditions:</b> PV1-2&lt;&gt;N</p>	VN	Inpatients	MR	Outpatients		
VN	Inpatients								
MR	Outpatients								
20	Financial Class	OC..*	<p>Financial class(es) assigned to the patient for the purpose of identifying sources of reimbursement.<sup>02</sup></p> <p><b>Loc ITA:</b> Condizione dell'assistito in relazione alle eventuali esenzioni. (<i>Compliant HL7 Italia</i>)</p> <p><b>Format:</b></p> <p>FC.1= Codice di esenzione. Rif. codici di esenzione ministeriali</p> <p>FC.2= Data scadenza dell'esenzione. <i>Format:YYYYMMDD</i></p> <p><b>Conditions:</b></p> <p><i>Scenario=Outpatients OR Scenario=PatientIdentity</i></p>						
21	Charge Price Indicator	OC	<p>This field contains the code used to determine which price schedule is to be used</p> <p><b>Loc ITA:</b> (<i>Compliant HL7 Italia</i>)</p> <table border="1"> <thead> <tr> <th>Meaning</th> <th>Context</th> </tr> </thead> <tbody> <tr> <td>Onere della Degenza</td> <td><i>Inpatients.</i></td> </tr> <tr> <td>Regime erogazione di</td> <td><i>Outpatients.</i></td> </tr> </tbody> </table> <p><b>Values:</b> FC.1=User Table 0032 - ChargePriceIndicator: IT (<i>Compliant HL7 Italia</i>)</p> <p><b>Conditions:</b></p> <p><i>Scenario=PatientEncounter</i></p>	Meaning	Context	Onere della Degenza	<i>Inpatients.</i>	Regime erogazione di	<i>Outpatients.</i>
Meaning	Context								
Onere della Degenza	<i>Inpatients.</i>								
Regime erogazione di	<i>Outpatients.</i>								
24	Contract code	OC	<p>This field identifies the type of contract entered into by the healthcare facility and the guarantor for the purpose of settling outstanding account balances.</p> <p><b>Loc ITA:</b> Tipo di convenzione contrattuale che la struttura sanitaria ha stipulato con il soggetto che deve farsi carico del pagamento della prestazioni effettuate. (<i>Compliant HL7 Italia</i>)</p> <p><b>Values:</b> User Table 0044 - ContractCode: IT</p> <p><b>Conditions:</b></p> <p><i>Scenario=PatientEncounter</i></p>						
36	Discharge Disposition	OC	<p>This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.).</p>						

#	Name	Set	Description
			<b>Values:</b> <u>User Table 0112 - DischargeDisposition: IT (Compliant HL7 Italia)</u> <b>Conditions:</b> <i>Scenario=PatientEncounter</i>
43	Prior Temporary Location	OC	This field contains the prior patient temporary location if the patient is being transferred <b>Format:</b> Same format of PV1-3: see <u>Assigned Patient Location</u> for details <b>Conditions:</b> <i>Event = Transfer Inpatient</i>
44	Admit date/time	RC	Actual admission timestamp <b>Format:</b> YYYYMMDDHHMM[SS] <b>Conditions:</b> <i>Scenario=PatientEncounter AND Event in (A01, A04, A05)</i>
45	Discharge date/time	RC	Actual discharge timestamp <b>Format:</b> YYYYMMDDHHMM[SS] <b>Conditions:</b> <i>Scenario=PatientEncounter AND Event =A03</i>
50	Alternate Visit ID	OC	This field contains the alternative, temporary, or pending visit ID number <b>Format:</b> CX.1=Alternate Visit number. <b>Req</b>  CX.4=Application that is registering the identifier in CX.1. <i>ValueList:</i> Ref. User Table 0363 - Assigning Authority: IT. <b>Req</b> <b>Conditions:</b> <i>Scenario=PatientEncounter</i>
51	Visit Indicator	OC	<b>Values:</b> <i>Constant: V</i> <b>Conditions:</b> <i>PV1-2 &lt;&gt; N</i>

<sup>01</sup>CRS-SISS nel caso di messaggi Preadmit patient (A05) richiede l'utilizzo di PV1-5

<sup>02</sup>Nel caso di Inpatients il CRS-SISS assegna al campo il significato di "Onere della degenza", che noi invece specifichiamo in PV1-21

## 2. Fields definition

### 2.1. PV1-3

Assigned Patient Location.<sup>1</sup> This field contains the patient's initial assigned location or the location to which the patient is being moved. For canceling a transaction or discharging a patient, the current location (after the cancellation event or before the discharge event) should be in this field.

The data type Patient Location (PL) contains several location identifiers that should be thought of in the following order from the most general to the most specific: facility , building, floor, point of care, room , bed.

#	Name	Set	Description
<i>PL.1</i>	point of care	<b>R</b>	Code of Ward/Ambulatory
<i>PL.2</i>	room	O	Room assigned to the patient
<i>PL.3</i>	bed	O	Bed assigned to the patient

<sup>1</sup>Nei messaggi documentali il CRS-SISS prevede l'uso del campo per specificare la "Struttura in cui viene prodotto il referto", che noi invece valorizziamo in OBR-32

#	Name	Set	Description
PL.4	facility	O	Facility owning the point of care in PL.1. Generally describes the highest level physical designation of an institution, medical center or enterprise.  <b>Loc ITA:</b> Presidio. <i>CodedValue:</i> Codifica ministeriale presidi (6 cifre). (Compliant HL7 Italia)
PL.7	building	O	Building of the facility where the point of care in PL.1 is located.  <b>Loc ITA:</b> Stabilimento (subcodice da codice presidio). <i>CodedValue:</i> Codifica ministeriale stabilimenti (2 cifre). (Compliant HL7 Italia)
PL.8	floor	O	Floor where the room is located
PL.9	location description	R	Ward/Ambulatory description
PL.10	Comprehensive Location Identifier	O	<b>Loc ITA:</b> Codice Azienda Ospedaliera <sup>a</sup>
PL.11	Assigning Authority for Location	n/a	n/a <sup>b</sup>

<sup>a</sup>CRS-SISS prevede l'uso di PL.4

<sup>b</sup>CRS-SISS prevede l'uso del campo per specificare la Struttura di Conservazione del documento, che noi definiamo in TXA.23

### Example 20.1. Sample PV1-3 field

Example for Italian Localization

- *Ward:* 008.01 - CARDIOLOGIA
- *Room:* A
- *Bed:* 7
- *Facility:* Ospedale di Imola del Presidio di Imola-Castel San Pietro Terme (Presidio: 080044; Subcodice: 01)

008.01^A^7^080044^^^01^^CARDIOLOGIA^^

## 2.2. PV1-7

Attending Doctor.

#	Name	Set	Description
XCN.1	ID Number	R	Doctor's identifier <sup>a</sup>  <b>Values:</b> Depends on XCN.13
XCN.2	family name	RE	Surname
XCN.3	given name	RE	Forename
XCN.9	assigning authority	OC	<b>Loc ITA:</b> HD.1= ASL di appartenenza del medico. <i>CodedValue:</i> Codice Regione (3 cifre) + Codice regionale dell'Azienda Sanitaria (3 cifre). <b>Req.</b>  HD.3= <i>Constant:</i> ASLA (Ref. HL7 Table 0203 - Identifier Type: IT)

#	Name	Set	Description										
			<p><b>Conditions:</b></p> <p><i>Scenario=PatientIdentity</i></p>										
XCN.13	identifier type code	R	<p>It defines the type of identifier specified in XCN.1.</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>NN</td> <td>National Personal Identifier</td> </tr> <tr> <td>RRI</td> <td>Regional Registry ID</td> </tr> <tr> <td>LR</td> <td>Local Registry ID (<i>Not Compliant CRS-SISS</i>)</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>NNITA</td> <td>Tax Code</td> </tr> </table> <p>(Ref. HL7 Table 0203 - Identifier Type: IT)</p>	NN	National Personal Identifier	RRI	Regional Registry ID	LR	Local Registry ID ( <i>Not Compliant CRS-SISS</i> )	<b>Loc ITA</b>		NNITA	Tax Code
NN	National Personal Identifier												
RRI	Regional Registry ID												
LR	Local Registry ID ( <i>Not Compliant CRS-SISS</i> )												
<b>Loc ITA</b>													
NNITA	Tax Code												
XCN.19	Effective date	OC	<p><b>Loc ITA:</b> Data scelta medico di base. <i>Format:</i> YYYYMMDD[HH[MM[SS]]]</p> <p><b>Conditions:</b></p> <p><i>Scenario=PatientIdentity</i></p>										
XCN.20	Expiration date	OC	<p><b>Loc ITA:</b> Data revoca medico di base. <i>Format:</i> YYYYMMDD[HH[MM[SS]]]</p> <p><b>Conditions:</b></p> <p><i>Scenario=PatientIdentity</i></p>										

<sup>3</sup>CRS-SISS, nel caso di messaggi documentali, richiede di specificare il Codice Fiscale del medico.

### 3. Tables

**Table 20.3. User Table 0023 - Admit Source: IT (Compliant HL7 Italia)**

Value	Description	Comment
1	paziente che acceda all'istituto di cura senza proposta di ricovero formulata da un medico	Per degenti. Rif. DM 27/10/2000, n. 380
2	paziente che acceda all'istituto di cura con proposta del medico di base	"
3	ricovero precedentemente programmato dallo stesso istituto di cura;	"
4	paziente trasferito da un istituto di cura pubblico;	"
5	paziente trasferito da un istituto di cura privato accreditato;	"
6	paziente trasferito da istituto di cura privato non accreditato;	"
7	paziente trasferito da altro tipo di attività di ricovero (acuti, riabilitazione, lungodegenza) o da altro regime di ricovero (ricovero diurno o ordinario) nello stesso istituto;	"
9	altro.	"
10	Medico specialista ospedaliero	Per specialistica ambulatoriale. Rif HL7 Italia
11	Medico specialista territoriale	"

Value	Description	Comment
12	Richiesta INPS, INAIL	"
20	Segnalazione del medico di base	Per ADI. Rif HL7 Italia
21	Segnalazione dell'ospedale	"
22	Segnalazione di parenti/familiari	"
23	Segnalazione di servizi sociali	"
24	Segnalazione di volontariato	"

**Table 20.4. User Table 0007 - Admission types: IT (Compliant HL7 Italia)**

Value	Description	Comment
1	Ricovero programmato non urgente	Per degenti. Rif. DM 27/10/2000, n. 380
2	Ricovero Urgente	"
3	Ricovero per trattamento sanitario obbligatorio (TSO)	"
4	Ricovero programmato con pre-ospedalizzazione	"
5	Ricovero d'urgenza in OBI	Per degenti. Rif. HL7 Italia
6	Ordinario (programmabile)	Per specialistica ambulatoriale. Rif. HL7 Italia
7	Urgente	"
	<i>&lt;eventuali valori aggiuntivi in base a flussi regionali o per esigenze locali&gt;</i>	

**Table 20.5. User Table 0032 - ChargePriceIndicator: IT (Compliant HL7 Italia)**

Value	Description	Comment
1	A totale carico SSN	Per Degenti e Ambulatoriali
2	Ricovero a prevalente carico SSN, con parte delle spese a carico del paziente(differenza alberghiera)	Per Degenti
3	Ricovero con successivo rimborso (totale o parziale) a carico del SSN	Per Degenti
4	Senza oneri per il SSN (solvente);	Per Degenti e Ambulatoriali
5	A prevalente carico del SSN, con parte delle spese a carico del paziente (libera professione);	Per Degenti e Ambulatoriali
6	ricovero a prevalente carico del SSN, con parte delle spese a carico del paziente (libera professione e differenza alberghiera);	Per Degenti
7	A carico del SSN di pazienti stranieri provenienti da Paesi convenzionati con SSN;	Per Degenti e Ambulatoriali
8	A carico del SSN di pazienti stranieri con dichiarazione di indigenza;	Per Degenti e Ambulatoriali
9	altro	Per Degenti e Ambulatoriali
A	ricovero a carico del Ministero dell'interno di pazienti stranieri con dichiarazione di indigenza;	Per Degenti
N	Naviganti	Per Ambulatoriali
C	Prestazioni rese a detenuti	Per Ambulatoriali



La tabella contiene i codici utilizzabili per esprimere l'Onere della degenza per pazienti degenti ( Rif. DM 27/10/2000, n. 380) e il Regime di erogazione per pazienti ambulatoriali (Rif 28/SAN). Da completare eventualmente con altri valori presi dai flussi regionali, o inseriti a completamento delle esigenze locali.

**Table 20.6. User Table 0044 - ContractCode: IT**

Value	Description	Comment
SSN	Domiciliato in ASL, Cittadino italiano	Rif. People - progetto Empoli
EMI	Cittadino italiano emigrato, residente estero	"
UE	Cittadinanza europea, regolarmente soggiornante	"
TEAM	Cittadinanza europea, soggiorno temporaneo	"
STP	Extra UE, non regolarmente soggiornante	"
E109	Lavoratore UE distaccato, figli iscritti in Italia	"
E121	Titolare di pensione, Attestato E121	"
E120	In attesa di pensione, Attestato E120	"
E106	Studente o lavoratore distaccato, attestato E106	"
E112	Maternità o cure mediche programmate, E112	"
E123	Malattia e/o infortuni sul lavoro, Attestato E123	"
E000	Altro attestato UE	"
XUEO	Cittadino extraUE regolarmente soggiornante, iscrizione obbligatoria	"
XUEF	Cittadino extraUE regolarmente soggiornante, iscrizione facoltativa	"
CNV1	Cittadino extraUE di paese convenzionato, titolare di attestato, regolarmente soggiornante	"
CNV2	Cittadino extraUE di paese convenzionato, soggiorno temporaneo	"
SASN	Servizio Assistenza Sanitaria Naviganti	"

La tabella definisce l'elenco delle convenzioni di assistenza riconosciute dall'ASL. Attualmente i valori in tabella sono quelli del progetto di Empoli, e vanno adattati in base alle esigenze locali.

**Table 20.7. User Table 0112 - DischargeDisposition: IT (Compliant HL7 Italia)**

Value	Description	Comment
1	Deceduto	Per degenti. Rif. DM 27/10/2000, n. 380
2	Dimissione ordinaria al domicilio del paziente	"
3	Dimissione ordinaria presso una residenza sanitaria assistenziale (RSA)	"
4	dimissione al domicilio del paziente con attivazione di ospedalizzazione domiciliare	"
5	dimissione volontaria (da utilizzare anche nei casi in cui il paziente in ciclo di trattamento diurno non si sia ripresentato durante il ciclo programmato)	"
6	trasferimento ad un altro istituto di ricovero e cura, pubblico o privato, per acuti;	"
7	trasferimento ad altro regime di ricovero o ad altro tipo di attività di ricovero nell'ambito dello stesso istituto;	"

Value	Description	Comment
8	trasferimento ad un istituto pubblico o privato di riabilitazione;	"
9	dimissione ordinaria con attivazione di assistenza domiciliare integrata	"
10	Ricoverato	Per pazienti in uscita da Pronto Soccorso. Rif. HL7 Italia
11	Rifiuta ricovero	"
12	Giunto cadavere	"
13	Completamento del programma assistenziale	Per assistenza domiciliare o altra tipologia di assistenza erogata. Rif. HL7 Italia

**Table 20.8. HL7 Table 0203 - Identifier Type: IT**

Value	Description	Comment
ANT	Temporary Account Number	Identificativo del dipartimentale (temporaneo). Rif. HL7 Italia
DN	Doctor Number	Codice ricetta del medico. Rif. HL7 Italia
FI	Facility Id	
HC	Health Card Number	per tessera TEAM. Rif. HL7 Italia
LR	Local Registry ID	Identificativo locale.
MD	Medical License number	Codice matricola del medico. Rif. HL7 Italia
NNxxx	National Person Identifier where the xxx is the ISO table 3166 3-character (alphabetic) country code	NNITA – Per codice fiscale. Rif. HL7 Italia
PI	Patient internal identifier	Identificativo paziente aziendale. Rif. HL7 Italia
PNT	Temporary Living Subject Number	Per STP. Rif. HL7 Italia
RRI	Regional registry ID	Chiave regionale. Rif. HL7 Italia
SS	Social Security number	Codice della tessera sanitaria. Rif. HL7 Italia
VN	Visit number	Numero nosologico o numero di contatto. Rif. HL7 Italia
ASLA	AUSL di assistenza	AUSL di assistenza. Rif. HL7 Italia
ASLR	AUSL di appartenenza	AUSL di appartenenza. Rif. HL7 Italia
MR	Medical Record	Numero di cartella. Rif. CRS-SISS

The table contains a subset of HL7 table 0203, with main identifiers relevant for Italian localization as proposed by HL7 Italia and, partly, by CRS-SISS

# Chapter 21. PV2 - Patient Visit - Additional Information

The PV2 segment is a continuation of informations contained in the PV1 segment.

## 1. Segment definition

#	Name	Set	Description
03	Admit Reason	OC	Reason for patient admission, coded or free-text. In case the Admit Reason equals the ICD9 / ICD10 Admission Diagnosis, then it SHOULD be transmitted using a <u>DG1 - Diagnosis</u> segment.  <b>Format:</b> CE.1=Admit reason code  CE.2=Admit reason description <b>Req.</b>  CE.3=Coding system. <i>ValueList:</i> <u>User Table 0396 - Coding System</u> <b>Req.</b> if CE.1 <> null  <b>Conditions:</b> <i>Event</i> =Admit Inpatient
04	Transfer Reason	OC	Reason for a patient location change, coded or free-text.  <b>Format:</b> CE.1=Transfer reason code  CE.2=Transfer reason description <b>Rea.</b>  CE.3=Coding system. <i>ValueList:</i> <u>User Table 0396 - Coding System</u> <b>Rea</b> if CE.1 <> null  <b>Conditions:</b> <i>Event</i> =Transfer Inpatient
07	Visit User Code	RC	Internal event key: it is a unique key, inside each visit, identifying the event (e.g.: Admit, Transfer,..) in the sending application. For example, it might be assigned the timestamp when the event was registered (same value as EVN-2). It allows for event cancelling or update between the sending and the receiving application.  <b>Format:</b> Free format, do no exceed 64 chars.  <b>Condition:</b> <i>Scenario</i> =Patient Encounter
08	Expected Admit Date/Time	O	May contain the date and time that the patient is expected to be admitted.  <b>Format:</b> YYYYMMDDHHMM[SS]  <b>Conditions:</b> <i>Scenario</i> =Patient Encounter Management (Outpatient and Pre-Admission)
09	Expected discharge Date/Time	O	May contain the date and time that the patient is expected to be discharged.  <b>Format:</b> YYYYMMDDHHMM[SS]  <b>Conditions:</b> <i>Scenario</i> =Patient Encounter Management (Inpatient and Short-Stay)
12	Visit Description	O	May contain a description of the encounter, or a reason for it, in a free-text format.  <b>Conditions:</b> <i>Scenario</i> =Patient Encounter Management
21	Visit Publicity Code	O	User-defined code indicating what level of publicity is allowed for a specific visit

PV2 - Patient Visit -  
Additional Information

#	Name	Set	Description										
			<p><b>Loc ITA</b> Livello di riservatezza dei dati della visita o dell'accesso (<i>Compliant HL7 Italia</i>).</p> <p><i>Nota:</i> In ambito <i>CRS-SISS</i> si usa il campo PV2-45 per l'oscuramento dei dati clinici del paziente.</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>F</td> <td>Family Only [ITA: Solo Familiari]</td> </tr> <tr> <td>N</td> <td>No Publicity [ITA: Consenso negato]</td> </tr> <tr> <td>Y</td> <td>Publicity [ITA: Consenso accordato]</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> <tr> <td>O</td> <td>Other</td> </tr> </table> <p>(Ref. User Table 0215 - Publicity Code)</p>	F	Family Only [ITA: Solo Familiari]	N	No Publicity [ITA: Consenso negato]	Y	Publicity [ITA: Consenso accordato]	U	Unknown	O	Other
F	Family Only [ITA: Solo Familiari]												
N	No Publicity [ITA: Consenso negato]												
Y	Publicity [ITA: Consenso accordato]												
U	Unknown												
O	Other												
25	Visit Code	Priority O	<p>This field contains the priority of the visit</p> <p><b>Loc ITA</b> (<i>Compliant HL7 Italia</i>) La distinzione del ricovero in programmato ed urgente viene già determinata tramite i campi PV1- 2, PV1-4. Un possibile utilizzo di questo campo può essere quello di inviare:</p> <ul style="list-style-type: none"> <li>• Priorità di accesso, legata alle prestazioni di specialistica ambulatoriale</li> <li>• Gravità dell'episodio (triage, per episodi di Pronto Soccorso)</li> <li>• Classificazione delle priorità basata sui tempi massimi di attesa</li> </ul> <p><b>Values:</b></p> <p>User Table 0217 - Visit Priority Code: IT</p>										
31	Recurring Service Code	RC	<p>In Patient Encounter scenario for Day Hospital it is required to differentiate between first patient access and following ones.</p> <p>In Patient Encounter scenario for Outpatients it is required in case of recurring ambulatory encounters.</p> <p><b>Values:</b> User Table 0219 - Recurring Service Code: IT</p> <p><b>Conditions:</b> Scenario=PatientEncounter and PV1-2 in (D, O)</p>										
36	Newborn Baby Indicator	O	<p>Indicates whether the patient is a baby.</p> <p><b>Values:</b></p> <table border="1"> <tr> <td>Y</td> <td>The patient is a baby</td> </tr> <tr> <td>N</td> <td>The patient is NOT a baby</td> </tr> </table>	Y	The patient is a baby	N	The patient is NOT a baby						
Y	The patient is a baby												
N	The patient is NOT a baby												
38	Mode of arrival	O	<p>Identifies how the patient was brought to the healthcare facility.</p> <p><b>Format:</b> CE.1=Mode of arrival code. <i>ValueList:</i> &lt;see below&gt;</p> <p><b>Table 21.1. User Table 0430 - Mode of Arrival</b></p> <table border="1"> <tr> <td>A</td> <td>Ambulance</td> </tr> <tr> <td>C</td> <td>Car</td> </tr> <tr> <td>F</td> <td>On Foot [IT: A piedi]</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> <tr> <td>H</td> <td>Helicopter [ITA: Eliambulanza]</td> </tr> </table>	A	Ambulance	C	Car	F	On Foot [IT: A piedi]	U	Unknown	H	Helicopter [ITA: Eliambulanza]
A	Ambulance												
C	Car												
F	On Foot [IT: A piedi]												
U	Unknown												
H	Helicopter [ITA: Eliambulanza]												

PV2 - Patient Visit -  
Additional Information

#	Name	Set	Description																		
			<table border="1"> <tr> <td>P</td> <td>Public transport</td> </tr> <tr> <td>O</td> <td>Other</td> </tr> </table> <p>CE.2=Mode of arrival description CE.3=HL70430. <b>Req.if CE.1 &lt;&gt; null</b></p>	P	Public transport	O	Other														
P	Public transport																				
O	Other																				
45	Advance Directive Code	OC..*	<p>Indicates the patient's instructions to the healthcare facility.</p> <p>Current usage include patient consent to publication of clinical data. May be extended for additional needs</p> <p><b>Format:</b> CE.1=Value assigned to directive. <i>ValueList:</i> Y=Yes; N=No <b>Req</b> CE.2=Directive identifier. <i>ValueList:</i>&lt;see below&gt; <b>Req.</b></p> <table border="1"> <tr> <td>Publish_Order_Con</td> <td>Consent to publication of Order related clinical data to Portal application</td> </tr> <tr> <td>Publish_Visit_P</td> <td>Consent to publication of Visit related clinical data to Portal application</td> </tr> <tr> <td></td> <td></td> </tr> </table> <p>CE.3=99GALILEO. <b>Req</b></p> <p><b>Loc=CRS-SISS</b></p> <p>CE.1=Valore Oscuramento. <i>ValueList:</i> SI/NO <b>Req</b> CE.2=Tipologia Oscuramento. <i>ValueList:</i>&lt;see below&gt; <b>Req.</b></p> <table border="1"> <tr> <td colspan="2">Tipologia di oscuramento volontario dei referti prodotti nell'ambito dell'evento sanitario.</td> </tr> <tr> <td>10</td> <td>Oscuramento per tossicodipendenza</td> </tr> <tr> <td>20</td> <td>Oscuramento per HIV</td> </tr> <tr> <td>30</td> <td>Oscuramento per Violenze Subite</td> </tr> <tr> <td>40</td> <td>Oscuramento per interruzione volontaria gravidanza</td> </tr> <tr> <td>50</td> <td>Oscuramento volontario cittadino</td> </tr> </table> <p>CE.3=99SISS <b>Req.</b></p> <p><b>Conditions:</b> <i>Scenario</i> in (Patient Encounter, Order Management)</p>	Publish_Order_Con	Consent to publication of Order related clinical data to Portal application	Publish_Visit_P	Consent to publication of Visit related clinical data to Portal application			Tipologia di oscuramento volontario dei referti prodotti nell'ambito dell'evento sanitario.		10	Oscuramento per tossicodipendenza	20	Oscuramento per HIV	30	Oscuramento per Violenze Subite	40	Oscuramento per interruzione volontaria gravidanza	50	Oscuramento volontario cittadino
Publish_Order_Con	Consent to publication of Order related clinical data to Portal application																				
Publish_Visit_P	Consent to publication of Visit related clinical data to Portal application																				
Tipologia di oscuramento volontario dei referti prodotti nell'ambito dell'evento sanitario.																					
10	Oscuramento per tossicodipendenza																				
20	Oscuramento per HIV																				
30	Oscuramento per Violenze Subite																				
40	Oscuramento per interruzione volontaria gravidanza																				
50	Oscuramento volontario cittadino																				

### Example 21.1. Sample PV2 segment

```
// an Inpatient Admission
PV2||||2298006^Myocardial infraction^SNT||||876500982347||201212051800|||
  Suspect of myocardial infraction, admission recommended|||||F|||A||
  |||||||N||A|||||Y^Publish_Visit_Portal^99GALILEO

// an Inpatient Transfer
PV2||||05^Transferred due to better conditions^L||||334765412239|||||
  Suspect of myocardial infraction, admission recommended|||||F|||
  A|||||||||N||A|||||Y^Publish_Visit_Portal^99GALILEO

// a Short-Stay administrative opening
PV2|||||323542345343|||||This is the visit reason|||||F|||C|||||DHO
  ||||Y|U|||||Y^Publish_Visit_Portal^99GALILEO~SI^50^99SISS

// Short-Stay accesses begins and ends
PV2|||||554222345522|||||This is te access reason|||||F|||C|||||DHAB
  ||||Y|U|||||Y^Publish_Visit_Portal^99GALILEO~SI^50^99SISS

PV2|||||554235554455|||||||||F|||C|||||DHAE|||||Y|U|||||
  |Y^Publish_Visit_Portal^99GALILEO~SI^50^99SISS

// a Short-Stay administrative closure
PV2|||||124466739874|||||||||F|||C|||||DHC|||
  ||Y|U|||||Y^Publish_Visit_Portal^99GALILEO~SI^50^99SISS
```

## 2. Tables

**Table 21.2. User Table 0217 - Visit Priority Code: IT**

Value	Description	Comment
R	Triage - Red	For Emergency Department
Y	Triage - Yellow	"
G	Triage - Green	"
W	Triage - White	"
...	<Additional values to be added on local needs>	

**Table 21.3. User Table 0219 - Recurring Service Code: IT**

Value	Description	Comment
<i>Patient Encounter</i>		
DHO	Day Hospital Open	Day Hospital encounter administrative opening
DHAB	Day Hospital Access Begin	Day Hospital access - begin
DHAE	Day Hospital Access End	Day Hospital access - end
DHC	Day Hospital Close	Day Hospital encounter administrative closure
RO	Recurring Ambulatory Open	First Recurring Ambulatory access

PV2 - Patient Visit -  
Additional Information

---

<b>Value</b>	<b>Description</b>	<b>Comment</b>
RE	Recurring Ambulatory Encounter	Following Recurring Ambulatory accesses
RC	Recurring Ambulatory Close	Last Recurring Ambulatory access

# Chapter 22. RXO - Pharmacy/ Treatment Order Segment

The PR1 segment contains information relative to various types of procedures that can be performed on a patient.

## 1. Segment definition

#	Name	Give	Set	Description
01	Requested Code	Give	RC	Identifies the treatment product or treatment ordered to be given to the patient.  <b>Format:</b> CE.1 = treatment code <b>Req</b> CE.2 = treatment text CE. 3 = name of coding system <b>Req. Loc UK: "dm+d"</b>  <b>Condition:</b> Required if RXO-6 = null
02	Requested Amount Minimum	Give -	RC	This field is the ordered amount. In a variable dose order, this is the minimum ordered amount. In a non-varying dose order, this is the exact amount of the order.  <b>Condition:</b> Required if RXO-6 = null
03	Requested Amount Maximum	Give -	O	In a variable dose order, this is the maximum ordered amount. In a non-varying dose order, this field is not used.
04	Requested Units	Give	RC	This field indicates the units for the give amount.  <b>Condition:</b> Required if RXO-6 = null
06	Provider's Pharmacy/ Treatment Instructions		RC	Contains a free text version of the prescription line  <b>Format:</b> CE.2 = Treatment free text  <b>Condition:</b> mandatory if RXO-1, RXO-2 and RXO-4 are all null.
20	Indication		RC	It identifies the condition or problem for which the drug/treatment was prescribed. It is provided in a free text format.  <b>Format:</b> CE.2 = Indication free text  <b>Condition:</b> <i>Scenario</i> =Medicines on discharge.  Mandatory if the treatment was started during the patient current episode (ORC-5 = SC)



---

# Chapter 23. RXR - Pharmacy/ Treatment Route Segment

The Pharmacy/Treatment Route segment contains the alternative combination of route, site, administration device, and administration method that are prescribed.

## 1. Segment definition

#	Name	Set	Description
01	Route	<b>R</b>	This field contains the route of administration. It is provided in a free text format. <b>Format:</b> CE.2 = Route free text description <b>Req</b>
02	Administration Site	O	This field contains the site of the administration route. It is provided in a free text format. <b>Format:</b> CWE.2 = Administration site free text description <b>Req</b>
04	Administration Method	O	This field identifies the specific method requested for the administration of the drug or treatment to the patient. It is provided in a free text format. <b>Format:</b> CWE.2 = Administration method free text description <b>Req</b>
05	Routing instruction	O	This field provides instruction on administration routing. It is provided in a free text format. <b>Format:</b> CE.2 = Routing instruction free text description <b>Req</b>

# Chapter 24. SPM - Specimen

The intent of this segment is to describe the characteristics of a specimen; a specimen as a physical entity that is the target of an observation.

## 1. Segment definition

#	Name	Set	Description
01	Set ID – SPM	O	Identifier of each occurrence of the segment.
02	Specimen ID	O	<p>Specimen identifier assigned by placer or filler application</p> <p><b>Format:</b> EIP.1.1=Placer Assigned Identifier</p> <p>EIP.1.2=Placer Application. <i>ValueList:</i> <u>User Table 0361 - Application</u></p> <p>EIP.2.1=Filler Assigned Identifier</p> <p>EIP.2.2=Filler Application. <i>ValueList:</i> <u>User Table 0361 - Application</u></p>
04	Specimen Type	R	<p>Describes the precise nature of the entity that will be the source material for the observation.</p> <p><b>Format:</b> CWE.1=Source Code <b>Req.if Scenario = Laboratory Testing Management</b></p> <p>CWE.2=Source Description</p> <p>CWE.3=Coding system. <i>ValueList:</i><u>User Table 0396 - Coding System</u> <b>Req.if CWE.1 is not empty</b></p>
07	Specimen Collection Method	O	<p>Describes the procedure or process by which the specimen was collected.</p> <p><b>Format:</b> CWE.1=Code</p> <p>CWE.2=Description</p> <p>CWE.3=Coding system. <i>ValueList:</i><u>User Table 0396 - Coding System</u> <b>Req.if CWE.1 is not empty</b></p>
08	Specimen Source Site	O	<p>Specifies the source from which the specimen was obtained. For example, in the case where a liver biopsy is obtained via a percutaneous needle, the source would be 'liver.'</p> <p><b>Format:</b> CWE.1=Code</p> <p>CWE.2=Description</p> <p>CWE.3=Coding system. <i>ValueList:</i><u>User Table 0396 - Coding System</u> <b>Req.if CWE.1 is not empty</b></p>
10	Specimen Collection Site	O	<p>This field differs from 'SPM-8-Specimen Source Site' in those cases where the source site must be approached via a particular site (e.g., anatomic location). For example, in the case where a liver biopsy is obtained via a percutaneous needle, the collection site would be the point of entry of the needle. For venous blood collected from the left radial vein, the collection site could be "antecubital fossa".</p> <p><b>Format:</b> CWE.1=Code</p>

#	Name	Set	Description
			CWE.2=Description  CWE.3=Coding system. <i>ValueList:User Table 0396 - Coding System Req.if CWE.1 is not empty</i>
17	Specimen Collection Date/Time	O	The date and time when the specimen was acquired from the source  <b>Format:</b> YYYYMMDDHHMM[SS]
26	Number of Specimen Containers	O	This field identifies the number of containers for a given sample.

**Example 24.1. Sample SPM segment**

```
SPM|1|^0300058301&DNLAB||90^Blood^L|||LNA^Line, Arterial^L|ARM^Arm^L||R^Right^L|||||
|20061128154000|||||||1
```

# Chapter 25. TQ1 - Timing/Quantity

This segment determines the quantity, frequency, priority, and timing of a service.

## 1. Segment definition

#	Name	Set	Description
01	Set ID - TQ1	O	Identifier of each occurrence of the segment
02	Quantity	O	Quantity of required/supplied observation/treatment
03	Repeat pattern	OC..*	<p>The repeating frequency with which the treatment is to be administered.</p> <p>When the quantity timing specification must change to a different repeat pattern after some period of time, a new TQ1 segment must be used to show the new repeat pattern. Note that the end date of the current TQ1 will show when the current timing specification ends, and the start date of the next TQ1 shows when the new timing specification begins.</p> <p><b>Format:</b>        <i>Details to be defined</i></p> <p><b>Condition:</b>    <i>Scenario = Pharmacy/Treatment Management</i></p>
04	Explicit time	OC..*	<p>This field explicitly lists the actual times referenced by the code in TQ1-3.</p> <p>This field will be used to clarify the TQ1-3 in cases where the actual administration times vary within an institution. If the time of the service request spans more than a single day, this field is only practical if the same times of administration occur for each day of the service request. If the actual start time of the service request (as given by TQ1-7 ) is after the first explicit time, the first administration is taken to be the first explicit time after the start time. In the case where the patient moves to a location having a different set of explicit times, the existing service request may be updated with a new quantity/timing segment showing the changed explicit times.</p> <p><b>Format:</b>        <i>Details to be defined</i></p> <p><b>Condition:</b>    <i>Scenario = Pharmacy/Treatment Management</i></p>
05	Relative time and units	OC..*	<p>This field is used to define the interval between schedules for administrations.</p> <p>If this field contains a value, it overrides any value in the explicit time interval field. The units component of the CQ data type is constrained to units of time.</p> <p><b>Format:</b>        <i>Details to be defined</i></p> <p><b>Condition:</b>    <i>Scenario = Pharmacy/Treatment Management</i></p>
06	Service duration	OC	<p>It contains the duration for which the treatment is requested.</p> <p><b>Format:</b>        <i>Details to be defined</i></p> <p><b>Condition:</b>    <i>Scenario = Pharmacy/Treatment Management</i></p>
07	Start Date/Time	RC	<p>It indicates the earliest date/time at which the services/treatments should be started.<sup>a</sup></p> <p><b>Format:</b>        YYYYMMDD[HH[MM[SS]]]</p> <p><b>Condition:</b>    <i>Scenario &lt;&gt; Document Management</i></p>

#	Name	Set	Description						
08	End Date/Time	O	<p>This field contains the latest date/time that the service/treatment should be performed.<sup>b</sup></p> <p><b>Format:</b> YYYYMMDD[HH[MM[SS]]]</p>						
09	Priority	OC	<p>This field describes the urgency of the request. If this field is blank, the default is R.</p> <p><b>Values:</b> <b>Table 25.1. User Table 0485 – Extended Priority Codes</b></p> <table border="1"> <tr> <td>S</td> <td>Emergency (highest priority)</td> </tr> <tr> <td>A</td> <td>Urgent (highest priority after S)</td> </tr> <tr> <td>R</td> <td>Routine</td> </tr> </table> <p><b>Condition:</b> <i>Scenario</i> &lt;&gt; Pharmacy/Treatment Management</p>	S	Emergency (highest priority)	A	Urgent (highest priority after S)	R	Routine
S	Emergency (highest priority)								
A	Urgent (highest priority after S)								
R	Routine								
10	Condition Text	OC	<p>This is a free text field that describes the conditions under which the drug is to be given (e.g. "pain", or "to keep blood pressure below 110")</p> <p><b>Condition:</b> <i>Scenario</i> = Pharmacy/Treatment Management</p>						
11	Text instruction	RC	<p>This field is a full text version of the instruction.</p> <p><b>Condition:</b> If <i>Scenario</i> = Pharmacy/Treatment Management, and if none of the fields Repeat Pattern, Service Duration, Start Date/Time, End Date/Time are populated a free text instruction <b>MUST</b> be provided.</p>						
12	Conjunction	RC	<p>This field indicates that more TQ1 segment are to follow.</p> <p><b>Values:</b> <b>Table 25.2. HL7 Table 0472 - TQ Conjunction ID</b></p> <table border="1"> <tr> <td>S</td> <td> <p>Synchronous</p> <p>Do the next specification after this one (unless otherwise constrained by the following fields: <i>TQ1-7-start date/time</i> and <i>TQ1-8-end date/time</i>). An "S" specification implies that the second timing sequence follows the first</p> </td> </tr> <tr> <td>A</td> <td> <p>Asynchronous</p> <p>Do the next specification in parallel with this one (unless otherwise constrained by the following fields: <i>TQ1-7-start date/time</i> and <i>TQ1-8-end date/time</i>). The conjunction of "A" specifies two parallel instructions, as are sometimes used in medication, e.g., prednisone given at 1 tab on Monday, Wednesday, Friday, and at 1/2 tab on Tuesday, Thursday, Saturday, Sunday.</p> </td> </tr> <tr> <td>C</td> <td> <p>Actuation time</p> <p>It will be followed by a completion time for the service.</p> </td> </tr> </table> <p><b>Condition:</b> If <i>Scenario</i> = Pharmacy/Treatment Management, and if the TQ1 segment is repeated in the message, this field <b>MUST</b> be populated with the appropriate Conjunction code indicating the sequencing of the following TQ1 segment.</p>	S	<p>Synchronous</p> <p>Do the next specification after this one (unless otherwise constrained by the following fields: <i>TQ1-7-start date/time</i> and <i>TQ1-8-end date/time</i>). An "S" specification implies that the second timing sequence follows the first</p>	A	<p>Asynchronous</p> <p>Do the next specification in parallel with this one (unless otherwise constrained by the following fields: <i>TQ1-7-start date/time</i> and <i>TQ1-8-end date/time</i>). The conjunction of "A" specifies two parallel instructions, as are sometimes used in medication, e.g., prednisone given at 1 tab on Monday, Wednesday, Friday, and at 1/2 tab on Tuesday, Thursday, Saturday, Sunday.</p>	C	<p>Actuation time</p> <p>It will be followed by a completion time for the service.</p>
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C	<p>Actuation time</p> <p>It will be followed by a completion time for the service.</p>								

<sup>a</sup>In DNLAB the field is filled with <dtmdataaccettazione>

<sup>b</sup>Regardless of the value of the end date/time, the treatment should be stopped at the earliest of the date/times specified by either the duration or the end date/time.

# Chapter 26. TXA - Transcription Document Header

The TXA segment contains information specific to the document but does not include the text of the document.

## 1. Segment definition

#	Name	Set	Description																														
01	Set ID - TXA	R	Identifier of each occurrence of the segment																														
02	Document Type	O	<p>This field identifies the type of document.</p> <p><b>Values:</b> Values are driven by customer project specific needs; general values are listed in 0270 table below.</p> <p><b>Table 26.1. User Table 0270 - Document Type</b></p> <table border="1"> <thead> <tr> <th colspan="2"><i>Subset of HL7 values</i></th> </tr> </thead> <tbody> <tr> <td>DS</td> <td>Discharge Summary [IT: Lettera di dimissione]<sup>a</sup></td> </tr> <tr> <td>ED</td> <td>Emergency department report [IT: Verbale di Pronto Soccorso]<sup>b</sup></td> </tr> <tr> <td>OP</td> <td>Operative Report [IT: Verbale operatorio]</td> </tr> <tr> <td>TS</td> <td>Transfer Summary [IT: Lettera di trasferimento]</td> </tr> <tr> <td>CN</td> <td>Consultation</td> </tr> <tr> <th colspan="2"><i>NoemaLife custom values</i></th> </tr> <tr> <td>LAB</td> <td>Laboratory Department report<sup>c</sup></td> </tr> <tr> <td>MIC</td> <td>Microbiology report<sup>d</sup></td> </tr> <tr> <td>RAD</td> <td>Radiology Department report<sup>e</sup></td> </tr> <tr> <td>ANP</td> <td>Anatomic Pathology Department report<sup>f</sup></td> </tr> <tr> <td>AMB</td> <td>Ambulatory Referral<sup>g</sup></td> </tr> <tr> <td>EVN</td> <td>Evaluation Note<sup>h</sup></td> </tr> <tr> <td>MSC</td> <td>Medical Sickness Certificate<sup>i</sup></td> </tr> <tr> <td>PIC</td> <td>Pathology Information Collection Report<sup>j</sup> (report used to collect specific clinical data for a pathology)</td> </tr> </tbody> </table> <p><sup>a</sup>Codice CRS-SISS: 05  <sup>b</sup>Codice CRS-SISS: 04  <sup>c</sup>Codice CRS-SISS: 02; Codice SOLE: LAB  <sup>d</sup>Codice CRS-SISS: 02; Codice SOLE: MIC  <sup>e</sup>Codice CRS-SISS: 03; Codice SOLE: RAD  <sup>f</sup>Codice CRS-SISS: 02  <sup>g</sup>Codice CRS-SISS: 01; Codice SOLE: SPS  <sup>h</sup>Codice CRS-SISS: 08  <sup>i</sup>Codice CRS-SISS: 16  <sup>j</sup>Codice CRS-SISS: 14</p>	<i>Subset of HL7 values</i>		DS	Discharge Summary [IT: Lettera di dimissione] <sup>a</sup>	ED	Emergency department report [IT: Verbale di Pronto Soccorso] <sup>b</sup>	OP	Operative Report [IT: Verbale operatorio]	TS	Transfer Summary [IT: Lettera di trasferimento]	CN	Consultation	<i>NoemaLife custom values</i>		LAB	Laboratory Department report <sup>c</sup>	MIC	Microbiology report <sup>d</sup>	RAD	Radiology Department report <sup>e</sup>	ANP	Anatomic Pathology Department report <sup>f</sup>	AMB	Ambulatory Referral <sup>g</sup>	EVN	Evaluation Note <sup>h</sup>	MSC	Medical Sickness Certificate <sup>i</sup>	PIC	Pathology Information Collection Report <sup>j</sup> (report used to collect specific clinical data for a pathology)
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03	Document Content Presentation	R	<p>Document content MIME Type.</p> <p><i>Note:</i> Here we follow HL7 2.7.1 specifications, and use HL7 table 0834 (containing MIME Types) instead of 0191.</p>																														

#	Name	Set	Description														
			<p><b>Values:</b> <b>Table 26.2. HL7 Table 0834 - Type Of Data (MIME Types)</b></p> <table border="1"> <tr> <td>application</td> <td>Application data</td> </tr> <tr> <td>audio</td> <td>Audio data</td> </tr> <tr> <td>image</td> <td>Image data</td> </tr> <tr> <td>multipart</td> <td>MIME multipart package <sup>a</sup></td> </tr> <tr> <td>model</td> <td>Model data (RFC 2077)</td> </tr> <tr> <td>video</td> <td>Video data</td> </tr> <tr> <td>text</td> <td>Text data</td> </tr> </table> <p><sup>a</sup>Preferred value for CRS-SISS</p>	application	Application data	audio	Audio data	image	Image data	multipart	MIME multipart package <sup>a</sup>	model	Model data (RFC 2077)	video	Video data	text	Text data
application	Application data																
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multipart	MIME multipart package <sup>a</sup>																
model	Model data (RFC 2077)																
video	Video data																
text	Text data																
06	Origination Date/Time	O	<p>This field contains the date and time when the document was created</p> <p><b>Format:</b> YYYYMMDDHHMM[SS]</p>														
09	Originator Code/Name	R.*	<p>Person who created the document (author)</p> <p><b>Note</b></p> <p>It is possible to use more than one repetition of the field, but information in each repetition <b>MUST</b> be related to the same doctor. Multiple repetitions <b>MUST</b> be used only to transmit <u>different identifiers</u> (ex. national identifier, regional identifier, local identifier, ecc.) of the <u>same doctor</u>; each repetition and its identifier <b>MUST</b> be clearly qualified according to the rules exposed below.</p> <p><b>Format:</b> XCN.1= Person identifier of document creator (author) <b>Req.</b></p> <p>XCN.2=Surname. <b>Req.</b></p> <p>XCN.3=Forename. <b>Req.</b></p> <p>XCN.13=Type of identifier specified in XCN.1. <b>Req.</b></p> <table border="1"> <tr> <td>PI</td> <td>Person identifier assigned by MPI (Master Patient Index)</td> </tr> <tr> <td colspan="2"><b>Loc ITA</b></td> </tr> <tr> <td>NNITA</td> <td>Codice Fiscale</td> </tr> <tr> <td>RRI</td> <td>Regional identifier</td> </tr> <tr> <td>LR</td> <td>Local identifier</td> </tr> </table> <p>(Ref <u>HL7 Table 0203 - Identifier Type: IT</u>)</p> <p><b>Note</b></p> <p>This field <b>MUST</b> be used to transmit only the document creator (author). If existing, other actors involved in document life-cycle (e.g. legal authenticator) <b>MUST</b> be specified in TXA-22.</p>	PI	Person identifier assigned by MPI (Master Patient Index)	<b>Loc ITA</b>		NNITA	Codice Fiscale	RRI	Regional identifier	LR	Local identifier				
PI	Person identifier assigned by MPI (Master Patient Index)																
<b>Loc ITA</b>																	
NNITA	Codice Fiscale																
RRI	Regional identifier																
LR	Local identifier																
12	Unique Document Number	R	<p>This field contains the unique document identification numbers.</p> <p>In case that more than one document is transmitted in OBX segments, the field is used for the document identification numbers of the <i>main</i> document.</p>														



TXA - Transcription  
Document Header

#	Name	Set	Description						
			<p><b>Format:</b> EI.1= document identifier assigned by the <i>system that generated the document Req</i></p> <p>EI.3= document identifier assigned by the <i>Document Repository actor</i></p>						
13	Parent Document Number	RC	<p>This field contains a document number that identifies the parent document to which this document applies.</p> <p><b>Format:</b> EI.1= identifier of parent document assigned by the sending system <b>Req</b></p> <p>EI.3= identifier of parent document assigned by the Document Repository actor</p> <p><b>Conditions:</b> <i>Event</i> in (Replacement Document Notification, Cancel Document Notification)</p>						
14	Placer Order Number	OC	<p>Identifier of the Order that originated the document (Placer Order).</p> <p>Since under some circumstances there may be differences between Placer Order Number and Placer Group Number, in those cases it is <b>REQUIRED</b> to transmit the Placer Group Number (having higher relevance).</p> <p><b>Format:</b> EI.1= Placer Order Number/Placer Group Number</p> <p>EI.2 = Code of Order Placer application. <i>ValueList: User Table 0361 - Application</i></p> <p><b>Conditions:</b> The Document has been originated by an Order (e.g. Documents from Diagnostic systems)</p>						
15	Filler Order Number	RC	<p>Filler Order Number of the Order that originated the document</p> <p><b>Format:</b> EI.1= Filler Order Number <b>Loc DNLAB:</b> format &lt;bytidlab&gt;-&lt;stridrichiesta&gt;-&lt;dtmdataaccettazione, YYYYMMDDHHMM&gt; is <b>REQUIRED</b></p> <p>EI.2 = Code of Order Filler application. <i>ValueList: User Table 0361 - Application</i></p> <p><b>Conditions:</b> The Document has been originated by an Order (e.g. Documents from Diagnostic systems)</p>						
16	Unique Document File Name	OC	<p>This field is used to communicate the Document URI if the document is stored at an external Registry/Repository (e.g. Document URI on CRS-SISS Regional Document Registry)</p> <p><b>Conditions:</b> Event=Document Status Change Notification (T03)</p>						
17	Document Completion Status	R	<p>This field identifies the current completion status of the document</p> <p><b>Values:</b> <b>Table 26.3. User Table 0271 - Document Completion Status</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td>IP</td> <td>In Progress [ITA: documento in bozza]</td> </tr> <tr> <td>AU</td> <td>Authenticated [ITA: documento validato ma non firmato digitalmente]</td> </tr> <tr> <td>LA</td> <td>Legally Authenticated [ITA: documento firmato digitalmente]</td> </tr> </tbody> </table>	IP	In Progress [ITA: documento in bozza]	AU	Authenticated [ITA: documento validato ma non firmato digitalmente]	LA	Legally Authenticated [ITA: documento firmato digitalmente]
IP	In Progress [ITA: documento in bozza]								
AU	Authenticated [ITA: documento validato ma non firmato digitalmente]								
LA	Legally Authenticated [ITA: documento firmato digitalmente]								

#	Name	Set	Description															
20	Document Storage Status	RC	<p>The field is used to carry the Document Storage Status, or the result/outcome of the notification/status change if there was an error. The type of notification is defined in the EVN.4</p> <p><b>Values:</b>     <b>Table 26.4. HL7 Table 0275 - Document Storage Status</b></p> <table border="1" style="width: 100%;"> <tr> <td>AC</td> <td>Active</td> </tr> <tr> <td>AA</td> <td>Active and Archived</td> </tr> <tr> <td>AR</td> <td>Archived</td> </tr> <tr> <td>PU</td> <td>Purged</td> </tr> <tr> <td colspan="2"><i>NoemaLife custom values</i></td> </tr> <tr> <td>&lt;ExtSystem&gt;-OK</td> <td>Notification to the External System (code &lt;ExtSystem&gt;) was successful.  <i>Example: "SISS-OK" means "successful notification to SISS external system".</i></td> </tr> <tr> <td>&lt;ExtSystem&gt;-&lt;errorCode&gt;</td> <td>Notification to the External System (code &lt;ExtSystem&gt;) was unsuccessful with error code &lt;errorCode&gt;</td> </tr> </table> <p><b>Conditions</b>     <i>Event = Document Status Change Notification (T03)</i></p>	AC	Active	AA	Active and Archived	AR	Archived	PU	Purged	<i>NoemaLife custom values</i>		<ExtSystem>-OK	Notification to the External System (code <ExtSystem>) was successful.  <i>Example: "SISS-OK" means "successful notification to SISS external system".</i>	<ExtSystem>-<errorCode>	Notification to the External System (code <ExtSystem>) was unsuccessful with error code <errorCode>	
AC	Active																	
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<ExtSystem>-<errorCode>	Notification to the External System (code <ExtSystem>) was unsuccessful with error code <errorCode>																	
21	Document Change Reason	R	<p>This field contains the reason for document status change.</p> <p>If Event= Document Status Change Notification, it may contain an error description associated to a failed event notification (e.g. error description for a Legal Timestamp generation failure).</p> <p><b>Values:</b></p> <table border="1" style="width: 100%;"> <thead> <tr> <th><i>Value</i></th> <th><i>Condition</i></th> <th></th> </tr> </thead> <tbody> <tr> <td>OR</td> <td><i>Event = Original Document</i><sup>01</sup></td> <td></td> </tr> <tr> <td>RP</td> <td><i>Event = Replacement Document</i><sup>02</sup></td> <td></td> </tr> <tr> <td>CA</td> <td><i>Event = Cancel Document</i><sup>03</sup></td> <td></td> </tr> <tr> <td>&lt;error description&gt;</td> <td><i>Event = Document Status Change Notification</i></td> <td></td> </tr> </tbody> </table> <p><sup>01</sup>Codice CRS-SISS: "01" (Standard)  <sup>02</sup>Codice CRS-SISS: "03" (Sostitutivo)  <sup>03</sup>Codice CRS-SISS: "04" (Annullativo)</p>	<i>Value</i>	<i>Condition</i>		OR	<i>Event = Original Document</i> <sup>01</sup>		RP	<i>Event = Replacement Document</i> <sup>02</sup>		CA	<i>Event = Cancel Document</i> <sup>03</sup>		<error description>	<i>Event = Document Status Change Notification</i>	
<i>Value</i>	<i>Condition</i>																	
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CA	<i>Event = Cancel Document</i> <sup>03</sup>																	
<error description>	<i>Event = Document Status Change Notification</i>																	
22	Authentication Person, Time Stamp	RC.*	<p>This field contains a set of components describing by whom and when authentication was performed (either manually or electronically).</p> <p>This field is repeatable in order to specify different kinds of authentications, identified by component PPN.17.</p> <p><b>Format:</b></p> <p>PPN.1 = Identifier of Validator/Authenticator person <b>Req.</b> if (PPN-17 &lt;&gt; TIMESTAMP)</p> <p>PPN.2 = Surname. <b>Req.</b> if (PPN-17 &lt;&gt; TIMESTAMP)</p> <p>PPN.3 = Forename. <b>Req.</b> if (PPN-17 &lt;&gt; TIMESTAMP)</p> <p>PPN.13 = Type of identifier specified in PPN.1. <i>ValueList:</i> &lt;see below&gt; <b>Req.</b> if (PPN-17 &lt;&gt; TIMESTAMP)</p>															

TXA - Transcription  
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#	Name	Set	Description																				
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<b>Loc ITA</b>																							
NNITA	Codice Fiscale <sup>04</sup>																						
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AU	Identifies the repetition containing data related to Authentication of clinical document  <i>Note</i> : may apply if TXA-17 in (AU, LA).  <i>Note</i> : "AU" and "LA" repetitions may coexist, since theoretically the person clinically validating the document and legally authenticating it may differ.																						
LA	Identifies the repetition containing data related to Legal Authentication of clinical document  <i>Note</i> : applies only if TXA-17=LA																						
PRIVACY	Identifies the repetition containing data related to Legal Authentication of Privacy Document attachment [ITA: documento DAO per CRS-SISS]  <i>Note</i> : applies only if TXA-17=LA																						
TIMESTAMP	Identifies the repetition containing data related to document's Legal Timestamp [ITA: Marca temporale]  <i>Note</i> : applies only if TXA-17=LA																						
23	Distributed Copies	RC..*	<p><b>Loc ITA:</b> L'utilizzo corrente del campo è limitato ad identificare la "struttura di conservazione del documento" (informazione richiesta dal progetto CRS-SISS)</p> <p><b>Format:</b> XCN.1= Codice Azienda Ospedaliera. <b>Req.</b> XCN.2= Descrizione Azienda Ospedaliera XCN.13 = FI <sup>05</sup><b>Req.</b></p>																				

TXA - Transcription  
Document Header

#	Name	Set	Description
			<b>Conditions:</b> <i>Loc=CRS-SISS</i>

<sup>a</sup>Codice CRS-SISS: 05

<sup>b</sup>Codice CRS-SISS: 04

<sup>c</sup>Codice CRS-SISS: 02; Codice SOLE: LAB

<sup>d</sup>Codice CRS-SISS: 02; Codice SOLE: MIC

<sup>e</sup>Codice CRS-SISS: 03; Codice SOLE: RAD

<sup>f</sup>Codice CRS-SISS: 02

<sup>g</sup>Codice CRS-SISS: 01; Codice SOLE: SPS

<sup>h</sup>Codice CRS-SISS: 08

<sup>i</sup>Codice CRS-SISS: 16

<sup>j</sup>Codice CRS-SISS: 14

<sup>a</sup>Preferred value for CRS-SISS

<sup>01</sup>Codice CRS-SISS: "01" (Standard)

<sup>02</sup>Codice CRS-SISS: "03" (Sostitutivo)

<sup>03</sup>Codice CRS-SISS: "04" (Annullativo)

<sup>04</sup>Required value for CRS-SISS

<sup>05</sup>FI=Facility Identifier.

### Loc CRS-SISS

Differenze più significative nell'utilizzo di TXA rispetto alle specifiche del progetto CRS-SISS:

Campo	CRS-SISS	Specifiche NoemaLife
Creatore del documento	TXA-11; XCN-13 = COMPILATORE	TXA-9
Autenticatore (firmatario)	PV1-8; XCN-13 = REFERTANTE	TXA-22, PPN.17=LA
Autorizzante	PV1-8; XCN-13 = AUTORIZZANTE	TXA-22, PPN.17=PRIVACY

---

# Chapter 27. ZET - Local Attribute Table

The intent of this segment is to convey custom informations.

Currently ZET segment is used in the Laboratory Placer Order Management, to convey labels informations from the Order Filler to the Order Placer. Each ZET segment contains informations for one label printout.

## 1. Segment definition

### 1.1. ZET for Lis Placer Order Management

#	Name	Set	Description
01	StrIdCampEtichetta	R	Specimen identifier (for barcode printing)
02	StrDescrEtichetta	R	Label description
03	StrIdContenitore	O	Identifier of container
04	StrSiglaContenitore	O	Code of container
05	StrNotePrelievo	O	Notes for specimen collection
06	BytIdLab	R	Laboratory Identifier
07	StrIdRichiesta	R	Filler order number
08	DtmDataAccettazione	R	Date of order
09	BytLivelloUrgenza	R	Order priority
10	StrIdPaziente	R	Patient identifier
11	StrCognome	R	Patient surname
12	StrNome	R	Patient name
13	StrSesso	R	Patient sex
14	DtmDataNascita	R	Patient Date of Birth
15	StrCodiceFiscale	O	Patient Tax Code
16	StrCodiceSanitario	O	Patient SSN
17	StrIdRepartoRich	R	Identifier of ordering facility (i.e.Ward, Ambulatory)
18	StrNomeReparto	R	Name of ordering facility
19	StrIdPuntoAccettazione	R	Identifier of ordering location
20	StrIdMateriale	R	Specimen Source code
21	StrIdProvenienza	O	Specimen Source Site
22	MemElencoAnalisi	R	List or required tests
23	StrIdSettore	R	Identifier of Laboratory sector in charge of the observation
24	StrNomeSettore	R	Name of Laboratory sector in charge of the observation
25	DtmDataOraPrelievo	R	Date/Time when the specimen is to be collected. <b>Format:</b> YYYYMMDDHHMM
26	DtmDataConsegnaReferto	R	Date/Time when the order is expected to be reported. <b>Format:</b> YYYYMMDDHHMM

---

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# **NoemaLife HL7 Integration Policy**

## **Use Cases and Integration Scenarios**

**Davide Musiani**  
**Francesco Masotti**

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# **NoemaLife HL7 Integration Policy: Use Cases and Integration Scenarios**

by Davide Musiani and Francesco Masotti

Version number: 0.5.1 - Document build date: 2013-05-14

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# Chapter 1. Preface

## 1. Purpose of this document

The aim of this document is to describe the integration scenarios managed by the NoemaLife HL7 Integration Policy. Use Cases will be described in terms of participating Actors and their cooperation.

Just like any software artifact, this document will be fixed, updated and tested as needed. Any feedback is welcome.

## 2. How to read this document

Aside the first sections, this document leans to a double purpose of giving all the informations that are needed at the first time and, subsequently, be accessed as a reference manual. To this sake, we will follow a bottom-up approach, which also allows to jump back and forth in the document, examining specific subjects once at a time.

The document *NoemaLife HL7 Integration Policy - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] is meant to add to this one all of the technical informations and specifications related to HL7 2.5 messages formatting, and must be considered an integral part of the NoemaLife HL7 Integration Policy.

## 3. Intended audience

This document should be read by anyone having some role within:

- the software production and maintenance process (analysts and developers), in order to have a common basis between all NoemaLife products for "internal" legacy integrations amongst products
- the cutomers' projects deployment of internal legacy integrations, to understand their logics and features.

## 4. Compliance against this document

As of this writing a wide variety of projects is in progress within the NoemaLife group. This document is binding for all the projects started from the final release of this document; projects that are already active are expected to tend to this specification and possibly schedule converging activities.

## 5. Future directions

At the date of release of this document, the following issues and items are *not supported* and identified as possible future document's enhancements and extensions:

- Additional transaction in Emergency Scenario to manage bed/room transfer inside the ER department (ADT^A02 message as possible choice)
- Update of Pre-Admission (ADT^A05) events (possibly using ADT^A08 messages)
- Management of Filler Order Management transaction (*IHE Laboratory Technical Framework* [IHE-ITI-LTF], transaction LAB-2)
- Enhancement of Laboratory Order Result Management transaction to manage "Deletion of Battery/Test in a Filler Order"
- Use of additional OBX or NTE segments for carrying comments to Laboratory results (at present are inserted in OBX-17, not compliant with HL7 but simpler to manage)
- Management of comments/notes to the Laboratory Order and to the requested Tests (Elementary or Complex)



- Structured Radiology Report export ([IHE-RAD-TF]), transaction RAD-28 (ORU^R01)
- Appointment Notification ([IHE-RAD-TF]), transaction RAD-48 (SIU messages)
- Schedules of appointments (HL7 Chapter 10)
- Financial Management (HL7 Chapter 6), Update Diagnosis/Procedures (BAR^P12)

#### Loc IT

- Notifica prestazioni erogate

## 6. Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, and “MAY” in this document are to be interpreted as described in *RFC 2119* [RFC-2119].

## 7. Changes log

### Revision History

#### Revision 0.5.1

14 May 2013

Davide Musiani

- The use of segment BLG is now recommended in all messages where is has been included (OML^O21, OML^O33, OMG^O19)
- Document Management part:
  - Structure of messages MDM^T02 in "Original Document Content Notification" and consequently MDM^T10 in "Replacement Document Content Notification" now requires segment OBR if segment ORC is used (that is, OBR segment is no more optional if segment ORC is used, as per HL7 2.5 standard)
  - Optional segment ORC has been removed from messages MDM^T11 in "Cancel Document Notification" and MDM^T03 in "Document Status Change Notification". Essential informations previously transmitted in ORC segment (mainly Filler Order Number and Placer Order/Group Number) are now managed in TXA segment (TXA-14 and TXA-15).
  - A complete "Common Order Group", including ORC, TQ1 and OBR segments, has been introduced in messages MDM^T01 for use case "Original Document Link Notification" and MDM^T09 for use case "Replacement Document Link Notification"

#### Revision 0.5.0

14 March 2013

Davide Musiani Francesco Masotti

- Patient Encounter Management: introduced the use of ADT^A08 messages to update/modify previously sent events.

#### Revision 0.4.0

11 January 2013

Davide Musiani , Francesco Masotti

- Document Management part: the "Document Link" use case has been split in "Original Document Link Notification" and "Replacement Document Link Notification", in order to better describe expected actions for participating actors.
- Document Management part: use case "Original Document Notification" has been renamed in "Original Document *Content* Notification"; use case "Replacement Document Notification" has been renamed in "Replacement Document *Content* Notification".
- Patient Identity Management part: optional segment PV2 has been removed from the messages for the Create, Update and Merge person use cases.
- Laboratory Placer Order Management: in the "Laboratory Order Status Changed" use case message OML^O33, previously used to transmit LIS order status updates, has been replaced by message OML^O21

#### Revision 0.3.0

28 September 2012

Davide Musiani , Francesco Masotti

- Enhancements and fixes in HL7 acknowledgement logics (on Order Entry messages, in particular) to have a better compliance to standards and an easier implementation
- Rework of General Clinical Order Management part, now inspired by IHE Radiology Framework v.11 transactions
- Enhanced structure of messages OMG^O19, OML^O21 and OML^O33 to introduce optional "dummy" segment in case of ambiguous parsing of ORDER\_PRIOR segments group at the receiver

Revision **0.2.0**

**28 June 2012**

Davide Musiani , Francesco Masotti

FIRST OFFICIAL RELEASE

Revision **0.1.0**

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# **Part I. Patient Administration Management**

*Use cases*

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# Chapter 2. Patient Administration Management overview

The Patient Administration Management establishes the continuity and integrity of patient data, and additional information such as related persons (primary caregiver, guarantor, next of kin, etc.). It coordinates the exchange of patient registration and update information among systems that need to be able to provide current information regarding a patient's encounter status and location. This profile supports ambulatory and acute care use cases including patient identity feed, admission, discharge, transfer and encounter management.

## 1. Use cases transactions in Patient Administration

According to the *IHE IT Infrastructure Integration Framework* [IHE-ITI-TF], use cases included in Patient Administration Management can be divided into two main "categories", or transactions:

- **Patient Identity Management**, that is related to the management and exchange of demographic information only. This category relates to Transaction ITI-30, "Patient Identity Management" of the IHE IT Infrastructure Technical Framework.
- **Patient Encounter Management**, that involves the management and exchange of both demographic data and encounter data. This category relates to Transaction ITI-31 "Patient Encounter Management" of the IHE IT Infrastructure Technical Framework.

## 2. Actors

Several actors are involved in Patient Administrator Management, interacting each other in a supplier-consumer model.

In the case of Patient Identity Management transaction, they are:

**Patient Demographic Supplier (or Source)**      The Patient Demographic Supplier role is to add and modify patient demographics.

**Patient Demographic Consumer**      Is the consumer (receiver) of patient demographics data added or modified by Patient Demographic Supplier.

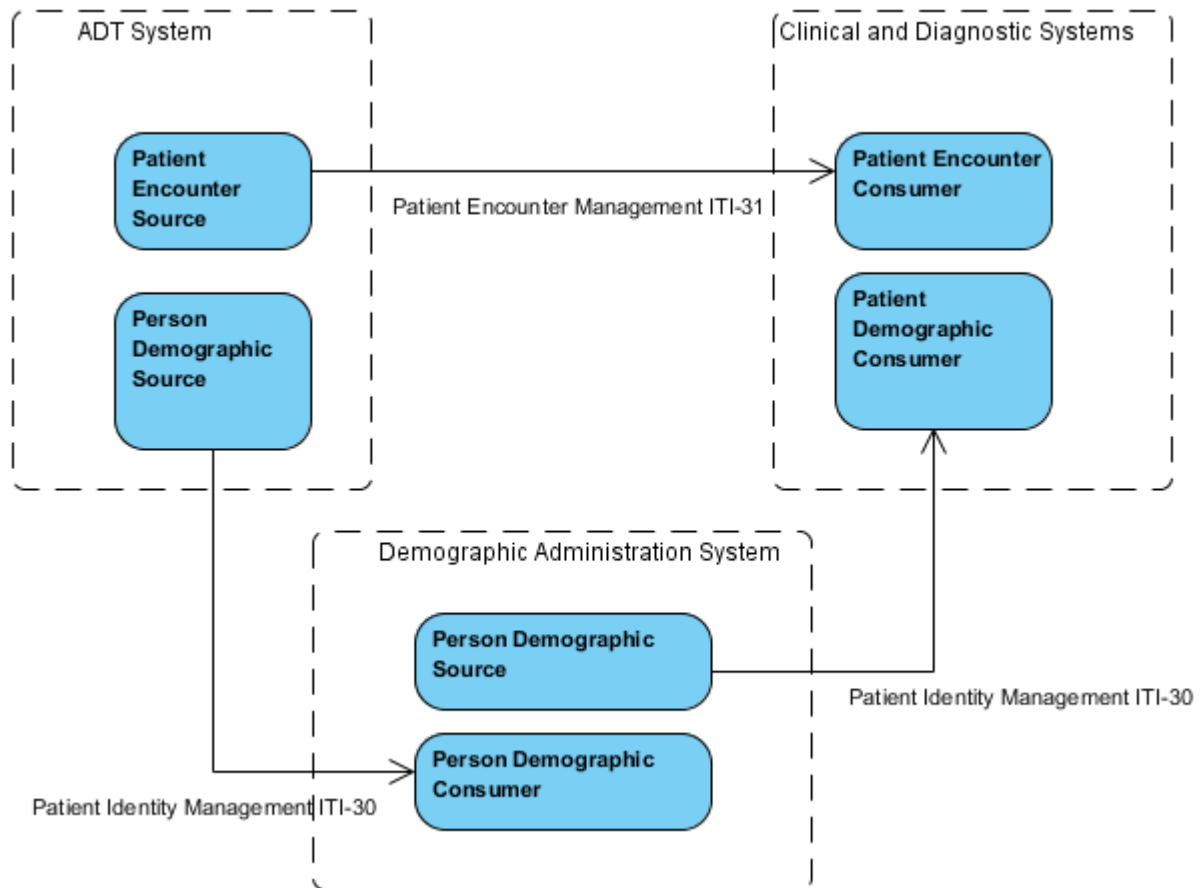
For Patient Encounter Management transaction, the participating actors are:

**Patient Encounter Supplier (or Source)**      The Patient Encounter Supplier adds and modifies both patient demographics and patient encounter information.

**Patient Encounter Consumer**      Patient Encounter Consumer receives adds and modifications of demographic and encounter data managed by Patient Encounter Supplier

## 3. Process Flow

The following schema shows systems that may be involved in Patient Administration Management, the transactions that may take place and the participating actors.



## 4. Communication implementation

The IHE directives are taken into account, thus the use cases described in the following chapters will be implemented by using **HL7 2.5 messages, pipe-separated format**.

For the sake of clarity and easiness of reading, only the segments structure of messages will be described, leaving the detailed specifications of segments and fields contents to *NoemaLife HL7 Integration Policy - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG]. The HL7 messages structure will be described using the syntax explained in *Messages Description Conventions* section.

In the following, the description of the use cases will be given from a functional point of view only; details on the low-level HL7 protocol communication issues (e.g. acknowledgments, TCP/IP communication, messages envelopes, etc.) will be covered in section *MLLP Communication Protocol*.

## 5. Future directions

At the date of release of this document, the following issues and items are *not supported* and identified as possible future document's enhancements and extensions:

- Additional transaction in Emergency Scenario to manage bed/room transfer inside the ER department (ADT^A02 message as possible choice)
- Update of Pre-Admission (ADT^A05) events (possibly using ADT^A08 messages)

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# Chapter 3. Patient Identity Management

This transaction transmits patient demographics in a patient identification domain (i.e., patient identifiers assigned by the same assigning authority).

The term “patient demographics” is intended to convey the patient identification and full identity and also information on persons related to this patient, such as primary caregiver, family doctor, guarantor, next of kin, etc., as well as clinical or administrative information. The transaction contains events for creating, updating and merging persons; other possible use cases (e.g. cancel, link, unlink, unmerge) are not managed at present.

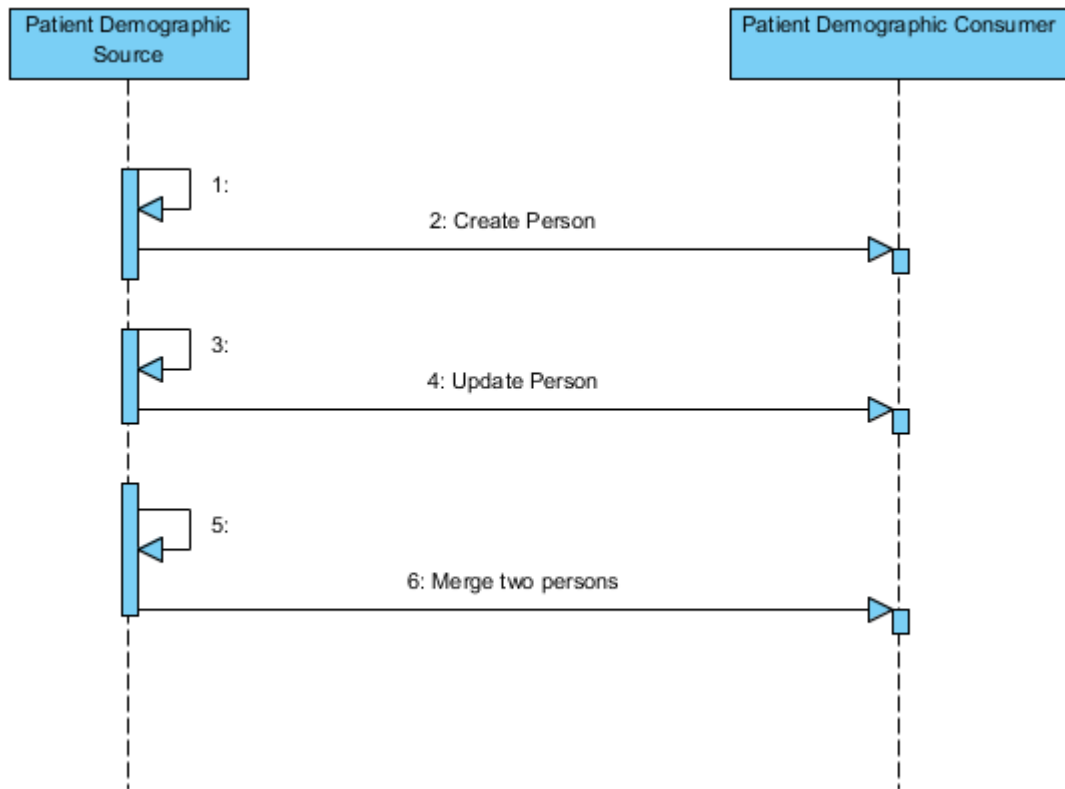
The transaction has general purpose scope, and can be used in all patient scenarios: inpatients (i.e., those who are assigned a bed at the facility), outpatients (i.e., those who are not assigned a bed at the facility), emergency rooms and acute care, ambulatory, day hospital, etc.

Actors involved in the transaction are the Patient Demographic Source (or Supplier) and the Patient Demographic Consumer:



Only some of the use cases described in IHE ITI-30 transaction will be considered and managed, and more specifically:

- Create Person
- Update Person Information
- Merge two persons



HL7 2.5 messages are used to transmit information from Patient Demographic Source to Patient Demographic Consumer.

## 1. Use Cases

### 1.1. Create Person

The message communicates a new person's demographic information. Contains person's identifiers and any demographic information that is known about a person, including primary caregiver, family doctor, guarantor, next of kin,

#### 1.1.1. Trigger Event

This message is sent by a Patient Demographics Supplier to a Patient Demographics Consumer to communicate the demographics of a new patient, as well as related information.

#### 1.1.2. Expected Actions

##### Important

The following Expected Actions are valid under the assumption that the Patient Demographics Supplier is a "reliable" data source (e.g. the enterprise Master Patient index). Under different conditions rules **MAY** be changed by local agreement, pursuing the goal of a reliable and secure patient data exchange.

Patient Demographics Supplier:

- after insertion of a new patient's record, **MUST** compose and send an HL7 2.5 **ADT^A28** message
- **MUST** include in the message **all** the available demographic information about the person.
- Special care shall be put in defining and sending the person identifiers available, and especially:



- All the available person identifiers **MUST** be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;
- All the person identifiers sent **MUST** be completely and clearly qualified, using the standard NoemaLife qualifiers

Patient Demographics Consumer:

- **MUST**, if patient record is not already present in the Patient Demographics Consumer database, process the message and import/add **all** of the patient's data it's able to manage;
- **SHOULD**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out accordingly to the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements.

### 1.1.3. HL7 message structure

**Table 3.1. Create Person - ADT^A28 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.2. Update Person Information

The message is used to communicate changes in a person's demographic data. The message can be used to update anything that is known about a person, including his health care information (doctor,...) and other related information (ex. relatives, etc.).

### 1.2.1. Trigger Event

This message is sent by a Patient Demographics Supplier to a Patient Demographics Consumer to update the demographics of an existing patient.

### 1.2.2. Expected Actions

#### **Important**

The following Expected Actions are valid under the assumption that the Patient Demographics Supplier is a "reliable" data source (e.g. the enterprise Master Patient index). Under different conditions rules **MAY** be changed by local agreement, pursuing the goal of a reliable and secure patient data exchange.

Patient Demographics Supplier:

- after update to a patient's record, **MUST** compose and send an HL7 2.5 **ADT^A31** message
- the message **MUST** include **all** of the available demographic information about the person
- Special care shall be put in defining and sending the person identifiers available, and especially:

- All the available person identifiers **MUST** be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;
- All the person identifiers sent **MUST** be completely and clearly qualified, using the standard NoemaLife qualifiers

Patient Demographics Consumer:

- **MUST**, if patient record is already present in the Patient Demographics Consumer database, process the message and update **all** of the patient's data it's able to manage;
- **SHOULD**, in case the person data is not already stored in the database, create a new demographic record, following the rules of the Create Person use case. Nevertheless this may not apply under specific circumstances or by local project agreements.

### 1.2.3. HL7 message structure

**Table 3.2. Update Person Information - ADT^A31 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.3. Merge two persons

The message is used to communicate that a 'deprecated' demographic record must be joined to a correct demographic record.

### 1.3.1. Trigger Event

The Patient Demographics Supplier notifies to a Patient Demographics Consumer, the merge of records for a patient that was incorrectly filed under two different identifiers.

### 1.3.2. Expected Actions

#### Important

The following Expected Actions are valid under the assumption that the Patient Demographics Supplier is a "reliable" data source (e.g. the enterprise Master Patient index). Under different conditions rules **MAY** be changed by local agreement, pursuing the goal of a reliable and secure patient data exchange.

Patient Demographics Supplier:

- after merge operation, **MUST** compose and send an HL7 2.5 **ADT^A40** message
- message **MUST** include **all** the available demographic information about the "master record" person
- message **MUST** include **all** the available patient identifiers for the "deprecated record" person.

- Special care shall be put in defining and sending the person identifiers available, both for "master record" and for "deprecated record":
  - All the available person identifiers **MUST** be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;
  - All the person identifiers sent **MUST** be completely and clearly qualified, using the standard NoemaLife qualifiers

Patient Demographics Consumer:

- **SHOULD** process the message accordingly to the following implementation options:
  - The **RECOMMENDED** merge mode is the "logical" one, where both database records continue to exist and a link is created between them, making the deprecated one an invisible, unusable "slave" of the master one. This allows better traceability and facilitates the possibility to recover to the pre-merge condition, in case of errors.
  - Another possibility is to operate a full, "physical" merge, where the old deprecated record is deleted from the database and all related information is moved (or re-linked) to the master, living record.
  - A third possibility is to ignore the merge notification at all, but it should be considered only under specific functional requirements or local projects agreements; whenever possible, this approach is **NOT RECOMMENDED**.
- In all cases, a comprehensive and durable tracing of the operations **REQUIRED**, in order to guarantee the possibility to analyze problems and errors that may arise from the merge operation, that may sometime have serious consequences.
- Moreover, when the merge operation takes place there still is the possibility that other data is sent to the Patient Demographics Consumer actors referencing the "deprecated" patient (e.g. observation or clinical data required before the merge operation); in such cases, the Patient Demographics Consumer **MUST** be able to accept the data and link it to the "master" record of the person.
- There may exist special cases, that happens when at the Patient Demographics Consumer one or both of the records are not present on the database.
  - if the master record is available in the database but the deprecated record is not, then the merge notification **MUST** be processed according to the rules of the Update Person Information use case.
  - if the deprecated record is available in the database but the master record is not, then the master record **MUST** be inserted first, like in the Create Person use case, and then the merge operation can take place.
  - if both master and deprecated records are not available, the merge operation **MUST** be processed like the Create Person use case.

### 1.3.3. HL7 Message structure

**Table 3.3. Merge two persons - ADT^A40 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	
[PD1]	Additional demographic	O	
MRG	Merge Information	R	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

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# Chapter 4. Patient Encounter Management

This transaction enables systems to share encounter information within acute care settings for both inpatients (i.e., those who are assigned an inpatient bed at the facility) and outpatients (i.e., those who are not assigned an inpatient bed at the facility). The transaction carries events for creating, updating, and canceling patient encounters as well as the movements that take place within these encounters.

Inside clinical organizations, several different type of encounter may take place:

- Inpatient encounters
- Outpatient / Ambulatory encounter
- Emergency encounter
- Short-stay encounter (e.g. Day Hospital, Day Surgery, etc.)
- Pre-admission encounters
- Follow-up / Post-admission encounter

Each one of this encounter types can be seen as a "**scenario**", composed in turn by many single use cases and messages. For the most of the scenarios, the actors involved are the Patient Encounter Supplier (or Source) and the Patient Encounter Consumer, relating each other as described in the generic use case diagram below:



Usually, the Patient Encounter Supplier role is played by an ADT or similar Hospital Registration system, while the Patient Encounter Consumer role is played by the other hospital systems needing to know about patient encounters and movements (e.g. EMR, specific diagnostic systems, etc.).

Nonetheless, in some scenarios there are also other actors or interactions that may come into play; specific use cases diagrams and actors will be described when needed in each scenario chapter.

Patient Encounter Supplier goal SHALL be to transmit **all** the administrative and clinical information that is available in its database, in order to give the highest level of detail to the receiver, allowing it to precisely record the patient's movement and status (both administrative and clinical).

Patient Encounter Consumer will process incoming messages with different objectives, depending on its characteristics:

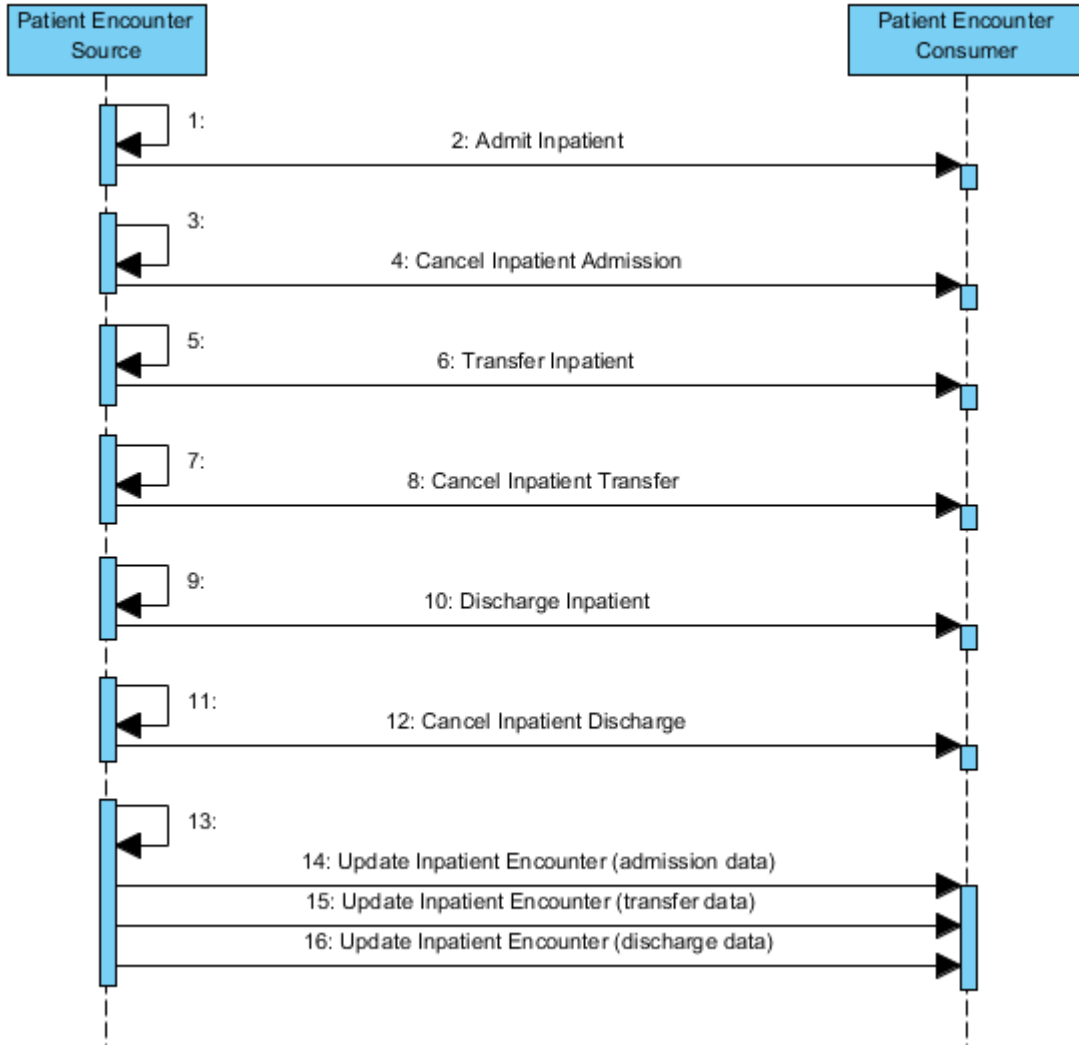
- if the Patient Encounter Consumer implements "repository-like" functions, then it SHOULD import and process **all** the information that is able to store in its database, allowing the final user to have a wider and more detailed view on patients
- if the Patient Encounter Consumer implements "diagnostic service-like" functions, then it SHOULD import and process **at least** the information that allows a correct, complete and unambiguous communication of the data produced to the main hospital stakeholders (Order Placers, Repository, etc.)

In the following, each scenario will be analysed and explained in detail.

# 1. Inpatient scenario

This scenario is related to any encounter where a patient is admitted by a hospital or equivalent facility, assigned to a location where patients generally stay at least overnight and provided with room, bed, board and continuous nursing service. Such a scenario is commonly referred to as “inpatient” care.

Use cases managed in this scenario are represented in the following sequence diagram:



## 1.1. Admit Inpatient

### 1.1.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a patient has arrived at a healthcare facility for an episode of care in which the patient is assigned to bed.

### 1.1.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient admission, **MUST** compose and send an HL7 2.5 **ADT^A01** message.
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person.</li> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included, and has to be guaranteed its uniqueness within the data scope (e.g. within the whole hospital, in a single-hospital installation, or among all hospitals, in a multi-hospital environment)</li> <li>• Admit date/time <b>MUST</b> be included, at least with minute-level detail</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Inpatient</li> <li>• Assigned Patient Location <b>MUST</b> be included (at least the ward/unit code; ward/unit name, bed and room are recommended)</li> <li>• If the encounter were generated as a consequence of previous encounter (e.g. pre-admission, ER encounter, etc.), then Preadmit Number <b>SHOULD</b> be included, to allow linking of encounters for clinical traceability</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the admission event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> </ul>
Other information	<ul style="list-style-type: none"> <li>• It is <b>RECOMMENDED</b> to include all the available clinical and administrative information, with a special mention for Diagnosis, Allergies and Relatives (Next of Kin)</li> </ul>

Patient Encounter Consumer:

- **SHOULD** change patient's status to reflect the admission operation. An Inpatient encounter **SHOULD** always have higher relevance related to other types of encounter (e.g. short-stay, outpatient, etc.), thus an inpatient admission should change the patient status to "admitted as inpatient" even if other encounters of different types was already open for the same patient.
- **MUST** discard the message, ad raise an error, if the same encounter is already recorded in the database but associated to another patient, and no merge operations have been previously notified between the two patients
- **MUST** use the unique identifier sent by the Patient Encounter Supplier for the admission event as internal event identifier (or at least to use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
- **SHOULD** link the admission to the previous encounter (typically pre-admission o ER encounter) if the Preadmit Number was sent by the Patient Encounter Supplier. Two options can be considered:
  - merging the previous encounter into the inpatient admission, thus hiding the previous encounter and letting the inpatient encounter to "inherit" all its data (ex. clinical orders, results, etc.);
  - leaving both the encounters visible and independent each others, but allowing functionalities to see data of one encounter from the other.

As a rule of thumb, the first option is suitable for linking Pre-admission encounters, while the second is for ER and Follow-up encounters.

In both cases, a logical linking/merging operation is RECOMMENDED; traceability and reversibility of the operation are REQUIRED.

### 1.1.3. HL7 Message definition

**Table 4.1. Admit Inpatient - ADT^A01 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the admission event)
[[OBX]]	Observation/Result	O..*	May be present to carry clinical information useful for the encounter (e.g. previous observations results, patient weight or height, etc.).
[[AL1]]	Allergy information	O..*	
[[DG1]]	Diagnosis Information	O..*	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.2. Cancel Inpatient Admission

### 1.2.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify to a Patient Encounter Consumer the cancellation of a previously sent inpatient admission.

### 1.2.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient admission cancellation, MUST compose and send an HL7 2.5 **ADT^A11** message.
- MUST allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers MUST be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent MUST be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
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Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Inpatient</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the admission event (e.g. Patient Encounter Supplier internal identifier) sent during the admission</li> </ul>
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Patient Encounter Consumer: .

- **MUST** change patient's status to reflect the cancellation of the admission, which means it should be restored to the value prior to patient admission.
- **SHOULD** discard the message, raising at most a warning or a non blocking error, in case the cancellation is inconsistent with the current situation for the patient (e.g. the patient admission event or the whole encounter is not existing)
- **SHOULD** manage the admission event cancellation as a logical operation, letting the admission not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the cancellation, whether the operation is logical or physical.
- The cancellation operation **SHOULD** entail the complete cancellation of the visit and all of the related data (e.g. clinical info already attached to the visit).
- There may be cases where, after cancellation of an admission, the same Visit Number can be reused and re-assigned to another patient; for this reason it is also **REQUIRED** the Patient Encounter Consumer to allow such a possibility, by properly managing the cancelled data and excluding it from data consistency checks.

### 1.2.3. HL7 Message structure

**Table 4.2. Cancel Admit Inpatient - ADT^A11 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the admission event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.3. Transfer Inpatient

### 1.3.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a patient is being transferred from one location to another.

It must be remarked that, in the case of inpatients, the location of patient is ultimately the bed; thus, this event will be normally used to notify a change in the ward the patient is assigned to, but taking to an extreme it could be also be used to notify changes of room or even bed within the same ward, if needed.



### 1.3.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient admission cancellation, **MUST** compose and send an HL7 2.5 **ADT^A02** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient, encounter and transfer; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Inpatient</li> <li>• Transfer date/time <b>MUST</b> be included, at least with minute-level detail</li> <li>• New Assigned Patient Location <b>MUST</b> be included (at least the ward/unit code; ward/unit name, bed and room are recommended)</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the transfer event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> </ul>

Patient Encounter Consumer:

- **MUST** change patient's status to reflect the new location.
- In case the transfer conflicts with the current situation for the patient, due to visit or patient missing, the message **SHOULD** be processed anyway applying the same rules of the Admit Inpatient use case, except for the creation of the admission event; this will mean the creation of patient or visit, if one or both does not exist, or the message discard, in case of mismatches in the patient-visit relation.
- **MUST** use the unique identifier sent by the Patient Encounter Supplier for the transfer event as internal event identifier (or at least to use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates or cancellation).

### 1.3.3. HL7 Message structure

**Table 4.3. Transfer Inpatient - ADT^A02 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Transfer date/time)

Segment	Meaning	Usage	Notes
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the transfer event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.4. Cancel Inpatient Transfer

### 1.4.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to a Patient Encounter Consumer to cancel a previous notification that a patient was being moved from one location to another.

### 1.4.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient admission cancellation, **MUST** compose and send an HL7 2.5 **ADT^A12** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient, encounter and transfer; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Inpatient</li> <li>• Transfer date/time <b>MUST</b> be included, at least with minute-level detail</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the transfer event previously sent (e.g. Patient Encounter Supplier internal identifier), in order to allow the Patient Encounter Consumer to reliably find the event to be cancelled.</li> </ul>

Patient Encounter Consumer:

- **MUST** use the unique event identifier sent by the Patient Encounter Supplier to reliably locate the event to be deleted
- In case the cancellation points to a non-existing previous transfer event, the message **SHOULD** be discarded but no error condition is required to be raised at the Patient Encounter Consumer.
- **MUST** change patient's status to reflect the cancellation of the transfer, which means the patient location should be restored to the value prior to the patient transfer
- **SHOULD** manage the transfer event cancellation as a logical operation, letting the event not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the cancellation, whether the operation is logical or physical.

### 1.4.3. HL7 Message structure

**Table 4.4. Cancel Inpatient Transfer - ADT^A12 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Transfer date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the transfer event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.5. Discharge Inpatient

### 1.5.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a patient stay at a healthcare facility has ended.

### 1.5.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient discharge, **MUST** compose and send an HL7 2.5 **ADT^A03** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• Discharge date/time <b>MUST</b> be included, at least with minute-level detail</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Inpatient</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the discharge event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit.</li> </ul>
Other information	<ul style="list-style-type: none"> <li>• It is <b>RECOMMENDED</b> to include all the available clinical and administrative information, with a special mention for Diagnosis and Procedures</li> </ul>

Patient Encounter Consumer:

- **MUST** change patient's status to reflect the discharge operation

- **MUST** use the Patient Encounter Supplier unique event identifier as its internal identifier (or at least use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- In case the discharge conflicts with current patient status (e.g. encounter is not existing):
  - If the Patient Encounter Consumer implements "diagnostic service-like" functions, it **SHOULD** discard the message, raising at most a warning or a non blocking error,
  - If the Patient Encounter Consumer implements "repository-like" functions, it **SHOULD** process the message anyway, creating patient and encounter if needed and then recording the discharge event.
- **SHOULD** process Diagnosis and Procedures information included in the message

### 1.5.3. HL7 Message structure

**Table 4.5. Discharge inpatient - ADT^A03 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.45 (Discharge date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the discharge event)
[[DG1]]	Diagnosis information	O..*	
[[PR1]]	Procedure information	O..*	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.6. Cancel Inpatient Discharge

### 1.6.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to a Patient Encounter Consumer to cancel a previous notification that a patient stay at a healthcare facility had ended.

### 1.6.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient discharge, **MUST** compose and send an HL7 2.5 **ADT^A13** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
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Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• Discharge date/time <b>MUST</b> be included, at least with minute-level detail</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Inpatient</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the discharge event previously sent (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event to be cancelled</li> </ul>
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Patient Encounter Consumer:

- **SHOULD** restore the patient's status to "admitted"
- **SHOULD** discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing discharge
- **SHOULD** manage the discharge event cancellation as a logical operation, letting the event not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the cancellation, whether the operation is logical or physical.

### 1.6.3. HL7 Message structure

**Table 4.6. Cancel Inpatient Discharge - ADT^A13 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.45 (Discharge date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the discharge event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 1.7. Update Inpatient Encounter

### 1.7.1. Trigger Event

The Update Inpatient Encounter use case is actually composed by three sub-cases. Different messages will be sent by a Patient Encounter Supplier to notify a Patient Encounter Consumer that some information has changed for the admit, transfer or discharge events (such as admit date or ward, discharge date, etc.) and, in case, for the patient (such as address, date of birth, etc.).

Changes related to patient demographic data only **SHOULD NOT** be addressed by this use case but rather with the Update Person Information use case.

#### **Important**

The changes notified via this events and messages **MUST NOT alter the assignment of a visit to a patient**. To alter the patient-visit assignment, the Patient Encounter Supplier :

- **SHOULD** apply the Move Visit use case (RECOMMENDED choice)

- MAY, as an alternative, cancel completely the "old" encounter and insert a "new" one with the new patient-visit assignment

## 1.7.2. Expected Actions and messages

Patient Encounter Supplier:

- after registration of update, MUST compose and send an HL7 2.5 ADT^A08 message;
- The structure and content of A08 message is strictly related to the type of event it aims to update.
  - Updates to an Admit Inpatient event are notified using an ADT^A08 having the same structure of the original ADT^A01 message (see [Admit Inpatient](#)), except for field **EVN-4 that will contain value "A01"**;
  - Updates to a Transfer Inpatient event are notified using an ADT^A08 having the same structure of the original ADT^A02 message (see [Transfer Inpatient](#)), except for field **EVN-4 that will contain value "A02"**;
  - Updates to a Discharge Inpatient event are notified using an ADT^A08 having the same structure of the original ADT^A03 message (see [Discharge Inpatient](#)), except for field **EVN-4 that will contain value "A03"**;

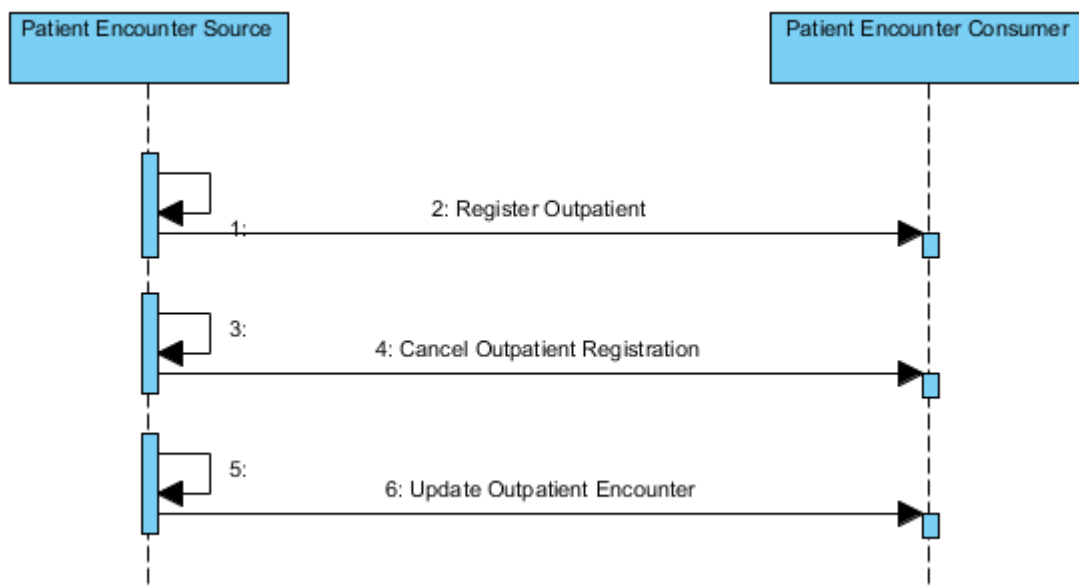
Patient Encounter Consumer:

- MUST process A08 messages related to inpatient admission (EVN-4="A01") using the same logics and rules described in [Admit Inpatient](#);
- MUST process A08 messages related to inpatient transfer (EVN-4="A02") using the same logics and rules described in [Transfer Inpatient](#);
- MUST process A08 messages related to inpatient discharge (EVN-4="A03") using the same logics and rules described in [Discharge Inpatient](#);

## 2. Outpatient scenario

The term "outpatient" is related to an encounter where the patient has come to a facility where health care is provided on a non-emergency basis, including diagnostic, therapeutic and health maintenance services, and patient's stay does not requires the assignment to a bed. Sometimes is referred to as an "Ambulatory encounter".

Use cases managed in this scenario are represented in the following sequence diagram:



It must be noted that an "outpatient encounter closure" is not considered in this scenario, since does not seem to be a significant event and frequently is not recorded/managed at the Patient Encounter Supplier.

## 2.1. Register Outpatient

### 2.1.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a patient has arrived at a healthcare facility for an episode of care in which the patient is not assigned to a bed. Examples of such episodes include outpatient visits and ambulatory care encounters.

### 2.1.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient arrival, **MUST** compose and send an HL7 2.5 ADT^A04 message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter

Patient information	<ul style="list-style-type: none"> <li>• It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person.</li> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• A Visit Number <b>MUST</b> be included, representing the outpatient encounter. It has to be unique within the data scope (e.g. within the whole hospital, in a single-hospital installation, or among all hospitals, in a multi-hospital environment)</li> <li>• Admit date/time <b>MUST</b> be included, at least with minute-level detail, to transmit the date of arrival/visit start</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Outpatient</li> <li>• Assigned Patient Location <b>MUST</b> be included (at least the ward/unit code; ward/unit name is also recommended). In this scenario, will represent the unit/ambulatory that will provide "ambulatory" health care.</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the registration event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> </ul>

Patient Encounter Consumer:

- **MAY** change the patient's status to reflect the registration operation. An Outpatient encounter has low priority related to Inpatient, Emergency and Short-Stay, thus the outpatient opening **MUST NOT** alter patient status in case such encounters are still open.
- **MUST** use the Patient Encounter Supplier unique event identifier as its internal identifier (or at least use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- Outpatient registrations does not usually conflict with other patient movements (e.g. inpatient movements or other outpatient movements), thus the Patient Encounter Consumer **SHOULD** in all cases manage the event; **MUST** discard the message, ad raise an error, only if the same encounter is already recorded in the database but associated to another patient, and no merge operations have been previously notified between the two patients.

- **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).

### 2.1.3. HL7 Message definition

**Table 4.7. Register Outpatient - ADT^A04 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Registration date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the event)
[[OBX]]	Observation/Result	O..*	May be present to carry clinical information useful for the encounter (e.g. previous observations results, patient weight or height, etc.).
[[AL1]]	Allergy information	O..*	
[[DG1]]	Diagnosis Information	O..*	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 2.2. Cancel Outpatient Registration

### 2.2.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify to a Patient Encounter Consumer the cancellation of a previously sent outpatient registration.

### 2.2.2. Expected Actions

Patient Encounter Supplier:

- after cancellation of outpatient registration, **MUST** compose and send an HL7 2.5 **ADT^A11** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the outpatient encounter hospital identifier) <b>MUST</b> be included</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Outpatient</li> </ul>



	<ul style="list-style-type: none"> <li>• Admit date/time <b>MUST</b> be included, at least with minute-level detail, to transmit the date of arrival/visit start</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the registration event previously sent (e.g. Patient Encounter Supplier internal identifier), in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event to be cancelled</li> </ul>
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Patient Encounter Consumer:

- **SHOULD** change the patient's status to reflect the cancellation of the registration, which means it should be restored to the value prior to the fake registration.
- **SHOULD** discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing discharge
- **MUST** use the Patient Encounter Supplier unique event identifier to locate the event to delete
- **SHOULD** cancel the outpatient event logically, letting the registration not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the operation, whether the cancellation of data is logical or physical
- **SHOULD** perform a complete cancellation of the visit and all of the related data (e.g. clinical info already attached to the visit).
- There may be cases where, after cancellation of a registration, the same Visit Number can be reused and re-assigned to another patient; for this reason it is also **REQUIRED** the Patient Encounter Consumer to allow such a possibility, by properly managing the cancelled data and excluding it from data consistency checks.

## 2.2.3. HL7 Message structure

**Table 4.8. Cancel Outpatient Registration - ADT^A11 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Registration date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 2.3. Update Outpatient Encounter

### 2.3.1. Trigger Event

The Update Outpatient Encounter use case applies when a Patient Encounter Supplier need to notify a Patient Encounter Consumer that some information has changed for the outpatient registration event (such as registration

date, unit/ward, etc.) and, in case, for the patient (such as address, date of birth, etc.). Changes related to patient demographic data only **SHOULD NOT** be addressed by this use case but rather with the [Update Person Information](#) use case.

## Important

The changes notified via this events and messages **MUST NOT alter the assignment of a visit to a patient**. To alter the patient-visit assignment, the Patient Encounter Supplier :

- SHOULD apply the [Move Visit](#) use case (RECOMMENDED choice)
- MAY, as an alternative, cancel completely the "old" encounter and insert a "new" one with the new patient-visit assignment

## 2.3.2. Expected Actions and messages

Patient Encounter Supplier:

- after registration of update, **MUST** compose and send an HL7 2.5 **ADT^A08** message;
- The structure and content of A08 message is the same of the A04 it aims to update (see [Register Outpatient](#)), except for field **EVN-4 that will contain value "A04"**;

Patient Encounter Consumer:

- **MUST** process A08 messages related to outpatient registration (EVN-4="A04") using the same logics and rules described in [Register Outpatient](#).

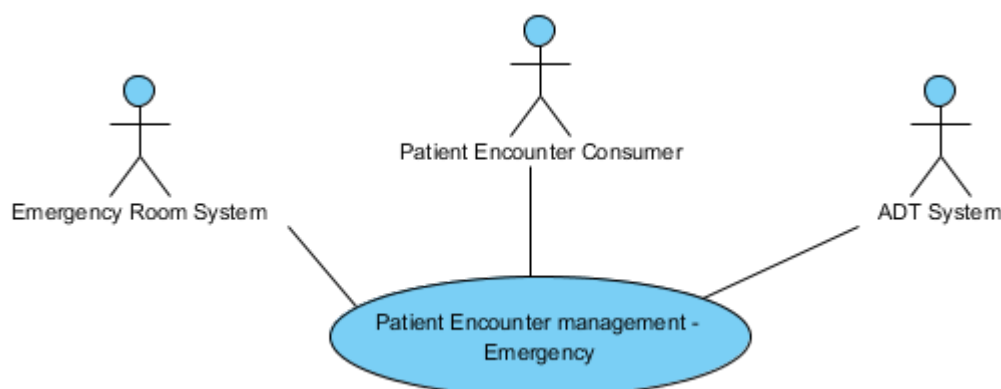
## 3. Emergency scenario

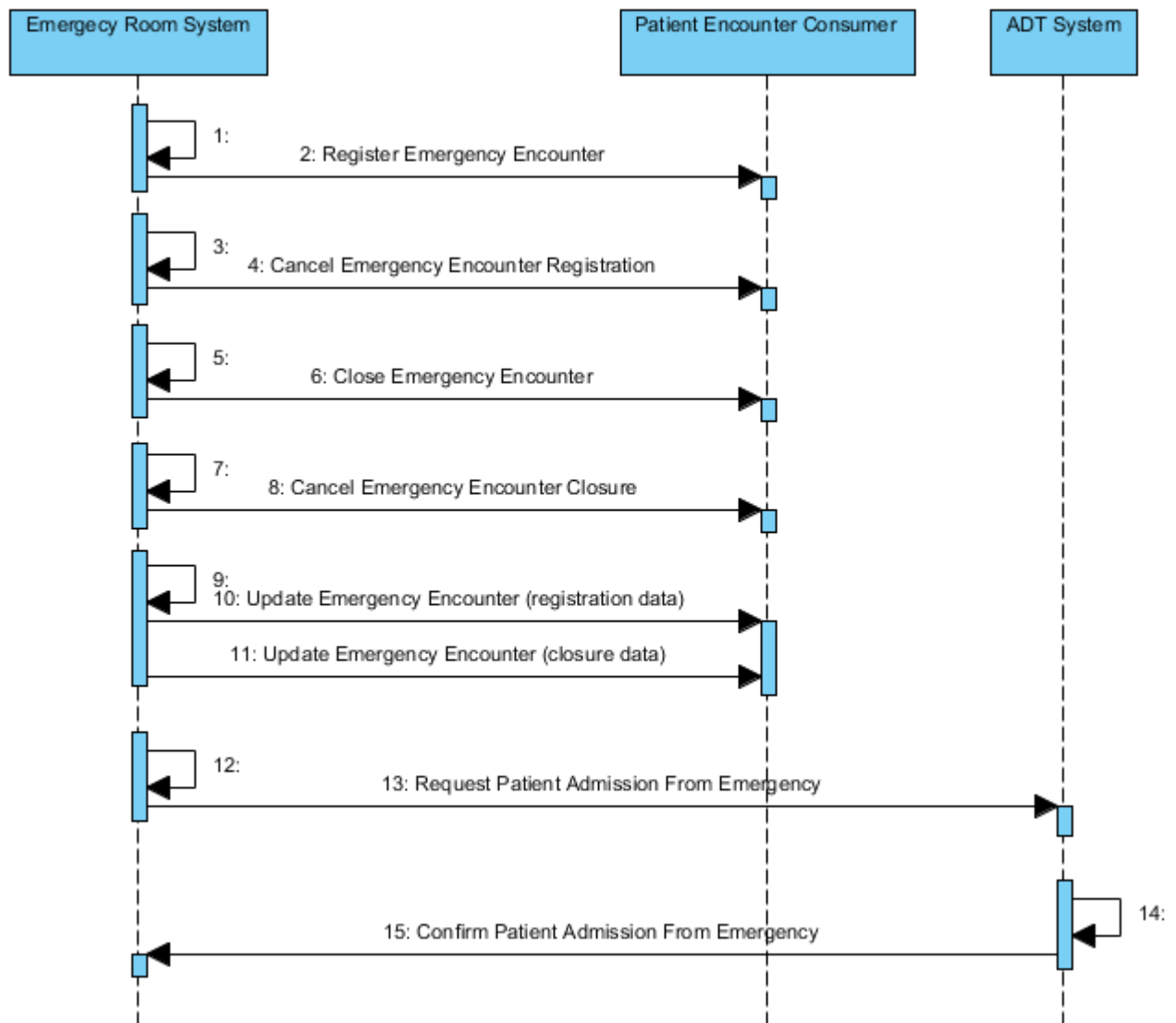
The Emergency scenario is related to a patient encounter that takes place at a dedicated healthcare service delivery location where the patient receives immediate evaluation and treatment, provided until the patient can be discharged or responsibility for the patient's care is transferred elsewhere (for example, the patient could be admitted as an inpatient or transferred to another facility).

The Emergency encounter scenario normally involves more than the two "usual" actors, Patient Encounter Supplier and Consumer, and the roles of the actors are not strictly fixed but vary in time.

The Emergency Room System (in the following ER System) is of course the main Supplier, but also acts as a Consumer under some circumstances, while the ADT System also plays both Supplier and Consumer role related to the ER System. A general Patient Encounter Consumer still exists, in the use cases, to represent all the other systems needing to be notified about the Emergency Room patient's movements.

The following pictures represent the use case diagram and the sequence diagram of this scenario:





## Important

It must be remarked that, for the sake of completeness and effective management of ER events in NoemaLife applications, **this scenario does not fully comply with IHE ITI-31 directives.**

## 3.1. Register Emergency Encounter

### 3.1.1. Trigger Event

This use case is triggered by ER System, playing the role of Patient Encounter Supplier, to notify a Patient Encounter Consumer that a patient has arrived at an emergency healthcare facility for an episode of care. The patient may or may not be assigned to a bed.

### 3.1.2. Expected Actions

ER System:

- after registration of patient admission, **MUST** compose and send an HL7 2.5 **ADT^A01** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person. For the sake of security and data consistency, in case of unknown patients it is <b>REQUIRED</b> to generate brand new person demographic record and data; previously used "unknown" demographic data <b>MUST NOT</b> be reused</li> <li>All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>Visit Number (the ER visit hospital identifier) <b>MUST</b> be included, and has to be guaranteed its uniqueness within the data scope (e.g. within the whole hospital, in a single-hospital installation, or among all hospitals, in a multi-hospital environment)</li> <li>Admit (registration) date/time <b>MUST</b> be included, at least with minute-level detail</li> <li>Patient Class <b>MUST</b> be included, stating that the encounter is related to an Emergency</li> <li>Assigned Patient Location <b>MUST</b> be included (at least the ward/unit code; ward/unit name is recommended, as well as bed and room if applies)</li> <li>It is <b>REQUIRED</b> to include an unique identifier of the admission event (e.g. ER System internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> </ul>
Other information	<ul style="list-style-type: none"> <li>It is <b>RECOMMENDED</b> to include all the available clinical and administrative information, with a special mention for Diagnosis, Allergies, Relatives (Next of Kin) and Accident.</li> </ul>

Patient Encounter Consumer:

- SHOULD** change patient's status to reflect the admission to the ER facility. An Emergency encounter **SHOULD** always have higher relevance related to all other types of encounter (e.g. short-stay, outpatient, etc.), thus an ER admission should change the patient status to "admitted in ER facility" even if other encounters of different types was already open for the same patient.
- MUST** discard the message, and raise an error, if the same encounter is already recorded in the database but associated to another patient, and no merge operations have been previously notified between the two patients
- MUST** use the ER System unique event identifier as its internal identifier (or at least use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).

### 3.1.3. HL7 Message definition

**Table 4.9. Register Emergency Encounter - ADT^A01 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)

Segment	Meaning	Usage	Notes
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.19 (Visit Number), PV1.44 (Admit date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the admission event)
[[OBX]]	Observation/Result	O..*	May be present to carry clinical information useful for the encounter (e.g. previous observations results, patient weight or height, etc.).
[[AL1]]	Allergy information	O..*	
[[DG1]]	Diagnosis Information	O..*	
[ACC]	Accident information	O	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 3.2. Cancel Emergency Encounter Registration

### 3.2.1. Trigger Event

This use case is triggered by the ER System, playing the role of Patient Encounter Supplier, to notify to a Patient Encounter Consumer the cancellation of a previously sent Emergency Room admission/registration.

### 3.2.2. Expected Actions

ER System:

- after registration of ER admission cancellation, **MUST** compose and send an HL7 2.5 **ADT^A11** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the ER visit hospital identifier) <b>MUST</b> be included</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Emergency</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the admission event previously sent (e.g. ER System internal identifier), in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event to be cancelled</li> </ul>

Patient Encounter Consumer:

- **SHOULD** change patient's status to reflect the cancellation of the admission, which means it should be restored to the value prior to patient admission in ER
- **SHOULD** discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing admission in ER

- **MUST** use the ER System unique event identifier to locate the event to delete
- **SHOULD** cancel the admission event logically, letting the registration not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the operation, whether the cancellation of data is logical or physical
- **SHOULD** perform a complete cancellation of the visit and all of the related data (e.g. clinical info already attached to the visit).
- There may be cases where, after cancellation of a registration, the same Visit Number can be reused and re-assigned to another patient; for this reason it is also **REQUIRED** the Patient Encounter Consumer to allow such a possibility, by properly managing the cancelled data and excluding it from data consistency checks.

### 3.2.3. HL7 Message structure

**Table 4.10. Cancel Emergency Encounter Registration - ADT^A11 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the admission event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 3.3. Close Emergency Encounter

### 3.3.1. Trigger Event

This use case is triggered by the ER system, playing the role of Patient Encounter Supplier, to notify a Patient Encounter Consumer that a patient stay at a ER facility has ended.

### 3.3.2. Expected Actions

ER System:

- after registration of patient discharge from ER, **MUST** compose and send an HL7 2.5 **ADT^A03** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the ER visit hospital identifier) <b>MUST</b> be included</li> <li>• Discharge date/time <b>MUST</b> be included, at least with minute-level detail</li> </ul>

	<ul style="list-style-type: none"> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Emergency</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the discharge event (e.g. ER System internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> </ul>
Other information	<ul style="list-style-type: none"> <li>• It is <b>RECOMMENDED</b> to include all the available clinical and administrative information, with a special mention for Diagnosis and Procedures</li> </ul>

Patient Encounter Consumer:

- **MUST** change patient's status to reflect the closure operation
- **MUST** use the ER System unique event identifier as its internal identifier (or at least use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- In case the closure conflicts with current patient status (e.g. encounter is not existing):
  - If the Patient Encounter Consumer implements "diagnostic service-like" functions, it **SHOULD** discard the message, raising at most a warning or a non blocking error
  - If the Patient Encounter Consumer implements "repository-like" functions, it **SHOULD** process the message anyway, creating patient and encounter if needed and then recording the discharge event.
- **SHOULD** process Diagnosis and Procedures information included in the message, if available

### 3.3.3. HL7 Message structure

**Table 4.11. Close Emergency Encounter - ADT^A03 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.45 (Discharge date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the discharge event)
[[DG1]]	Diagnosis information	O..*	
[[PR1]]	Procedure information	O..*	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 3.4. Cancel Emergency Encounter Closure

### 3.4.1. Trigger Event

This use case is triggered by the ER System, playing the role of Patient Encounter Supplier, to a Patient Encounter Consumer to cancel a previous notification that a patient stay at a ER facility had ended.

### 3.4.2. Expected Actions

ER System:

- after registration of patient admission, **MUST** compose and send an HL7 2.5 **ADT^A13** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the ER visit hospital identifier) <b>MUST</b> be included</li> <li>• Discharge date/time <b>MUST</b> be included, at least with minute-level detail</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Inpatient</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the discharge event previously sent (e.g. ER System internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event to be cancelled</li> </ul>

Patient Encounter Consumer:

- **SHOULD** change patient's status to reflect the cancellation of the discharge, thus showing the patient is still present at the ER facility
- **SHOULD** discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing discharge in ER
- **MUST** use the ER System unique event identifier to locate the event to delete
- **SHOULD** cancel the discharge event logically, letting the registration not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the operation, whether the cancellation of data is logical or physical

### 3.4.3. HL7 Message structure

**Table 4.12. Cancel Emergency Encounter Closure - ADT^A13 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.45 (Discharge date/time)
[PV2]	Patient Visit - Additional Info	O	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the discharge event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.



## 3.5. Update Emergency Encounter

### 3.5.1. Trigger Event

For the Update Emergency Encounter use case, the business logics that apply are similar to the ones in [Update Inpatient Encounter](#) use case.

Update Emergency Encounter is actually composed by two sub-cases. Different messages will be sent by the ER System to notify a Patient Encounter Consumer that some information has changed for the admit or discharge events (such as admit date or ward, discharge date, etc.) and, in case, for the patient (such as address, date of birth, etc.). Changes related to patient demographic data only **SHOULD NOT** be addressed by this use case but rather with the [Update Person Information](#) use case.

#### **Important**

The changes notified via this events and messages **MUST NOT alter the assignment of a visit to a patient**. To alter the patient-visit assignment, the Patient Encounter Supplier :

- SHOULD apply the [Move Visit](#) use case (RECOMMENDED choice)
- MAY, as an alternative, cancel completely the "old" encounter and insert a "new" one with the new patient-visit assignment

### 3.5.2. Expected Actions and messages

Patient Encounter Supplier:

- after registration of update, **MUST** compose and send an HL7 2.5 **ADT^A08** message;
- The structure and content of A08 message is strictly related to the type of event it aims to update. In greater detail:
  - Updates to a Register Emergency Encounter event are notified using an ADT^A08 having the same structure of the original ADT^A01 message (see [Register Emergency Encounter](#)), except for field **EVN-4 that will contain value "A01"**;
  - Updates to a Close Emergency Encounter event are notified using an ADT^A08 having the same structure of the original ADT^A03 message (see [Close Emergency Encounter](#)), except for field **EVN-4 that will contain value "A03"**;

Patient Encounter Consumer:

- **MUST** process A08 messages related to emergency admission (EVN-4="A01") using the same logics and rules described in [Register Emergency Encounter](#);
- **MUST** process A08 messages related to emergency discharge (EVN-4="A03") using the same logics and rules described in [Close Emergency Encounter](#);

## 3.6. Request Patient Admission from Emergency

### 3.6.1. Trigger Event

This use case is triggered by the ER System, playing the role of Patient Encounter Supplier, to notify an ADT system, playing the role of Patient Encounter Consumer, that it has been decided to transfer a patient to an "inpatient" location right after the discharging from ER facility. This notification will be considered, at the ADT System, as a *proposal* to admit the patient.

It must be remarked that this use case is not an alternative to the [Close Emergency Encounter](#) use case, but is a completely distinct use case that may follow it.

### 3.6.2. Expected Actions

ER System:

- upon the registration of the admission proposal, **MUST** compose and send an HL7 2.5 **ADT^A06** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the previous ER encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person.</li> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the ADT System;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Preadmit Number (the previous ER visit hospital identifier) <b>MUST</b> be included</li> <li>• Admit date/time <b>MUST</b> be included, at least with minute-level detail; as this timestamp is the proposed admission date, it will coincide with the discharge date/time from ER.</li> <li>• Patient Class <b>MUST</b> be included, to propose an Inpatient encounter admission</li> <li>• Assigned Patient Location <b>MUST</b> be included, to propose the admission ward/unit (ward/unit code <b>MUST</b> be included; ward/unit name is recommended, as well as bed and room if applies)</li> </ul>
Other information	<ul style="list-style-type: none"> <li>• It is <b>RECOMMENDED</b> to include all the available clinical and administrative information, with a special mention for Diagnosis, Procedures, Allergies, Relatives (Next of Kin) and Accident.</li> </ul>

ADT System:

- **MUST** consider the message as an *admission proposal*. This means that, on a local agreement basis, two different strategies may apply to the message management:
  - the admission proposal data is stored in the ADT System database, but the admission is actually done manually by ADT operators in a later stage
  - the admission proposal automatically generates the admission.
- Whatever the case is, the ADT System **SHOULD** use the data sent by the ER System to carry out the admission
- **MUST** store among the admission data also the previous ER visit identifier, thus allowing possible future links between the ER encounter and the Inpatient Encounter that followed
- **MAY** use the ER encounter discharge Date/time as admission date for the Inpatient encounter.
- About all the other data, the ADT System **SHOULD** behave as a Patient Encounter Consumer in the Admit Inpatient use case.

### 3.6.3. HL7 Message definition

**Table 4.13. Request Patient Admission from Emergency - ADT^A06 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	

Segment	Meaning	Usage	Notes
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.44 (Admit date/time)
[PV2]	Patient Visit - Additional Info	O	
[[OBX]]	Observation/Result	O..*	May be present to carry clinical information useful for the encounter (e.g. previous observations results, patient weight or height, etc.).
[[AL1]]	Allergy information	O..*	
[[DG1]]	Diagnosis Information	O..*	
[ACC]	Accident information	O	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 3.7. Confirm Patient Admission from Emergency

### 3.7.1. Trigger Event

This use case is triggered by an ADT System, playing the role of Patient Encounter Supplier, to notify an ER System, playing the role of Patient Encounter Consumer, that a patient has been admitted as a consequence of a previous admission proposal from an ER facility.

The goal is to confirm the inpatient admission and to transmit the ER System the main information about the event.

### 3.7.2. Expected Actions

ADT System:

- MUST behave as in the Admit Inpatient use case, by composing the **ADT^A01** message as usual and sending *italso* to ER System.
- MUST allow, setting properly the message content, to uniquely identify the patient and the previous ER encounter; for this sake, as stated in the Admit Inpatient use case, the Pre-admit Number becomes a REQUIRED information.

ER System:

- SHOULD process the message importing the useful information related to the admission and storing it among the ER encounter data.
- SHOULD discard the message, raising an error, in case the Pre-Admit Number in the message points to a non-existing ER encounter

## 4. Short-stay scenario

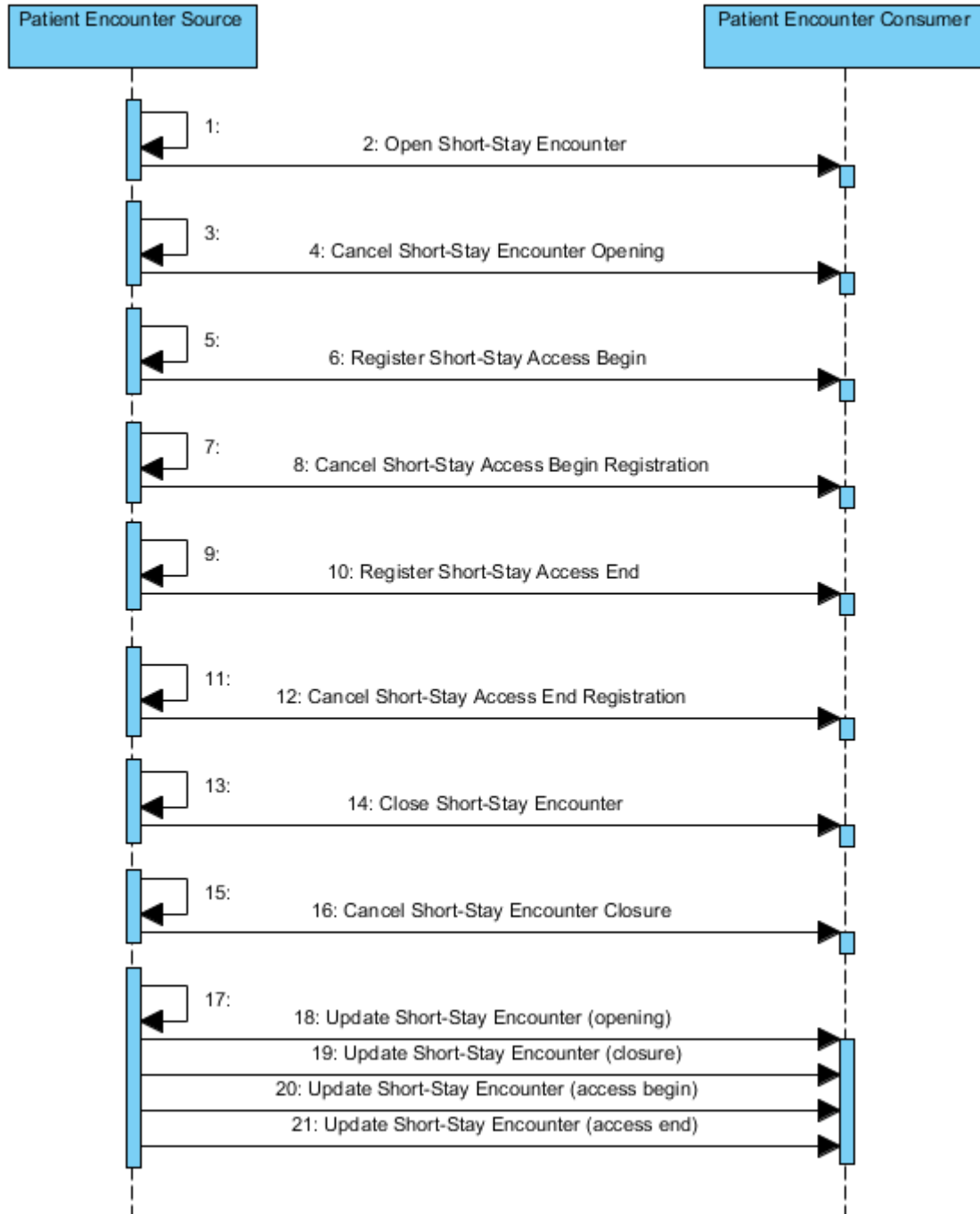
The Short-Stay scenario is one of the most complex and peculiar, and merges together characteristics from both the inpatient and the outpatient encounter. The key features are:

- the patient receives treatment and accommodation in a way that is similar to the inpatients (may include room and bed assignment, board, nursing service, etc.), except for the overnight stay; patient usually stays at the hospital during daytime, and leaves the facility for nighttime.

- the encounter may feature one only moment in time when the patient receives treatments at a facility (e.g. one-day stay only for a simple intervention/procedure) but may also be composed by several distinct moments in time for treatments (ex. a patient regularly receiving dialysis treatment every three days); this is sometimes called "recurring" short-stay. In the following, this kind of "sub-encounter" moments will be referred to as *access*.

Frequently, the short-stay encounters are also called "Day Hospital", while the short-stay encounters with single access related to an intervention may be called "Day Surgery".

Use cases managed in this scenario are represented in the following sequence diagram:



### Important

It must be remarked that, for the sake of completeness and effective management of Short-Stay events in NoemaLife applications, **this scenario does not fully comply with IHE ITI-31 directives.**

## 4.1. Open Short-Stay Encounter

### 4.1.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a new short-stay encounter has been opened for a patient. The opening must be meant just as an "administrative" event; a corresponding treatment access may or may not occur concurrently. Opening goal is just to notify the data of the patient, the visit/encounter identifier and the organization unit/facility in charge of the patient treatments.

In case the opening of the short-stay encounter also coincide with the real access of the patient to the facility for treatments, then a Register Short-Stay Access Begin use case **MUST** be explicitly triggered and notified **in addition to, and following**, the short-stay encounter opening.

### 4.1.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient arrival, **MUST** compose and send an HL7 2.5 **ADT^A01** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the short-stay encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person.</li> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• A Visit Number <b>MUST</b> be included, representing the Short-Stay encounter. It has to be unique within the data scope (e.g. within the whole hospital, in a single-hospital installation, or among all hospitals, in a multi-hospital environment)</li> <li>• Admit date/time <b>MUST</b> be included, at least with minute-level detail, to transmit the Short-Stay "administrative" opening date/time</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to a Short-Stay (Day Hospital)</li> <li>• Assigned Patient Location <b>MUST</b> be included (at least the ward/unit code; ward/unit name is also recommended). In this scenario, will represent the facility/unit that is <i>responsible</i> for the clinical activities (the "attending facility/unit"; could differ from the facility/unit <i>performing</i> the clinical treatments from time to time)</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the opening event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> <li>• The Recurring Service Code <b>MUST</b> be specified stating that the event is related to a Short-Stay encounter opening. This is necessary to avoid possible errors in data while managing other events of this scenario or to allow special management of the event at some customized installations.</li> </ul>
Other information	<ul style="list-style-type: none"> <li>• It is <b>RECOMMENDED</b> to include all the available clinical and administrative information, with a special mention for Diagnosis, Allergies and Relatives (Next of Kin)</li> </ul>

Patient Encounter Supplier:

- SHOULD change patient's status to reflect the short-stay administrative opening operation. A Short-Stay encounter SHOULD always have lower relevance related to Inpatient and Emergency, but higher relevance related to the other types of encounter (e.g. outpatient, etc.); thus a short-stay opening should change the patient status to "admitted as short-stay" only if no other inpatient or emergency encounters are still open.
- MUST discard the message, and raise an error, if the same encounter is already recorded in the database but associated to another patient, and no merge operations have been previously notified between the two patients.
- MUST use the unique identifier sent by the Patient Encounter Supplier for the opening event as internal event identifier (or at least to use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- MUST store the information of the Recurring Service Code (Short-Stay opening, in this case) in order to allow a better management of events under special circumstances.
- MUST, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. SHOULD NOT, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).

### 4.1.3. HL7 Message definition

**Table 4.14. Open Short-Stay Encounter - ADT^A01 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Short-Stay opening date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the opening event), PV2.31 (Recurring Service Code)
[[OBX]]	Observation/Result	O..*	May be present to carry clinical information useful for the encounter (e.g. previous observations results, patient weight or height, etc.).
[[AL1]]	Allergy information	O..*	
[[DG1]]	Diagnosis Information	O..*	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.2. Cancel Short-Stay Encounter Opening

### 4.2.1. Trigger Event

When a Short-Stay encounter has been erroneously opened, then the Patient Encounter Supplier will trigger this use case to notify to a Patient Encounter Consumer about its cancellation.

## 4.2.2. Expected Actions

Patient Encounter Supplier:

- after cancelling the Short-Stay opening, **MUST** compose and send an HL7 2.5 **ADT^A11** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient, the encounter and the type of cancellation to be carried out, since the same HL7 message is used throughout the scenario to cancel different types of events; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the Short-Stay encounter hospital identifier) <b>MUST</b> be included</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to a Short-Stay</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the opening event previously sent (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event to be cancelled</li> <li>• The Recurring Service Code <b>MUST</b> be specified stating that the event is related to the cancellation of a Short-Stay encounter opening.</li> </ul>

Patient Encounter Consumer:

- **SHOULD** change patient's status to reflect the cancellation of the short-stay opening, which means it should be restored to the prior value
- **SHOULD** discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing short-stay opening event
- **MUST** use the Patient Encounter Supplier unique event identifier to locate the event to delete
- **SHOULD** cancel the opening event logically, letting the registration not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the operation, whether the cancellation of data is logical or physical
- **SHOULD** perform a complete cancellation of the visit and all of the related data (e.g. clinical info already attached to the visit).
- There may be cases where, after cancellation of a registration, the same Visit Number can be reused and re-assigned to another patient; for this reason it is also **REQUIRED** the Patient Encounter Consumer to allow such a possibility, by properly managing the cancelled data and excluding it from data consistency checks.

## 4.2.3. HL7 Message structure

**Table 4.15. Cancel Short-Stay Encounter Opening - ADT^A11 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)

Segment	Meaning	Usage	Notes
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the opening event), PV2.31 (Recurring Service Code)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.3. Register Short-Stay Access Begin

### 4.3.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a patient has arrived at a healthcare facility for an episode of care that is part of a Short-Stay encounter (a so called "access"). This may happen or not at the same time of the Short-Stay opening, and in case of "recurring" Short-Stay encounters it may happen several times during the lifetime of the encounter.

### 4.3.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient arrival, **MUST** compose and send an HL7 2.5 **ADT^A04** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient, the encounter and the access; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• A Visit Number <b>MUST</b> be included, representing the Short-Stay encounter.</li> <li>• Admit date/time <b>MUST</b> be included, at least with minute-level detail, to transmit the date of arrival/access start</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to a Short-Stay</li> <li>• Assigned Patient Location <b>MUST</b> be included (at least the ward/unit code; ward/unit name is also recommended).</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> <li>• The Recurring Service Code <b>MUST</b> be specified stating that the event is related to the registration of the beginning of a Short-Stay access.</li> </ul>

Patient Encounter Consumer:

- **MAY** change patient's status to reflect the access has begun. Patient status of "admitted as inpatient" or "admitted as emergency" **MUST NOT** be modified by this event



- MUST use the unique identifier sent by the Patient Encounter Supplier for the access begin event as internal event identifier (or at least to use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- In case the access begin event conflicts with the current situation for the patient, due to visit or patient missing, the message SHOULD be processed anyway applying the same rules of the Open Short Stay Encounter use case, except for the creation of the opening event; this will mean the creation of patient or visit, if one or both does not exist, or the message discard, in case of mismatches in the patient-visit relation.
- MUST store the information of the Recurring Service Code (Short-Stay Access Begin, in this case) in order to allow the management of event.

### 4.3.3. HL7 Message definition

**Table 4.16. Register Short-Stay Access Begin - ADT^A04 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Registration date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the event), PV2.31 (Recurring Service Code)
[[OBX]]	Observation/Result	O..*	May be present to carry clinical information useful for the encounter (e.g. previous observations results, patient weight or height, etc.).

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.4. Cancel Short-Stay Access Begin Registration

### 4.4.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify to a Patient Encounter Consumer the cancellation of a previously sent registration of Short-Stay access begin.

### 4.4.2. Expected Actions

Patient Encounter Supplier:

- after cancellation of outpatient registration, MUST compose and send an HL7 2.5 **ADT^A11** message
- MUST allow, setting properly the message content, to uniquely identify the patient, the encounter and the access; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers MUST be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent MUST be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
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Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the Short-Stay encounter hospital identifier) MUST be included</li> <li>• Patient Class MUST be included, stating that the encounter is related to a Short-Stay</li> <li>• Admit date/time MUST be included, at least with minute-level detail, to transmit the date of arrival/access begin previously sent</li> <li>• It is REQUIRED to include the unique identifier of the access begin registration event previously sent, in order to allow the Patient Encounter Consumer to easily reference the event to be cancelled</li> <li>• The Recurring Service Code MUST be specified stating that the event is related to the cancellation of a Short-Stay access beginning registration.</li> </ul>
---------------------------------	---

Patient Encounter Consumer:

- MAY change patient's status to reflect the cancellation operation
- MUST use the Patient Encounter Supplier unique event identifier, and in case the Recurring Service Code (Short-Stay Access Begin, in this case), to locate the event to delete
- SHOULD discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing short-stay access begin event
- SHOULD cancel the access begin event logically, letting the registration not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- MUST guarantee traceability and reversibility of the operation, whether the cancellation of data is logical or physical

### 4.4.3. HL7 Message structure

**Table 4.17. Cancel Short-Stay Access Begin Registration - ADT^A11 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Registration date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the event), PV2.31 (Recurring Service Code)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.5. Register Short-Stay Access End

### 4.5.1. Trigger Event

As the patient has terminated treatment and leaves the facility, a Short-Stay access is meant to end. This use case is triggered to notify access end from Patient Encounter Supplier to the Patient Encounter Consumer.

The use case may or may not apply and be used, and should be considered as an "optional" use case, since the access end registration is frequently not required.

### 4.5.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient arrival, **MUST** compose and send an HL7 2.5 **ADT^A04** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient, the encounter and the access; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• A Visit Number <b>MUST</b> be included, representing the Short-Stay encounter.</li> <li>• Discharge date/time <b>MUST</b> be included, at least with minute-level detail, to transmit the date of access end</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to a Short-Stay</li> <li>• It is <b>REQUIRED</b> to include an unique identifier of the event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier <b>MUST</b> be unique among all the other events in the visit</li> <li>• The Recurring Service Code <b>MUST</b> be specified stating that the event is related to the registration of the end of a Short-Stay access.</li> </ul>

Patient Encounter Consumer:

- **MAY** change patient's status to reflect the access has ended. Patient status of "admitted as inpatient" or "admitted as emergency" **MUST NOT** be modified by this event
- **MUST** use the unique identifier sent by the Patient Encounter Supplier for the access end event as internal event identifier (or at least to use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- In case the access end event conflicts with the current situation for the patient, due to visit or patient missing, the message **SHOULD** be processed anyway applying the same rules of the Open Short Stay Encounter use case, except for the creation of the opening event; this will mean the creation of patient or visit, if one or both does not exist, or the message discard, in case of mismatches in the patient-visit relation.
- **MUST** store the information of the Recurring Service Code (Short-Stay Access End, in this case) in order to allow the management of event.

### 4.5.3. HL7 Message definition

**Table 4.18. Register Short-Stay Access End - ADT^A04 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	

Segment	Meaning	Usage	Notes
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Registration date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the event), PV2.31 (Recurring Service Code)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.6. Cancel Short-Stay Access End Registration

### 4.6.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify to a Patient Encounter Consumer the cancellation of a previously sent registration of Short-Stay access end.

### 4.6.2. Expected Actions

Patient Encounter Supplier:

- after cancellation of outpatient registration, **MUST** compose and send an HL7 2.5 **ADT^A11** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient, the encounter and the access; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• A Visit Number <b>MUST</b> be included, representing the Short-Stay encounter.</li> <li>• Discharge date/time <b>MUST</b> be included, at least with minute-level detail, to transmit the date of access end</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to a Short-Stay</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the access end registration event previously sent, in order to allow the Patient Encounter Consumer to easily reference the event to be cancelled</li> <li>• The Recurring Service Code <b>MUST</b> be specified stating that the event is related to the cancellation of the registration of the end of a Short-Stay access.</li> </ul>

Patient Encounter Consumer:

- **MAY** change patient's status to reflect the cancellation operation
- **MUST** use the Patient Encounter Supplier unique event identifier, and in case the Recurring Service Code (Short-Stay Access End, in this case), to locate the event to delete
- **SHOULD** discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing short-stay access begin event
- **SHOULD** cancel the access begin event logically, letting the registration not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).

- MUST guarantee traceability and reversibility of the operation, whether the cancellation of data is logical or physical

### 4.6.3. HL7 Message structure

**Table 4.19. Cancel Short-Stay Access End Registration - ADT^A11 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Registration date/time)
[PV2]	Patient Visit - Additional Info	O	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the event), PV2.31 (Recurring Service Code)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.7. Close Short-Stay Encounter

### 4.7.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a Short-Stay encounter has been closed, from an "administrative" point of view.

### 4.7.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient discharge, MUST compose and send an HL7 2.5 **ADT^A03** message
- MUST allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers MUST be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent MUST be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) MUST be included</li> <li>• Discharge date/time MUST be included, at least with minute-level detail, stating the Short-Stay closure date/time</li> <li>• Patient Class MUST be included, stating that the encounter is related to a Short-Stay</li> <li>• It is REQUIRED to include an unique identifier of the close event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. The identifier MUST be unique among all the other events in the visit</li> </ul>

	<ul style="list-style-type: none"> <li>The Recurring Service Code <b>MUST</b> be specified stating that the event is related to the closure of a Short-Stay access.</li> </ul>
Other information	<ul style="list-style-type: none"> <li>It is <b>RECOMMENDED</b> to include all the available clinical and administrative information, with a special mention for Diagnosis and Procedures</li> </ul>

Patient Encounter Consumer:

- MUST** change patient's status to reflect the closure operation
- In case the event conflicts with current patient status (e.g. encounter is not existing):
  - If the Patient Encounter Consumer implements "diagnostic service-like" functions, it **SHOULD** discard the message, raising at most a warning or a non blocking error,
  - If the Patient Encounter Consumer implements "repository-like" functions, it **SHOULD** process the message anyway, creating patient and encounter if needed and then recording the discharge event.
- MUST** use the unique identifier sent by the Patient Encounter Supplier for the closure event as internal event identifier (or at least to use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- MUST** store the information of the Recurring Service Code (Short-Stay Closure, in this case) in order to allow the management of event.
- SHOULD** process Diagnosis and Procedures information included in the message

### 4.7.3. HL7 Message structure

**Table 4.20. Close Short-Stay Encounter - ADT^A03 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.45 (Discharge date/time, used for closure date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the closure event), PV2.31 (Recurring Service Code)
[[DG1]]	Diagnosis information	O..*	
[[PR1]]	Procedure information	O..*	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.8. Cancel Short-Stay Encounter Closure

### 4.8.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to a Patient Encounter Consumer to cancel a previous notification that a patient Short-Stay has been closed.

## 4.8.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient admission, **MUST** compose and send an HL7 2.5 **ADT^A13** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• Discharge date/time <b>MUST</b> be included, at least with minute-level detail, stating the Short-Stay closure date/time</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to a Short-Stay</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the closure event previously sent (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to easily reference the event to be cancelled</li> <li>• The Recurring Service Code <b>MUST</b> be specified stating that the event is related to the closure of a Short-Stay access.</li> </ul>

Patient Encounter Consumer:

- **SHOULD** restore the patient's status in order to state that the short-stay encounter is still open (from an administrative point of view)
- **MUST** use the Patient Encounter Supplier unique event identifier, and in case the Recurring Service Code (Short-Stay encounter End, in this case), to locate the event to delete
- **SHOULD** discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing closure
- **SHOULD** manage the event cancellation as a logical operation, letting the event not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- **MUST** guarantee traceability and reversibility of the cancellation, whether the operation is logical or physical.

## 4.8.3. HL7 Message structure

**Table 4.21. Cancel Short-Stay Encounter Closure - ADT^A13 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.45 (Discharge date/time, used as Short_Stay closure date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier)

Segment	Meaning	Usage	Notes
			for the closure event), PV2.31 (Recurring Service Code)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4.9. Update Short-Stay Encounter

### 4.9.1. Trigger Event

For the Update Short-Stay Encounter use case, since it is some kind of combination of inpatient and outpatient, the business logics that apply are similar to the ones in the [Update Inpatient Encounter](#) and [Update Outpatient Encounter](#) use cases.

Update Short-Stay Encounter is actually composed by four sub-cases. Different messages will be sent by the Patient Encounter Supplier to notify a Patient Encounter Consumer that some information has changed for the open, close or access related events (such as opening date or ward, access date, etc.) and, in case, for the patient (such as address, date of birth, etc.). Changes related to patient demographic data only **SHOULD NOT** be addressed by this use case but rather with the [Update Person Information](#) use case.

#### Important

The changes notified via this events and messages **MUST NOT alter the assignment of a visit to a patient**. To alter the patient-visit assignment, the Patient Encounter Supplier :

- SHOULD apply the [Move Visit](#) use case (RECOMMENDED choice)
- MAY, as an alternative, cancel completely the "old" encounter and insert a "new" one with the new patient-visit assignment

### 4.9.2. Expected Actions and messages

Patient Encounter Supplier:

- after registration of update, **MUST** compose and send an HL7 2.5 **ADT^A08** message;
- The structure and content of A08 message is strictly related to the type of event it aims to update. In greater detail:
  - Updates to a Open Short-Stay Encounter event are notified using an ADT^A08 having the same structure of the original ADT^A01 message (see [Open Short-Stay Encounter](#)), except for field **EVN-4 that will contain value "A01"**;
  - Updates to a Register Short-Stay Access Begin event are notified using an ADT^A08 having the same structure of the original ADT^A04 message (see [Register Short-Stay Access Begin](#)), except for field **EVN-4 that will contain value "A04"**;
  - Updates to a Register Short-Stay Access End event are notified using an ADT^A08 having the same structure of the original ADT^A04 message (see [Register Short-Stay Access End](#)), except for field **EVN-4 that will contain value "A04"**;
  - Updates to a Close Short-Stay Encounter event are notified using an ADT^A08 having the same structure of the original ADT^A03 message (see [Close Short-Stay Encounter](#)), except for field **EVN-4 that will contain value "A03"**;

Patient Encounter Consumer:

- **MUST** process A08 messages related to Open Short-Stay Encounter event (EVN-4="A01", PV2-31="DHO") using the same logics and rules described in [Open Short-Stay Encounter](#);



- MUST process A08 messages related to Register Short-Stay Access Begin event (EVN-4="A04", PV2-31="DHAB") using the same logics and rules described in [Register Short-Stay Access Begin](#);
- MUST process A08 messages related to Register Short-Stay Access End event (EVN-4="A04", PV2-31="DHAE") using the same logics and rules described in [Register Short-Stay Access End](#);
- MUST process A08 messages related to Close Short-Stay Encounter event (EVN-4="A03", PV2-31="DHC") using the same logics and rules described in [Close Short-Stay Encounter](#);

## 5. Pre-admission scenario

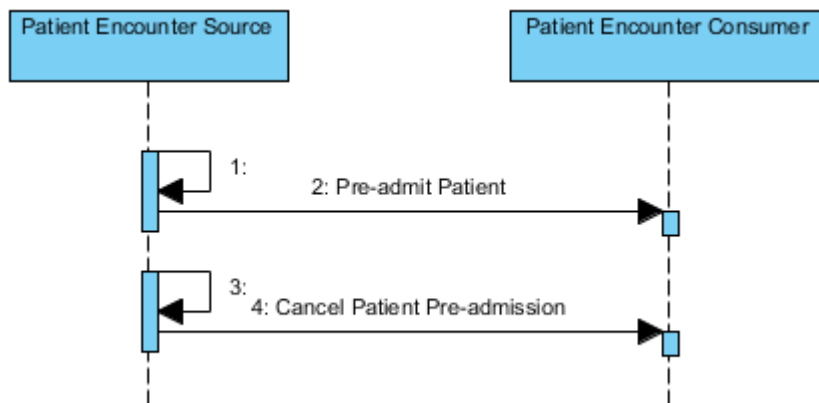
The pre-admission encounter scenarios involves all the activities that a patient undergoes before being actually admitted. Typically, they include tests and clinical procedures that are required for preparing the patient for the admission (e.g. pre-intervention laboratory tests) or to assess whether the admission is viable or not.

Management of a pre-admission encounter is composed by two different phases or moments.

- The Pre-admission itself, as a stand-alone encounter, characterized by its own "open" event and possibly by a "cancel" event (e.g. due to errors). To be noted that no specific transaction will be used to notify the "closure" of pre-admission, in case a real admission does not follow.
- If the pre-admission outcome allows it, then an Inpatient admission event is triggered, and also occurs the linking of the Pre-admission encounter information to Inpatient admission encounter. Before this operation, Pre-admission and Inpatient are two independent encounters; after, the encounters are linked in order to get access to the clinical and administrative data of one encounter from the other one.

The Inpatient admission notification and the linking of the Pre-admission are out of the scope of this scenario, and are described in details in the [Admit Inpatient](#) use case.

Use cases managed in this scenario are represented in the following sequence diagram:



### 5.1. Pre-Admit Patient

#### 5.1.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a patient has arrived, or is planned to arrive, at a healthcare facility for a pre-admission episode of care, in which the patient is not assigned to a bed and will undergo to clinical evaluations to assess viability of specific encounters at a later time (e.g. surgery).

#### 5.1.2. Expected Actions

Patient Encounter Supplier:

- after registration of patient arrival, MUST compose and send an HL7 2.5 ADT^A05 message

- MUST allow, setting properly the message content, to uniquely identify the patient and the pre-admit encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• It is REQUIRED to include in the message <b>all</b> the available demographic information about the person.</li> <li>• All the available person identifiers MUST be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent MUST be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• A Visit Number MUST be included, representing the pre-admit encounter. It has to be unique within the data scope (e.g. within the whole hospital, in a single-hospital installation, or among all hospitals, in a multi-hospital environment)</li> <li>• Admit date/time MUST be included, at least with minute-level detail, to transmit the pre-admission date/time</li> <li>• Patient Class MUST be included, stating that the encounter is related to a Pre-admission</li> <li>• Assigned Patient Location MUST be included (at least the ward/unit code; ward/unit name is also recommended). In this scenario, will represent the facility/unit that is responsible for the pre-admission clinical activities.</li> <li>• It is REQUIRED to include an unique identifier of the pre-admission event (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event in the future. Since the Pre-admission Encounter is frequently suitable for merging with the following Inpatient Encounter, the identifier MUST be unique within the data scope (e.g. within the whole hospital, in a single-hospital installation, or among all hospitals, in a multi-hospital environment)</li> </ul>
Other information	<ul style="list-style-type: none"> <li>• It is RECOMMENDED to include all the available clinical and administrative information, with a special mention for Diagnosis, Allergies and Relatives (Next of Kin)</li> </ul>

Patient Encounter Consumer:

- MAY change patient's status to reflect the pre-admit operation. A Pre-Admission encounter has lower relevance related to Inpatient, Emergency and Short-Stay, thus the patient status MUST NOT be changed in case still exists such encounters for the patient s in open state.
- MUST use the unique identifier sent by the Patient Encounter Supplier for the pre-admit event as internal event identifier (or at least to use it to compose the internal event identifier); this way, it should be easier to point to the specific event if needed (e.g. for updates).
- MUST, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. SHOULD NOT, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).

### 5.1.3. HL7 Message definition

**Table 4.22. Pre-Admit patient - ADT^A05 message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	

Segment	Meaning	Usage	Notes
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
[[NK1]]	Next of Kin/ Associated parties	O..*	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Pre-admit date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the pre-admission event)
[[OBX]]	Observation/Result	O..*	May be present to carry clinical information useful for the encounter (e.g. previous observations results, patient weight or height, etc.).
[[AL1]]	Allergy information	O..*	
[[DG1]]	Diagnosis Information	O..*	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 5.2. Cancel Patient Pre-Admission

### 5.2.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify to a Patient Encounter Consumer the cancellation of a previously sent Pre-admission registration.

### 5.2.2. Expected Actions

Patient Encounter Supplier:

- after cancellation of outpatient registration, **MUST** compose and send an HL7 2.5 **ADT^A38** message
- **MUST** allow, setting properly the message content, to uniquely identify the patient and the pre-admit encounter; for this sake, it is necessary to take special care to the information listed hereafter.

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Encounter and Event information	<ul style="list-style-type: none"> <li>• Visit Number (the Pre-admit encounter hospital identifier) <b>MUST</b> be included</li> <li>• Patient Class <b>MUST</b> be included, stating that the encounter is related to an Outpatient</li> <li>• Admit date/time <b>MUST</b> be included, at least with minute-level detail, to transmit the pre-admission date/time</li> <li>• It is <b>REQUIRED</b> to include the unique identifier of the registration event previously sent (e.g. Patient Encounter Supplier internal identifier) in order to allow the Patient Encounter Consumer to create a reliable key for referencing the event to be cancelled</li> </ul>

Patient Encounter Consumer:

- **SHOULD** change patient's status to reflect the cancellation of the pre-admission, which means patient should no more be seen as "pre-admitted"

- SHOULD discard the message, raising at most a warning or a non blocking error, if the cancellation is related to a non-existing pre-admission event
- MUST use the Patient Encounter Supplier unique event identifier to locate the event to delete
- SHOULD cancel the pre-admission event logically, letting the registration not to be visible anymore to the final user but to be still present as database record (e.g. using a "cancelled" flag or status).
- MUST guarantee traceability and reversibility of the operation, whether the cancellation of data is logical or physical
- SHOULD perform a complete cancellation of the visit and all of the related data (e.g. clinical info already attached to the visit).
- There may be cases where, after cancellation, the same Visit Number can be reused and re-assigned to another patient; for this reason it is also REQUIRED the Patient Encounter Consumer to allow such a possibility, by properly managing the cancelled data and excluding it from data consistency checks.

### 5.2.3. HL7 Message structure

**Table 4.23. Cancel Patient Pre-Admission - ADT^A38 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number), PV1.44 (Admit date/time, used for Pre-admit date/time)
PV2	Patient Visit - Additional Info	R	Highlights: PV2.7 (Visit User Code, used for Patient Encounter Supplier unique identifier for the pre-admission event)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 6. Follow-up / Post-admission scenario

The Follow-up/Post-admission encounter scenario involves all the activities that a patient undergoes after being discharged from an Inpatient encounter, but still are strictly related to the Inpatient encounter.

Typically, they include tests and clinical procedures that are required for assessing patient's status and the clinical outcome of the Inpatient encounter, as well as clinical procedures completing the Inpatient encounter activity and not requiring the patient to be assigned at a bed.

The use cases of this scenario completely overlap with the ones of the Outpatient Scenario, since in facts follow-ups are managed as outpatient encounters.

Only a few differences need to be remarked:

- The Patient Class of the messages used MUST state that the encounter is a Follow-up /post-admission one;
- It is RECOMMENDED to use the Pre-admit Number to transmit the Visit Number of the preceding Inpatient encounter;
- The Patient Encounter Consumer SHOULD link, by using the Pre-admit Number, the Follow-up encounter to its preceding Inpatient Encounter, allowing the possibility to navigate data from one encounter to the other. For linking rules and policies please refer to the ones expressed in the Admit Inpatient use case.

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

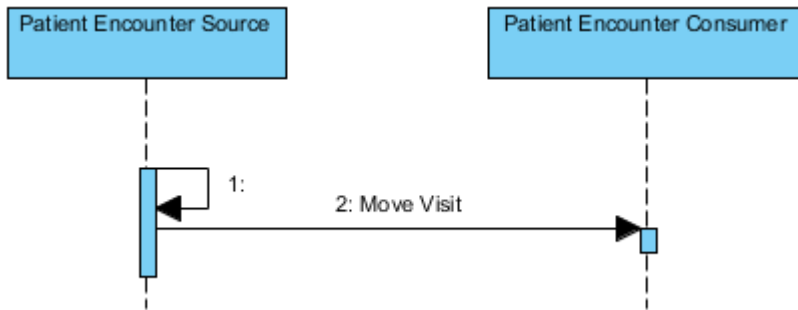
## 7. Move visit scenario

The Move Visit scenario does not involve a specific patient class and clinical/administrative pathway but rather is a "general purpose" scenario that may apply along with all the other scenarios.

Its goal is giving the possibility to change patient-to-encounter relationship, allowing to move a visit (encounter) and all its content from one patient to another. The main reasons why this may be needed are related to the correction of errors or the assignment of the visit to the "final" patient record (frequent, for example, in Emergency Room when patient is registered as "unknown" and only later on the real identity is defined).

**This scenario is the one allowing all the changes in patient-visit assignment that were forbidden in all the previously described "update" use cases.**

The only use case managed in this scenario is represented in the following sequence diagram:



### 7.1. Move Visit

#### 7.1.1. Trigger Event

This use case is triggered by a Patient Encounter Supplier to notify a Patient Encounter Consumer that a previously defined patient-visit association has changed, and thus the visit and all its data need to be moved from one patient to another.

#### 7.1.2. Expected Actions

Patient Encounter Supplier:

- after registration of visit move, **MUST** compose and send an HL7 2.5 **ADT^A45** message
- **MUST** allow, setting properly the message content, to uniquely identify the "new" patient, the "old" patient and the encounter to be moved; for this sake, it is necessary to take special care to the information listed hereafter.

"New" Patient information	<ul style="list-style-type: none"> <li>• It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person.</li> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
"Old" Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Prior Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> </ul>

	<ul style="list-style-type: none"> <li>All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
"New" and "Old" Visit information	<ul style="list-style-type: none"> <li>The Prior Visit Number <b>MUST</b> be included, pointing to the encounter to be moved.</li> <li>The Visit Number <b>MUST</b> be included, pointing to the encounter to be moved (that is, same value of Prior Visit Number)</li> </ul> <p>A special remark must be given about the possibility to change the visit information and key data during its move, as per HL7 standard specifications; for example, the possibility to change the visit number during the move from one patient to another. For the sake of simplicity and data consistency, this kind of option <b>MUST NOT</b> be applied; thus, the information named as "New visit" in the message <b>MUST</b> reflect and replicate the one of the "Old" visit.</p> <ul style="list-style-type: none"> <li>Patient Class <b>MUST</b> be included</li> </ul>

Patient Encounter Consumer:

- SHOULD** process the message and apply data to its database, accordingly to the role played.
  - If the Patient Encounter Consumer implements "repository-like" functions, storing and linking clinical (or other) data to the encounter, then it **MUST** detach the visit from the "old" patient record and assign it to the "new" patient record. The move operation **MUST** entail the move of all of the data linked to the visit (e.g. orders, results, other clinical or administrative data).

In case the Patient Encounter Consumer receives new data after the visit move, then it **MUST** be able accept it and guarantee it to be linked to the correct ("new") position even if it is notified using the "old" patient-visit association.

- If the Patient Encounter Consumer implements "diagnostic service-like" functions, and holds patient-visit relation mainly to satisfy the external requesters' needs, then is **RECOMMENDED** it to update the patient-visit assignment and guarantee that the data is returned to the requester includes the "new" patient-visit relation.
- SHOULD** manage the move event logically, rather than physically.
- MUST** guarantee traceability and reversibility of the operation, whether it is logical or physical
- In case the "new" person demographic data is not available in its database, **MUST** register it as in the Create Person use case before the visit move, in order to guarantee data consistency.
- In case the person data is somehow already stored in the database, demographic data **SHOULD NOT** be updated; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
- In case the "old" patient-visit association stated in the message conflicts with the one in the Patient Encounter Consumer, then the message **MUST** be discarded and an error raised.
- In case the "old" patient-visit association is not registered in the Patient Encounter Consumer database, then the operation **SHOULD** be processed as an "initial" event of the scenario identified by the Patient Class.

### 7.1.3. HL7 Message definition

Table 4.24. Move Visit - ADT^A45 message structure

Segment	Meaning	Usage	Notes
MSH	Message Header	R	

Patient Encounter Management

Segment	Meaning	Usage	Notes
EVN	Event Type	R	
PID	Patient Identification	R	"New" patient data. Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	"New" patient data.
MRG	Merge Information	R	"Old" patient and visit data. Highlights: MRG.1 (Prior Patient Identifier List). MRG.5 (Prior Visit number)
PV1	Patient Visit	R	"New" visit data. Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.19 (Visit Number)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

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# **Part II. Document Management**

## ***Use cases***



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# Chapter 5. Document Management overview

The Document Management scenario is about publishing medical documents produced by different applications inside the enterprise (i.e. laboratory reports by LIS, discharge letters by ADT, etc.), to a central Document Repository that feeds the electronic patient record.

According to IHE, which inspires current specifications, document management typically includes the following scenarios:

- Document Registration
- Document Query
- Document Retrieval

Current specifications will cover only the "Document Registration" scenario.

For more informations concerning localizations for CRS-SISS regional project, refer to CRS-SISS technical documentation [CRS-SISS-HL7]

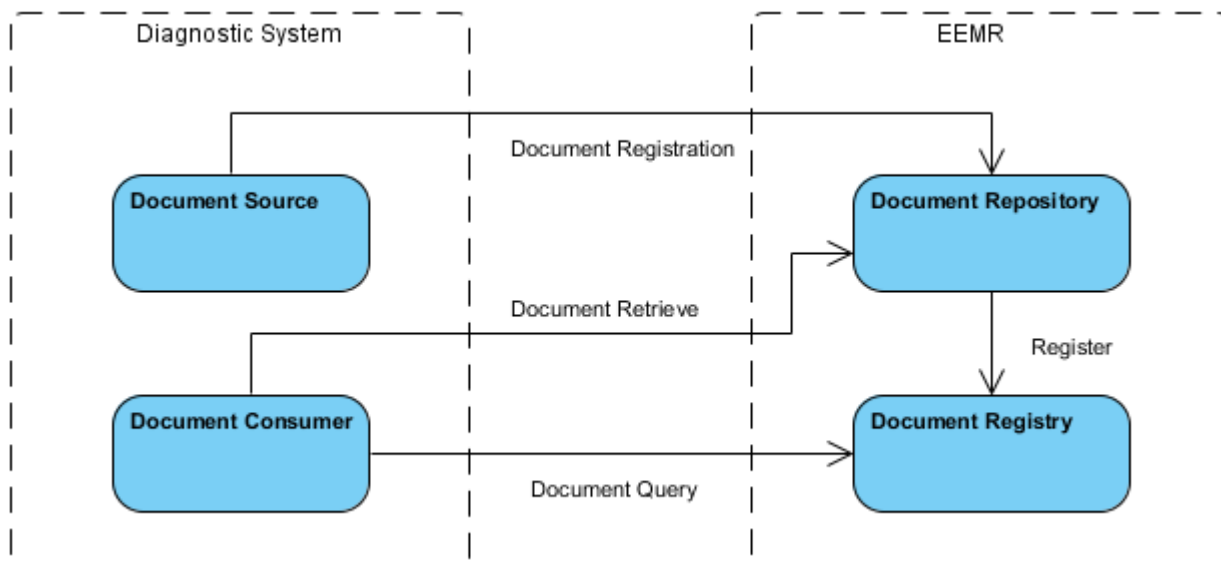
## 1. Actors

The following actors are involved in Document Management, and interact each other in a supplier-consumer model.

<b>Document Source</b>	The document source is the producer of the medical document.
<b>Document Repository</b>	The Document Repository actor persistently stores documents. It assigns and maintains a unique identifier for each document, to allow Document Consumers to retrieve them.
<b>Document Registry</b>	The Document Registry actor maintains meta-data about each registered document in a document entry. This includes a link to the Document Repository where the actual document is stored. The Document Registry responds to queries from Document Consumer actors about documents meeting specific criteria
<b>Document Consumer</b>	The Document Consumer actor queries a Document Registry actor for documents meeting certain criteria, and retrieves selected documents from one or more Document Repository actors.

## 2. Process Flow

The following schema shows a general process flow in Document Management; as we said before, current specifications will cover only the "Document Registration" scenario.



All of the Actors **are assumed to be provided with up-to-date patient demographic and encounter data**, thus no specific patient or encounter management transactions will be covered. Such functionalities SHOULD be achieved by "grouping" actors in current integration profile with appropriate actors of the Patient Administration Management integration profile, and applying its rules. Nonetheless, basic specifications for patient identity and encounter management will be also given as a workaround in case this is not possible.

### 3. Communication implementation

The IHE directives are taken into account, thus the use cases described in the following chapters will be implemented by using **HL7 2.5 messages, pipe-separated format**.

For the sake of clarity and easiness of reading, only the segments structure of messages will be described, leaving the detailed specifications of segments and fields contents to *NoemaLife HL7 Integration Policy - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG]. The HL7 messages structure will be described using the syntax explained in Messages Description Conventions section.

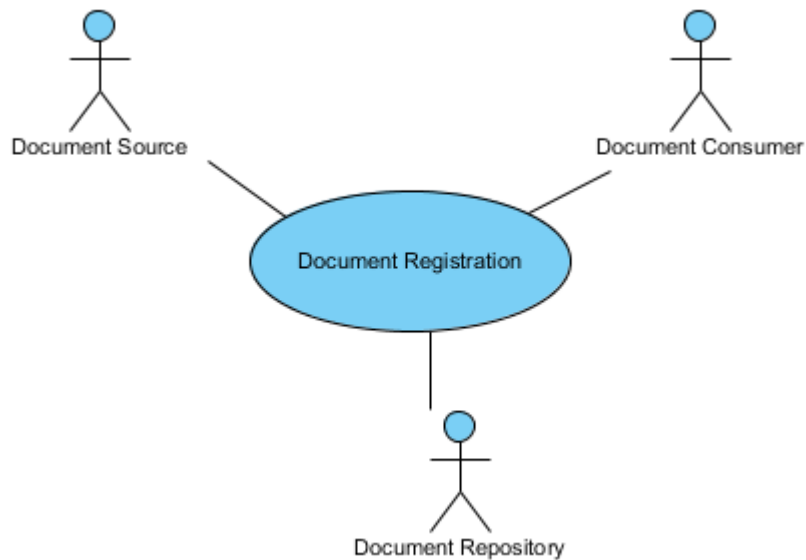
In the following, the description of the use cases will be given from a functional point of view only; details on the low-level HL7 protocol communication issues (e.g. acknowledgments, TCP/IP communication, messages envelopes, etc.) will be covered in section MLLP Communication Protocol.

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# Chapter 6. Document Registration

Document Registration is about sharing clinical documents, produced in the enterprise, inside a common document repository.

The document registration scenario involve the Document Source and Document Repository actors.



The Document Source role can be played by any system producing clinical documents that have to be shared within the organization; it can be an ADT system publishing Discharge Letters, a LIS producing Laboratory Reports and so on.

The Document Repository is any system that is able to receive the clinical document itself and associated classification data, linking the document to the right context (e.g. patient, visit and order information). Among NoemaLife applications, the role of the Document Repository is played by Galileo.

The Document Consumer is any system that is interested in getting notifications when documents, meeting some matching criteria, are available in the Document Repository. For example, when the Emergency Room places an order to an Order Filler (LIS, RIS,..), then it may play the role of Document Consumer when the report created by the Order Filler is stored in the Repository.

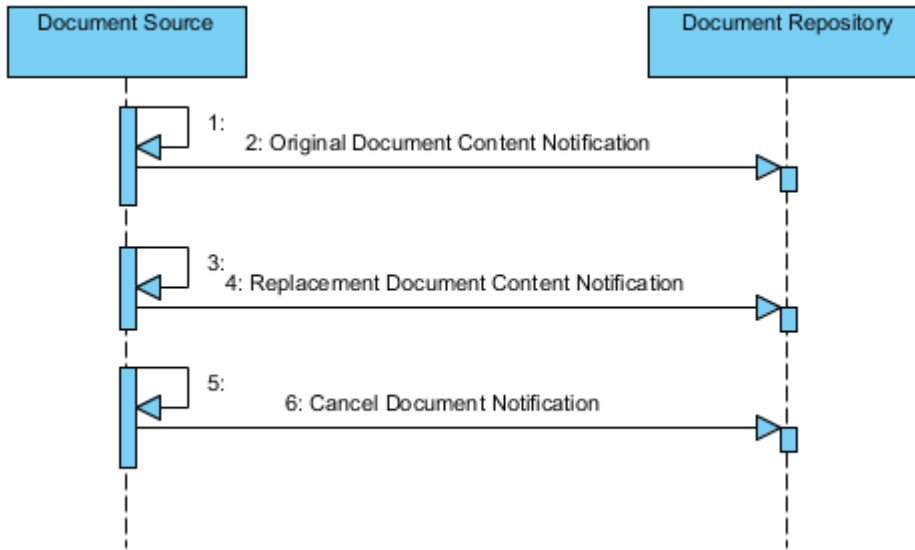
The following use cases will be considered and managed for the document registration scenario:

- Original Document Content Notification
- Replacement Document Content Notification
- Cancel Document Notification
- Original Document Link Notification
- Replacement Document Link Notification
- Document Status Change Notification

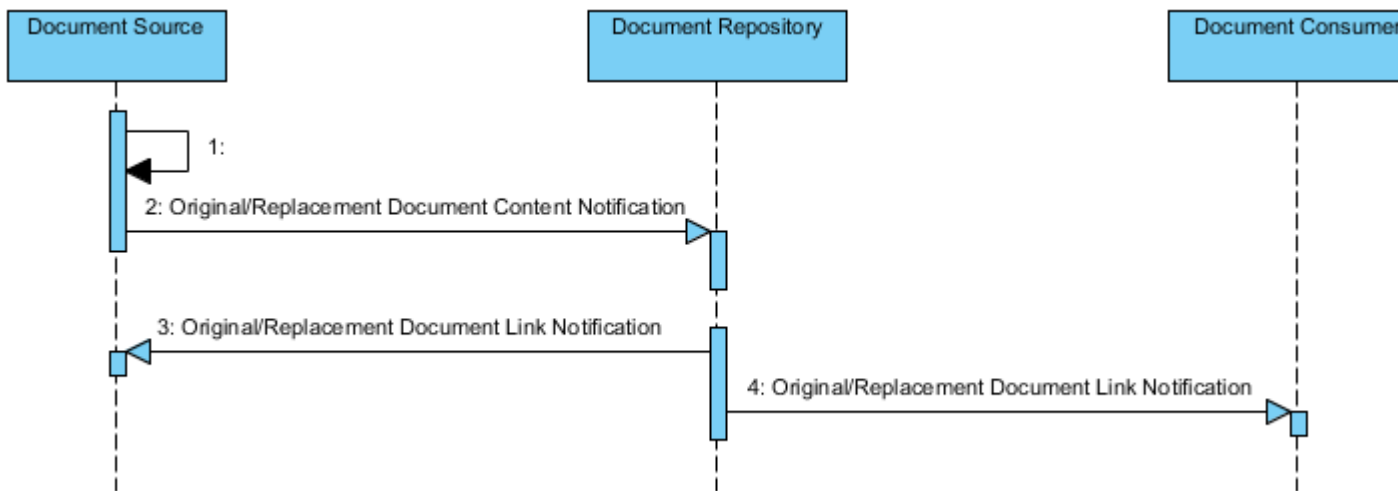
*Note:* current specifications do not include the Addendum Document Content Notification use case, because it is not managed by NoemaLife applications.

The first three use cases, **Original, Replacement and Cancel Document Notification**, deal with the notification and content delivery, from the document source to the document repository, of new documents as well as any

changes in the content of previously notified documents. Such use cases are represented in the following sequence diagram:

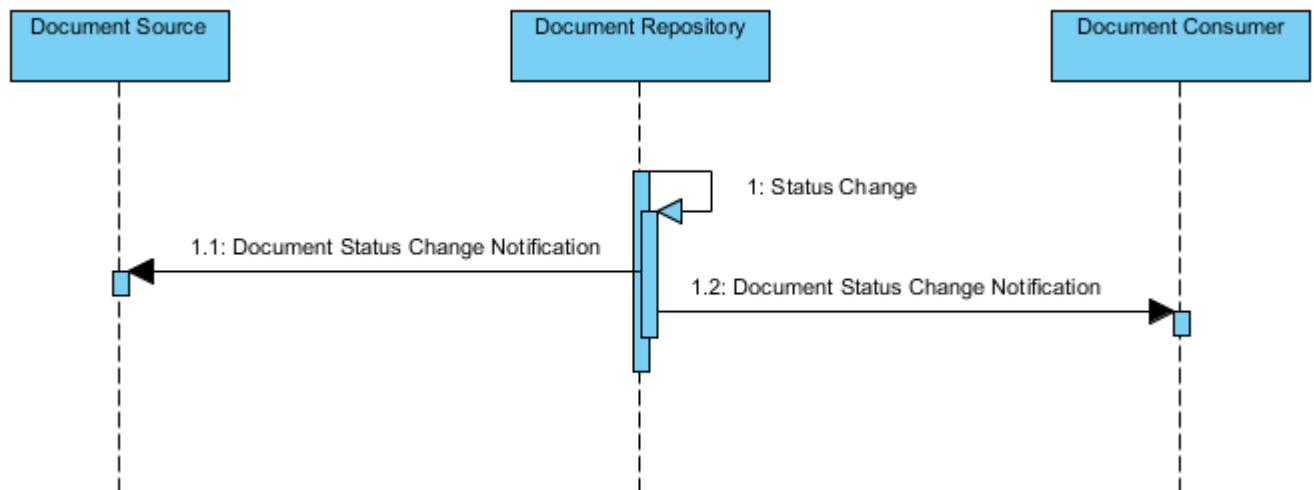


The **Original/Replacement Document Link Notification** use cases are about the notification (without any content delivery), from the Document Repository to the Document Source and to any Document Consumer that may have interest in the document, of the unique document identifier assigned to the documents by the Document Repository, so that the Document Source/Consumer can store this information for later retrieval of the document<sup>1</sup>. This use case is represented in the following sequence diagram:



The **Document Status Change Notification** use case is about the notification (without any content delivery), from the Document Repository to the Document Source and to any Document Consumer that may have interest in it, of relevant events occurred to the document (e.g.: assignment of TimeStamp [IT: Marca Temporale], Notification to external Repository,..). This use case is represented in the following sequence diagram:

<sup>1</sup>Document Retrieval scenario is not covered by current specifications



## 1. Glossary

- **Original Document:** it is the clinical document that is first published by the Document Source as the result of a clinical process (e.g. Report in case of a Laboratory Order, Discharge letter for an Encounter, etc.). Notification of the original document requires the use of the "Original Document Content Notification" message.
- **Replacement Document:** it is a document containing clinical informations that is sent by the Document Source with the purpose to replace a previous document, referred to as '*parent document*'. The Replacing Document supersedes the parent document. The parent document may be either an Original document or another Replacement Document, thus creating a '*chain*' of documents, with the last document of the chain being the sole having valid clinical content. The replaced parent document becomes '*obsolete*'. Notification of the Replacement document requires the use of the "Replacement Document Content Notification" message.
- **Invalidating Document** [IT: Documento annullativo]: it is a document that does not contain any clinical information, that is sent by the document source in order to notify document consumers that a previous delivered document is no longer valid. This event should be limited to the case when a clinical document has been erroneously created or associated to the wrong patient: when this happens, the document source must create an invalidating document, possibly containing an explanation for the invalidation, replacing the parent document. The parent document to be invalidated must be the last document in a document chain (see above), so it can be both an Original or Replacing document; as a consequence the parent document becomes '*cancelled*'. Notification of the Invalidating document requires the use of the "Replacement Document Content Notification" use case, where a specific field of the message, TXA-21, stores information about the document nature. An invalidating Document should be visible to end users.
- **Cancelled Document:** with this term we refer to the status of an Original or Replacement document that has been made invalid, as a result of the delivery of an Invalidating Document or a Cancel document notification. A cancelled document has no more clinical validity, but must still be retained in the system for historical reference; it should not be visible to end users.
- **Obsolete Document:** with this term we refer to the status of an Original or Replacement document that has been replaced, as a result of a Replacement Document Content Notification. An obsolete document has no more clinical validity, but must still be retained in the system for historical reference; it may or may not be visible to end users, according to site-specific policies.
- **Parent Document:** with this term we refer to the document that is preceding a given document it in a document chain.
- **Secondary Document:** with this term we refer to the attachments to a valid Original or Replacing document. Such attachments may be link to clinical images related to the main document, or may contain metadata about the main document. An example of secondary document is, in the CRS-SISS regional project, the DAO document, containing information about document authorization, privacy and consent.

## 2. Original Document Content Notification

### 2.1. Trigger Event

A new clinical document has been created by the Document Source and is available for delivery to the Document Repository. The use case is used to deliver an Original Document [63]

### 2.2. Expected Actions

Document Source:

- After creation of a new clinical document, **MUST** compose and send an HL7 2.5 **MDM^T02** message, including the original document and, when needed, any secondary documents
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit, order); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• In case of clinical documents from diagnostic systems, it is <b>REQUIRED</b> to specify the Filler Order Number, and it <b>RECOMMENDED</b> to include the Placer Order Number/Placer Group Number if available.</li> <li>• The values in Filler Order Number, Placer Order Number and Placer Group Number <b>MUST</b> be the same used in any other message and transaction related to the same order.</li> </ul>
Document information	<ul style="list-style-type: none"> <li>• Document Source's document identifier <b>MUST</b> be provided, and <b>MUST</b> be unique within the sending application</li> </ul>

Document Repository:

- **MUST** process the message and apply data to its database, according to following rules:
  - **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - **MUST**, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). **SHOULD NOT**, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
- **MUST** store the document, linking it to the context provided in the message (e.g. Patient, Visit and Order).

## 2.3. HL7 message structure

**Table 6.1. Original Document - MDM^T02 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)
<b>Table 6.2. Common Order Group</b>			
[Group]	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b> <b>Notes</b>
	ORC	Common Order Segment	R Highlights: ORC.3 (Filler Order Number), ORC.2 (Placer order Number), ORC.4 (Placer Group Number)
	[TQ1]	Timing/Quantity Segment	O Quantity of required observations
	OBR	Observation Request Segment	R Highlights: OBR.4 (Universal Service Identifier)
TXA	Document Notification	R	Highlights: TXA.12 (Unique Document Number), TXA.13 (Parent Document Number), TXA.17 (Document Completion Status), TXA.21 (Document Change Reason), TXA.22 (Authentication Person)
<b>Table 6.3. Document Content and Informations Group</b>			
{Group}	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b> <b>Notes</b>
	OBX	Observation/Result	R Highlights: OBX.3 (Observation identifier), OBX.5 (Observation value)  Repetitions of the segment allow for delivery of a main clinical document and secondary documents.  <b>Loc CRS-SISS:</b>  Primo OBX: documento DCE  Secondo OBX (opzionale): documento DAO
	{ [NTE] }	Notes and comments about the observation	R..* <b>Loc CRS-SISS:</b>  Ripetizioni del segmento utilizzate per notificare gli attributi relativi al DCE e al DAO; devono seguire l'OBX di pertinenza.

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.



## 3. Replacement Document Content Notification

### 3.1. Trigger Event

It is possible to distinguish between two sub-use cases:

- The clinical content of a document already delivered to the Document Repository must be changed: the Document Source creates a new version of the document with updated clinical content, named Replacement Document [63], and delivers it to the Document Repository to replace the previous document, which then becomes *obsolete*.
- A document has been erroneously created or associated to the wrong patient and already delivered to the Document Repository: the Document Source creates an Invalidating Document [63] containing an explanation for the invalidation and without any clinical content, and delivers it to the Document Repository to replace the previous document, which then becomes *cancelled*.

### 3.2. Expected Actions

Document Source:

- After creation of a new clinical document, **MUST** compose and send an HL7 2.5 **MDM^T10** message, including the replacement document and, when needed, any secondary documents.
- The message content **MUST** allow to uniquely identify the context (e.g.. patient, visit, order); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• In case of clinical documents from diagnostic systems, it is <b>REQUIRED</b> to specify the Filler Order Number, and it <b>RECOMMENDED</b> to include the external order (Placer Order Number/Placer Group Number) if available.</li> <li>• The values in Filler Order Number, Placer Order Number and Placer Group Number <b>MUST</b> be the same used in any other message and transaction related to the same order</li> </ul>
Document information	<ul style="list-style-type: none"> <li>• Document identifier <b>MUST</b> be provided, and <b>MUST</b> be unique within the sending application</li> <li>• The Document Source's identifier of the parent document [63] to be replaced <b>MUST</b> be provided</li> </ul>

Document Repository:

- **MUST** process the message and apply data to its database, according to following rules:
  - **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances

or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).

- **MUST**, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). **SHOULD NOT**, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
- **MUST** store the document, linking it to the context provided in the message (e.g.. Patient, Visit, Order and parent document).
- **MUST**, in case the parent document [63] is not available in the database, register the document as an Original document.
- **MUST** make the parent document an obsolete document [63] when TXA.21=RP, or a cancelled document [63] when TXA.21=CA, but must still retain it for historical reference.

### 3.3. HL7 message structure

The structure of MDM^T10 message is the same of MDM^T02 message.

## 4. Cancel Document Notification

### 4.1. Trigger Event

A document already delivered to the Document Repository must be changed due to incorrect clinical content. This is normally the use case for a Replacement Document Content Notification, but occasionally it may happen that the clinical process required to correct the mistake takes too much time; in this case, it is important to give an immediate notification to the Document Repository that the document is no longer valid. The Document Source sends a Cancel Document Notification to the Document Repository to make invalid the document with incorrect content, which then becomes *cancelled*. Note that in this case no documents are included in the message.

### 4.2. Expected Actions

Document Source:

- After creation of a correct clinical document, **MUST** compose and send an HL7 2.5 **MDM^T11** message
- The message content **MUST** allow to uniquely identify the context (e.g.. patient, visit, order); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• In case of clinical documents from diagnostic systems, it is <b>REQUIRED</b> to specify the Filler Order Number, and it is <b>RECOMMENDED</b> to include the external order number (Placer Order Number or Placer Group Number) when available. Since under some circumstances there may be differences between Placer Order Number and Placer Group Number, in those cases it is <b>REQUIRED</b> to transmit the Placer Group Number (having higher relevance).</li> <li>• The values in Filler Order Number and Placer Order Number / Placer Group Number <b>MUST</b> be the same used in any other message and transaction related to the same order</li> </ul>

Document information	<ul style="list-style-type: none"> <li>The Document Source's identifier of the parent document [63] that has to be cancelled MUST be provided</li> </ul>
----------------------	--

Document Repository:

- MUST then process the message and apply data to its database, according to following rules:
  - SHOULD NOT insert a new Patient, a new Visit and a new Order, if not existent
  - SHOULD NOT update Patient, Visit or Order informations, if already existent
  - In case the parent document [63] is not existent in the database, the message SHOULD be discarded raising at most a warning or a non blocking error
  - MUST make the parent document a cancelled document [63], retaining it in the system for historical reference.

### 4.3. HL7 message structure

**Table 6.4. Cancel Document - MDM^T11 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)
TXA	Document Notification	R	TXA.13 (Parent Document Number), TXA.14 (Placer Order Number), TXA.15 (Filler Order Number), TXA.17 (Document Completion Status), TXA.21 (Document Change Reason), TXA.22 (Authentication Person)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 5. Original Document Link Notification

### 5.1. Trigger Event

After receiving a document from the Document Source via an Original Document Content Notification, the Document Repository assigns a unique identifier to the document and stores it. Later on, the Document Repository communicates the unique identifier to the Document Source and to any Document Consumer that may be interested in the document.

The Original Document Link Notification message MUST NOT be intended, by the Document Source, as an Application Acknowledge.

### 5.2. Expected Actions

Document Repository:

- MUST compose and send an HL7 2.5 **MDM^T01** message, in order to notify a link to an Original Document [63]

- The message content **MUST** allow to uniquely identify the context (e.g.. patient, visit, order); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• In case of clinical documents from diagnostic systems, it is <b>REQUIRED</b> to specify the Filler Order Number, and it <b>RECOMMENDED</b> to include the Placer Order Number/Placer Group Number if available.</li> <li>• The values in Filler Order Number, Placer Order Number and Placer Group Number <b>MUST</b> be the same used in any other message and transaction related to the same order.</li> </ul>
Document information	<ul style="list-style-type: none"> <li>• The identifier of the Document assigned by the Document Source <b>MUST</b> be provided</li> <li>• The identifier of the Document assigned by the Document Repository <b>MUST</b> be provided</li> </ul>

Document Source

- **MUST** save the Repository Document Identifier inside the document record identified by the Document Source Identifier, according to following rules:
  - In case no document exists in the database matching the Document Source identifier, the message **SHOULD** be discarded raising at most a warning or a non blocking error.
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order information, if already existent

Document Consumer

- If a Document Consumer is interested in receiving the document (i.e. the message satisfies some filtering criteria defined by local project) then it **MUST** create a new document record with Document information, linking it to the Patient, Visit and Order context described in the message, according to following rules:
  - **SHOULD** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order information, if already existent

### 5.3. HL7 message structure

**Table 6.5. Original Document Link Notification - MDM^T01**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
EVN	Event Type	R		
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)	
PV1	Patient Visit	R	Highlights: PV1.19 (Visit Number)	
[ <i>Group</i> ]]	<b>Table 6.6. Common Order Group</b>			
	Segment	Meaning	Usage	Notes
	ORC	Common Order Segment	R	Highlights: ORC.3 (Filler Order Number), ORC.2 (Placer order Number), ORC.4 (Placer Group Number)
[TQ1]	Timing/Quantity Segment	O	Quantity of required observations	

Segment	Meaning	Usage	Notes
	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b> <b>Notes</b>
	OBR	Observation Request Segment	R Highlights: OBR.4 (Universal Service Identifier)
TXA	Document Notification	R	Highlights: TXA.12 (Unique Document Number)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 6. Replacement Document Link Notification

### 6.1. Trigger Event

After receiving a document from the Document Source via a Replace Document Content Notification, the Document Repository assigns a unique identifier to the new document and stores it. Later on, the Document Repository communicates the unique identifier to the Document Source and to any Document Consumer that may be interested in the document.

The Replacement Document Link Notification message **MUST NOT** be intended, by the Document Source, as an Application Acknowledge.

### 6.2. Expected Actions

Document Repository:

- **MUST** compose and send an HL7 2.5 **MDM^T09** message, in order to notify a link to a Replacement Document [63]
- The message content **MUST** allow to uniquely identify the context (e.g.. patient, visit, order); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• In case of clinical documents from diagnostic systems, it is <b>REQUIRED</b> to specify the Filler Order Number, and it <b>RECOMMENDED</b> to include the Placer Order Number/Placer Group Number if available.</li> <li>• The values in Filler Order Number, Placer Order Number and Placer Group Number <b>MUST</b> be the same used in any other message and transaction related to the same order.</li> </ul>
Document information	<ul style="list-style-type: none"> <li>• The identifier of the Document assigned by the Document Source <b>MUST</b> be provided</li> <li>• The identifier of the Document assigned by the Document Repository <b>MUST</b> be provided</li> <li>• The parent document identifiers assigned by Document Source and Document Repository must be provided</li> </ul>

Document Source

- **MUST** save, and in case replace, the Repository Document Identifier inside the document record identified by the Document Source Identifier, according to following rules
- In case no document exists in the database matching the Document Source identifier, the message **SHOULD** be discarded raising at most a warning or a non blocking error.

- SHOULD NOT insert a new Patient, a new Visit and a new Order, if not existent
- SHOULD NOT update Patient, Visit or Order informations, if already existent

Document Consumer

If a Document Consumer is interested in receiving the document, then:

- If the document record matching the Repository Parent Document identifier is found, MUST create a new document record linked to the same Patient, Visit and Order context of the *parent document*, with following rules:
  - MUST flag the parent document as "*obsolete*". The obsolete document may or may not be visible to end users, according to site-specific policies.
  - SHOULD NOT update Patient, Visit or Order informations.
- If the document record matching the Repository Parent Document identifier is NOT found, MUST create a new document record linked to the same Patient, Visit and Order context of the message, with following rules:
  - SHOULD insert a new Patient, a new Visit and a new Order, if not existent;
  - SHOULD NOT update Patient, Visit or Order informations, if already existent.

### 6.3. HL7 message structure

**Table 6.7. Replacement Document Link Notification - MDM^T09 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
EVN	Event Type	R		
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)	
PV1	Patient Visit	R	Highlights: PV1.19 (Visit Number)	
[ <i>Group</i> ]	<b>Table 6.8. Common Order Group</b>			
	Segment	Meaning	Usage	Notes
	ORC	Common Order Segment	R	Highlights: ORC.3 (Filler Order Number), ORC.2 (Placer order Number), ORC.4 (Placer Group Number)
	[TQ1]	Timing/Quantity Segment	O	Quantity of required observations
OBR	Observation Request Segment	R	Highlights: OBR.4 (Universal Service Identifier)	
TXA	Document Notification	R	Highlights: TXA.12 (Unique Document Number), TXA.13 (Parent Document Number)	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 7. Document Status Change Notification

### 7.1. Trigger Event

An event occurred on a document stored at the Document Repository that must be notified to the Document Source or Document Consumer actors.

Examples of events can be:

- The Document Repository publishes the Document to an external Regional or National Document Registry (e.g.. CRS-SISS Document Registry);
- The Document Repository assigns a Legal TimeStamp (IT: Marca Temporale) to the Document.

The list of relevant events that must be notified is subject to local project agreements.

## 7.2. Expected Actions

Document Repository:

- **MUST** compose and send an HL7 2.5 **MDM^T03** message, in order to notify a status change event occurred on a document.
- The message content **MUST** allow to uniquely identify the context (e.g.. patient, visit, order); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• In case of clinical documents from diagnostic systems, it is <b>REQUIRED</b> to specify the Filler Order Number, and it is <b>RECOMMENDED</b> to include the external order number (Placer Order Number or Placer Group Number) when available. Since under some circumstances there may be differences between Placer Order Number and Placer Group Number, in those cases it is <b>REQUIRED</b> to transmit the Placer Group Number (having higher relevance).</li> <li>• The values in Filler Order Number and Placer Order Number / Placer Group Number <b>MUST</b> be the same used in any other message and transaction related to the same order</li> </ul>
Document information	<ul style="list-style-type: none"> <li>• The identifier of the Document assigned by the Document Source <b>MUST</b> be provided</li> <li>• The identifier of the Document assigned by the Document Repository <b>MUST</b> be provided</li> </ul>
Event Information	<ul style="list-style-type: none"> <li>• The Notification Type <b>MUST</b> be provided in EVN.4 (e.g.. SISS_NOTIFY)</li> <li>• External link to the document, when applicable, <b>MUST</b> be transmitted in TXA-16</li> <li>• TXA-20 <b>MUST</b> be used to carry the Document Storage Status, or the result/outcome of the notification/status change (e.g. SISS-OK if notification was OK; SISS-&lt;errorCode&gt; if there was an error)</li> <li>• TXA-21 <b>SHOULD</b> be used for error description, if any</li> </ul>

Document Source & Document Consumer

- **SHOULD** save event related data in the database, according to following rules:
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order informations, if already existent
- In case the Document is not existing in the database, the message **SHOULD** be discarded raising at most a warning or a non blocking error.

## 7.3. HL7 message structure

**Table 6.9. Document Status Change Notification - MDM^T03 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
EVN	Event Type	R	Highlights: EVN.4 (Event Reason Code)
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.19 (Visit Number)
TXA	Document Notification	R	Highlights: TXA.12 (Unique Document Number), TXA.14 (Placer Order Number), TXA.15 (Filler Order Number), TXA.16 (Unique Document File Name), TXA.20 (Document Storage Status), TXA.21 (Document Change Reason)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.



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# **Part III. Laboratory Testing Management**

## ***Use cases***

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# Chapter 7. Laboratory Testing Management overview

Laboratory Testing Management is inspired, and adheres the more is possible, to the IHE "**Laboratory Testing Workflow**" integration profile of the *IHE Laboratory Technical Framework* [IHE-ITI-LTF].

It establishes the continuity and integrity of clinical laboratory testing and observation data inside a healthcare institution, and covers the workflow related to tests performed by the clinical laboratories of the institution, for both identified orders and unknown orders, related to both identified patients and unidentified or misidentified patients. The profile involves a set of transactions, to maintain the consistency of ordering and patient information, to track the specimen collection and specimen acceptance and to deliver the laboratory results and reports at various steps of validation.

## 1. Actors

Several actors are involved in IHE Laboratory Testing Workflow, interacting each other in a supplier-consumer model.

**Order Placer**                      The Order Placer is a system that generates test orders for various clinical laboratories, places each of these to the correct laboratory, and appropriately manages all state changes.

**Order Filler**                      The Order Filler is a system used by a laboratory, that receives test orders from Order Placer actors, collects or controls the related specimens, accepts or rejects the order, schedules work orders, and sends them to one or more Automation Managers, receives the results from each Automation Manager, performs the clinical validation, appropriately manages all state changes of the order and sends the results to the Order Result Tracker(s).

**Order Result Tracker**              The Order Result Tracker is a system that stores laboratory observations obtained for the patients of the healthcare institution, registers all state changes in the results notified by Order Fillers.

**Automation Manager**              Automation Manager is any system or component that manages the automation in the laboratory, or a part of it. Automation involves the integration or interfacing of automated or robotic transport systems, analytical instruments, and pre- or post-analytical process equipment such as automated centrifuges and aliquoters, decappers, recappers, sorters, and specimen storage and retrieval systems.

**In the Noemalife applications scenario, this role is grouped together with the Order Filler, thus it is mentioned for completeness but will not be considered in use cases.**

## 2. Laboratory Testing Workflow transactions

Use cases included in IHE Laboratory Testing Workflow can be divided into several transactions; only the following ones will be considered.

- **Placer Order Management**, used by the Order Placer to place an order to the Order Filler. Relates to Transaction LAB-1 of the IHE Laboratory Technical Framework.
- **Order Results Management**, used to notify the Order Result Tracker of requested tests upon creation of an order, reception of a specimen in the laboratory and observation results when a result is acquired, clinically validated, modified or deleted. Relates to Transaction LAB-3 of the IHE Laboratory Technical Framework.

Aside from this "standard" transactions, one more will be added:

- **Order Report Management**, used to transmit to the Order Result Tracker the report (partial or final) related to an order, in human readable/printable format (e.g. PDF).

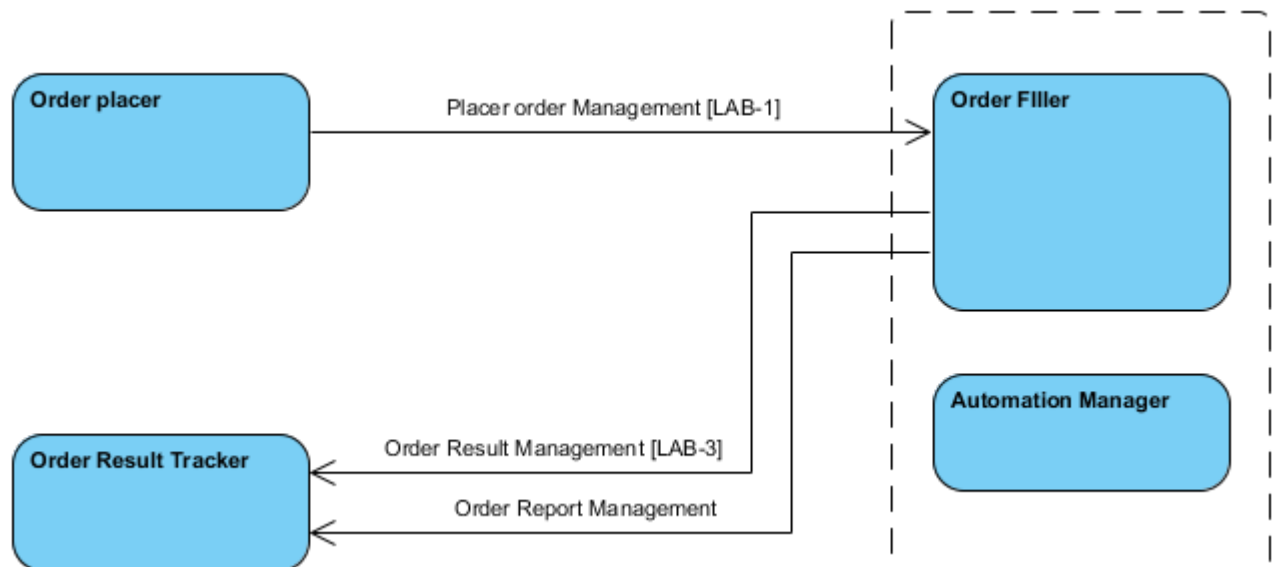
Despite this **"non-standard" transaction is not specifically included in IHE Laboratory Technical Framework**, it is somehow **related to the "Report Fac-simile For Order Group Option"**, giving the possibility to transmit to the Order Result Tracker a *link* to a report fac-simile including the results transmitted during the Order Result Management.

In our implementation, the main difference will be the transmission of the *content* of the document, and not just the link. The report content transmission will be achieved applying the Document Management integration profile.

All of the Actors **are assumed to be provided with up-to-date patient demographic and encounter data**, thus no specific patient or encounter management transactions will be covered. Such functionalities SHOULD be achieved by "grouping" actors in current integration profile with appropriate actors of the Patient Administration Management integration profile, and applying its rules. Nonetheless, basic specifications for patient identity and encounter management will be also given as a workaround in case this is not possible.

### 3. Process Flow

The following schema shows systems that may be involved in Laboratory Testing Workflow, the transactions that will be implemented and the participating actors.



### 4. Laboratory testing glossary and definitions

#### Prescription

Is defined as the paper that originates the order and identifies the required services. Prescriptions are strictly related with billing, but they have also legal implications, as they may indicate that the prescriber takes responsibility for the clinical care of the patient. Every order can be associated to zero, one or more prescriptions, and each prescription can generate one or more orders.

Prescriptions may have a unique identifier; in Italy the identifier of prescriptions filled by general practitioners is called Codice RUR (identificativo ricetta); in CRS-SISS project electronic prescriptions filled by general practitioners are assigned a unique identifier called IUP (Identificativo Univoco della Prescrizione).

#### Order Group

Set of Orders to be tested together for a patient. An Order Group is identified by a number or code in the placer system (Placer Group Number)

<b>Order</b>	An order is a request for the execution of a battery or a single test. The order has always a unique requesting organization unit (placer) and a unique receiver organization unit (designated filler). An order is identified by a number or code in a placer system (Placer Order Number) by another number or code in a filler system (Filler Order Number). Both these identifiers must unequivocally identify the order in the scope of the placer and filler respectively.
<b>Test</b>	An operation performed in laboratory or on the point of care, manually or on an analyzer or with the help of a device, instrument or system, to produce one or more observations (i.e. results).
<b>Observation</b>	A measurement of a single variable or a single value derived logically and/or algebraically from other measured or derived values. A test result is an observation.
<b>Battery</b>	A set of one or more laboratory tests, identified by a single name and code, that can be ordered to a laboratory. A battery can be an elementary laboratory test, like Potassium, or a set of laboratory tests or complex test, like the Complete Blood Count.
<b>Elementary test</b>	<p>Is a single, atomic test that may be requested alone or as a part of set of elementary tests (complex test).</p> <p>A single result (numeric, coded, textual, etc.) may be assigned to an elementary test.</p> <p><b>Loc DNLAB:</b> In DNLAB, refers to "analisi singola"</p>
<b>Complex test</b>	<p>Is a set of elementary tests.</p> <p>No results are directly associated to a complex test, but only to the elementary test composing the complex test.</p> <p><b>Loc DNLAB:</b> In DNLAB, refers to "analisi multipla"</p>
<b>Loc: CRS-SISS</b>	
<b>Prestazione Aggiuntiva</b>	Prestazione che può essere erogata direttamente dall'Order Filler senza che questa sia indicata sulla ricetta (prescription) e dipendentemente dal risultato che si ottiene dall'esame iniziale richiesto. Ad esempio l'antibiogramma è da considerarsi una prestazione aggiuntiva.

## 5. Communication implementation

The IHE directives are taken into account, thus the use cases described in the following chapters will be implemented by using **HL7 2.5 messages, pipe-separated format**.

For the sake of clarity and easiness of reading, only the segments structure of messages will be described, leaving the detailed specifications of segments and fields contents to *NoemaLife HL7 Integration Policy - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG]. The HL7 messages structure will be described using the syntax explained in Messages Description Conventions section.

In the following, the description of the use cases will be given from a functional point of view only; details on the low-level HL7 protocol communication issues (e.g. acknowledgments, TCP/IP communication, messages envelopes, etc.) will be covered in section MLLP Communication Protocol.

## 6. Future directions

At the date of release of this document, the following issues and items are *not supported* and identified as possible future document's enhancements and extensions:

- Management of Filler Order Management transaction (*IHE Laboratory Technical Framework* [IHE-ITI-LTF], transaction LAB-2)

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Management overview

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- Enhancement of Laboratory Order Result Management transaction to manage "Deletion of Battery/Test in a Filler Order"
- Use of additional OBX or NTE segments for carrying comments to Laboratory results (at present are inserted in OBX-17, not compliant with HL7 but simpler to manage)
- Management of comments/notes to the Laboratory Order and to the requested Tests (Elementary or Complex)

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# Chapter 8. Laboratory Placer Order Management

Laboratory Placer Order Management is a **partial** implementation of LAB-1 transaction of the *IHE Laboratory Integration Framework* [IHE-ITI-LTF].

This scenario allows an Order Placer to place an Order Group (i.e. a set of Orders to be tested together for a patient) or a standalone Order to the Order Filler. The Order Placer is allowed to notify the Order Filler subsequent modifications to the Order Group (new Orders or Order cancellations) until the Order Filler starts processing of the Order Group. The Order Filler notifies the Order Placer about status changes of the Orders.



We assume that an Order Group placed by the Order Placer will be fulfilled by a unique Order Filler, that is services for different Order Fillers will be placed into separate Orders Groups.

The following use cases will be considered and managed for the Placer Order Management scenario:

- Request Laboratory Order
- Cancel Laboratory Order
- Update Laboratory Order
- Laboratory Order Status changed

## 1. Request Laboratory Order

### 1.1. Trigger Event

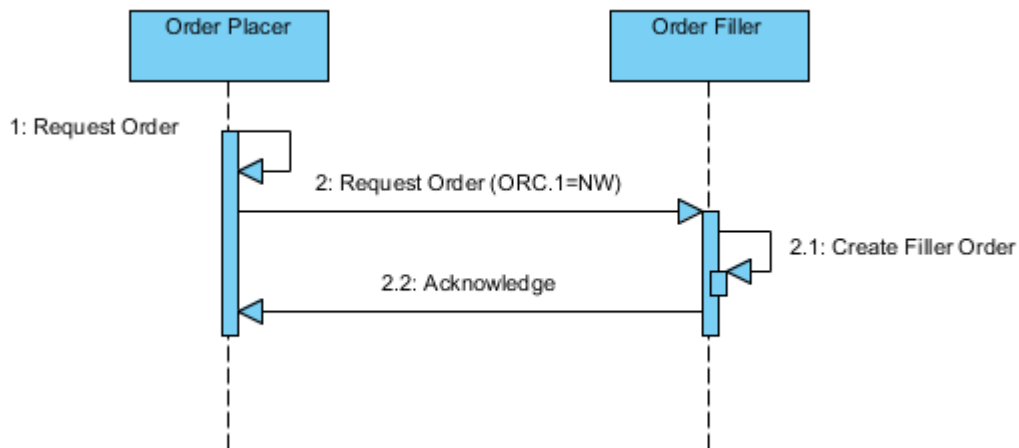
An application playing the role of Order Placer, places a single Order or an Order Group to the LIS for execution of tests that are to be performed on one or more specimens collected from the patient.

Since in some cases the order message might be the only source of patient's demographic and visit data for the order filler, it is important that the Order Placer fills both PID and PV1 segments.

*Option:*

The Order Filler generates specimen's identifiers and required labelling informations, that are transmitted to the Order Placer via the acknowledge message inside ZET segments.

The use case is represented in the following diagram:



## 1.2. Expected Actions

Order Placer:

- After creation of a new Order (Placer Order), **MUST** compose and send an HL7 2.5 **OML^O21** or **OML^O33** message with following rules:
  - An Order in the message (ORC segment) **MUST** contain a single Battery or Test (OBR segment), and *ORC.1=NW*
  - In case more than one Battery or Test are required, an Order **MUST** be created for each Battery/Test, with distinct Placer Order Number and the same Placer Group Number
  - The message content **MUST** uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Filler</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available visit information about the person.</li> </ul>

- **MUST** receive an HL7 2.5 **ORL^O22 (matching a OML^O21)** or **ORL^O34 (matching a OML^O33)** *Synchronous application acknowledge* message from the Order Filler, informing about the result of the request (ORC.1=OK: request accepted; ORC.1=UA: unable to accept request).
- When the result is successful (ORC.1=OK), **SHOULD** store the Filler Order Number in the record of the order for later reference (e.g. for Cancel Laboratory Order request).
- If ZET segments are included in the message, **SHOULD** be able to print labels to be attached to the specimen containers.

Order Filler:

- **MUST** process the message and apply data to its database, according to following rules:



- **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
- **MUST**, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). **SHOULD NOT**, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
- If the Placer Order is valid (e.g. all required tests are valid,...), **MUST** create one Filler Order (matching the Placer Order Group) or many Filler Orders (matching each Placer Order), linking them to the context provided in the message (e.g. Patient, Visit, Placer Order).
- If the Placer Order is **NOT** valid (e.g. some required services are unknown to the Filler system,...), **MUST** discard the order and raise an error condition.
- **MUST** compose and send a *Synchronous application acknowledge* using the HL7 2.5 **ORL^O22 (matching a OML^O21) or ORL^O34 (matching a OML^O33)** message, including the result for the Order creation request (ORC.1=OK: request accepted; ORC.1=UA: unable to accept request) and, when result is successful, the Filler Order Number/s.
- **SHOULD** be able to include labelling informations in ZET segments inside the *application acknowledge* message.

### 1.3. HL7 message structure

**Table 8.1. Request Laboratory Order - OML^O21 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)
[PV2]	Patient Visit – Additional Info	O	
{Group}	<b>Table 8.2. Common Order Group</b>		
	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b> <b>Notes</b>
	ORC	Common Order Segment	R Highlights: ORC.1 (Order Control)=NW, ORC.2 (Placer order Number), ORC.4 (Order Group Number)
	[TQ1]	Quantity/Timing	O
	OBR	Observation Request Segment	R Highlights: OBR.2 (Placer order Number), OBR.4 (Universal Service Identifier)
	[{SPM}]	Specimen	O

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Segment	Meaning	Usage	Notes
	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b> <b>Notes</b>
	[BLG]	Billing Segment	O Used as "dummy" segment to avoid parsing errors (see segment description for details). Its use is RECOMMENDED.

**Table 8.3. Request Laboratory Order - OML^O33 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
[PD1]	Additional demographic	O	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)
[PV2]	Patient Visit – Additional Info	O	

<b>Table 8.4. Specimen Group</b>				
Segment	Meaning	Usage	Notes	
SPM	Specimen	O		
{ Group }	<b>Table 8.5. Common Order Group</b>			
	Segment	Meaning	Usage	Notes
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=NW, ORC.2 (Placer order Number), , ORC.4 (Order Group Number)
	[TQ1]	Quantity/Timing	O	
	OBR	Observation Request Segment	R	Highlights: OBR.2 (Placer order Number), OBR.4 (Universal Service Identifier)
	[BLG]	Billing Segment	O	Used as "dummy" segment to avoid parsing errors (see segment description for details). Its use is RECOMMENDED.

**Table 8.6. ACK - ORL^O22 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
MSA	Message Acknowledgment	R		
[ERR]	Error	O		
[PID]	Patient Identification	O	Highlights: PID.3 (Patient Identifier List)	
[ { Group } ]	<b>Table 8.7. Common Order Group</b>			
	Segment	Meaning	Usage	Notes
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control), ORC.2 (Placer order Number), ORC.3

Segment	Meaning	Usage	Notes
	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b> <b>Notes</b>
			(Filler order Number), , ORC.4 (Order Group Number)
[OBR]	Observation Request Segment	O	Highlights: OBR.2 (Placer order Number), OBR.3 (Filler order Number), OBR.4 (Universal Service Identifier)
[SPM]	Specimen	O	
[ {ZET} ]	Local Attribute Table	O	Segment used for labelling informations; one ZET segment for each label

**Table 8.8. ACK - ORL^O34 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
MSA	Message Acknowledgment	R		
[ERR]	Error	O		
[PID]	Patient Identification	O	Highlights: PID.3 (Patient Identifier List)	
{Group}	<b>Table 8.9. Specimen Group</b>			
	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b> <b>Notes</b>	
	SPM	Specimen	O	
	{Group}	<b>Table 8.10. Common Order Group</b>		
	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b>	<b>Notes</b>
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=NW, ORC.2 (Placer order Number), , ORC.4 (Order Group Number)
[OBR]	Observation Request Segment	O	Highlights: OBR.2 (Placer order Number), OBR.4 (Universal Service Identifier)	
[ {ZET} ]	Local Attribute Table	O	Segment used for labelling informations; one ZET segment for each label	

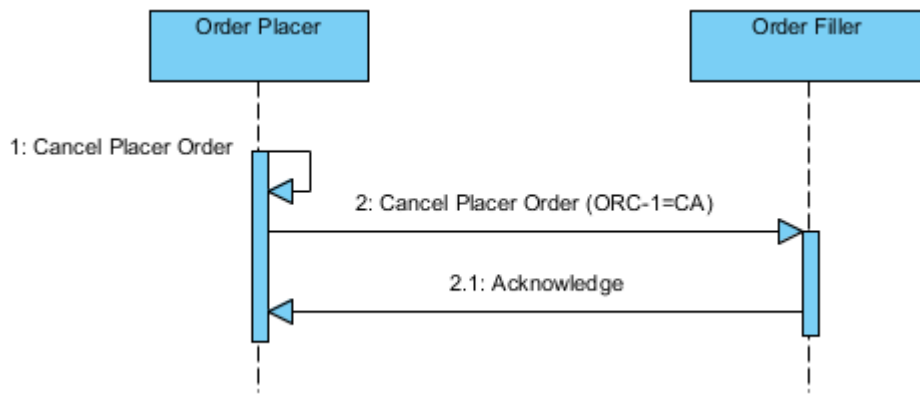
Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 2. Cancel Laboratory Order

### 2.1. Trigger Event

An Order Placer sends a request to the Order Filler system asking for the complete cancellation (i.e. cancellation of all required tests) of a previously required Order Group that has not already been started by the Order Filler. The Order Filler system accepts the request and cancels the Order Group.

The use case is represented in the following diagram:



## 2.2. Expected Actions

Order Placer:

- To deliver an Order Group cancellation request to the Order Filler, **MUST** compose and send an HL7 2.5 **OML^O21** or **OML^O33** message
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Filler;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order Information	<ul style="list-style-type: none"> <li>• All the Orders belonging to the Order Group to be cancelled <b>MUST</b> be included in the message, with the same Placer Order Number and Placer Group Number that were specified in the Request Laboratory Order message, and ORC-1=CA</li> <li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li> </ul>

- **MUST** receive an HL7 2.5 **ORL^O22 (matching a OML^O21)** or **ORL^O34 (matching a OML^O33)** *Synchronous application acknowledge* message from the Order Filler, informing about result of request (ORC.1=CR: cancelled as requested; ORC.1=UC: unable to cancel).

Order Filler:

- **MUST** process the message and apply data to its database, according to following rules:
  - **SHOULD NOT** insert a new Patient or a new Visit, if not existent.
  - **SHOULD NOT** update Patient or Visit informations, if already existent.
  - In case the Order is not available in the database, the message **SHOULD** be discarded raising at most a warning or a non blocking error.
  - In case the Order is already in progress and the Order Filler is not able to accept the cancellation request, **MUST** raise an error condition to be notified back to the Order Placer via the acknowledge message.
  - In case the Order Filler is able to accept the update request, **MUST** apply changes to the Order, and guarantee traceability and reversibility of the order deletion operation, whether it is logical or physical.

- MUST compose and send a *Synchronous application acknowledge* using the HL7 2.5 **ORL^O22 (matching a OML^O21) or ORL^O34 (matching a OML^O33)** message, informing about result of request (ORC.1=CR: cancelled as requested; ORC.1=UC: unable to cancel).

## 2.3. HL7 message structure

Refer to the message structures for the [Request Laboratory Order](#) message

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

# 3. Update Laboratory Order

## 3.1. Trigger Event

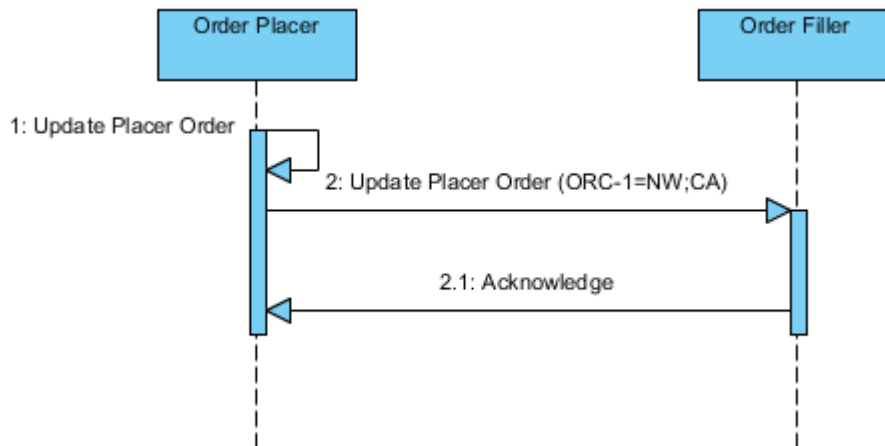
An Order Placer needs to change an existing Order Group that has not already been started by the Order Filler (i.e. an Order Status Update with ORC-5=IP have not been notified by the Order Filler ).

We can identify the following sub-usecases:

- Add Tests: The Order Placer needs to add one or more tests to an existing Order Group
- Delete Tests: The Order Placer needs to remove one or more tests from an Order Group
- Add and Delete Tests: it is a combination of previous sub-usecases

**Limitations:** Test *replacement* sub-usecase, as defined by the IHE function OML Replace Order, is *not supported*; the same result can be reached using a combination of Delete Test and Add Test.

The use case is represented in the following diagram:



## 3.2. Expected Actions

Order Placer:

- MUST compose an HL7 2.5 **OML^O21 or OML^O33** message, with following rules:
  - Tests to be added, in the ORC-OBR group, MUST have:
    - same Placer Group Number (ORC-4) of the Order Group that is being updated;
    - new and unique Placer Order Number (ORC-2)
    - ORC-1=NW

- Tests to be deleted, in the ORC-OBR group, MUST have:
  - same Placer Group Number (ORC-4) of the Order Group that is being updated
  - same Placer Order Number (ORC-2) as in the Order Group that is being updated
  - ORC-1=CA
- Unchanged tests:
  - MAY be omitted in the update message
  - if specified in the update message, MUST keep same Placer Group Number and Placer Order Number as in the Order Group that is being updated
- The message content MUST uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers MUST be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Filler</li> <li>• All the person identifiers sent MUST be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is RECOMMENDED to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) MUST be included</li> <li>• It is RECOMMENDED to include in the message <b>all</b> the available visit information about the person.</li> </ul>
Order Information	It is RECOMMENDED to specify the Filler Order Number

- MUST receive an HL7 2.5 **ORL^O22 (matching a OML^O21) or ORL^O34 (matching a OML^O33)** *Synchronous application acknowledge* message from the Order Filler, informing about the result of the request (ORC.1=OK: request accepted; ORC.1=UA: unable to accept request).
- If ZET segments are included in the message, SHOULD be able to print labels to be attached to the specimens.

Order Filler:

- MUST process the message and apply data to its database, according to following rules:
  - SHOULD NOT insert a new Patient, a new Visit and a new Order, if not existent
  - SHOULD NOT update Patient, Visit or Order informations, if already existent
  - In case the Order is not available in the database, the message SHOULD be discarded raising at most a warning or a non blocking error
  - In case the Order is already in progress and the Order Filler is not able to accept the update request, MUST raise an error condition to be notified back to the Order Placer via the acknowledge message.
  - In case the Order Filler is able to accept the update request, MUST update the order stopping any further processing of cancelled tests, and guarantee traceability and reversibility of the operation, whether it is logical or physical
  - SHOULD be able to provide updated labelling informations inside ZET segments;
- MUST compose and send a *Synchronous application acknowledge* using the HL7 2.5 **ORL^O22 (matching a OML^O21) or ORL^O34 (matching a OML^O33)** message, informing about result of request (ORC.1=OK: request accepted; ORC.1=UA: unable to accept request) and, when result is successful, the Filler Order Numbers.

- SHOULD be able to include up-to-date labelling informations in ZET segments inside the *application acknowledge* message.

### 3.3. HL7 message structure

Refer to the message structures for the Request Laboratory Order message

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4. Laboratory Order Status Changed

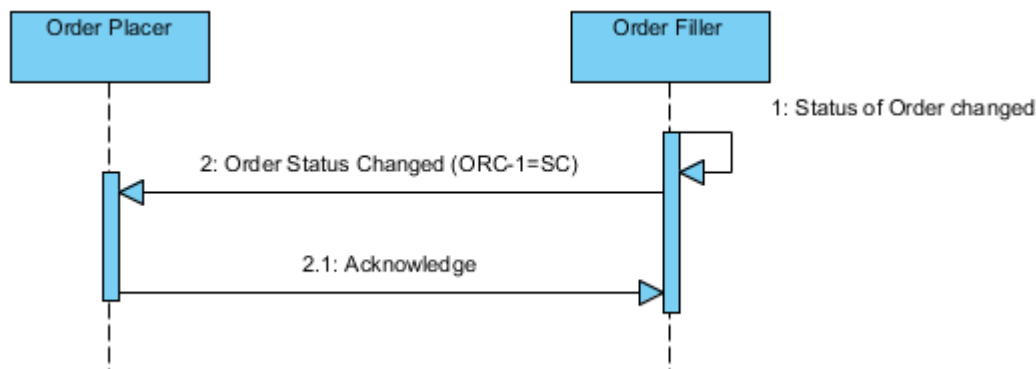
### 4.1. Trigger Event

During fulfillment of an Order, the Order Filler performs an unsolicited notification to the Order Placer about changes in the status of the order.

#### Limitations:

For compliance to IHE [IHE-ITI-LTF], this use case MUST not be applied when the Order Placer and the Order Results Tracker are grouped in the same application, because the Transaction LAB-3 message carrying the status change and possible new results is sufficient to inform that application of the new status of the Order.

The use case is represented in the following diagram:



### 4.2. Expected Actions

Order Filler:

- MUST compose and send an HL7 2.5 **OML^O21** message
  - MUST be able to notify at least the following events::
    - Order In Progress (ORC-5=IP): when the Order has started processing
    - Order Completed (ORC-5=CM): when the complete, verified report is available for the given order
  - Notification of following events is RECOMMENDED:
    - Order scheduled (ORC-5=SC) event
    - Partial Results available (ORC-5=A) event
  - MUST be able to provide, along with an Order Completed notification (ORC-5=CM), the list of supplied Tests in the ORC-OBR group

- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"><li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Placer;</li><li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li></ul>
Visit information	<ul style="list-style-type: none"><li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li></ul>
Order Information	<ul style="list-style-type: none"><li>• The Placer Order Number and Placer Group Number <b>MUST</b> be specified</li><li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li></ul>

Order Placer:

- **MUST** process the message and apply data to its database, according to following rules:
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order informations, if already existent
  - In case the Order is not available in the database, the message **SHOULD** be discarded raising at most a warning or a non blocking error
  - **MUST** compose and send a *Synchronous application acknowledge* using the HL7 2.5 **ORL^O34** message, informing about result of request (ORC.1=OK: request accepted; ORC.1=UA: unable to accept request)

### 4.3. HL7 message structure

Refer to the message structures for the [Request Laboratory Order](#) message

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.



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# Chapter 9. Order Result Management

Order Result Management is a **partial** implementation of LAB-3 transaction of the *IHE Laboratory Integration Framework* [IHE-ITI-LTF].

## 1. Order Results Management scenario

Actors involved in the transaction and their role are:

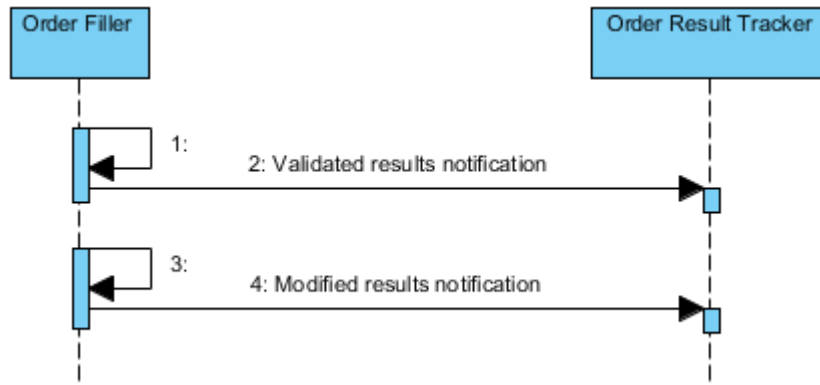


**Order Filler** Provides notification to the Order Result Tracker for technically/clinically validated results and modification/cancellation of results. Provides the complete sorted set of results related to a Placer Order or a Placer Order Group.

**Order Result Tracker** Receives test order and results from the Order Filler, gives access to this order and results to the healthcare enterprise.

Among all use cases of LAB-3 IHE transaction, only two will be implemented:

- new results notification from Order Filler to Order Result Tracker, after technical/clinical validation
- results modification notification from Order Filler to Order Result Tracker



### 1.1. Validated Results Notification

#### 1.1.1. Trigger Event

This use case is triggered on the Order Filler when one or more results of an order reaches the "exportable" status, in order to notify the Order Result Tracker of the new information; "exportable" refers to the status allowing a results to be made available for public use. Usually, a result can be exported for public use upon technical or clinical validation, in some cases even print of results or digital signing could be considered.

The choice whether to trigger event upon one of those events can be defined by local agreements, even if the clinical validation is the most frequent case and is **RECOMMENDED**.

#### 1.1.2. Expected Actions

Order Filler:

- After validation of results, **MUST** compose and send an HL7 2.5 **OUL^R22** message
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit, order); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Patient Encounter Consumer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is <b>REQUIRED</b> to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter's hospital identifier) <b>MUST</b> be included</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• The Filler Order Number is <b>REQUIRED</b>.</li> <li>• It is <b>RECOMMENDED</b> to include the Placer Group Number and/or the Placer Order Number</li> <li>• The values in Filler Order Number, Placer Order Number and Placer Group number <b>MUST</b> be <b>the same</b> used in <b>any</b> other message and transaction related to the same order</li> </ul>
Results information	<ul style="list-style-type: none"> <li>• Specimen Type <b>MUST</b> be included (code at least, description recommended)</li> <li>• Specimen Collection Date/Time <b>MUST</b> be included</li> <li>• Observation Identifier <b>MUST</b> be included</li> <li>• Observation Value <b>MUST</b> be included</li> <li>• Observation Result Status <b>MUST</b> be included, stating that the result notified is a new one in Final status</li> <li>• In case of numeric results, References Range <b>MUST</b> be included, if available, and should be set to the only range that apply to the patient condition (ex. considering age, sex, etc.)</li> <li>• See also details in <u>Microbiology results representation</u></li> </ul>

Order Result Tracker:

- **MUST** process the message and apply data to its database, according to following rules:
  - **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - **MUST**, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). **SHOULD NOT**, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - **MUST** store the results, linking them to the context provided in the message (e.g. Patient, Visit and Order information).

### 1.1.3. HL7 message structure

**Table 9.1. Validated Results Notification - OUL^R22 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)	
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)	
<b>Table 9.2. Specimen Group</b>				
Segment	Meaning	Usage	Notes	
SPM	Specimen information	R	Highlights: SPM.4 (Specimen Type), SPM.17 (Specimen Collection Date/Time)	
<b>Table 9.3. Order + Results Group</b>				
{Group}				
	Segment	Meaning	Usage	Notes
	OBR	Observation Request Segment	R	Highlights: OBR.2 (Placer order Number), OBR.3 (Filler Order Number)  See also details in <a href="#">Microbiology results representation</a>
	ORC	Common Order Segment	R	Highlights: ORC.2 (Placer order Number), ORC.3 (Filler Order Number), ORC.4 (Placer Group Number)
	[TQ1]	Timing/Quantity Segment	O	
{OBX}	Observation Result	R..*	Highlights: OBX.3 (Observation Identifier), OBX.5 (Observation Value), OBX.7 (References Range), OBX.11 (Observation Result Status)  See also details in <a href="#">Microbiology results representation</a>	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

#### 1.1.3.1. Microbiology results representation

Since Microbiology results have a complex, multi-level structure, in the following more details will be given to explain OUL^R22 HL7 message components mapping those information.

It is known that Microbiology results usually rely on three levels of detail of clinical analysis::

- *test result* (e.g. "Positive", "Negative", etc.);
- if the result is positive, a deeper analysis may occur leading to *identified microorganisms* (plus "auxiliary" information, like colony morphology, etc.)
- for each microorganism identified, *antibiotics susceptibility* may be tested

In HL7 messages, this hierarchical structure is represented using groups of OBR-ORC-{OBX} segments linked together, with each group carrying the data of one microbiology result level. To better explain with a schema:

```
MSH| ...
PID| ...

OBR| ... (Res)          -- "test result" group begin
ORC| ... (Res)
{OBX|... (Res, n)}     -- "test result" group end

OBR|... (Micro)        -- "identified microorganisms" group begin
ORC|... (Micro)        -- (includes microorganism-related results, like count, etc.)
{OBX|... (Micro, n)}   -- "identified microorganisms" group end

OBR|... (ATB)          -- "tested antibiotics" group begin
ORC|... (ATB)
{OBX|... (ATB, n)}     -- "tested antibiotics" group end
```

To allow linking of the groups each others, it is assumed that:

- the "test results" group and the "identified microorganisms" group are linked using the *elementary test code*, whose identifier **MUST** be included in both of
  - OBX.3 CE.1 of segment OBX|... (Res, n)
  - OBR.26 of segment OBR|... (Micro)

As an example, see fields highlighted in bold + underline in the example hereafter:

**Example 9.1. Link between Microbiology "test results" and "identified microorganisms"**

```
...
OBR|1||03000583^DN^1-03000583-200611281540|AREMO^Coltura aerobi^DN^AREMO@1^^DN
||200611281540|||010006|||LAB-1|F|^200611281540
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540|
20061128170733||010006|||OB - Ambulatorio Chirurgia
Plastica^^^^^FI^^^AMCHPL9
TQ1|1|||200611281540|R
OBX|1|NM|AREMO^Coltura aerobi^DN^AREMO@1^^DN|Positivo/a||AA||F||
20061128155300|DEMO
OBR|2||03000583^DN^1-03000583-200611281540|LIS_MIC^Microorganismi Identificati^DN
||200611281540|||LAB-1|F|AREMO^^^200611281540|^AREMO
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540|20061128170733
|||OB - Ambulatorio Chirurgia Plastica^^^^^FI^^^AMCHPL9
OBX|1|NM|11475-1^Micro organism identified^LN|1|haeinf^Haemophilus influenzae^DN
||N||F||20061128155300|DEMO
OBX|2|NM|11475-1^Micro organism identified^LN|2|hanano^Hansenula anomala^DN||N
||F||20061128155300|DEMO
OBR|3||03000583^DN^1-03000583-200611281540|LIS_ATB^Antibiotici Testati^DN||
200611281540|||LAB-1|F|AREMO|^200611281540|^AREMO
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540|20061128170733
|||OB - Ambulatorio Chirurgia Plastica^^^^^FI^^^AMCHPL9
OBX|1|SN|cf^Cefalotina^DN|1|>381||S|AB|F||20061128155300|DEMO
OBX|2|SN|tax^Cefotaxime^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|3|SN|ccl^Cefaclor^DN|1|<=8||S|AB|F||20061128155300|DEMO
OBX|4|SN|roxh^Cefuroxime^DN|1|<=4||S|AB|F||20061128155300|DEMO
...
```

- A similar link is created between the "identified microorganisms" group and the "tested antibiotics" group, always using the *elementary test code*, whose identifier **MUST** be included in both of
  - OBX.3 CE.1 of segment OBX|... (Res, n)
  - OBR.26 of segment OBR|... (ATB)

As an example, see fields highlighted in bold + underline in the example hereafter:

**Example 9.2. Link between Microbiology "test results" and "tested antibiotics"**

```

...
OBR|1||03000583^DN^1-03000583-200611281540|AREMO^Coltura aerobi^DN^AREMO@1^^DN
||200611281540|||010006|||LAB-1|F|^200611281540
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540||
20061128170733||010006|||OB - Ambulatorio Chirurgia
Plastica^^^^^FI^^^AMCHPL9
TQ1|1|||200611281540||R
OBX|1|NM|AREMO^Coltura aerobi^DN^AREMO@1^^DN|Positivo/a||AA||F||
20061128155300|DEMO
OBR|2||03000583^DN^1-03000583-200611281540|LIS_MIC^Microorganismi Identificati^DN
||200611281540|||LAB-1|F|AREMO|^200611281540|^AREMO
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540|20061128170733
|||OB - Ambulatorio Chirurgia Plastica^^^^^FI^^^AMCHPL9
OBX|1|NM|11475-1^Micro organism identified^LN|1|haeinf^Haemophilus influenzae^DN
||N||F||20061128155300|DEMO
OBX|2|NM|11475-1^Micro organism identified^LN|2|hanano^Hansenula anomala^DN
||N||F||20061128155300|DEMO
OBR|3||03000583^DN^1-03000583-200611281540|LIS_ATB^Antibiotici Testati^DN
||200611281540|||LAB-1|F|AREMO|^200611281540|^AREMO
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540||
20061128170733|||OB - Ambulatorio Chirurgia Plastica^^^^^FI^^^
AMCHPL9
OBX|1|SN|cf^Cefalotina^DN|1|>381||S|AB|F||20061128155300|DEMO
OBX|2|SN|tax^Cefotaxime^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|3|SN|ccl^Cefaclor^DN|1|<=8||S|AB|F||20061128155300|DEMO
OBX|4|SN|roxh^Cefuroxime^DN|1|<=4||S|AB|F||20061128155300|DEMO
...

```

- The link between an "identified microorganism" and the related "tested antibiotics" (an OBX|... (ATB, n) each) is carried out using the microorganism progressive index, whose value **MUST** be included in both of
  - OBX.4 of segment OBX|... (Micro, n) (one segment for each of the N microorganisms detected, with different progressive index from 1 to N)
  - OBX.4 of segment OBX|... (ATB, n) (one segment for each tested antibiotics; every antibiotic will have OBX.4 filled with the same progressive index of the microorganism is related to)

As an example, see fields highlighted in bold + underline in the example hereafter:

### Example 9.3. Link between Microbiology "identified microorganisms" and "tested antibiotics"

```

...
OBR|2||03000583^DN^1-03000583-200611281540|LIS_MIC^Microorganismi Identificati^DN
|||200611281540|||LAB-1|F|AREMO|^^^200611281540|^AREMO
ORC|SC||03000583^DN^1-03000583-200611281540|CM|^^^200611281540|20061128170733
|||OB - Ambulatorio ChirurgiaPlastica^^^^^FI^^^AMCHPL9
OBX|1|NM|11475-1^Micro organism identified^LN|1|haeinf^Haemophilus influenzae^DN
||N||F||20061128155300|DEMO
OBX|2|NM|11475-1^Micro organism identified^LN|2|hanano^Hansenula anomala^DN
||N||F||20061128155300|DEMO
OBR|3||03000583^DN^1-03000583-200611281540|LIS_ATB^Antibiotici Testati^DN|||
200611281540|||LAB-1|F|AREMO|^^^200611281540|^AREMO
ORC|SC||03000583^DN^1-03000583-200611281540|CM|^^^200611281540|20061128170733
|||OB - Ambulatorio ChirurgiaPlastica^^^^^FI^^^AMCHPL9
OBX|1|SN|cf^Cefalotina^DN|1|>381||S|AB|F||20061128155300|DEMO
OBX|2|SN|tax^Cefotaxime^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|3|SN|ccl^Cefaclor^DN|1|<=8||S|AB|F||20061128155300|DEMO
OBX|4|SN|roxh^Cefuroxime^DN|1|<=4||S|AB|F||20061128155300|DEMO
OBX|5|SN|c^Cloramfenicolo^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|6|SN|am^Ampicillina^DN|1|<=1||S|AB|F||20061128155300|DEMO
OBX|7|SN|sxt^Trimetoprin/Sulfam.^DN|1|<=0.5||S|AB|F||20061128155300|DEMO
OBX|8|SN|ofx^Ofloxacina^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|9|SN|tet^Tetraciclina^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|10|SN|amc^Amoxicillina/A.CLAV.^DN|1|<=4||S|AB|F||20061128155300|DEMO
OBX|11|SN|rif^Rifampicina^DN|1|<=1||S|AB|F||20061128155300|DEMO
OBX|12|SN|cf^Cefalotina^DN|2||R|AB|F||20061128155300|DEMO
OBX|13|SN|cfu^Cefuroxime^DN|2||S|AB|F||20061128155300|DEMO
OBX|14|SN|cc^Clindamicina^DN|2|>= 100||S|AB|F||20061128155300|DEMO
OBX|15|SN|cxt^Co-Trimoxazolo^DN|2|> 200||S|AB|F||20061128155300|DEMO
OBX|16|SN|e^Eritromicina^DN|2|>=2.5||S|AB|F||20061128155300|DEMO
OBX|17|SN|gm^Gentamicina^DN|2||I|AB|F||20061128155300|DEMO
OBX|18|SN|ox^Oxacillina^DN|2||R|AB|F||20061128155300|DEMO
OBX|19|SN|peng^Penicillina G^DN|2||R|AB|F||20061128155300|DEMO
...

```

Despite HL7 standard would suggest a different approach, for the sake of easiness all the antibiotics tested on all the microorganisms identified of a single elementary microbiology test are included in the same OBR-ORC-{OBX} group.

- Finally, a common link among the three groups is introduced, by using the identifier of the *complex test* that MUST be included in all of
- OBR.4 CE.1 of segment OBR|... (Res)
- OBR.29 EIP.2 EI.1 of segment OBR|... (Micro)
- OBR.29 EIP.2 EI.1 of segment OBR|... (ATB)

As an example, see fields highlighted in bold + underline in the example hereafter:

### Example 9.4. Link between Microbiology "test results", "identified microorganisms" and "tested antibiotics"

```

...
OBR|1||03000583^DN^1-03000583-200611281540|AREMO^Colturaaerobi^DN^AREMO@1^^DN
||200611281540|||010006|||LAB-1|F|^200611281540
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540|20061128170733
||010006|||OB - Ambulatorio Chirurgia Plastica^^^^^FI^^^AMCHPL9
TQ1|1|||200611281540|R
OBX|1|NM|AREMO^Coltura aerobi^DN^AREMO@1^^DN|Positivo/a||AA||F||20061128155300
|DEMO
OBR|2||03000583^DN^1-03000583-200611281540|LIS_MIC^Microorganismi Identificati^DN
||200611281540|||LAB-1|F|AREMO|^200611281540|^AREMO
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540|20061128170733
|||OB - Ambulatorio Chirurgia Plastica^^^^^FI^^^AMCHPL9
OBX|1|NM|11475-1^Micro organism identified^LN|1|haeinf^Haemophilus influenzae^DN
||N||F||20061128155300|DEMO
OBX|2|NM|11475-1^Micro organism identified^LN|2|hanano^Hansenula anomala^DN
||N||F||20061128155300|DEMO
OBR|3||03000583^DN^1-03000583-200611281540|LIS_ATB^Antibiotici Testati^DN
||200611281540|||LAB-1|F|AREMO|^200611281540|^AREMO
ORC|SC|03000583^DN^1-03000583-200611281540|CM|^200611281540|20061128170733
|||OB - Ambulatorio Chirurgia Plastica^^^^^FI^^^AMCHPL9
OBX|1|SN|cf^Cefalotina^DN|1|>381||S|AB|F||20061128155300|DEMO
OBX|2|SN|tax^Cefotaxime^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|3|SN|ccl^Cefaclor^DN|1|<=8||S|AB|F||20061128155300|DEMO
OBX|4|SN|roxh^Cefuroxime^DN|1|<=4||S|AB|F||20061128155300|DEMO
OBX|5|SN|c^Cloramfenicolo^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|6|SN|am^Ampicillina^DN|1|<=1||S|AB|F||20061128155300|DEMO
OBX|7|SN|sxt^Trimetoprin/Sulfam.^DN|1|<=0.5||S|AB|F||20061128155300|DEMO
OBX|8|SN|ofx^Ofloxacina^DN|1|<=2||S|AB|F||20061128155300|DEMO
OBX|9|SN|tet^Tetraciclina^DN|1|<=2||S|AB|F||20061128155300|DEMO
...

```

## 1.2. Modified Results Notification

### 1.2.1. Trigger Event

This use case is triggered on the Order Filler when one or more results, previously notified, have been modified. New values must be notified to the Order Result Tracker.

To be noted that this use case MAY combine notification of results corrections and notifications of new results, applying the rules of the [Validated Results Notification](#) use case.

### 1.2.2. Expected Actions

The use case management is basically the same of previous [Validated Results Notification](#) use case.

The only significant difference is that, in modified results data, Observation Result Status MUST be included stating that the Observation Value is the *Correction* of a previously notified result.

---

# **Part IV. Radiology Management**

## ***Use cases***



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# Chapter 10. Radiology Order Management overview

The Radiology Order Management is about the management of orders to the Radiology department; it is inspired by the IHE **Scheduled Workflow** Integration Profile of the *IHE Radiology Integration Framework* [IHE-RAD-TF], of which it implements the following transactions:

- RAD-2: Placer Order Management
- RAD-3: Filler Order Management

We will refer to above transaction as two different **scenarios**: Placer Order Management and Filler Order Management

For more informations concerning localizations for CRS-SISS regional project, refer to CRS-SISS technical documentation [CRS-SISS-HL7]

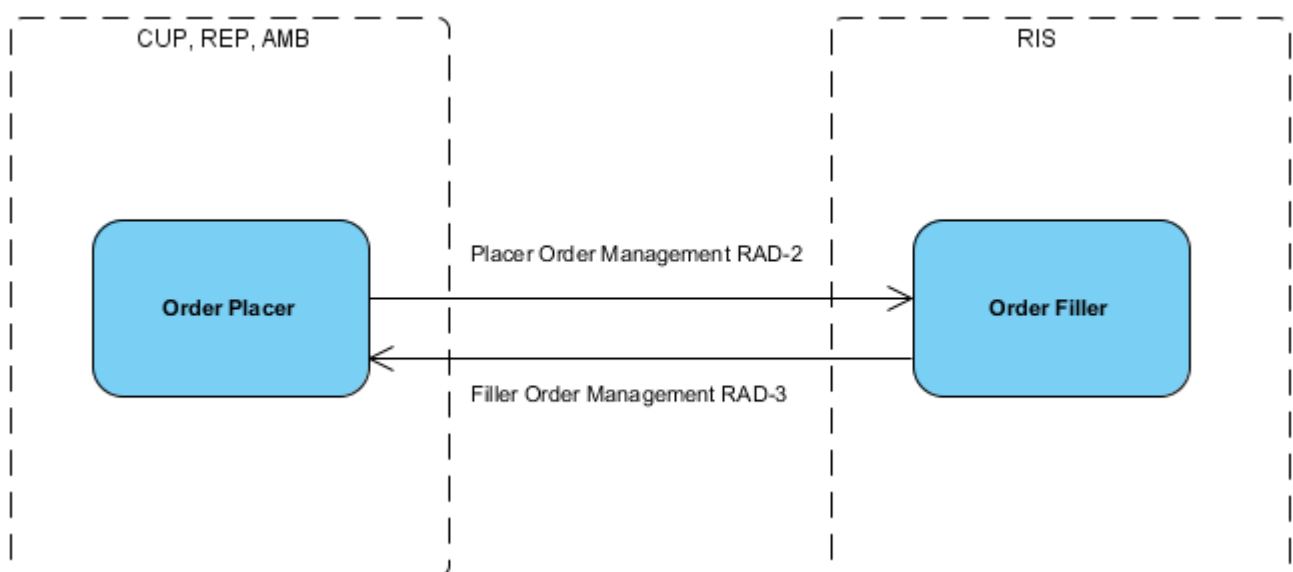
## 1. Actors

Two actors are involved in Radiology Order Management, having different roles depending on the scenario in which they are participating:

- *Placer Order Management scenario*
  - **Order Placer**: Places orders and order cancelations to the Order Filler
  - **Order Filler**: Receives and processes (fills) orders and cancellations from the Order Placer
- *Filler Order Management scenario*
  - **Order Filler**: Creates new or cancels existing orders; sends notifications of order status to the Order Placer.
  - **Order Placer**: Receives new order and order cancellation requests from Order Filler. Receives Order Status updates from Order Filler.

## 2. Process Flow

The following schema shows a general process flow in Radiology Order Management.



All of the Actors **are assumed to be provided with up-to-date patient demographic and encounter data**, thus no specific patient or encounter management transactions will be covered. Such functionalities SHOULD be

achieved by "grouping" actors in current integration profile with appropriate actors of the [Patient Administration Management](#) integration profile, and applying its rules. Nonetheless, basic specifications for patient identity and encounter management will be also given as a workaround in case this is not possible.

### 3. Glossary and definitions

- **Prescription:** is defined as the paper that originates the order and identifies the required services. Prescriptions are strictly related with billing, but they have also legal implications, as they may indicate that the prescriber takes responsibility for the clinical care of the patient. Every order can be associated to zero, one or more prescriptions, and each prescription can generate one or more orders.

Prescriptions may have a unique identifier; in Italy the identifier of prescriptions filled by general practitioners is called Codice RUR (identificativo ricetta); in CRS-SISS project electronic prescriptions filled by general practitioners are assigned a unique identifier called IUP (Identificativo Univoco della Prescrizione).

- **Order:** An order is a request for the execution of healthcare services. The order has always an unique requesting organization unit (placer) and an unique receiver organization unit (designated filler). An order is identified by a number or code in a placer system (Placer Order Number) and by another number or code in a filler system (Filler Order Number). Both these identifiers must univocally identify the order in the scope of the placer and filler respectively.
- **Requested Service:** health services that are requested with an order. Typically services of a same order belong to the same specialty. If the set of requested services contains more specialties, services are splitted in more orders, each one specific for a specialty.
- **Accession Number:** A user-friendly identifier created by the Order Filler, which identifies an instance of a filler order or imaging service request. It may group one or more requested procedures.
- **Requested Procedure:** unit of work that must be performed by the Order Filler to fulfill a requested service. In the Radiology domain they are identified by a *Study Instance UID*
- **Study Instance UID:** a globally unique identifier for each Requested Procedure. This identifier is used to identify all generated images and other DICOM objects related to a Requested Procedure.

### 4. Communication implementation

The IHE directives are taken into account, thus the use cases described in the following chapters will be implemented by using **HL7 2.5 messages, pipe-separated format**.

For the sake of clarity and easiness of reading, only the segments structure of messages will be described, leaving the detailed specifications of segments and fields contents to *NoemaLife HL7 Integration Policy - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG]. The HL7 messages structure will be described using the syntax explained in [Messages Description Conventions](#) section.

In the following, the description of the use cases will be given from a functional point of view only; details on the low-level HL7 protocol communication issues (e.g. acknowledgments, TCP/IP communication, messages envelopes, etc.) will be covered in section [MLLP Communication Protocol](#).

### 5. Future directions

At the date of release of this document, the following issues and items are *not supported* and identified as possible future document's enhancements and extensions:

- Structured Radiology Report export ([IHE-RAD-TF]), transaction RAD-28 (ORU^R01)
- Appointment Notification ([IHE-RAD-TF]), transaction RAD-48 (SIU messages)

---

# Chapter 11. Radiology Placer Order Management

Radiology Placer Order Management is a **partial** implementation of RAD-1 transaction of the *IHE Laboratory Integration Framework* [IHE-RAD-TF].

In this scenario, the Order Placer will *place a new order* to the Order Filler. The Order Placer will be able to *cancel the order* until the Order filler starts processing it. Order Placer will be allowed to make *modifications* to a placed order, only by cancelling the initial order and placing the new order.



We assume that the order placed by the Order Placer contains only radiology services, that is services for different diagnostic systems (e.g. Cardiology) will be placed into separate orders.

The following use cases will be considered and managed for the Placer Order Management scenario:

- Request Radiology Order
- Book Radiology Order
- Cancel Radiology Order
- Update Radiology Order

## 1. Request Radiology Order

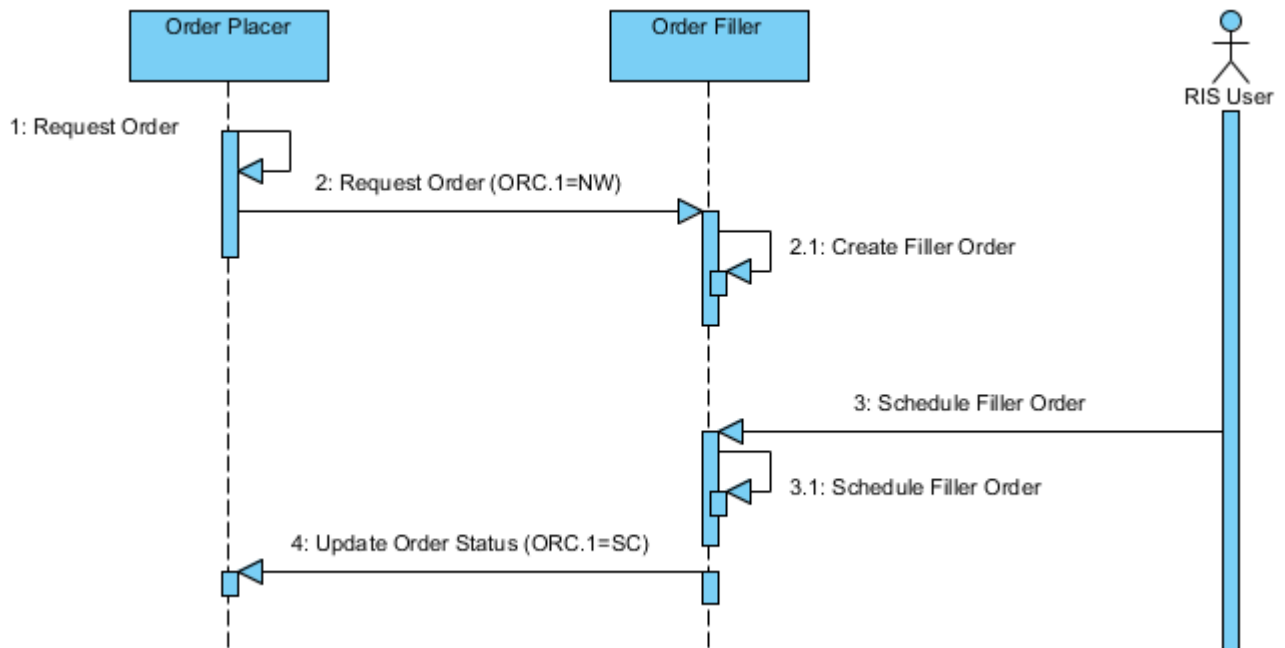
### 1.1. Trigger Event

An application playing the role of Order Placer (e.g. CUP, Ward Order Entry), places a new order to the Radiology system asking for the execution of one or more radiology services, for inpatients or outpatients. The Radiology system creates a Filler order with associated requested procedures (studies) fulfilling the requested services. Then the Filler Order is available to RIS users for scheduling (i.e. confirm/assign execution times and modalities).

After the Order has been scheduled by the Order Filler, a message is sent to the Order Placer informing that the order has been scheduled.

Since in some cases the order message might be the only source of patient's demographic and visit data for the order filler, it is important that the order palcer fills both PID and PV1 segments.

The use case is represented in the following diagram:



## 1.2. Expected Actions

Order Placer:

- After creation of a new Order (Placer Order), MUST compose and send an HL7 2.5 **ORM^O01** message, including the required services
- The message content MUST allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers MUST be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Filler</li> <li>• All the person identifiers sent MUST be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is RECOMMENDED to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) MUST be included</li> <li>• It is RECOMMENDED to include in the message <b>all</b> the available visit information about the person.</li> </ul>
Order information	<ul style="list-style-type: none"> <li>• Order start date/time or exam date/time MUST be included in the “Quantity/Timing” field of both the ORC and OBR segments.</li> </ul>

- It is RECOMMENDED to receive an Update Radiology Order Status (ORM^O01) message delivering scheduling informations, as described in the Radiology Filler Order Management. **Note:** for CRS-SISS projects, an ORR^O02 might be required instead of ORM^O01

Order Filler:

- MUST process the message and apply data to its database, according to following rules:
  - MUST, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances

or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).

- **MUST**, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). **SHOULD NOT**, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
- If the Placer Order is valid (e.g. all required services are valid,...), **MUST** create a new order inside the database (Filler Order) with associated procedures fulfilling the requested services, linking it to the context provided in the message (e.g. Patient, Visit, Placer Order).
- If the Placer Order is **NOT** valid (e.g. some requires services are unknown to the Filler system,...), **MUST** discard the order and raise an error condition
- It is **RECOMMENDED** to compose and send an Update Radiology Order Status(ORM^O01) message delivering scheduling informations, as described in the Radiology Filler Order Management. **Note:** for CRS-SISS projects, an ORR^O02 might be required instead of ORM^O01

### 1.3. HL7 message structure

**Table 11.1. Request Radiology Order - ORM^O01 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)	
[PD1]	Additional demographic	O		
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)	
[PV2]	Patient Visit – Additional Info	O		
{Group}	<b>Table 11.2. Common Order Group</b>			
	Segment	Meaning	Usage	Notes
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=NW, ORC.2 (Placer order Number), ORC.7 (Quantity/Timing)
OBR	Observation Request Segment	R	Highlights: OBR.2 (Placer order Number), OBR.4 (Universal Service Identifier), OBR.27 (Quantity/Timing)	

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 2. Book Radiology Order

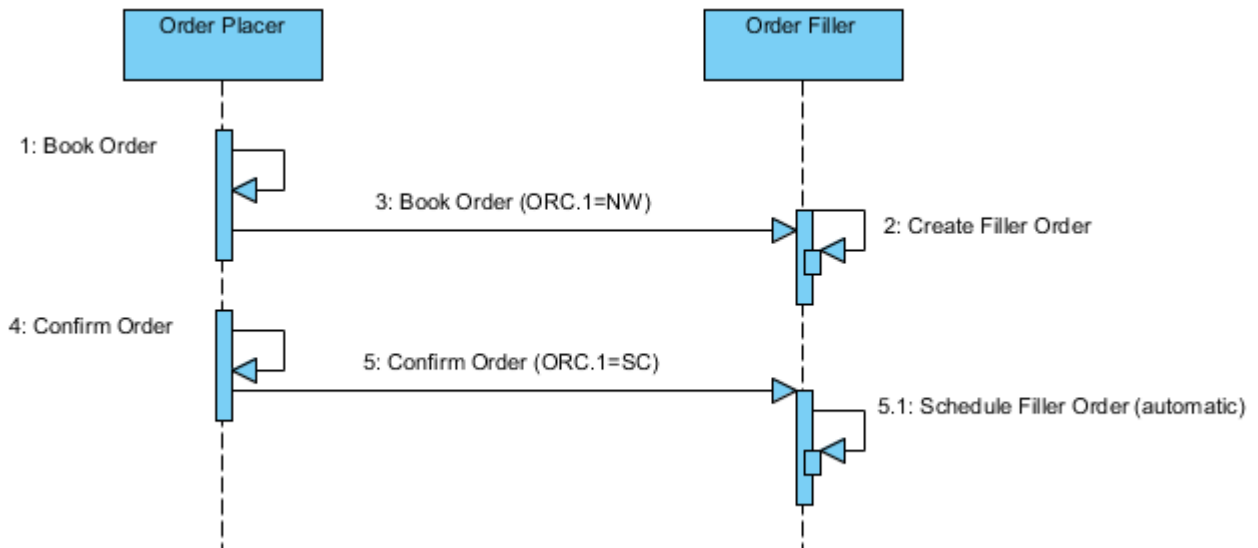
### 2.1. Trigger Event

This is an extension of the Request Radiology Order use case, allowing the order Placer to perform a two-steps Order Request & Confirm for booking first and later confirming an order, as described in the following:

1) Book Radiology Order: like in the Request Radiology Order use case, the Order Placer sends an Order to the order Filler in order to book an Order without scheduling it;

2) Confirm Radiology Order: the Order Placer sends a second message to the Order Filler to confirm the order previously booked (for example, after an Encounter has been registered for the patient at the hospital); the Order Filler performs automatic scheduling (based either on scheduling informations - time and modalities - that the order placer may specify in the OBR segment, or on the Order Filler configuration preferences).

The use case is represented in the following diagram:



## 2.2. Expected Actions

Order Placer:

- MUST *Book a new order* via an HL7 2.5 **ORM^O01** message with ORC.1=NW, following the rules stated for the use case Request Radiology Order
- MUST *Confirm the order* via an HL7 2.5 **ORM^O01** message with ORC.1=SC, following the rules stated for the use case Request Radiology Order with following additional rules:
  - the Order Placer Number (ORC-2 and OBR-2) MUST be the same as specified in the Book Radiology Order message

Order Filler:

- MUST process the *Book Radiology Order* message according to the rules stated for the use case Request Radiology Order
- MUST process the *Confirm Radiology Order* according to the following rules:
  - MUST schedule the Order, assigning execution time and modalities to required procedures
  - In case the Order is not available in the database, the message SHOULD be discarded raising at most a warning or a non blocking error

## 2.3. HL7 message structure

Refer to the message structures for the Request Radiology Order message

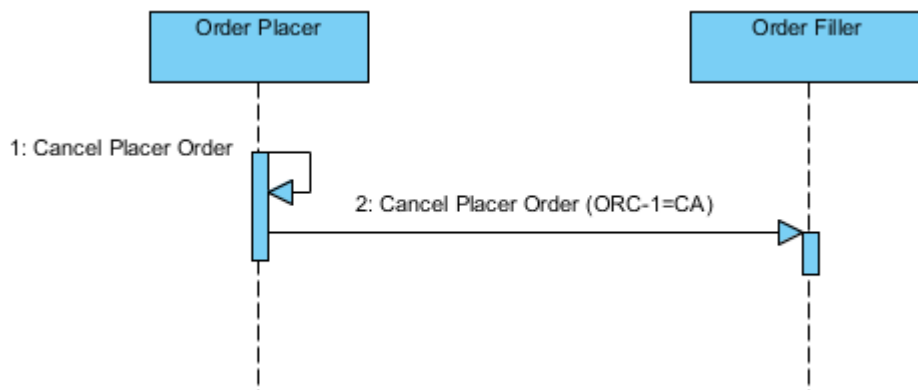
## 3. Cancel Radiology Order

### 3.1. Trigger Event

An Order Placer sends a request to the Radiology system asking for the cancellation of a previously required order that has not already been started. The Radiology system accepts the request and cancels the order.

The use case does not allow for partial cancellation of orders: the whole order with all required services will be cancelled.

The use case is represented in the following diagram:



### 3.2. Expected Actions

Order Placer:

- To deliver an order cancellation request to the Order Filler, **MUST** compose and send an HL7 2.5 **ORM^O01** message, including the required services
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Filler;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order Information	<ul style="list-style-type: none"> <li>• The Placer Order Number to be cancelled <b>MUST</b> be specified</li> <li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li> </ul>

Order Filler:

- **MUST** process the message and apply data to its database, according to following rules:
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order informations, if already existent
- In case the Order is not available in the database, the message **SHOULD** be discarded raising at most a warning or a non blocking error



- In case the Order is already in progress and the Order Filler is not able to accept the cancellation request, MUST raise an error condition to be notified back to the Order Placer via the acknowledge message.
- In case the Order Filler is able to accept the cancellation request, MUST cancel the order stopping any further processing, and guarantee traceability and reversibility of the operation, whether it is logical or physical

### 3.3. HL7 message structure

**Table 11.3. Cancel Radiology Order - ORM^O01 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number)
ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control) = CA, ORC.2 (Placer Order Number), ORC.3 (Filler Order Number),

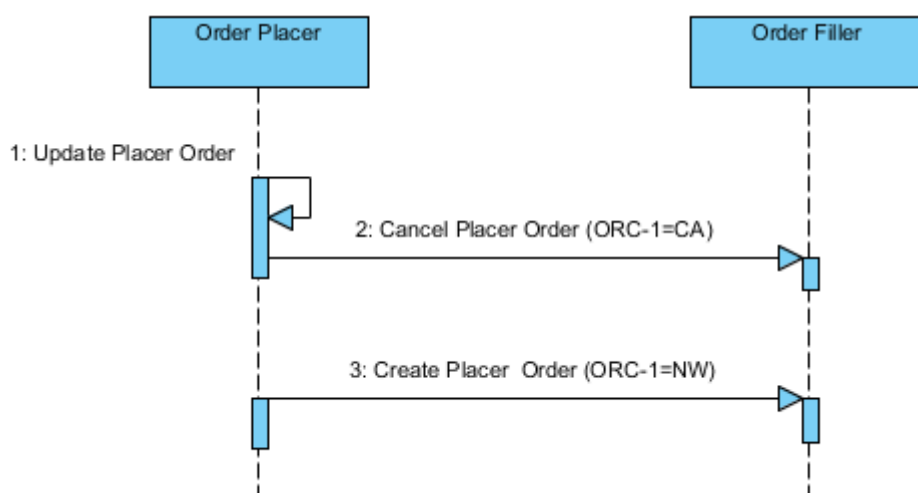
Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 4. Update Radiology Order

### 4.1. Trigger Event

An Order Placer needs to change a previously accepted Order, for example to add or delete one or more services, that has not already been started by the Order Filler (i.e. an Order Status Update with ORC-5=IP should not have been notified by the Order Filler via the Update Radiology Order Status message. This use case can be fulfilled in two steps: first the Order Placer sends a cancellation request for the Order that needs to be changed, then it sends a new order with the complete list of services that are required.

The use case is represented in the following diagram:



### 4.2. Expected Actions

Order Placer:

- MUST *cancel the order* that needs to be updated via an HL7 2.5 **ORM^O01** message, following the rules stated for the use case Cancel Radiology Order
- MUST *create a new order* via an HL7 2.5 **ORM^O01** message, following the rules stated for the use case Request Radiology Order, with following additional rules:
  - the new Order MUST have a different Placer Order Number than the old order (ORC-2 and OBR-2)
  - the new Order MAY have the same or different Placer Group Number (ORC-4)

Order Filler:

- MUST process the *cancel message* according to the rules stated for the use case Cancel Radiology Order
- MUST process the *new order message* according to the rules stated for the use case Request Radiology Order

### **4.3. HL7 message structure**

Refer to the message structures for the Cancel Radiology Order message and Request Radiology Order message

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# Chapter 12. Radiology Filler Order Management

Radiology Filler Order Management is a **partial** implementation of RAD-2 transaction of the *IHE Laboratory Integration Framework* [IHE-RAD-TF].

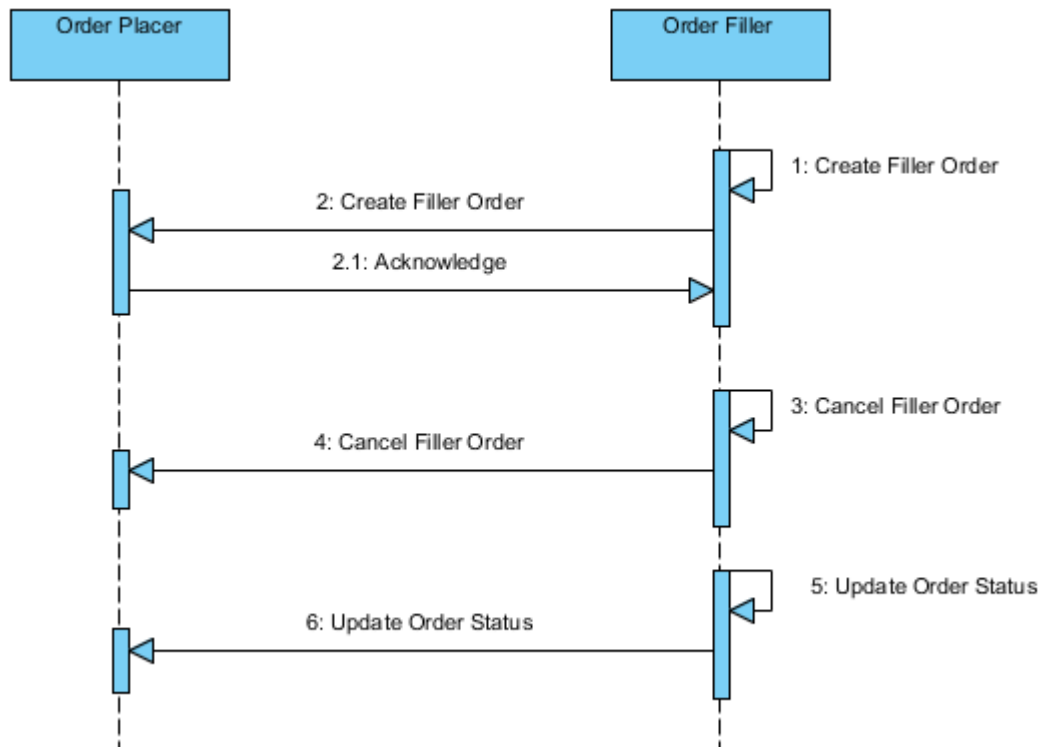
This scenario is used by the Order Filler to inform the Order Placer about the orders it creates and cancels, including the status of the orders it is fulfilling. If the Order Filler needs to change an order, it has to do so as a combination of Order Cancel followed by New Order.



The following use cases will be considered and managed for the Filler Order Management scenario:

- Create Radiology Filler Order
- Cancel Radiology Filler Order
- Update Radiology Order Status

Above use cases are represented in the following sequence diagram:



# 1. Create Radiology Filler Order

## 1.1. Trigger Event

A new Order is entered at the Radiology system (Order Filler); the Radiology sends a message to the Order Placer to inform about it, then the Order Placer replies sending the Placer Order Number.

## 1.2. Expected Actions

Order Filler:

- After creation of a new Order (Filler Order), MUST compose and send an HL7 2.5 **ORM^O01** message, with ORC-1=SN and ORC-3= Filler Order Number
- The message content MUST allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers MUST be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Placer;</li> <li>• All the person identifiers sent MUST be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is RECOMMENDED to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) MUST be included</li> <li>• It is RECOMMENDED to include in the message <b>all</b> the available visit information about the person.</li> </ul>

- MUST receive an HL7 2.5 **ORR^O02** *Synchronous application acknowledge* message from the Order Placer, informing about the result of the request; if the result is successful, MUST store the Placer Order Number in the order record

Order Placer:

- MUST process the message and apply data to its database, according to the following rules:
  - MUST, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. SHOULD NOT, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - MUST, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). SHOULD NOT, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - If the Filler Order is valid (e.g. all services are valid,...), MUST create a new order inside the database (Placer Order) with requested services, linking it to the context provided in the message (e.g. Patient, Visit, Filler Order).

- If the Filler Order is NOT valid (e.g. some services are unknown to the Placer system,...), SHOULD raise an error condition.
- MUST compose and send an *Synchronous application acknowledge* using the HL7 2.5 **ORR^O02** message with the result for the Order creation (i.e. failed or successful), and, when successful, an ORC segment with ORC-1=NA and ORC-2=Placer Order Number.

## 1.3. HL7 message structure

**Table 12.1. Create Radiology Filler Order - ORM^O01 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)	
[PD1]	Additional demographic	O		
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)	
[PV2]	Patient Visit – Additional Info	O		
{ Group }	<b>Table 12.2. Common Order Group</b>			
	Segment	Meaning	Usage	Notes
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=SN, ORC.3 (Filler order Number)
OBR	Observation Request Segment	R	Highlights: OBR.3 (Filler Order Number), OBR.4 (Universal Service Identifier), OBR.27 (Quantity/Timing)	

**Table 12.3. ACK - ORR^O02 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
MSA	Message Acknowledgment	R	Highlights: MSA.1 (Acknowledgment Code), MSA.2 (Message Control ID)
[ERR]	Error Segment	<b>RC</b>	<b>Conditions:</b> Required for notification of Error
[ORC]	Common Order Segment	<b>RC</b>	<b>Conditions:</b> Required for notification of Success Highlights: ORC.1 (Order Control)=NA, ORC.2 (Placer Order Number), ORC.3 (Filler Order Number)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 2. Cancel Radiology Filler Order

### 2.1. Trigger Event

The Order Filler (Radiology system) sends a notification to the Order Placer system informing about the cancellation of a previously accepted Order. The Order Placer system accepts the request and cancels the order.

## 2.2. Expected Actions

Order Filler:

- To deliver an order cancellation notification to the Order Placer, **MUST** compose and send an HL7 2.5 **ORM^O01** message, with ORC-1=OC
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Placer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers;</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order Information	<ul style="list-style-type: none"> <li>• The Placer Order Number <b>MUST</b> be specified</li> <li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li> </ul>

Order Placer:

- **MUST** process the message and apply data to its database, according to following rules:
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order informations, if already existent
  - In case the Order is not available in the database, the message **SHOULD** be discarded raising at most a warning or a non blocking error
  - **MUST** guarantee traceability and reversibility of the operation, whether it is logical or physical

## 2.3. HL7 message structure

**Table 12.4. Cancel Radiology Filler Order - ORM^O01 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number)
ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control) = OC, ORC.2 (Placer Order Number), ORC.3 (Filler Order Number),

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 3. Update Radiology Order Status

### 3.1. Trigger Event

During fulfillment of an Order, the Order Filler performs an unsolicited notification to the Order Placer about changes in the status of the order and required services.

Depending on the system that is playing the role of Order Placer:

- it may be needed to communicate only a subset of available Order status changes:

for example, an Order Placer for Outpatients (e.g: CUP application) typically needs to be notified only when a service is complete, whereas an Emergency or a Ward application is interested in knowing that there are results available as soon as they're ready.

- it may be required to notify not only the status of the order, but to communicate the complete list of required and supplied service, together with their status:

for example, if the Order Placer application is responsible on behalf of the Order Filler for the data flow of supplied services for reimbursement purposes, when the order completes it is required that the Order Filler delivers to the Order Placer the list of supplied services.

## 3.2. Expected Actions

Order Filler:

- To deliver an order status change notification to the Order Placer, **MUST** compose and send an HL7 2.5 **ORM^O01** message, with ORC-1=SC
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Placer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order Information	<ul style="list-style-type: none"> <li>• The Placer Order Number <b>MUST</b> be specified</li> <li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li> </ul>

- **MUST** be able to notify at least the following events (ref. IHE):
  - Order In Progress (ORC-5=IP): when the first Performed Procedure Step corresponding to the Order has been created
  - Order Completed (ORC-5=CM): when the complete, verified report is available for the given order
- It is **RECOMMENDED** to be able to notify:
  - Order scheduled (ORC-5=SC) event
  - Partial Results available (ORC-5=A) event
- If an order is being created by the Order Filler, Order Status Update message **MUST NOT** be issued until New Order message has been sent by the Order Filler (ref.IHE)
- **MUST** be able to provide, along with an Order Completed notification, the list of required and supplied services in the OBR segment

Order Placer:

- **MUST** process the message and apply data to its database, according to following rules:
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order informations, if already existent

- In case the Order is not available in the database, the message SHOULD be discarded raising at most a warning or a non blocking error.

### 3.3. HL7 message structure

*Note:* Though not stated by IHE, we require mandatory PID, PV1 and OBR segments

**Table 12.5. Order Update Status - ORM^O01 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)

Table 12.6. Common Order Group				
	Segment	Meaning	Usage	Notes
{Group}	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=SC, ORC.2 (Placer order Number), ORC.3 (Filler order Number), ORC.5 (Order Status)
	OBR	Observation Request Segment	R	Highlights: OBR.2 (Placer Order Number), OBR.3 (Filler Order Number), OBR.4 (Universal Service Identifier), OBR.27 (Quantity/Timing)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.



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# **Part V. Generic Order Management**

## ***Use cases***

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# Chapter 13. General Clinical Order Management overview

The General Clinical Order Management is about the management of orders for Ambulatory patients; it is inspired by the IHE **Scheduled Workflow** Integration Profile of the *IHE Radiology Integration Framework, version 11* [IHE-RAD-TF\_11], of which implements the following transactions:

- RAD-2: Placer Order Management
- RAD-3: Filler Order Management

We will refer to above transaction as two different **scenarios**: Placer Order Management and Filler Order Management.

The use cases for the General Clinical Order Management keep strong similarity to the ones for Radiology Order Management; the main implementation difference with Radiology is the set of HL7 messages used: here we use OMG, in Radiology we use ORM.

For more informations concerning localizations for CRS-SISS regional project, refer to CRS-SISS technical documentation [CRS-SISS-HL7]

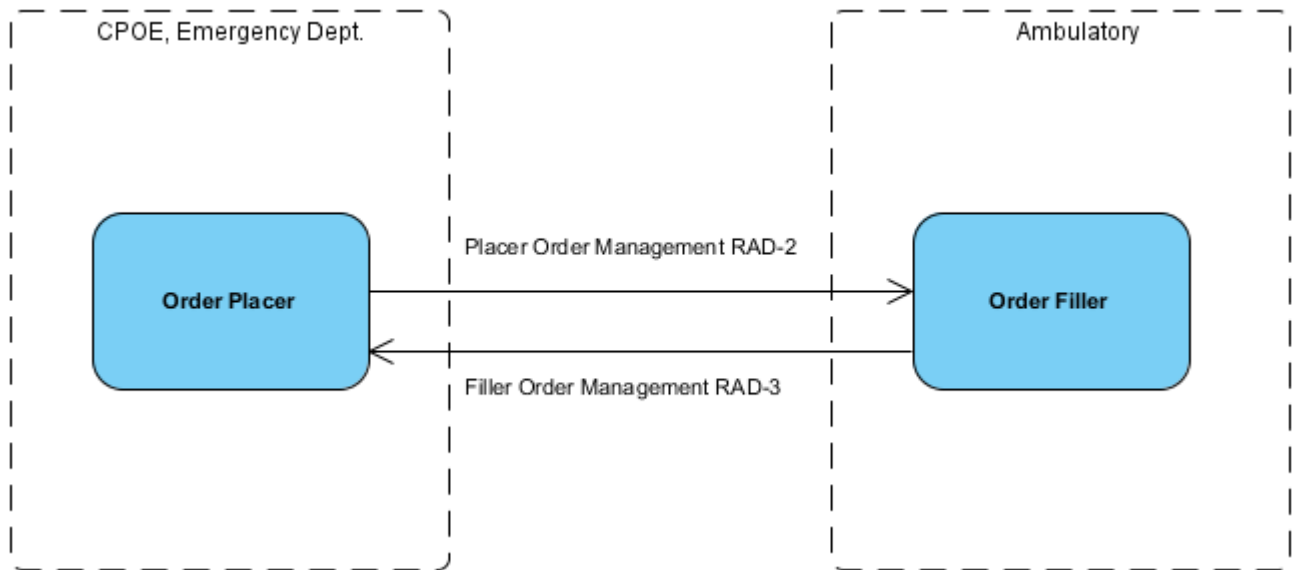
## 1. Actors

Two actors are involved in General Clinical Order Management, having different roles depending on the scenario in which they are participating:

- *Placer Order Management scenario*
  - **Order Placer**: Places orders and order cancelations to the Order Filler
  - **Order Filler**: Receives and processes (fills) orders and cancellations from the Order Placer
- *Filler Order Management scenario*
  - **Order Filler**: Creates new or cancels existing orders; sends notifications about changes in order status to the Order Placer.
  - **Order Placer**: Receives new order and order cancellation requests from Order Filler. Receives Order Status updates from Order Filler.

## 2. Process Flow

The following schema shows a general process flow in General Clinical Order Management.



All of the Actors **are assumed to be provided with up-to-date patient demographic and encounter data**, thus no specific patient or encounter management transactions will be covered. Such functionalities SHOULD be achieved by "grouping" actors in current integration profile with appropriate actors of the Patient Administration Management integration profile, and applying its rules. Nonetheless, basic specifications for patient identity and encounter management will be also given as a workaround in case this is not possible.

### 3. Glossary and definitions

- **Prescription:** is defined as the paper that originates the order and identifies the required services. Prescriptions are strictly related with billing, but they have also legal implications, as they may indicate that the prescriber takes responsibility for the clinical care of the patient. Every order can be associated to zero, one or more prescriptions, and each prescription can generate one or more orders (that is, there is a n:m relation between prescriptions and orders).

Prescriptions may have a unique identifier; in Italy the identifier of prescriptions filled by general practitioners is called Codice RUR (identificativo ricetta); in CRS-SISS project electronic prescriptions filled by general practitioners are assigned a unique identifier called IUP (Identificativo Univoco della Prescrizione).

- **Order:** An order is a request for the execution of healthcare services. The order has always an unique requesting organization unit (placer) and an unique receiver organization unit (designated filler). An order is identified by a number or code in a placer system and by a number or code in a filler system. Both these identifiers must univocally identify the order in the scope of the placer and filler respectively.
- **Requested Service:** health services that are requested with an order. Typically services of a same order belong to the same clinical specialty. If the set of requested services contains more specialties, services are splitted in more orders, each one specific for a specialty.

### 4. Communication implementation

The IHE directives are taken into account, thus the use cases described in the following chapters will be implemented by using **HL7 2.5 messages, pipe-separated format**.

For the sake of clarity and easiness of reading, only the segments structure of messages will be described, leaving the detailed specifications of segments and fields contents to *NoemaLife HL7 Integration Policy - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG]. The HL7 messages structure will be described using the syntax explained in Messages Description Conventions section.

In the following, the description of the use cases will be given from a functional point of view only; details on the low-level HL7 protocol communication issues (e.g. acknowledgments, TCP/IP communication, messages envelopes, etc.) will be covered in section MLLP Communication Protocol.

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# Chapter 14. General Placer Order Management

General Placer Order Management is a **partial** implementation of RAD-2 transaction of the *IHE Radiology Integration Framework, version 11* [IHE-RAD-TF\_11].

In this scenario, the Order Placer will *place a new order* to the Order Filler. The Order Placer will be able to *cancel the order* until the Order filler starts processing it. Order Placer will be allowed to make *modifications* to a placed order, only by completely cancelling the initial order and placing the new order.



We assume that an order placed by the Order Placer will be fulfilled by a unique Order Filler, letting services for different Order Fillers to be placed using separate orders.

The following use cases will be considered and managed for the Placer Order Management scenario:

- Request General Order
- Cancel General Order
- Update General Order

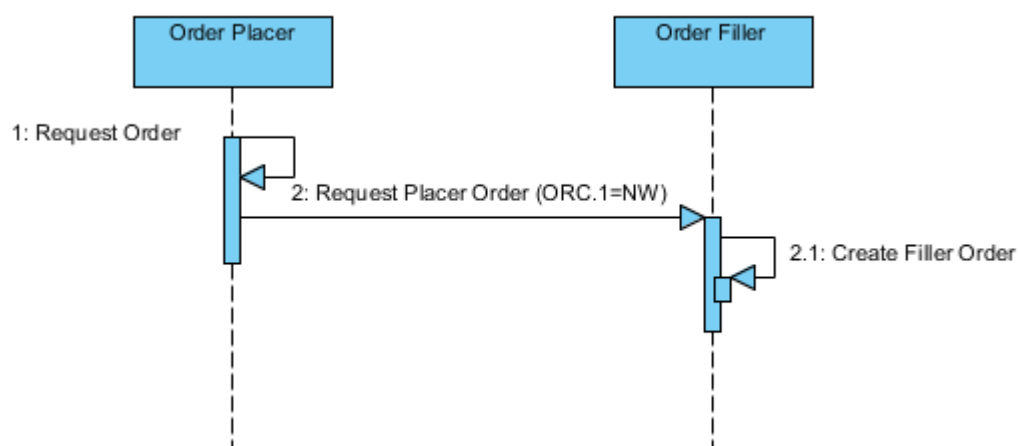
## 1. Request General Order

### 1.1. Trigger Event

An application playing the role of Order Placer (e.g. CPOE, CUP, Emergency Department), places a new order to the Ambulatory system asking for the execution of one of more services, for inpatients or outpatients. The Ambulatory system creates a Filler order fulfilling the requested services.

Since in some cases the order message might be the only source of patient's demographic and visit data for the order filler, it is important that the order palcer fills both PID and PV1 segments.

The use case is represented in the following diagram:



## 1.2. Expected Actions

Order Placer:

- After creation of a new Order (Placer Order), **MUST** compose and send an HL7 2.5 **OMG^O19** message, including the required services
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is essential to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Filler</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available visit information about the person.</li> </ul>

Order Filler:

- **MUST** process the message and apply data to its database, according to following rules:
  - **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - **MUST**, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). **SHOULD NOT**, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - If the Placer Order is valid (e.g. all required services are valid,...), **MUST** create a new order inside the database (Filler Order) with associated procedures fulfilling the requested services, linking it to the context provided in the message (e.g. Patient, Visit, Placer Order).
  - If the Placer Order is **NOT** valid (e.g. some requires services are unknown to the Filler system,...), **MUST** discard the order and raise an error condition

## 1.3. HL7 message structure

**Table 14.1. Request General Order - OMG^O19 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)

Segment	Meaning	Usage	Notes	
[PD1]	Additional demographic	O		
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)	
[PV2]	Patient Visit – Additional Info	O		
{Group}	<b>Table 14.2. Common Order Group</b>			
	Segment	Meaning	Usage	Notes
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=NW, ORC.2 (Placer order Number)
	[TQ1]	Quantity/Timing	O	
	OBR	Observation Request Segment	R	Highlights: OBR.2 (Placer order Number), OBR.4 (Universal Service Identifier)
	[BLG]	Billing Segment	O	Used as "dummy" segment to avoid parsing errors (see segment description for details). Its use is RECOMMENDED.

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 2. Book General Order

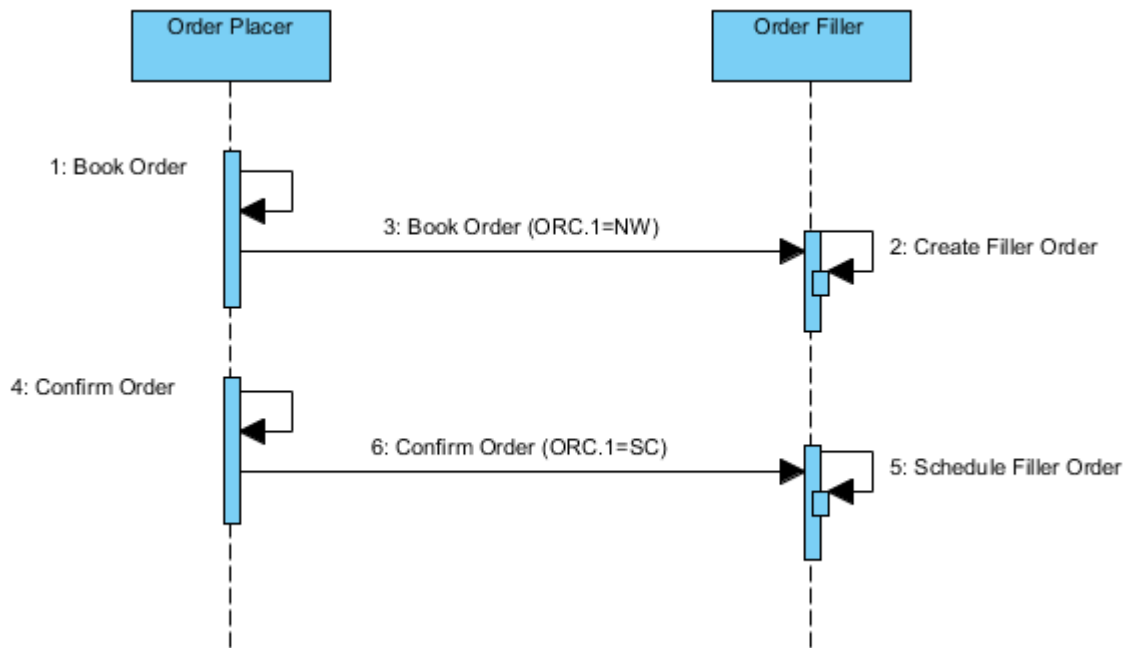
### 2.1. Trigger Event

This is an extension of the Request General Order use case, allowing the order Placer to perform a two-steps Order Request & Confirm for booking first and later confirming an order, as described in the following:

- 1) Book General Order: like in the Request General Order use case, the Order Placer sends a first message to the order Filler in order to book an Order without scheduling it;
- 2) Confirm General Order: after an Encounter has been registered for the patient at the hospital, the Order Placer sends a second message to the Order Filler to confirm and schedule the order previously booked.

The use case is represented in the following diagram:





## 2.2. Expected Actions

Order Placer:

- MUST *Book a new order* via an HL7 2.5 **OMG^O19** message with ORC.1=NW, following the rules stated for the use case Request General Order
- MUST *Confirm the order* via an HL7 2.5 **OMG^O19** message with ORC.1=SC, following the rules stated for the use case Request General Order with following additional rules:
  - the Order Placer Number (ORC-2 and OBR-2) MUST be the same as specified in the Request General Order message

Order Filler:

- MUST process the *Book General Order* message according to the rules stated for the use case Request General Order
- MUST process the *Confirm General Order* according to the following rules:
  - MUST schedule the Order, assigning execution time and modalities to required procedures
  - In case the Order is not available in the database, the message SHOULD be discarded raising at most a warning or a non blocking error

## 2.3. HL7 message structure

Refer to the message structures for the Request General Order message

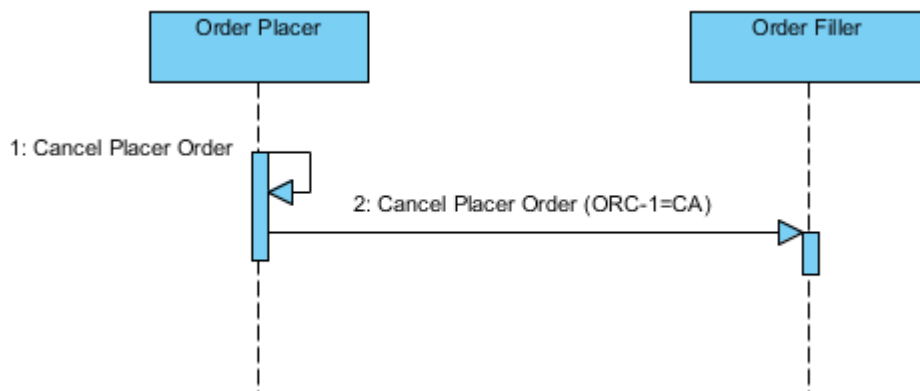
# 3. Cancel General Order

## 3.1. Trigger Event

An Order Placer sends a request to the Order Filler system asking for the cancellation of a previously required order that has not already been started. The Order Filler system accepts the request and cancels the order.

The use case does not allow for partial cancellation of orders: the whole order with all requested services will be cancelled.

The use case is represented in the following diagram:



### 3.2. Expected Actions

Order Placer:

- To deliver an order cancellation request to the Order Filler, **MUST** compose and send an HL7 2.5 **OMG^O19** message, including the required services
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Filler;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order Information	<ul style="list-style-type: none"> <li>• The Placer Order Number to be cancelled <b>MUST</b> be specified</li> <li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li> </ul>

Order Filler:

- **MUST** process the message and apply data to its database, according to following rules:
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order informations, if already existent
  - In case the Order is not available in the database, the message **SHOULD** be discarded raising at most a warning or a non blocking error
  - In case the Order is already in progress and the Order Filler is not able to accept the cancellation request, **MUST** raise an error condition to be notified back to the Order Placer via the acknowledge message.
  - In case the Order Filler is able to accept the cancellation request, **MUST** cancel the order and all of its related services, stopping any further processing, and guarantee traceability and reversibility of the operation, whether it is logical or physical.

### 3.3. HL7 message structure

**Table 14.3. Cancel General Order - OMG^O19 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number)
ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control) = CA, ORC.2 (Placer Order Number), ORC.3 (Filler Order Number),

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

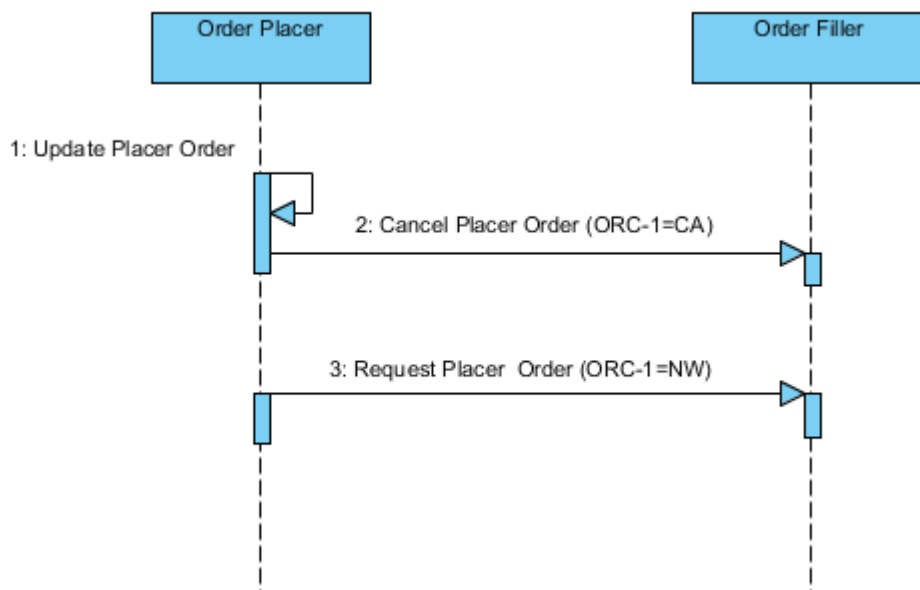
## 4. Update General Order

### 4.1. Trigger Event

An Order Placer needs to change a previously accepted Order, for example to add or delete one or more services, that has not already been started by the Order Filler (i.e. an Order Status Update with ORC-5=IP should not have been notified by the Order Filler ). This use case can be fulfilled in two steps: first the Order Placer sends a cancellation request for the Order that needs to be changed, then it sends a new order with the complete list of services that are required.

As stated in Cancel General Order, it is not allowed to delete a single service requested, but rather the whole order and all of its services are deleted; this implies that, even updating a single service of an order, it is **REQUIRED** to delete the order and all of its services, and then insert a new order including modified and unmodified services.

The use case is represented in the following diagram:



### 4.2. Expected Actions

Order Placer:

- MUST *cancel the order* that needs to be updated via an HL7 2.5 **OMG^O19** message, following the rules stated for the use case Cancel General Order
- MUST *create a new order* via an HL7 2.5 **OMG^O19** message, following the rules stated for the use case Request General Order, with following additional rules:
  - the new Order MUST have a different Placer Order Number than the old order (ORC-2 and OBR-2)
  - the new Order MAY have the same or different Placer Group Number (ORC-4)

Order Filler:

- MUST process the *cancel message* according to the rules stated for the use case Cancel General Order
- MUST process the *new order message* according to the rules stated for the use case Request General Order

### **4.3. HL7 message structure**

Refer to the message structures for the Cancel General Order message and Request General Order message

---

# Chapter 15. General Filler Order Management

General Filler Order Management is a **partial** implementation of RAD-3 transaction of the *IHE Laboratory Integration Framework, version 11* [IHE-RAD-TF\_11].

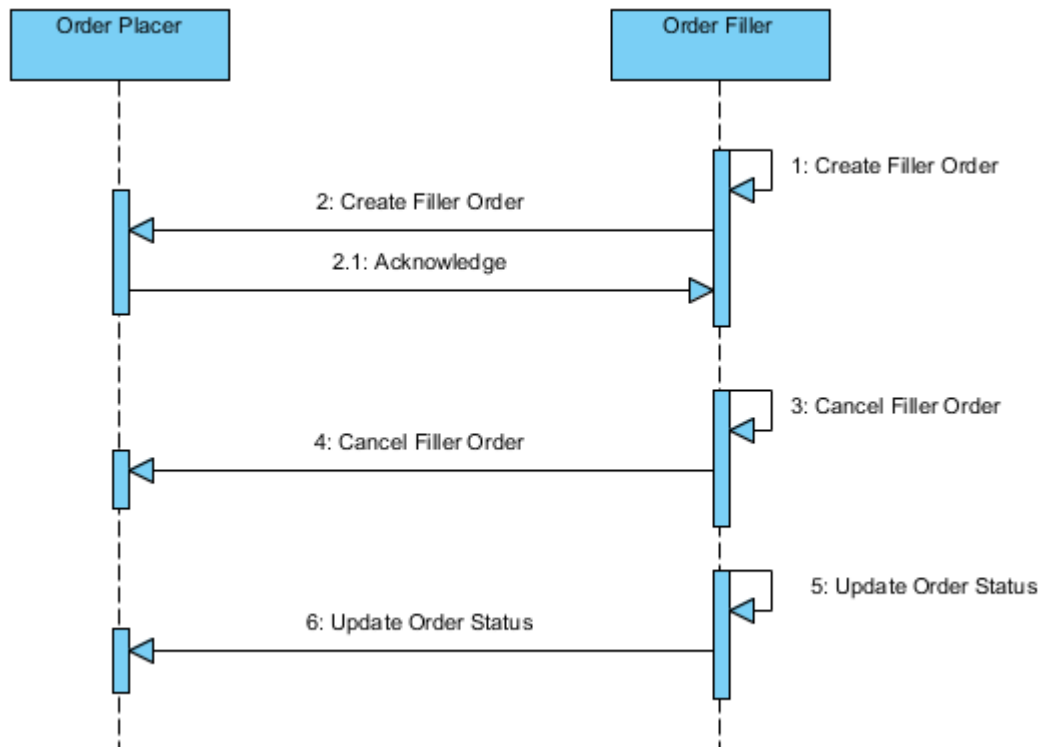
This scenario is used by the Order Filler to inform the Order Placer about the orders it creates and cancels, including the status of the orders it is fulfilling. If the Order Filler needs to change an order, it has to do so as a combination of Cancel Order followed by Create Order.



The following use cases will be considered and managed for the Filler Order Management scenario:

- Create General Filler Order
- Cancel General Filler Order
- Update General Order Status

Above use cases are represented in the following sequence diagram:



# 1. Create General Filler Order

## 1.1. Trigger Event

A new Order is entered at the Ambulatory system (Order Filler); the Ambulatory sends a message to the Order Placer to inform about it, then the Order Placer replies sending the Placer Order Number.

## 1.2. Expected Actions

Order Filler:

- After creation of a new Order (Filler Order), **MUST** compose and send an HL7 2.5 **OMG^O19** message, with ORC-1=SN and ORC-3= Filler Order Number
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Placer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available demographic information about the person.</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> <li>• It is <b>RECOMMENDED</b> to include in the message <b>all</b> the available visit information about the person.</li> </ul>

- **MUST** receive an HL7 2.5 **ORG^O20 Synchronous application acknowledge** message from the Order Placer, informing about the result of the request; if the result is successful, **MUST** store the Placer Order Number in the order record

Order Placer:

- **MUST** process the message and apply data to its database, according to the following rules:
  - **MUST**, in case the person demographic data is not available in the database, register it as a new patient, following the business logic of the Create Person use case. **SHOULD NOT**, in case the person data is somehow already stored in the database, update demographic data; this should be carried out as a separate transaction using the Update Person Information use case. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - **MUST**, in case the encounter data is not available in the database, register it as a new encounter, following the business logic of the encounter registration use case that is appropriate for the patient encounter scenario (available in PV1.2 - Patient Class). **SHOULD NOT**, in case the encounter data is somehow already stored in the database, update the encounter data; this should be carried out as a separate transaction using use case appropriate for the patient's encounter scenario. Nevertheless this may not apply under specific circumstances or by local project agreements (e.g. when the Supplier is considered to be a "reliable" data source, update may occur directly).
  - If the Filler Order is valid (e.g. all services are valid,...), **MUST** create a new order inside the database (Placer Order) with requested services, linking it to the context provided in the message (e.g. Patient, Visit, Filler Order).
  - If the Filler Order is **NOT** valid (e.g. some services are unknown to the Placer system,...), **SHOULD** raise an error condition.

- MUST compose and send a *Synchronous application acknowledge* using the HL7 2.5 **ORG^O20** message with the result for the Order creation (i.e. failed or successful), and, when successful, an ORC segment with ORC-1=NA and ORC-2=Placer Order Number.

### 1.3. HL7 message structure

**Table 15.1. Create General Filler Order - OMG^O19 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)	
[PD1]	Additional demographic	O		
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)	
[PV2]	Patient Visit – Additional Info	O		
<b>Table 15.2. Common Order Group</b>				
{ Group }	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b>	<b>Notes</b>
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=SN, ORC.3 (Filler order Number)
	[TQ1]	Quantity/Timing	O	
	OBR	Observation Request Segment	R	Highlights: OBR.3 (Filler Order Number), OBR.4 (Universal Service Identifier), OBR.27 (Quantity/Timing)
	[{SPM}]	Specimen	O	
	[BLG]	Billing Segment	O	Used as "dummy" segment to avoid parsing errors (see segment description for details). Its use is RECOMMENDED.

**Table 15.3. ACK - ORG^O20 Message structure**

Segment	Meaning	Usage	Notes	
MSH	Message Header	R		
MSA	Message Acknowledgment	R	MSA.1 (Acknowledgment Code), MSA.2 (Message Control ID)	
[{ERR}]	Error Segment	O		
[ORC]	Common Order Segment	O	ORC.1 (Order Control)=NA, ORC.2 (Placer Order Number), ORC.3 (Filler Order Number)	
<b>Table 15.4. Common Order Group</b>				
[ { Group } ]	<b>Segment</b>	<b>Meaning</b>	<b>Usage</b>	<b>Notes</b>
	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=NA, ORC.2 (Placer Order Number), ORC.3 (Filler Order Number)
	[OBR]	Observation Request Segment	O	Highlights: OBR.2 (Placer order Number), OBR.3 (Filler order Number), OBR.4 (Universal Service Identifier)

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 2. Cancel General Filler Order

### 2.1. Trigger Event

The Order Filler (Ambulatory system) sends a notification to the Order Placer system informing about the cancellation of a previously accepted Order. The Order Placer system accepts the request and cancels the order.

### 2.2. Expected Actions

Order Filler:

- To deliver an order cancellation notification to the Order Placer, **MUST** compose and send an HL7 2.5 **OMG^O19** message, with ORC-1=OC
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Placer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers;</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order Information	<ul style="list-style-type: none"> <li>• The Placer Order Number <b>MUST</b> be specified</li> <li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li> </ul>

Order Placer:

- **MUST** process the message and apply data to its database, according to following rules:
  - **SHOULD NOT** insert a new Patient, a new Visit and a new Order, if not existent
  - **SHOULD NOT** update Patient, Visit or Order informations, if already existent
  - In case the Order is not available in the database, the message **SHOULD** be discarded raising at most a warning or a non blocking error
  - **MUST** guarantee traceability and reversibility of the operation, whether it is logical or physical

### 2.3. HL7 message structure

**Table 15.5. Cancel General Filler Order - OMG^O19 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.19 (Visit Number)
ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control) = OC, ORC.2 (Placer Order Number), ORC.3 (Filler Order Number),



Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

## 3. Update General Order Status

### 3.1. Trigger Event

During fulfillment of an Order, the Order Filler performs an unsolicited notification to the Order Placer about changes in the status of the order and required services.

Depending on the system that is playing the role of Order Placer:

- it may be needed to communicate only a subset of available Order status changes:

for example, an Order Placer for Outpatients (e.g: CUP application) typically needs to be notified only when a service is complete, whereas an Emergency or a Ward application is interested in knowing that there are results available as soon as they're ready.

- it may be required to notify not only the status of the order, but to communicate the complete list of required and supplied service, together with their status:

for example, if the Order Placer application is responsible on behalf of the Order Filler for the data flow of supplied services for reimbursement purposes, when the order completes it is required that the Order Filler delivers to the Order Placer the list of supplied services.

### 3.2. Expected Actions

Order Filler:

- To deliver an order cancellation notification to the Order Placer, **MUST** compose and send an HL7 2.5 **OMG^O19** message, with **ORC-1=SC**
- The message content **MUST** allow to uniquely identify the context (e.g. patient, visit); for this sake, it is necessary to take special care to the information listed hereafter:

Patient information	<ul style="list-style-type: none"> <li>• All the available person identifiers <b>MUST</b> be included in the Patient Identifier List, in order to allow the highest possible level of identification at the Order Placer;</li> <li>• All the person identifiers sent <b>MUST</b> be completely and clearly qualified, using the standard NoemaLife qualifiers</li> </ul>
Visit information	<ul style="list-style-type: none"> <li>• Visit Number (the encounter hospital identifier) <b>MUST</b> be included</li> </ul>
Order Information	<ul style="list-style-type: none"> <li>• The Placer Order Number <b>MUST</b> be specified</li> <li>• It is <b>RECOMMENDED</b> to specify the Filler Order Number</li> </ul>

- **MUST** be able to notify at least the following events (ref. IHE):
  - Order In Progress (ORC-5=IP): when the first Performed Procedure Step corresponding to the Order has been created
  - Order Completed (ORC-5=CM): when the complete, verified report is available for the given order
- It is **RECOMMENDED** to be able to notify:
  - Order scheduled (ORC-5=SC) event
  - Partial Results available (ORC-5=A) event
- If an order is being created by the Order Filler, Order Status Update message **MUST NOT** be issued until New Order message has been sent by the Order Filler (ref.IHE)

- MUST be able to provide, along with an Order Completed notification, the list of required and supplied services in the OBR segment

Order Placer:

- MUST process the message and apply data to its database, according to following rules:
  - SHOULD NOT insert a new Patient, a new Visit and a new Order, if not existent
  - SHOULD NOT update Patient, Visit or Order informations, if already existent
  - In case the Order is not available in the database, the message SHOULD be discarded raising at most a warning or a non blocking error.

### 3.3. HL7 message structure

Note: Though not stated by IHE, we require mandatory PID, PV1 and OBR segments

**Table 15.6. Order Update Status - OMG^O19 Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
PID	Patient Identification	R	Highlights: PID.3 (Patient Identifier List)
PV1	Patient Visit	R	Highlights: PV1.2 (Patient Class), PV1.3 (Assigned Patient Location), PV1.5 (Preadmit Number), PV1.19 (Visit Number), PV1.44 (Admit date/time)

<b>Table 15.7. Common Order Group</b>				
	Segment	Meaning	Usage	Notes
{ Group }	ORC	Common Order Segment	R	Highlights: ORC.1 (Order Control)=SC, ORC.2 (Placer order Number), ORC.3 (Filler order Number), ORC.5 (Order Status)
	OBR	Observation Request Segment	R	Highlights: OBR.2 (Placer Order Number), OBR.3 (Filler Order Number), OBR.4 (Universal Service Identifier), OBR.27 (Quantity/Timing)
	[BLG]	Billing Segment	O	Used as "dummy" segment to avoid parsing errors (see segment description for details). Its use is RECOMMENDED.

Refer to *NoemaLife HL7 Integration Framework - HL7 2.5 Segments Definition* [NL-HL7-IP-MSG] for more details on segments and fields and the complete data requirements.

---

# Chapter 16. HL7 conventions

## 1. Messages description conventions

This section explains the rules and conventions adopted in tables describing the HL7 2.5 messages' structure.

Column "Segment" Represents the standard HL7 segment identifier (three characters code) and, in case, its optionality and repeatability.

Accordingly to the Abstract Message Syntax (AMS) adopted by HL7:

- segments in square brackets (e.g. [XYZ]) are optional
- segments in braces (e.g. {XYZ}) are repeatable
- square brackets and braces can be combined (e.g. {XYZ [ABC]}) refers to a group of segments that may repeat, where in each group at least one XYZ segment must exist while a segment ABC may be present or not)

Column "Meaning" Standard HL7 2.5 segment's name

Column "Usage" This column gives information on segment optionality and segment repeatability using a syntax different than AMS, for better understanding.

**Table 16.1. Optionality types**

USAGE	Meaning	Description
R	mandatory/ required	
O	optional	
RC	conditional mandatory	field item <i>mandatory</i> if condition laid out in Description column is true, else <i>optional</i>
OC	optional mandatory	field item <i>optional</i> if condition laid out in Description column is true, else <i>ignored</i>

Information related to repeatability of fields is added as a suffix to optionality codes using the following syntax:

- No suffix      segment is not repeatable
- ..N              segment is repeatable to a maximum of N times
- ..\*              segment is repeatable an unlimited number of times

### Example 16.1. Examples of optionality and repeatability syntax

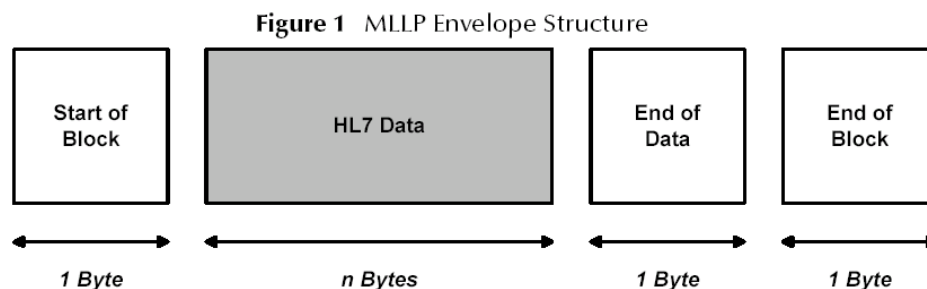
- R              Required segment, not repeatable
- O..2          Optional segment, repeatable to a maximum of 2 times
- RC..\*        Segment required under specific conditions (exposed in column "Notes"), repeatable an unlimited number of times

Column "Notes" This column further details the use of the segment in the message and use case context.

## 2. MLLP Communication Protocol

Transmission of HL7 messages from source to destination, in "piped" format (delimited string), will be carried out using the MLLP protocol (Minimum Lower Layer Protocol).

The protocol requires the message to be included inside an envelope with the following structure:



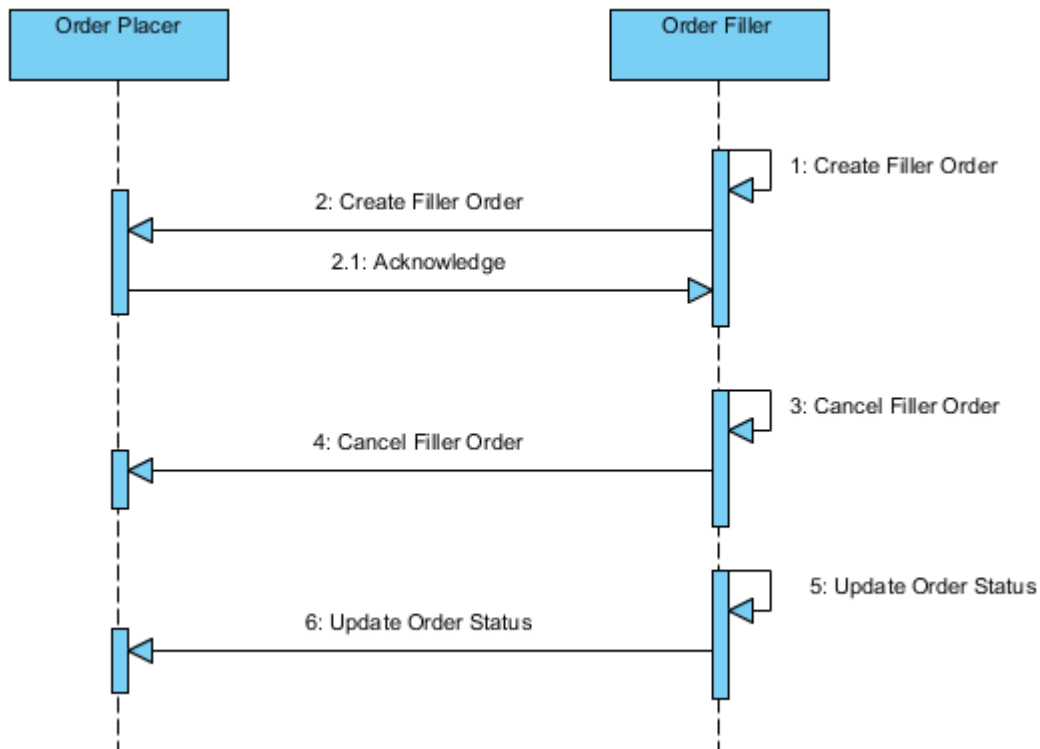
where:

Name	Description	Default Value
Start of Block	Is the character starting the HL7 message block (envelope start)	VT, ASCII(11), Hex(0b)
End of Data	Is the character stating the end of HL7 message data	FS, ASCII(28), Hex(1C)
End of Block	Is the character ending the HL7 message block (envelope end)	CR, ASCII(13), Hex(0d)

The enveloped message is then transmitted over TCP/IP protocol, using the following steps:

- the Sender composes the HL7 message;
- the Sender envelopes the HL7 message according to the MLLP schema above;
- the Sender required the TCP/IP socket opening to the Receiver, on the port exposed by the Receiver;
- the Receiver accepts the request and opens the TCP/IP socket;
- the Sender uses the TCP/IP socket to transmit the message envelope;
- the Receiver receives the envelope and, possibly, performs syntactic/semantic checks on the HL7 message;
- the Receiver composes an HL7-compliant acknowledge message; it may be a Commit Acknowledge (only stating that transmission was fine) or an Application Acknowledge (stating that transmission and functional processing of the message was fine); the decision to use one or the other can be taken on local agreement basis, even if it is RECOMMENDED to use the Application Acknowledge (HL7 Original Mode). If not otherwise specified, the acknowledge message must be considered Synchronous. When the use of Asynchronous Application Acknowledge is explicitly required, both the message initiating the transaction and the corresponding Asynchronous Application Acknowledge must be acknowledged by a synchronous Commit Acknowledge.

For better comprehension, we describe a couple of sequence diagrams taken from use cases described in this document.

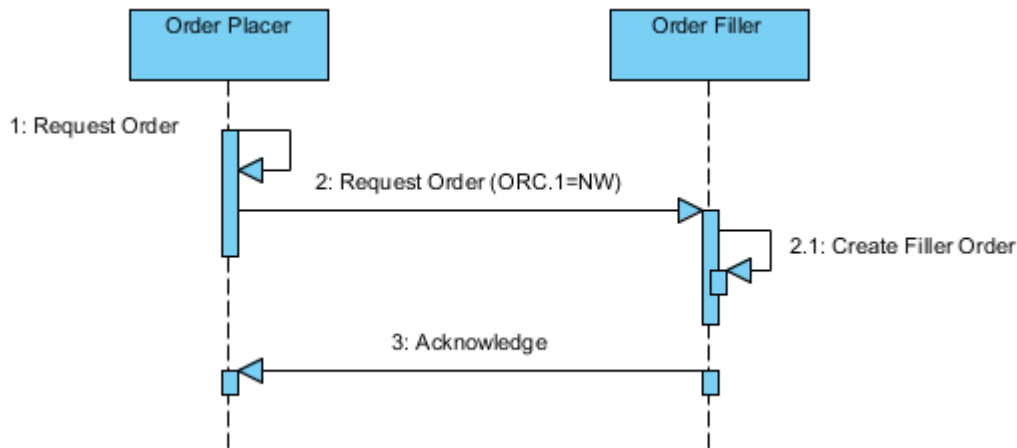
**Example 16.2. Example 1**

The above diagram shows three transactions, for each one a Synchronous Application Acknowledge is delivered, according to HL7 Original Mode.

In the first transaction (Create Filler Order) the Acknowledge message has been drawn explicitly because the use case requires an acknowledge message different from the standard one (ACK), in this case it might be an ORM^001 message.

In the second and third transactions instead (Cancel and Update Filler Order), the Acknowledge message has not been drawn: in this case a standard synchronous ACK message will be delivered.

**Example 16.3. Example 2**



The above diagram shows one transaction where an Asynchronous Application Acknowledge is delivered, according to HL7 Enhanced Mode. Upon receiving the Request message, the Filler replies using a Synchronous Commit ACK, and the Placer itself replies with an Synchronous Commit ACK to the Application Acknowledge received by the Filler.

- the Receiver envelopes the acknowledge accordingly to the MLLP schema above;
- the Receiver transmits to the Sender the enveloped acknowledge, *using the same socket previously opened*;
- finally, the Sender MAY use the same socket to send other messages in the same way, or close it. The socket MUST NOT be closed by the Receiver.

**If not otherwise specified, through this document all the Use Cases will use Synchronous Application Acknowledge (HL7 Original Mode), implemented via the standard HL7 "ACK" message, whose structure is the following:**

**Table 16.2. ACK Message structure**

Segment	Meaning	Usage	Notes
MSH	Message Header	R	
MSA	Message Acknowledge	R	
[ERR]	Error	O	

Refer to *NoemaLife HL7 Integration Policy - HL7 2.5 Segments Definition [NL-HL7-IP-MSG]* for fields definitions.

### 3. HL7 escape sequences in text fields

HL7 requires the encoding of the special characters used for fields and sub-fields delimiting.

The special characters are the ones included in the MSH.2 (encoding characters) field of each message, and MUST be encoded in every field of type TX, FT, or CF. In NoemaLife integrations, only the standard HL7 values will be supported: |, ^, & and ~.

An **escape sequence** consists of the escape character followed by an escape code ID of one character, zero (0) or more data characters, and another occurrence of the escape character. For purposes of this section, and according to HL7 specifications, the **character \ will be used as escape character**.

The following escape sequences are defined, and **MUST** be used and accepted in integrations:

\F\ field separator (the | character)

\S\ component separator (the ^ character)

\T\ subcomponent separator (the & character)

\R\ repetition separator (the ~ character)

\E\ escape character (the \ character itself)

\Xdddd\ used for encoding of other special characters (where dddd is the hexadecimal UTF-8 code of the character)

\.sp\ new line ("enter", or CR+LF)

## 4. Special values in text fields

As per HL7 standard specifications, the following rules apply as a receiver processes a message:

- an empty field (...|...) **MUST NOT** alter the value in the receiver database field; remains (or is set to) null if was null, remains at the previous value if a non-null value was already stored in the database
- a null string in quotation marks (...|"") **MUST** set to null the value in the receiver database field, that is deleting the previous content if not null

---

# External References

## Corporate Documents

- [BPSDP] *Software Development Process*. Blueprints. Federico Lelli, Nicolò Dé Faveri Tron, Raffaella Tibaldi, Michele Carenini, Davide Distefano, Paolo Apparuti, and Tommaso Sansoni. <http://distro.noemalife.loc/projects/devspecs/1.0.0/docs/html/sdp.html> .
- [BPSDPTR] *Software Development Process - Technical Reference*. Blueprints. Federico Lelli, Raffaella Tibaldi, Davide Distefano, Paolo Apparuti, and Tommaso Sansoni. <http://distro.noemalife.loc/projects/devspecs/1.0.0/docs/html/sdptr.html> .
- [NL-HL7-IP-UC] *NoemaLife HL7 Integration Policy*. Use Cases and Integration Scenarios. Davide Musiani and Francesco Masotti. <http://distro.noemalife.loc/projects/legacyproductsintegrations/HEAD/docs/html/nl-hl7-ip-usecases.html> .
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- [SDK] *NoemaLife Software Development Kit*. SDK Usage documentation. . <http://distro.noemalife.loc/projects/sdk/HEAD/docs/html/usage.html> .
- [LPI-CONFLUENCE] *Legacy Products Integrations project - Confluence home page*. . Davide Musiani. <http://confluence.noemalife.loc/display/ATI/Legacy+Products+Integrations> .

## Internet Resources

- [RFC-2119] *Key words for use in RFCs to Indicate Requirement Levels*. RFC 2119. S. Bradner. Copyright © 1997. <http://www.ietf.org/rfc/rfc2119.txt> .

## Standards

- [IHE-ITI-TF] *IHE Technical Framework*. IT Infrastructure (rev. 8.0). . Copyright © 2011. [http://www.ihe.net/Technical\\_Framework/index.cfm#IT](http://www.ihe.net/Technical_Framework/index.cfm#IT) .
- [IHE-ITI-LTF] *IHE Technical Framework*. Laboratory Technical Framework (rev. 2.1). . Copyright © 2008. [http://www.ihe.net/Technical\\_Framework/index.cfm#laboratory](http://www.ihe.net/Technical_Framework/index.cfm#laboratory) .
- [IHE-RAD-TF\_v10] *IHE Technical Framework*. Radiology Technical Framework (rev. 10.0). . Copyright © 2011. [http://www.ihe.net/Technical\\_Framework/index.cfm#radiology](http://www.ihe.net/Technical_Framework/index.cfm#radiology) .
- [IHE-RAD-TF\_v11] *IHE Technical Framework*. Radiology Technical Framework (rev. 11.0). . Copyright © 2012. [http://www.ihe.net/Technical\\_Framework/index.cfm#radiology](http://www.ihe.net/Technical_Framework/index.cfm#radiology) .
- [CRS-SISS-HL7] *Integrazioni interne tra sistemi dipartimentali delle Aziende Sanitarie tramite protocollo HL7*. Ver.9.1. . Copyright © 2012. <http://www.siss.regione.lombardia.it/EdmaSissPortaleSitoWeb/documentoDiProgetto.do?doc=15796627> .



### Allegato E-Scheda offerta economica

PROCEDURA APERTA PER IL SERVIZIO ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DELL'RNA -RT-PCR COVID 19 PER L'AZIENDA USL DI BOLOGNA	
DESCRIZIONE SERVIZIO	COSTO UNITARIO PER TAMPONE NON SUPERIORE A € 34,00 IVA ESCLUSA
SERVIZIO ANALISI E REFERTAZIONE COMPLETO DI STRUMENTAZIONE E MATERIALE	€
TOTALE COSTO SERVIZIO	

STRUMENTAZIONE UTILIZZATA -DESCRIZIONE	CODICE CND*	CODICE BD/RDM*

codice CND\* e BD/RDM\*: compilare per i dispositivi dotati di marchio CE/IVD

## Servizio Acquisti Metropolitan

# Patto Integrità allegato alla Domanda di Partecipazione

Allegato PI alla Domanda di  
Partecipazione

## PATTO DI INTEGRITA'

**Relativo alla GARA EUROPEA A PROCEDURA APERTA ACCELERATA FINALIZZATA ALLA STIPULA DI UN ACCORDO QUADRO CON OPERATORE ECONOMICO PER IL SERVIZIO DI ANALISI E REFERTAZIONE DEI TAMPONI PER IL RILEVAMENTO DEL RNA - RT-PCR COVID 19**

### Art. 1. Finalità

Il presente Patto d'integrità stabilisce la reciproca e formale obbligazione, tra l'Amministrazione aggiudicatrice e gli operatori economici, di improntare i propri comportamenti ai principi di lealtà, trasparenza e correttezza. Per i consorzi ordinari o raggruppamenti temporanei l'obbligo riguarda tutti i consorziati o partecipanti al raggruppamento o consorzio.

Il Patto di integrità costituirà parte integrante di qualsiasi contratto assegnato dalla Amministrazione aggiudicatrice a seguito della procedura di affidamento.

### Art. 2. Obblighi dell'operatore economico

L'operatore economico, per partecipare alla procedura:

dichiara di non avere influenzato il procedimento amministrativo diretto a stabilire il contenuto del bando, o di altro atto equipollente, al fine di condizionare le modalità di scelta del contraente da parte dell'Amministrazione aggiudicatrice e di non aver corrisposto né promesso di corrispondere ad alcuno - e s'impegna a non corrispondere né promettere di corrispondere ad alcuno - direttamente o tramite terzi, ivi compresi i soggetti collegati o controllati, somme di denaro, regali o altra utilità finalizzate a facilitare l'aggiudicazione e/o gestione del contratto;

si obbliga a non ricorrere ad alcuna mediazione o altra opera di terzi finalizzata all'aggiudicazione e/o gestione del contratto;

assicura di non trovarsi in situazioni di controllo o di collegamento (formale e/o sostanziale) con altri concorrenti e che non si è accordato e non si accorderà con altri partecipanti alla procedura, e assicura, con riferimento alla specifica procedura di affidamento, di non avere in corso né di avere praticato intese e/o pratiche restrittive della concorrenza e del mercato vietate ai sensi della vigente

normativa;

□ si impegna a segnalare al Responsabile della Prevenzione della Corruzione dell'Amministrazione aggiudicatrice, secondo le modalità indicate sul sito istituzionale nella sezione "Amministrazione trasparente", qualsiasi tentativo di turbativa, irregolarità o distorsione

nelle fasi di svolgimento della procedura o durante l'esecuzione del contratto, da parte di ogni interessato o addetto o di chiunque possa influenzare le decisioni relative alla procedura, comprese illecite richieste o pretese dei dipendenti dell'Amministrazione stessa;

□ si obbliga ad informare puntualmente tutto il personale, di cui si avvale, del presente Patto di integrità e degli obblighi in esso contenuti e a vigilare affinché gli impegni sopra indicati siano osservati da tutti i collaboratori e dipendenti nell'esercizio dei compiti loro assegnati;

□ assicura di collaborare con le forze di polizia, denunciando ogni tentativo di estorsione, intimidazione o condizionamento di natura criminale (richieste di tangenti, pressioni per indirizzare l'assunzione di personale o l'affidamento di subappalti a determinate imprese, danneggiamenti/furti di beni personali o in cantiere, etc.);

□ si obbliga ad acquisire con le stesse modalità e gli stessi adempimenti previsti dalla normativa vigente in materia di subappalto, preventiva autorizzazione da parte dell'Amministrazione aggiudicatrice, anche per i subaffidamenti relativi alle seguenti categorie:

- a) trasporto di materiali a discarica per conto di terzi;
- b) trasporto, anche transfrontaliero, e smaltimento rifiuti per conto terzi;
- c) estrazione, fornitura e trasporto terra e materiali inerti;
- d) confezionamento, fornitura e trasporto di calcestruzzo e di bitume;
- e) noli a freddo di macchinari;
- f) forniture di ferro lavorato;
- g) noli a caldo;
- h) autotrasporti per conto di terzi
- i) guardiania dei cantieri.

□ si obbliga altresì a inserire identiche clausole di integrità e anti-corruzione nei contratti di subappalto di cui al precedente paragrafo, ed è consapevole che, in caso contrario, le eventuali autorizzazioni non saranno concesse. Nel contratto di appalto devono essere inserite le clausole del

Patto di integrità: infatti nelle fasi successive all'aggiudicazione, gli obblighi si intendono riferiti all'aggiudicatario, il quale, a sua volta, avrà l'onere di pretenderne il rispetto anche dai propri subcontraenti.

### Art. 3. Obblighi dell'Amministrazione aggiudicatrice

L'Amministrazione aggiudicatrice si obbliga a rispettare i principi di lealtà, trasparenza e correttezza e ad attivare i procedimenti disciplinari nei confronti del personale a vario titolo intervenuto nel procedimento di affidamento e nell'esecuzione del contratto in caso di violazione di detti principi e, in particolare, qualora riscontri la violazione dei contenuti dell'art. 4 "Regali, compensi e altre utilità", dell'art. 6 "Comunicazione degli interessi finanziari e conflitti d'interesse", dell'art. 7 "Obbligo di astensione", dell'art. 8 "Prevenzione della Corruzione", dell'art. 13 "Disposizioni particolari per i dirigenti" e dell'art. 14 "Contratti e altri atti negoziali" del D.P.R. 16.04.2013, n. 62, Regolamento recante codice di comportamento dei dipendenti pubblici. In particolare l'Amministrazione aggiudicatrice assume l'esplicito impegno anticorruzione di non offrire, accettare o richiedere somme di denaro o qualsiasi altra ricompensa, vantaggio o beneficio, sia direttamente che indirettamente tramite intermediari, al fine dell'assegnazione del contratto e/o al fine di distorcerne la relativa corretta esecuzione.

L'Amministrazione aggiudicatrice è obbligata a rendere pubblici i dati più rilevanti riguardanti l'aggiudicazione, in base alla normativa in materia di trasparenza.

### Art. 4. Violazione del Patto di integrità

La violazione del Patto di integrità è dichiarata in esito ad un procedimento di verifica in cui venga garantito adeguato contraddittorio con l'operatore economico interessato.

La violazione da parte dell'operatore economico, sia in veste di concorrente che di aggiudicatario, di uno degli impegni previsti suo carico dall'articolo 2, può comportare, secondo la gravità della violazione accertata e la fase in cui la violazione è accertata:

l'esclusione dalla procedura di affidamento;

la risoluzione di diritto dal contratto.

L'Amministrazione aggiudicatrice può non avvalersi della risoluzione del contratto qualora la ritenga pregiudizievole agli interessi pubblici, quali indicati dall'art. 121, comma 2, d.lgs.104/2010; è fatto salvo in ogni caso l'eventuale diritto al risarcimento del danno;

#### Art. 5. Efficacia del patto di integrità

Il Patto di Integrità e le sanzioni applicabili resteranno in vigore sino alla completa esecuzione del contratto assegnato a seguito della procedura di affidamento.

Il contenuto del presente documento potrà essere integrato da altri eventuali Protocolli di legalità.

Luogo e data .....

**(sottoscrizione digitale)**

Il Legale Rappresentante /

I Legali Rappresentanti delle ditte Raggruppate o Consorziato