**Integrating the Healthcare Enterprise**



**IHE Patient Care Coordination**

**Technical Framework Supplement**

**Routine Interfacility Patient Transport**

**(RIPT)**

HL7® FHIR® STU 3

Using Resources at FMM Level 0-5

**Rev. 1.1 – Trial Implementation**

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**Please verify you have the most recent version of this document.** See [here](http://ihe.net/Technical_Frameworks/) for Trial Implementation and Final Text versions and [here](http://ihe.net/Public_Comment/) for Public Comment versions.

**Foreword**

This is a supplement to the IHE Patient Care Coordination Technical Framework V11.0. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on September 8, 2017 for trial implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the Patient Care Coordination Technical Framework. Comments are invited and can be submitted at [http://www.ihe.net/PCC\_Public\_Comments](http://www.ihe.net/PCC_Public_Comments/).

This supplement describes changes to the existing technical framework documents.

“Boxed” instructions like the sample below indicate to the Volume Editor how to integrate the relevant section(s) into the relevant Technical Framework volume.

Amend Section X.X by the following:

Where the amendment adds text, make the added text bold underline. Where the amendment removes text, make the removed text bold strikethrough. When entire new sections are added, introduce with editor’s instructions to “add new text” or similar, which for readability are not bolded or underlined.

General information about IHE can be found at [http://ihe.net](http://ihe.net/).

Information about the IHE Patient Care Coordination domain can be found at [http://ihe.net/IHE\_Domains](http://ihe.net/IHE_Domains/).

Information about the organization of IHE Technical Frameworks and Supplements and the process used to create them can be found at [http://ihe.net/IHE\_Process](http://ihe.net/IHE_Process/) and [http://ihe.net/Profiles](http://ihe.net/Profiles/).

The current version of the IHE Patient Care Coordination Technical Framework can be found at [http://ihe.net/Technical\_Frameworks](http://ihe.net/Technical_Frameworks/).

**CONTENTS**

[Introduction to this Supplement 6](#_Toc492559887)

[Open Issues and Questions 7](#_Toc492559888)

[Closed Issues 7](#_Toc492559889)

[General Introduction 9](#_Toc492559890)

[Appendix A – Actor Summary Definitions 9](#_Toc492559891)

[Appendix B – Transaction Summary Definitions 9](#_Toc492559892)

[Glossary 9](#_Toc492559893)

[**Volume 1 – Profiles 10**](#_Toc492559894)

[Copyright Licenses 10](#_Toc492559895)

[X Routine Interfacility Patient Transport (RIPT) Profile 11](#_Toc492559896)

[X.1 RIPT Actors, Transactions, and Content Modules 11](#_Toc492559897)

[X.1.1 Actor Descriptions and Actor Profile Requirements 13](#_Toc492559898)

[X.1.1.1 Content Creator 13](#_Toc492559899)

[X.1.1.2 Content Consumer 13](#_Toc492559900)

[X.1.1.3 Transport Data Consumer 13](#_Toc492559901)

[X.1.1.4 Transport Data Responder 13](#_Toc492559902)

[X.2 RIPT Actor Options 13](#_Toc492559903)

[X.2.1 RIPT Option Name 14](#_Toc492559904)

[X.3 RIPT Required Actor Groupings 14](#_Toc492559905)

[X.4 RIPT Overview 14](#_Toc492559906)

[X.4.1 Concepts 14](#_Toc492559907)

[X.4.2 Use Cases 14](#_Toc492559908)

[X.4.2.1 Use Case #1: Hospital Discharge to Transport with information Query 14](#_Toc492559909)

[X.4.2.1.1 Hospital Discharge to Transport Use Case Description with information Query 14](#_Toc492559910)

[X.4.2.1.2 Hospital Discharge to Transport Using Information Query Process Flow 15](#_Toc492559911)

[X.4.2.2 Use Case #2: Emergency Transport from Long-Term Care Facility 16](#_Toc492559912)

[X.4.2.2.1 Emergency Transport from Long-Term Care Facility Use Case Description 16](#_Toc492559913)

[X.4.2.2.2 Hospital Discharge to Transport Using CDA Process Flow 16](#_Toc492559914)

[X.5 RIPT Security Considerations 17](#_Toc492559915)

[X.6 RIPT Cross Profile Considerations 17](#_Toc492559916)

[X.7 RIPT Data Elements 18](#_Toc492559917)

[Appendices 19](#_Toc492559918)

[Appendix A – Required Data Elements for Transport Summary 19](#_Toc492559919)

[A.1 Data Elements Table 19](#_Toc492559920)

[**Volume 2 – Transactions 24**](#_Toc492559921)

[3.62 Query for Transport Data [PCC-62] 24](#_Toc492559922)

[3.62.1 Scope 24](#_Toc492559923)

[3.62.2 Actor Roles 24](#_Toc492559924)

[3.62.3 Referenced Standards 25](#_Toc492559925)

[3.62.4 Interaction Diagram 25](#_Toc492559926)

[3.62.4.1 Query for Transport Data 25](#_Toc492559927)

[3.62.4.1.1 Trigger Events 25](#_Toc492559928)

[3.62.4.1.2 Message Semantics 25](#_Toc492559929)

[3.62.4.1.3 Expected Actions 26](#_Toc492559930)

[3.62.5 Security Considerations 26](#_Toc492559931)

[3.62.5.1 Security Audit Considerations 26](#_Toc492559932)

[3.62.5.1.1 Transport Data Consumer Specific Security Considerations 26](#_Toc492559933)

[3.62.5.1.2 Transport Data Responder Specific Security Considerations 27](#_Toc492559934)

[Appendices 28](#_Toc492559935)

[Volume 2 Namespace Additions 28](#_Toc492559936)

[**Volume 3 – Content Modules 29**](#_Toc492559937)

[5 Namespaces and Vocabularies 30](#_Toc492559938)

[6 Content Modules 31](#_Toc492559939)

[6.3.1 CDA Document Content Modules 31](#_Toc492559940)

[6.3.1.D Routine Interfacility Patient Transport (RIPT) Document Content Module 31](#_Toc492559941)

[6.3.1.D.1 Format Code 31](#_Toc492559942)

[6.3.1.D.2 Parent Template 31](#_Toc492559943)

[6.3.1.D.3 Referenced Standards 31](#_Toc492559944)

[6.3.1.D.4 Data Element Requirement Mappings to CDA 31](#_Toc492559945)

[6.3.1.D.5 Routine Interfacility Patient Transport (RIPT) Document Content Module Specification 36](#_Toc492559946)

[6.3.1.D.5.1 Active Problems Constraint 37](#_Toc492559947)

[6.3.1.D.5.2 Payor Constraint 37](#_Toc492559948)

[6.3.1.D.5.3 Employer and School Information Constraint 38](#_Toc492559949)

[6.3.1.D.5.4 Allergies and Other Adverse Reactions Constraint 38](#_Toc492559950)

[6.3.1.D.5.5 Procedures and Other Interventions Constraint 39](#_Toc492559951)

[6.3.1.D.5.6 Medications Section Constraint 39](#_Toc492559952)

[6.3.1.D.5.7 Intake and Output Constraint 39](#_Toc492559953)

[6.3.1.D.5.8 Diagnostic findings Constraint 39](#_Toc492559954)

[6.3.1.D.5.9 Coded Results Constraint 39](#_Toc492559955)

[6.3.1.D.5.10 Coded Vital Signs Constraint 40](#_Toc492559956)

[6.3.1.D.5.11 Coded Detailed Physical Exam Constraint 41](#_Toc492559957)

[6.3.1.D.5.12 Coded Event Outcome Constraint 42](#_Toc492559958)

[6.3.1.D.6 Routine Interfacility Patient Transport (RIPT) Conformance 42](#_Toc492559959)

[6.3.2 CDA Header Content Modules 42](#_Toc492559960)

[6.3.3 CDA Section Content Modules 42](#_Toc492559961)

[6.3.3.10.S1 Certification of Medical Necessity - Section Content Module 43](#_Toc492559962)

[6.3.3.10.S2 Transport Instructions - Section Content Module 44](#_Toc492559963)

[6.3.4 CDA Entry Content Modules 44](#_Toc492559964)

[6.3.4.E Medical Necessity Entry 1.3.6.1.4.1.19376. 44](#_Toc492559965)

[6.3.4.E.1 Specification 45](#_Toc492559966)

[6.3.4.E.1.1 moodCode='EVN'> 45](#_Toc492559967)

[6.3.4.E.1.2 <templateId root='1.3.6.1.4.1.19376.1.5.3/> 45](#_Toc492559968)

[6.3.4.E.1.3 <id root='' extension=''/> 45](#_Toc492559969)

[6.3.4.E.1.4 <code code='' displayName='' codeSystem='' codeSystemName='' /> 45](#_Toc492559970)

[6.3.4.E.1.5 <value xsi:type='CE' .../> 45](#_Toc492559971)

[6.3.4.E.1.6 <text><reference value='#xxx'/></text> 45](#_Toc492559972)

[6.3.4.E.1.7 <effectiveTime><low value=''/><effectiveTime/> 45](#_Toc492559973)

[6.3.4.E.1.8 <performer typeCode='PRF'> <assignedEntity> <assignedPerson><name></assignedPerson></assignedEntity></performer> 46](#_Toc492559974)

[6.3.4.E.1.9 <performer> <assignedEntity><code> </assignedEntity></performer> 46](#_Toc492559975)

[6.3.4.E.1.10 <entryRelationship typeCode='DRIV'> 46](#_Toc492559976)

[6.3.4.E.1.11 <observation> <templateId root=' '/></observation> 46](#_Toc492559977)

[6.3.4.E.1.12 <code code='52018-9' displayName='Ambulance transport, Physician certification for transport indicator' codeSystem='2.16.840.1.113883.6.1'/> codeSystemName='LOINC' 46](#_Toc492559978)

[6.3.4.E.1.13 <value xsi:type='BL' value='true|false'/> 46](#_Toc492559979)

[6.3.4.E.1.14 <reference typeCode='REFR'><externalDocument classCode='DOC' moodCode='EVN'><id root=' ' extension=' '/><text><reference value=' '/></text> 46](#_Toc492559980)

[6.4 Section not applicable 47](#_Toc492559981)

[6.5 Transport Reason Value Sets 47](#_Toc492559982)

[6.5.1 Transport Reason 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.13 47](#_Toc492559983)

[6.6 HL7 FHIR Content Module 47](#_Toc492559984)

[6.6.1 Care Plan 47](#_Toc492559985)

[6.6.2 Subscription 48](#_Toc492559986)

[6.6.3 Transport Content 48](#_Toc492559987)

[Appendices 56](#_Toc492559988)

[Volume 3 Namespace Additions 56](#_Toc492559989)

# Introduction to this Supplement

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Whenever possible, IHE profiles are based on established and stable underlying standards. However, if an IHE committee determines that an emerging standard offers significant benefits for the use cases it is attempting to address and has a high likelihood of industry adoption, it may develop IHE profiles and related specifications based on such a standard.  The IHE committee will take care to update and republish the IHE profile in question as the underlying standard evolves. Updates to the profile or its underlying standards may necessitate changes to product implementations and site deployments in order for them to remain interoperable and conformant with the profile in question.  This RIPT Profile uses the emerging HL7®[[1]](#footnote-1) FHIR®[[2]](#footnote-2) specification. The FHIR release profiled in this supplement is STU 3. HL7 describes the STU (Standard for Trial Use) standardization state at <https://www.hl7.org/fhir/versions.html>.  In addition, HL7 provides a rating of the maturity of FHIR content based on the FHIR Maturity Model (FMM): level 0 (draft) through 5 (normative ballot ready). The FHIR Maturity Model is described at <http://hl7.org/fhir/versions.html#maturity>.  Key FHIR STU 3 content, such as Resources or ValueSets, used in this profile, and their FMM levels are:   | FHIR Resource Name | FMM Level | | --- | --- | | Patient | 5 | | RelatedPerson | 2 | | Coverage | 2 | | Practitioner | 3 | | Claim | 2 | | AllergyIntolerance | 3 | | Procedure | 3 | | Immunization | 3 | | MedicationStatement | 3 | | ClinicalImpression | 0 | | DiagnosticOrder | 5 | | DiagnosticReport | 3 | | ImagingStudy | 3 | | Observation | 5 | | Condition | 3 | | Location | 3 | |

When a professional transport takes place, there is information that needs to be recorded into a transport organization’s patient record, needed for patient care that is not electronically available to the transport team. Much of the information is currently available in standard formats in electronic discharge summaries used in US, Canada and European healthcare settings using the HL7 CDA®[[3]](#footnote-3) Release 2.0 Standard. Other standards, such as HL7 FHIR resources could also be used to communicate this information between the discharging facility and EMS transport company. The way that the transport company is contacted for the transport is out of the scope of this profile

The use of electronic transfer summaries benefits both hospitals and transport companies by decreasing staff time used to communicate such information, and hospitals will further benefit in reduced patient wait times for transfers and increase bed availability that could result from this time efficient transfer of this information. IHE is an excellent venue to solve this problem because it already has substantial experience with the standards that will be used and the necessary content and the knowledge of CDA-based discharge summaries (e.g., MS XPHR). IHE will also provide a mechanism for Transport system vendors and Hospital system vendors to establish and test a solution. Much of the content is already in the current, real world, EMR systems in hospitals and patient care facilities. This is regularly used when a patient is being transferred from a hospital into the rehab facility where the patient information is electronically sent to the facility that the patient is going to go into. This system can then be reused to fulfill transport system information needs.

## Open Issues and Questions

1. How can we reuse transactions and create transactions based on its use in QEDm?
2. Patient Medical History and risk factors map to multiple FHIR resources: Procedures, conditions, date of onset.
3. Should we subsume the mappings in the ETS and ITS Profiles into this profile and deprecate them?
4. There is a FHIR resource gap for Transport instructions.
5. Should the Transport Data Consumer and Transport Data Responder Actors have a more generic name such as Data Consumer and Data Responder?
6. There is no LOINC code for Revised Trauma Score.
7. Cannot find the NEMSIS copyright statement.

## Closed Issues

1. (2/7/2017) Profile needs to be renamed to become more universal.

The committee discussed and agreed on the profile renaming to Routine Interfacility patient Transport (RIPT).

1. (4/27/2017) There is no CDA section for “the Certificate of Medical Necessity” and no FHIR source to match it.

The committee discussed and agreed to create a CDA section in the Profile for the “Certificate of Medical Necessity”. The FHIR source for it will be composition.type.

1. (4/27/2017) There is no CDA section for “Transport Instructions”.

The Committee discussed and agreed to create a CDA section for “Transport Instructions”.

1. (4/27/2017) Should patient matching be profiled in this due to possibility of MRN not being sent over properly?

The Committee discussed and agreed that this is out of scope for this profile.

1. (4/27/2017) Do we use the term query or retrieve in transaction titles?

The Committee discussed and agreed that the term “query” is the most appropriate as the transaction title for this profile.

1. (4/27/2017) There are some attributes in this profile hat are not included in NEMSIS.

The committee discussed and agreed to include these attributes in the profile and that it is up to NEMSIS to make the custom elements to absorb it.

1. (4/27/2017) Is it the responsibility of the content creator or the content consumer to map to the custom the NEMSIS defined codes?

The Committee discussed and agreed that it will be the responsibility of the implantation to create the mapping required for the custom NEMSIS codes.

# General Introduction

Update the following Appendices to the General Introduction as indicated below. Note that these are not appendices to Volume 1.

# Appendix A – Actor Summary Definitions

Add the following actors to the IHE Technical Frameworks General Introduction list of actors:

|  |  |
| --- | --- |
| Actor | Definition |
| Transport Data Responder | Responds to a query for clinical content, supplying reconciled lists. |
| Transport Data Consumer | Queries for Transport data |

# Appendix B – Transaction Summary Definitions

Add the following transactions to the IHE Technical Frameworks General Introduction list of Transactions:

|  |  |
| --- | --- |
| Transaction | Definition |
| Query for Transport Data [PCC-62] | Queries for transport data and patient information elements using a query/response. |

Glossary

Add the following glossary terms to the IHE Technical Frameworks General Introduction Glossary:

No new Glossary terms

Volume 1 – Profiles

## Copyright Licenses

See open issues (NEMSIS)

Add the following to the IHE Technical Frameworks General Introduction Copyright section:

Add new Section X…

# X Routine Interfacility Patient Transport (RIPT) Profile

Transport organizations must record information about patients being transferred under their care so that the organizations can minimize errors in their patient care record and the patient can have accurate and an appropriate level of care for their condition. This information is either gathered verbally through nursing staff or by perusing extensive paperwork to find the information needed for the transport patient care record. Once the transport is completed, the same information is also communicated as part of the transport summary. While this is often done in electronic information systems today, a lack of standards means that duplicate entry is commonplace, leading to a higher chance for data entry errors by transport staff. In fact, there is approximately a 67% error associated with manual entry of patient information transferred into an electronic system, not to mention various other errors when there are misspellings[[4]](#footnote-4). Creating a patient summary for the transport team is a low-cost approach that builds on existing functionality as it reuses much of the information that is typically documented in hospital systems today. This will make it easy to find an efficient way to transfer information that is already in the EMR system and only needs to be efficiently transferred to another system.

Once the current transfer of information issue is solved, the transport team’s time spent gathering information in the hospital can be greatly reduced and the team can spend more time providing care to the patient, rather than spending prolonged periods of time searching for, and manually re-entering, the needed information for patient transport and informed patient care. Improved throughput for Emergency Department (ED) and inpatient bed availability become a hospital benefit, by creating a faster turnover rate for hospital discharge. This profile specifies the CDA and FHIR transactions that will be used to carry out this transaction. The exchange of the patient identifier is out of scope for this profile. This must be determined by the implementation (e.g., out of band, PIX, PDQ).

## X.1 RIPT Actors, Transactions, and Content Modules

This section defines the actors, transactions, and/or content modules in this profile. General definitions of actors are given in the Technical Frameworks General Introduction Appendix A at [http://ihe.net/Technical\_Frameworks](http://ihe.net/Technical_Frameworks/).

Figure X.1-1 shows the actors directly involved in the RIPT Profile and the relevant transactions between them. If needed for context, other actors that may be indirectly involved due to their participation in other related profiles are shown in dotted lines. Actors which have a mandatory grouping are shown in conjoined boxes.

Transport Data Consumer

Transport Data Responder

Query for Transport Data [PCC-62]

y for Transport Data

Figure X.1-1: RIPT Actor Diagram

Content Creator

Content Consumer

Document Sharing

Figure X.1-2: RIPT Actor Diagram

Table X.1-1 lists the transactions for each actor directly involved in the RIPT Profile. To claim compliance with this profile, an actor shall support all required transactions (labeled “R”) and may support the optional transactions (labeled “O”).

Table X.1-1: RIPT Profile - Actors and Transactions

| Actors | Transactions | Optionality | Reference |
| --- | --- | --- | --- |
| Content Creator | Document Sharing [PCC-1] | R | PCC TF-2: 3.1 |
| Content Consumer | Document Sharing [PCC-1] | R | PCC TF-2: 3.1 |
| Transport Data Consumer | Query for Transport Data [PCC-62 | R | PCC TF-2: 3.62 |
| Transport Data Responder | Query for Transport Data [PCC-62] | R | PCC TF-2: 3.62 |

A product implementation using this profile must group actors from this profile with actors from a workflow or transport profile to be functional. The grouping of the content module described in this profile to specific actors is described in more detail in the “Required Actor Groupings” section below.

Table X.1-2 lists the content module(s) defined in the RIPT Profile. To claim support with this profile, an actor shall support all required content modules (labeled “R”) and may support optional content modules (labeled “O”).

Table X.1-2: RIPT Profile - Actors and Content Modules

| Actors | Content Modules | Optionality | Reference |
| --- | --- | --- | --- |
| Content Creator | Content Module 1 Transport Data Summary and Template ID | R | PCC TF-3: 6.3.1.D |
| Content Consumer | Content Module 1 Transport Data Summary and Template ID | O | PCC TF-3: 6.3.1.D |

### X.1.1 Actor Descriptions and Actor Profile Requirements

Most requirements are documented in Transactions (Volume 2) and Content Modules (Volume 3). This section documents any additional requirements on profile’s actors.

#### X.1.1.1 Content Creator

The Content Creator shall be responsible for the creation of content and transmission of a RIPT document to a Content Consumer. Detailed rules for the RIPT content document are fully defined in PCC TF-3: 6.3.1.D

#### X.1.1.2 Content Consumer

A Content Consumer is responsible for viewing, importing, or other processing options for RIPT content created by a RIPT Content Creator.

#### X.1.1.3 Transport Data Consumer

The Transport Data Consumer is responsible for initiating a query to the provider’s EMR system for documents meeting certain criteria and can retrieve selected documents supplied by the Transport Data Responder.

#### X.1.1.4 Transport Data Responder

The Transport Data Responder is responsible for receiving a query supplied by the Transport Data Consumer and produces and publishes documents.

## X.2 RIPT Actor Options

Options that may be selected for each actor in this profile, if any, are listed in the Table X.2-1. Dependencies between options when applicable are specified in notes.

Table X.2-1: Routine Interfacility Patient Transport - Actors and Options

| Actor | Option Name | Reference |
| --- | --- | --- |
| Transport Data Consumer | No options defined | -- |
| Transport Data Responder | No options defined | -- |
| Content Creator | No options defined | -- |
| Content Consumer | View Option (see Note 1) | PCC TF-2: 3.1.1 |
| Document Import Option (see Note 1) | PCC TF-2: 3.1.2 |
| Section Import Option (see Note 1) | PCC TF-2: 3.1.3 |
| Discrete Data Import Option (see Note 1) | PCC TF-2: 3.1.4 |

Note 1: Implementer SHALL implement at least one of these options.

### X.2.1 RIPT Option Name

There are no options defined by this profile

## X.3 RIPT Required Actor Groupings

There are no required actor groupings for this profile

## X.4 RIPT Overview

Patient discharge is shown using FHIR transactions and CDA documents to make the flow of the patient information from the hospital to the transport team paperless. This reduces the time spent gathering information and errors developed through manual input of the information.

### X.4.1 Concepts

Transport companies’ main goal is to transport a patient from point A to point B while caring for any of the patient’s medical needs. In the absence of interoperability, when a patient needs a medical transport, the transport providers are required to develop a patient record using the information found in the discharge summary. If done manually inputting this information often takes 30 minutes and creates a lag in the discharge process and increases the amount of time that the transport team spends on each call.

### X.4.2 Use Cases

#### X.4.2.1 Use Case #1: Hospital Discharge to Transport with information Query

The use case describes the discharge process in a hospital after treatment has been carried out using an information query for the transfer of patient information.

##### X.4.2.1.1 Hospital Discharge to Transport Use Case Description with information Query

Alison Patel, a 28-year-old female, is going home from the hospital after having an infection due to systemic fibrosis. The doctors prescribed oxygen after treatment, and call a transport company to take her to rehab. Alison is a paraplegic and is wheelchair bound. Due to the prescribed oxygen, there needs to be monitoring for her transport. The transport provider system queries the hospital medical record system for the needed patient information. The information is then available to the transport provider system where it is retrieved to populate the patient information record for the transport. The contacted transport care team arrives on scene for the transport, prepared with portable oxygen. The R.N. transfers care to the transport team who then goes into Alison’s room to meet her. The transport is then carried out.

##### X.4.2.1.2 Hospital Discharge to Transport Using Information Query Process Flow

Transport Data Consumer

Transport Data Responder

Query for Transport Data [PCC-62]

Figure X.4.2.1.2-1: Basic Process Flow in Discharge to Transport Using FHIR Profile

Pre-conditions:

1. Hospital EMR has patient information in the system
2. Physician Clears Patient for discharge
3. Transport provider is contacted and minimum required patient data is shared with the transport provider (name, gender, date of birth, MRN)
4. The pickup time is arranged
5. Transport patient care record is ready to retrieve information and both the EMR and patient care record have an established XD\* infrastructure.

Main Flow:

1. Transport teams arrives at the pick-up location and queries the patient information from the Hospital EMR to populate the patient care record system.
2. Transport team receives nurse report and transfer of care
3. Patient contact is made and transport is started

Post-conditions:

1. Patient information is updated in the patient care record system during transport.
2. Patient is transferred to the care of the drop-off facility staff.

#### X.4.2.2 Use Case #2: Emergency Transport from Long-Term Care Facility

The use case describes the Emergency process at a long-term care facility when a transport to a hospital is needed and carried out.

##### X.4.2.2.1 Emergency Transport from Long-Term Care Facility Use Case Description

John Smith, an 87-year-old male living in a long-term care facility. The patient is suffering from a cardiac event and an emergency transport is needed. The long-term care facility contacts a transport provider and generates an electronic patient summary. The contracted transport care team arrives on scene for the transport. The long-term care facility provides the transport team with the transport summary CDA document. The electronic patient information consumed into their patient care system. The nurse transfers care to the transport team and the team takes the necessary care for the patient’s condition and starts the transport.

##### X.4.2.2.2 Hospital Discharge to Transport Using CDA Process Flow

Content Creator

Content Consumer

Document Sharing

Figure X.4.2.2.2-1: Basic Process Flow in Discharge to Transport Using CDA Profile

Pre-conditions:

1. The long-term care facility EMR has patient information in the system
2. Patient is considered to have an emergency event and a hospital trip needs to be made
3. Transport provider is contacted and minimum required patient data is shared with the transport provider (name, gender, date of birth, MRN)
4. Transport patient care record is ready to consume information and both the EMR and patient care record have an established XD\* infrastructure.

Main Flow:

1. Transport teams arrives at pick-up location and imports the patient information into the patient care record system.
2. Transport team receives nurse report and transfer of care
3. Patient contact is made and transport is started

Post-conditions:

1. Patient information is updated in the patient care record system during transport.
2. Patient is transferred to the care of the closest appropriate hospital staff.

## X.5 RIPT Security Considerations

Actors in the RIPT Profile create, modify, and consume patient demographics, clinical and administrative information which includes personally identifiable health information. This information must be protected against unauthorized access, modification or tampering. This profile recommends but does not require that connections between actors be grouped with the Secure Node or Secure Application Actors from the IHE ATNA Profile.

These actors ensure appropriate user authentication and authorization to access the application and protect personally identifiable health information against unauthorized access, modification or tampering while the information is in transit.

The security considerations for a content module are dependent upon the security provisions defined by the grouped actor(s). There may be jurisdictional restrictions on some patient content available to transport systems.

## X.6 RIPT Cross Profile Considerations

The use of the IHE XD\* family of transactions is encouraged to support standards-based interoperability between systems acting as the RIPT Content Creator and RIPT Content Consumer. However, this profile does not require any groupings with ITI XD\* actors to facilitate transport of the content document it defines. Below is a summary of recommended IHE transport transactions that MAY be utilized by systems playing the roles of RIPT Content Creator or RIPT Content Consumer to support the standard use case defined in this profile:

* A Document Source in XDS.b, a Portable Media Creator in XDM, or a Document Source in XDR might be grouped with the RIPT Content Creator. A Document Consumer in XDS.b, a Portable Media Importer in XDM, or a Document Recipient in XDR might be grouped with the RIPT Content Consumer. A registry/repository-based infrastructure is defined by the IHE Cross Enterprise Document Sharing (XDS.b) that includes profile support that can be leveraged to facilitate retrieval of public health related information from a document sharing infrastructure: Multi-Patient Query (MPQ), and Document Metadata Subscription (DSUB).
* A reliable messaging-based infrastructure is defined by the IHE Cross Enterprise Document Reliable Interchange (XDR) Profile. Document Source in XDR might be grouped with the RIPT Content Creator. A Document Recipient in XDR might be grouped with the RIPT Content Consumer.

Detailed descriptions of these transactions can be found in the IHE IT Infrastructure Technical Framework.

## X.7 RIPT Data Elements

This profile defines specific data element content. These data elements are used to create the Transport Data. This set of data elements in the form are identified and defined in Appendix A.

Appendices

# Appendix A – Required Data Elements for Transport Summary

## A.1 Data Elements Table

| Transport Data | | NEMSIS Reference | Definition |
| --- | --- | --- | --- |
| Patient | Last Name | Version2 Element - E06\_01 | The patient's last (family) name |
| First Name | Version2 Element - E06\_02 | The patient's first (given) name |
| Middle Initial/Name | Version2 Element - E06\_03 | The patient's middle name, if any |
| Home Address | Version2 Element - E06\_04 | Patient's address of residence |
| Home City | Version2 Element - E06\_05 | The patient's primary city or township of residence. |
| Home Country | Version2 Element - E06\_06 | The patient's home county or parish of residence. |
| Home State | Version2 Element - E06\_07 | The state, territory, or province where the patient resides. |
| Home Zip code | Version2 Element - E06\_08 | The patient's ZIP code of residence. |
| Country of Residence | Version2 Element - E06\_09 | The country of residence of the patient. |
| Social Security Number | Version2 Element - E06\_10 | The patient's social security number |
| Gender | Version2 Element - E06\_12 | The Patient's Gender |
| Race | Version2 Element - E06\_13 | The patient's race as defined by the OMB (US Office of Management and Budget) |
| Billing/Payment | Primary Method of Payment | Version2 Element - E07\_01 | The primary method of payment or type of insurance associated with this EMS encounter |
| Physician Certification Statement Signed | Version2 Element - E07\_02 | Indication of whether a physician certification statement (PCS) is available documenting the medical necessity or the EMS encounter. |
| Date Physician Certification Statement Signed | None | The date the Physician Certification Statement was signed |
| Reason for Physician Certification Statement | None | The reason for EMS transport noted on the Physician Certification Statement |
| Healthcare Provider Type Signing Physician Certification Statement | None | The type of healthcare provider who signed the Physician Certification Statement |
| Last Name of Individual Signing Physician Certification Statement | None | The last name of the healthcare provider who signed the Physician Certification Statement. |
| First Name of Individual Signing Physician Certification Statement | None | The first name of the healthcare provider who signed the Physician Certification Statement. |
| Insurance Company ID | Version2 Element - E07\_03 | The ID Number of the patient's insurance company. |
| Insurance Company Name | None | The name of the patient's insurance company. |
| Insurance Company Billing Priority | Version2 Element - E07\_04 | The billing priority or order for the insurance company. |
| Insurance Company Address | Version2 Element - E07\_05 | The mailing address of the Insurance Company |
| Insurance Company City | Version2 Element - E07\_06 | The insurance company's city or township used for mailing purposes. |
| Insurance Company State | Version2 Element - E07\_07 | The insurance company's state, territory, or province, or District of Columbia. |
| Insurance Company Zip code | Version2 Element - E07\_08 | The insurance company's ZIP Code |
| Insurance Company Country | None | The insurance company's country |
| Insurance Group ID | Version2 Element - E07\_09 | The ID number of the patient's insurance group |
| Insurance Policy ID Number | Version2 Element - E07\_10 | The ID number of the patient's insurance policy |
| Last Name of the Insured | Version2 Element - E07\_11 | The last (family) name of the person insured by the insurance company. |
| First Name of the Insured | Version2 Element - E07\_12 | The first (given) name of the person insured by the insurance company |
| Middle initial/name of the Insured | Version2 Element - E07\_13 | The middle name, if any, of the person insured by the insurance company. |
| Relationship to the Insured | Version2 Element - E07\_14 | The relationship of the patient to the primary insured person |
| Closest Relative/Guardian Last Name | Version2 Element - E07\_18 | The last (family) name of the patient's closest relative or guardian |
| Closest Relative/Guardian First Name | Version2 Element - E07\_19 | The first (given) name of the patient's closest relative or guardian |
| Closest Relative/Guardian Middle Initial/Name | Version2 Element - E07\_20 | The middle name/initial, if any, of the closest patient's relative or guardian. |
| Closest Relative/Guardian Street Address | Version2 Element - E07\_21 | The street address of the residence of the patient's closest relative or guardian |
| Closest Relative/Guardian City | Version2 Element - E07\_22 | The primary city or township of residence of the patient's closest relative or guardian. |
| Closest Relative/Guardian State | Version2 Element - E07\_23 | The state of residence of the patient's closest relative or guardian. |
| Closest Relative/Guardian Zip code | Version2 Element - E07\_24 | The ZIP Code of the residence of the patient's closest relative or guardian. |
| Closest Relative/Guardian Country | None | The country of residence of the patient's closest relative or guardian. |
| Closest Relative/Guardian Phone Number | Version2 Element - E07\_25 | The phone number of the patient's closest relative or guardian |
| Closest Relative/Guardian Relationship | Version2 Element - E07\_26 | The relationship of the patient's closest relative or guardian |
| Patient's Employer | Version2 Element - E07\_27 | The patient's employers Name |
| Patient's Employer's Address | Version2 Element - E07\_28 | The street address of the patient's employer |
| Patient's Employer's City | Version2 Element - E07\_29 | The city or township of the patient's employer used for mailing purposes |
| Patient's Employer's State | Version2 Element - E07\_30 | The state of the patient's employer |
| Patient's Employer's Zip code | Version2 Element - E07\_31 | The ZIP Code of the patient's employer |
| Patient's Employer's Country | None | The country of the patient's employer |
| Patient's Employer's Primary Phone Number | Version2 Element - E07\_32 | The employer's primary phone number. |
| Incident Facility or Location Name | None | The name of the facility, business, building, etc. associated with the scene of the EMS event. |
| History | Last Name of Patient's Practitioner | Version2 Element - E12\_01 | Indication of whether or not there were any patient specific barriers to serving the patient at the scene |
| First Name of Patient's Practitioner | Version2 Element - E12\_06 | The last name of the patient's practitioner |
| Middle Initial/Name of Patient's Practitioner | Version2 Element - E12\_04 | The first name of the patient's practitioner |
| Advanced Directives | Version2 Element - E12\_07 | The presence of a valid DNR form, living will, or document directing end of life or healthcare treatment decisions. |
| Medication Allergies | Version2 Element - E12\_08 | The patient's medication allergies |
| Environmental/Food Allergies | Version2 Element - E12\_09 | The patient's known allergies to food or environmental agents/ |
| Medical/Surgical History | Version2 Element - E12\_10 | The patient's pre-existing medical and surgery history of the patient |
| The Patient's Type of Immunization | Version2 Element - E12\_12 | The immunization type of the patient. |
| Immunization Year | Version2 Element - E12\_13 | The year associated with each immunization type |
| Current Medications | Version2 Element - E12\_14 | The medications the patient currently takes |
| Current Medication Dose | Version2 Element - E12\_15 | The numeric dose or amount of the patient's current medication |
| Current Medication Dosage Unit | Version2 Element - E12\_16 | The dosage unit of the patient's current medication |
| Current Medication Administration Route | Version2 Element - E12\_17 | The administration route (po, SQ, etc.) of the patient's current medication |
| Pregnancy | Version2 Element - E12\_20 | Indication of the possibility by the patient's history of current pregnancy. |
| Vitals | Date/Time Vital Signs Taken | Version2 Element - E14\_01 | The date/time vital signs were taken on the patient. |
| Cardiac Rhythm / Electrocardiography (ECG) | Version2 Element - E14\_02 | Indicates that the information which is documented was obtained prior to the documenting EMS units care. |
| ECG Type | Version2 Element - E14\_03 | The cardiac rhythm / ECG and other electrocardiography findings of the patient as interpreted by EMS personnel. |
| Method of ECG Interpretation | None | The method of ECG interpretation. |
| SBP (Systolic Blood Pressure) | Version2 Element - E14\_04 | The patient's systolic blood pressure. |
| DBP (Diastolic Blood Pressure) | Version2 Element - E14\_05 | The patient's diastolic blood pressure. |
| Method of Blood Pressure Measurement | Version2 Element - E14\_06 | Indication of method of blood pressure measurement. |
| Heart Rate | Version2 Element - E14\_07 | The patient's heart rate expressed as a number per minute. |
| Pulse Oximetry | Version2 Element - E14\_09 | The patient's oxygen saturation. |
| Pulse Rhythm | Version2 Element - E14\_10 | The clinical rhythm of the patient's pulse. |
| Respiratory Rate | Version2 Element - E14\_11 | The patient's respiratory rate expressed as a number per minute. |
| Respiratory Effort | Version2 Element - E14\_12 | The patient's respiratory effort. |
| Blood Glucose Level | Version2 Element - E14\_14 | The patient's blood glucose level. |
| Glasgow Coma Score-Eye | Version2 Element - E14\_15 | The patient's Glasgow Coma Score Eye opening. |
| Glasgow Coma Score-Verbal | Version2 Element - E14\_16 | The patient's Glasgow Coma Score Verbal. |
| Glasgow Coma Score-Motor | Version2 Element - E14\_17 | The patient's Glasgow Coma Score Motor |
| Glasgow Coma Score-Qualifier | Version2 Element - E14\_18 | Documentation of factors which make the GCS score more meaningful. |
| Total Glasgow Coma Score | Version2 Element - E14\_19 | The patient's total Glasgow Coma Score |
| Temperature | Version2 Element - E14\_20 | The patient's body temperature in degrees Celsius/centigrade. |
| Temperature Method | Version2 Element - E14\_21 | The method used to obtain the patient's body temperature. |
| Level of Responsiveness (AVPU) | Version2 Element - E14\_22 | The patient's highest level of responsiveness. |
| Pain Scale Score | Version2 Element - E14\_23 | The patient's indication of pain from a scale of 0-10. |
| Pain Scale Type | None | The type of pain scale used. |
| Stroke Scale Score | Version2 Element - E14\_24 | The findings or results of the Stroke Scale Type (eVitals.30) used to assess the patient exhibiting stroke-like symptoms. |
| Reperfusion Checklist | Version2 Element - E14\_25 | The results of the patient's Reperfusion Checklist for potential Thrombolysis use. |
| APGAR | Version2 Element - E14\_26 | The patient's total APGAR score (0-10). |
| Revised Trauma Score | Version2 Element - E14\_27 | The patient's Revised Trauma Score. |
| Labs | Laboratory Result Type | None | The type of the laboratory value. |
| Laboratory Result | None | The value or result of the laboratory test (Units may vary). |
| Imaging Study File or Waveform Graphic Type | None | The description of the image study file or waveform graphic stored in Imaging Study File or Waveform Graphic (eLabs.08) |
| Imaging Study File or Waveform Graphic | None | The imaging study file |
| Destination | Destination Street Address | Version2 Element - E20\_03 | The street address of the destination the patient was delivered or transferred to |
| Destination City | Version2 Element - E20\_04 | The city of the destination the patient was delivered or transferred to (physical address). |
| Destination State | Version2 Element - E20\_05 | The state of the destination the patient was delivered or transferred to. |
| Destination County | Version2 Element - E20\_06 | The destination county in which the patient was delivered or transferred to. |
| Destination ZIP Code | Version2 Element - E20\_07 | The destination ZIP code in which the patient was delivered or transferred to. |
| Destination Country | None | The country of the destination. |

Volume 2 – Transactions

Add Section 3.62

## 3.62 Query for Transport Data [PCC-62]

The Transport Data Consumerretrieves specific patient information from the Transport Data Responder.

### 3.62.1 Scope

This transaction is used to connect transport systems to patient care facility systems.

### 3.62.2 Actor Roles

Transport Data Consumer

Transport Data Responder

Figure 3.62.2-1: Use Case Diagram

The roles in this transaction are defined in the following table and may be played by the actors shown here:

Table 3.62.2-1: Actor Roles

|  |  |
| --- | --- |
| **Actor:** | Transport Data Consumer |
| **Role:** | Transport provider sends a Query request for required transport information. |
| **Actor:** | Transport Data Responder |
| **Role** | Transport Responder provides the information requested in the Query. |

Transaction text specifies behavior for each role. The behavior of specific actors may also be specified when it goes beyond that of the general role.

### 3.62.3 Referenced Standards

HL7 FHIR standard STU3

<http://hl7.org/fhir/STU3/index.html>

### 3.62.4 Interaction Diagram

Transport Data Consumer

Transport Data Responder

Query for Transport Data [PCC-62]

Message 1

#### 3.62.4.1 Query for Transport Data

Transport Data Consumer retrieves the required information needed for a patient’s transport from the Transport Data Responder.

##### 3.62.4.1.1 Trigger Events

Any time there is a transport request from a facility and the transport provider needs to retrieve the patient information to populate the Patient Care Record.

##### 3.62.4.1.2 Message Semantics

The message is a FHIR HTTP or HTTPS GET of Transport Data where the parameter provided is the Patient.id with an option to ask for a specific version of the current information needed for patient transport. Since this is retrieving from multiple resources the URLs for this operation are:

* [base]/Patient/[id]
* [base]/RelatedPerson/[id]
* [base]/Coverage/[id]
* [base]/Practitioner/[id]
* [base]/Claim/[id]
* [base]/AllergyIntolerance/[id]
* [base]/Procedure/[id]
* [base]/Immunization/[id]
* [base]/MedicationStatement/[id]
* [base]/ClinicalImpression/[id]
* [base]/DiagnosticOrder/[id]
* [base]/DiagnosticReport /[id]
* [base]/ImagingStudy /[id]
* [base]/Observation/[id]
* [base]/Condition/[id]
* [base]/Location/[id]

##### 3.62.4.1.3 Expected Actions

The Transport Data Consumer initiates the query request for the resources specified in PCC TF-3 6.6.3 Transport Content using HTTP or HTTPS GET, and the Transport Data Responder responds using the resources specified in PCC TF-3 6.6.3 RIPT Transport Content according to the FHIR GET specification with the requested transport information or an error message. See: <http://hl7.org/fhir/STU3/index.html>

### 3.62.5 Security Considerations

See ITI TF-2.x Appendix Z.8 “Mobile Security Considerations”

Note: This assumes the approval of the current ITI-CP-1036 regarding Appendix Z.8 “Mobile Security Considerations”.

#### 3.62.5.1 Security Audit Considerations

There has to be a trusted connection between the Transport Data Consumer and Transport Data Responder. This will be carried out in implementation and can either be a business relationship or a secured connection done through ATNA. The Transport Data Responder has control of what information can be accessed. See PCC TF 1:X.5. This transaction includes identifiable health information, and depending upon the implementation and application, may constitute a disclosure of health information that requires audit, encryption, and authentication of the Data Consumer and Data responder. For further guidance, see ITI TF Supplement: Appendix Z.

##### 3.62.5.1.1 Transport Data Consumer Specific Security Considerations

None

##### 3.62.5.1.2 Transport Data Responder Specific Security Considerations

None

Appendices

None

# Volume 2 Namespace Additions

Add the following terms to the IHE General Introduction Appendix G:

None

Volume 3 – Content Modules

# 5 Namespaces and Vocabularies

Add to Section 5 Namespaces and Vocabularies

|  |  |  |
| --- | --- | --- |
| codeSystem | codeSystemName | Description |
| 2.16.840.1.113883.6.90o | ICD10 | International Classification of Diseases, Clinical Modifiers, Version 10 |
| 2.16.840.1.113883.6.88 | RxNorm | RxNorm |
| 2.16.840.1.113883.6.96 | SNOMED-CT | SNOMED Controlled Terminology |
| NA | NEMSIS | National EMS Information System |
| 2.16.840.1.113883.6.1 | LOINC | Logical Observation Identifier Names and Codes |

Add to Section 5.1.1 IHE Format Codes

|  |  |  |  |
| --- | --- | --- | --- |
| Profile | Format Code | Media Type | Template ID |
| Routine Interfacility Patient Transport (RIPT) | urn:ihe:pcc:ript:2017 | text/xml | 1.3.6.1.4.1.19376.1.5.3.1.1.28.1 |

# 6 Content Modules

Add consideration for consuming systems to be responsible for translating Standard specific codes to NEMSIS codes

### 6.3.1 CDA Document Content Modules

#### 6.3.1.D Routine Interfacility Patient Transport (RIPT) Document Content Module

##### 6.3.1.D.1 Format Code

The XDSDocumentEntry format code for this content is **urn:ihe:pcc:ript:2017**

##### 6.3.1.D.2 Parent Template

Medical Summary Specification (1.3.6.1.4.1.19376.1.5.3.1.1.2)

##### 6.3.1.D.3 Referenced Standards

All standards which are referenced in this document are listed below with their common abbreviation, full title, and link to the standard.

Table 6.3.1.D.3-1: Routine Interfacility Patient Transport Document - Referenced Standards

|  |  |  |
| --- | --- | --- |
| Abbreviation | Title | URL |
| NEMSIS | National EMS Information Services | <http://www.nemsis.org/index.html> |
| HL7 FHIR | HL7 FHIR standard STU3 | http://hl7.org/fhir/STU3/ |
| CDAR2 | HL7 CDA Release 2.0 | <http://www.hl7.org/documentcenter/public/standards/dstu/CDAR2_IG_PROCNOTE_DSTU_R1_2010JUL.zip> |
| HL7 EMS PCR R2 | HL7 Implementation Guide for CDA Release 2 – Level 3: Emergency Medical Services; Patient Care Report, Release 2 – US Realm | <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=438> |
| HL7 EMS DAM | HL7 Version 3 Domain Analysis Model, Emergency Medical Services, Release 1 | <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=421> |
| HL7 EMS DIM | HL7 version 3 Domain Information Model; Emergency Model Services, release 1 | <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=302> |

##### 6.3.1.D.4 Data Element Requirement Mappings to CDA

This section identifies the mapping of data between referenced standards into the CDA implementation guide.

Table 6.3.1.D.4-1: Routine Interfacility Patient Transport (RIPT) - Data Element Requirement Mappings to CDA

| Clinical Data Element NEMSIS | RIPT CDA |
| --- | --- |
| Last name | Header |
| First name | Header |
| middle initial | Header |
| home address | Header |
| home city | Header |
| home country | Header |
| home state | Header |
| home zip code | Header |
| country of residence | Header |
| home census tract | Header |
| social security number | Header |
| gender | Header |
| race | Header |
| Age | Header |
| Age Units | Header |
| Date of Birth | Header |
| Patient's Phone Number | Header |
| Primary Method of Payment | Payer |
| Document type: Certificate of medical necessity (CMN) | Certification of Medical Necessity Section (LOINC code = 52016-3) |
| Physician Certification Statement Signed | Certification of Medical Necessity Section (LOINC code = 52016-3) |
| Date Physician Certification Statement Signed | Certification of Medical Necessity Section (LOINC code = 52016-3) |
| Reason for Physician Certification Statement | Certification of Medical Necessity Section (LOINC code = 52016-3) |
| Healthcare Provider Type Signing Physician Certification Statement | Certification of Medical Necessity Section (LOINC code = 52016-3) |
| Insurance Company ID | Payer |
| Insurance Company Name | Payer |
| Insurance Company Billing Priority | Payer |
| Insurance Company Address | Payer |
| Insurance Company City | Payer |
| Insurance Company State | Payer |
| Insurance Company Zip code | Payer |
| Insurance Company Country | Payer |
| Insurance Group ID | Payer |
| Insurance Policy ID Number | Payer |
| Last Name of the Insured | Payer |
| First Name of the Insured | Payer |
| Middle initial/name of the Insured | Payer |
| Relationship to the Insured | Payer |
| Insurance Group Name | Payer |
| Closest Relative/Guardian Last Name | Patient contacts |
| Closest Relative/Guardian First Name | Patient contacts |
| Closest Relative/Guardian Middle Initial/Name | Patient contacts |
| Closest Relative/Guardian Street Address | Patient contacts |
| Closest Relative/Guardian City | Patient contacts |
| Closest Relative/Guardian State | Patient contacts |
| Closest Relative/Guardian Zip code | Patient contacts |
| Closest Relative/Guardian Country | Patient contacts |
| Closest Relative/Guardian Phone Number | Patient contacts |
| Closest Relative/Guardian Relationship | Patient contacts |
| Patient's Employer | Employer and School Information |
| Patient's Employer's Address | Employer and School Information |
| Patient's Employer's City | Employer and School Information |
| Patient's Employer's State | Employer and School Information |
| Patient's Employer's Zip code | Employer and School Information |
| Patient's Employer's Country | Employer and School Information |
| Patient's Employer's Primary Phone Number | Employer and School Information |
| Barriers to Care | Active Problems |
| Last Name of Patient's Practitioner | Header |
| First Name of Patient's Practitioner | Header |
| Middle Initial/Name of Patient's Practitioner | Header |
| Advanced Directives | Coded Advanced Directives |
| Medication Allergies | Allergies and other Adverse Reactions |
| Environmental/Food Allergies | Allergies and other Adverse Reactions |
| Medical/Surgical History | Active Problems |
| Medical/Surgical History | Procedures and Interventions |
| The Patient's Type of Immunization | Immunizations Section |
| Immunization Year | Immunizations Section |
| Current Medications | Medications Section |
| Current Medication Dose | Medications Section |
| Current Medication Dosage Unit | Medications Section |
| Current Medication Administration Route | Medications Section |
| Presence of Emergency Information Form | Active Problems |
| Pregnancy | Active Problems |
| Last Oral Intake | Intake and Output |
| Date/Time Vital Signs Taken | Vital Signs |
| Method of ECG Interpretation | Coded Vital Signs |
| SBP (Systolic Blood Pressure) | Coded Vital Signs |
| DBP (Diastolic Blood Pressure) | Coded Vital Signs |
| Method of Blood Pressure Measurement | Coded Vital Signs |
| Mean Arterial Pressure | Coded Vital Signs |
| Heart Rate | Coded Vital Signs |
| Method of Heart Rate Measurement | Coded Vital Signs |
| Pulse Oximetry | Coded Vital Signs |
| Pulse Rhythm | Coded Vital Signs |
| Respiratory Rate | Coded Vital Signs |
| Respiratory Effort | Coded Vital Signs |
| End Title Carbon Dioxide (ETCO2) | Coded Vital Signs |
| Carbon Monoxide (CO) | Coded Vital Signs |
| Blood Glucose Level | Coded Vital Signs |
| Glasgow Coma Score-Eye | Coded Vital Signs |
| Glasgow Coma Score-Verbal | Coded Vital Signs |
| Glasgow Coma Score-Motor | Coded Vital Signs |
| Glasgow Coma Score-Qualifier | Coded Vital Signs |
| Total Glasgow Coma Score | Coded Vital Signs |
| Temperature | Coded Vital Signs |
| Temperature Method | Coded Vital Signs |
| Level of Responsiveness (AVPU) | Coded Vital Signs |
| Pain Scale Score | Coded Vital Signs |
| Pain Scale Type | Coded Vital Signs |
| Stroke Scale Score | Coded Vital Signs |
| Stroke Scale Type | Coded Vital Signs |
| Reperfusion Checklist | Coded Vital Signs |
| APGAR | Coded Vital Signs |
| Revised Trauma Score | Coded Vital Signs |
| Date/Time of Laboratory or Imaging Result | Coded Results Section |
| Study/Result Prior to this Unit's EMS Care | Coded Results Section |
| Laboratory Result Type | Coded Results Section |
| Laboratory Result | Coded Results Section |
| Imaging Study Type | Coded Results Section |
| Imaging Study Results | Coded Results Section |
| Imaging Study File or Waveform Graphic Type | Coded Results Section |
| Imaging Study File or Waveform Graphic | Coded Results Section |
| Estimated Body Weight in Kilograms | Coded Vital Signs |
| Length Based Tape Measure | Coded Vital Signs |
| Date/Time of Assessment | Coded Detailed Physical Examination Section |
| Skin Assessment | Detailed Physical Examination Section/Integumentary System Section |
| Head Assessment | Detailed Physical Examination Section/Head |
| Face Assessment | Detailed Physical Examination Section/Ears, Nose, Mouth, and Throat Section |
| Neck Assessment | Detailed Physical Examination Section/Neck |
| Chest/Lungs Assessment | Detailed Physical Examination Section/Thorax and Lungs |
| Heart Assessment | Detailed Physical Examination Section/Heart |
| Abdominal Assessment Finding Location | Detailed Physical Examination Section/Abdomen |
| Abdominal Assessment Finding Location | Detailed Physical Examination Section/Abdomen |
| Abdomen Assessment | Detailed Physical Examination Section/Abdomen |
| Pelvis/Genitourinary Assessment | Detailed Physical Examination Section/Genitalia |
| Back and Spine Assessment Finding Location | Detailed Physical Examination Section/Musculoskeletal |
| Back and Spine Assessment | Detailed Physical Examination Section/Musculoskeletal |
| Extremity Assessment Finding Location | Detailed Physical Examination Section/Musculoskeletal |
| Extremities Assessment | Detailed Physical Examination Section/Musculoskeletal |
| Eye Assessment Finding Location | Detailed Physical Examination Section/Eye section |
| Eye Assessment | Detailed Physical Examination Section/Eye section |
| Mental Status Assessment | Detailed Physical Examination Section/Neurologic System |
| Neurological Assessment | Detailed Physical Examination Section/Neurologic System |
| Stroke/CVA Symptoms Resolved | Active Problems Section |
| Destination Street Address | Coded Event Outcomes/patient transfer |
| Destination City | Coded Event Outcomes/patient transfer |
| Destination State | Coded Event Outcomes/patient transfer |
| Destination County | Coded Event Outcomes/patient transfer |
| Destination ZIP Code | Coded Event Outcomes/patient transfer |
| Destination Country | Coded Event Outcomes/patient transfer |

##### 6.3.1.D.5 Routine Interfacility Patient Transport (RIPT) Document Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Routine Interfacility Patient Transport (RIPT) Document Content Module, using the Template ID as the key identifier.

Sections that are used according to the definitions in other specifications are identified with the relevant specification document. Additional constraints on vocabulary value sets, not specifically constrained within the section template, are also identified.

Table 6.3.1.D.5-1: Routine Interfacility Patient Transport (RIPT) Document Content Module Specification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Template Name | | Routine Interfacility Patient Transport (RIPT) | | | |
| Template ID | | 1.3.6.1.4.1.19376.1.5.3.1.1.28.1 | | | |
| Parent Template | | Medical Summary (1.3.6.1.4.1.19376.1.5.3.1.1.2) | | | |
| General Description | | Routine Interfacility Patient Transport summary will contain the patient’s medical information needed by the transport provider to properly care for the patient during transport. | | | |
| Document Code | | SHALL BE 77596-5 Code System LOINC (CodeSystem: 2.16.840.1.113883.6.1 LOINC), “Transportation Summary Document” | | | |
| Opt and Card | Condition | Header Element or Section Name | Template ID | Specification Document | Vocabulary Constraint |
| Header Elements | | | | | |
| RE [0..1] |  | Personal Information: Last Name | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: First name | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: Middle initial | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: Home address | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: home city | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: home country | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: home state | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: home Zip code | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| RE [0..1] |  | Personal Information: country of residence | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| Sections | | | | | |
| RE [0..1] |  | Active Problems | 1.3.6.1.4.1.19376.1.5.3.1.3.6 | PCC TF-2: 6.3.3.2.3 | PCC RIPT-3:6.3.1.D.5.1 |
| RE [0..1] |  | Payor | 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.7 | PCC TF-2: 6.3.3.7.1 | PCC RIPT-3:6.3.1.D.5.2 |
| O [0..1] |  | Employer and School Information | 1.3.6.1.4.1.19376.1.5.3.1.2.2 | PCC-TF-2: 6.3.2.2 | PCC RIPT-3:6.3.1.D.5.3 |
| RE [0..1] |  | Allergies and other Adverse Reactions | 1.3.6.1.4.1.19376.1.5.3.1.3.13 | PCC TF-2: 6.3.3.2.11 | PCC RIPT-3:6.3.1.D.5.4 |
| RE [0..1] |  | Procedures and Interventions | 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11 | PCC TF-2: 6.3.3.8.3 | PCC RIPT-3:6.3.1.D.5.5 |
| O [0..1] |  | Immunizations Section | 1.3.6.1.4.1.19376.1.5.3.1.3.23 | PCC TF-2: 6.3.3.3.5 |  |
| RE [0..1] |  | Medications Section | 1.3.6.1.4.1.19376.1.5.3.1.3.19 | PCC TF-2: 6.3.3.3.1 | PCC RIPT-3:6.3.1.D.5.6 |
| O [0..1] |  | Intake and Output | 1.3.6.1.4.1.19376.1.5.3.1.1.20.2.3 | PCC TF-2: 6.3.3.6.17 | PCC RIPT-3:6.3.1.D.5.7 |
| RE [0..1] |  | Diagnostic Findings/Results section | 1.3.6.1.4.1.19376.1.5.3.1.3.27 | PCC TF-2: 6.3.3.5.1 | PCC RIPT-3:6.3.1.D.5.8 |
| RE [0..1] |  | Coded Results | 1.3.6.1.4.1.19376.1.5.3.1.3.28 | PCC TF-2: 6.3.3.5.2 | PCC RIPT-3:6.3.1.D.5.9 |
| RE [0..1] |  | Coded Vital Signs | 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2 | PCC TF-2: 6.3.3.4.5 | PCC RIPT-3:6.3.1.D.5.10 |
| RE [0..1] |  | Coded Detailed Physical Examination Section | 1.3.6.1.4.1.19376.1.5.3.1.1.9.15 | PCC TF-2: 6.3.3.4.2 | PCC RIPT-3:6.3.1.D.5.11 |
| RE [0..1] |  | Coded Event Outcomes/patient transfer: Destination street address | 1.3.6.1.4.1.19376.1.7.3.1.1.13.7 | PCC TF-2: 6.3.3.2.49 | PCC RIPT-3:6.3.1.D.5.12 |
| RE[0..1] |  | Certification of Medical Necessity | XXXX | XXXXX | PCC RIPT- 6.3.3.10.S1 |
| RE[0..1] |  | Transport Instructions | XXXXXX | XXXXX | PCC RIPT- 6.3.3.10.S2 |

###### 6.3.1.D.5.1 Active Problems Constraint

Within the Active Problems section the Content Creator SHALL be able to create a Problem concern entry (TemplateID 1.3.6.1.4.1.19376.1.5.3.1.4.5.2 [PCC TF-2]) to identify Medical/surgical History conditions and findings for the patient being transported. Including behaviors that may affect transport personnel (e.g., combativeness).

the .../code SHALL be “finding” and .../ value SHALL contain the coded value for the condition using the ICD-10-CM vocabulary.

###### 6.3.1.D.5.2 Payor Constraint

Within the Payor section the Content Creator SHOULD be able to create a Coverage Entry (Template ID 1.3.6.1.4.1.19376.1.5.3.1.4.17 [PCC TF-2]) to identify the payment information for the patient being transported.

The coverage information SHOULD include:

|  |  |  |  |
| --- | --- | --- | --- |
| Optionality | Cardinality | Name | Vocabulary |
| RE | 0..\* | Insurance Company Name |  |
| RE | 0..1 | Insurance Company Billing Priority |  |
| RE | 0..1 | Insurance Company Address |  |
| RE | 0..1 | Insurance Company City |  |
| RE | 0..1 | Insurance Company State |  |
| RE | 0..1 | Insurance Company Zip code |  |
| RE | 0..1 | Insurance Company Country |  |
| RE | 0..1 | Insurance Group ID |  |
| RE | 0..1 | Insurance Policy ID Number |  |
| RE | 0..1 | Last Name of the Insured |  |
| RE | 0..1 | First Name of the Insured |  |
| RE | 0..1 | Middle initial/name of the Insured |  |
| RE | 0..1 | Relationship to the Insured | NEMSIS |
| RE | 0..1 | Insurance Group Name |  |

###### 6.3.1.D.5.3 Employer and School Information Constraint

Within the Employer and School information section the Content Creator SHALL be able to include the following data elements:

|  |  |  |  |
| --- | --- | --- | --- |
| Optionality | Cardinality | Name | Vocabulary |
| RE | 0..1 | Patient's Employer |  |
| RE | 0..1 | Patient's Employer's Address |  |
| RE | 0..1 | Patient's Employer's City |  |
| RE | 0..1 | Patient's Employer's State |  |
| RE | 0..1 | Patient's Employer's Zip code |  |
| RE | 0..1 | Patient's Employer's Country |  |
| RE | 0..\* | Patient's Employer's Primary Phone Number | NEMSIS |

###### 6.3.1.D.5.4 Allergies and Other Adverse Reactions Constraint

Within the Allergies and Other Adverse Reactions section the Content Creator SHALL be able to create an Allergies and Intolerances Concern entry (Template ID 1.3.6.1.4.1.19376.1.5.3.1.4.5.3 [PCC TF-2]) to identify the patient’s medication and environmental/food allergies. Environmental/food allergies using SNOMED-CT SHOULD be used to identify the allergen. Medication allergies using RxNorm SHOULD be used to identify an allergy as a specific drug. To indicate an allergy to a class of drug ICD-10 SHOULD be used to indicate an allergy to a class of drug.

###### 6.3.1.D.5.5 Procedures and Other Interventions Constraint

Within the Procedures and Other Interventions section the Content Creator SHALL be able to create a procedure entry (TemplateID 1.3.6.1.4.1.19376.1.5.3.1.4.19 [PCC TF-2]) to identify any procedures the patient has undergone using ICD-10-PCS

###### 6.3.1.D.5.6 Medications Section Constraint

Within the Medications section the Content Creator SHALL be able to create a medications entry (TemplateID 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2]) to identify the current medications that have been given to the patient using RxNorm. In a narrative form there SHALL be an indication of the date, and time of the last medication administered to the patient.

The entry SHALL include the following elements:

|  |  |  |
| --- | --- | --- |
| Optionality | Cardinality | Name |
| RE | 0..\* | Current Medications |
| RE | 0..1 | Current Medication Dose |
| RE | 0..1 | Current Medication Dosage Unit |
| RE | 0..1 | Current Medication Administration Route |

###### 6.3.1.D.5.7 Intake and Output Constraint

Within this optional section, the Intake and Output section the Content Creator SHALL include a narrative of the substance and the effectiveTime to indicate the time and date of the last oral intake.

###### 6.3.1.D.5.8 Diagnostic findings Constraint

Within the Diagnostic Findings section SHALL include the narrative results of the Cardiac Rhythm / Electrocardiography (ECG) test, if known.

###### 6.3.1.D.5.9 Coded Results Constraint

Within the Coded Results section the Content Creator SHALL be able to create a Coded Result entry (TemplateID 1.3.6.1.4.1.19376.1.5.3.1.3.28 [PCC TF-2]) that will include the type and method of the Cardiac Rhythm / Electrocardiography (ECG) test interpretation, if known.

###### 6.3.1.D.5.10 Coded Vital Signs Constraint

Within the Coded Vital Signs section the Content Creator SHALL be able to create a Vital signs observation entries (TemplateID 1.3.6.1.4.1.19376.1.5.3.1.4.13.2 [PCC TF-2]) for the following vital signs:

| Optionality | Cardinality | Name | LOINC | Constraint |
| --- | --- | --- | --- | --- |
| RE | 0..1 | SBP (Systolic Blood Pressure) | 8480-6 | Indicating Method using valuesett from BloodPressureMeasurementMethod 2.16.840.1.113883.17.3.11.107 |
| RE | 0..1 | DBP (Diastolic Blood Pressure) | 8462-4 | Indicating Method using valueset from BloodPressureMeasurementMethod 2.16.840.1.113883.17.3.11.107 |
| RE | 0..1 | Mean Arterial Pressure | 8478-0 | Indicating Method using valuesett from BloodPressureMeasurementMethod 2.16.840.1.113883.17.3.11.107 |
| RE | 0..1 | Heart Rate | 8867-4 | Indicating the method or heat rate measurement using 8886-4 |
| RE | 0..1 | Pulse Oximetry | 2710-2 |  |
| RE | 0..1 | Pulse Rhythm | 44974-4 |  |
| RE | 0..1 | Respiratory Rate | 9279-1 |  |
| RE | 0..1 | Respiratory Effort | 80341-1 |  |
| RE | 0..1 | End Title Carbon Dioxide  (ETCO2) | 19889-5 |  |
| RE | 0..1 | Carbon Monoxide (CO) | 20563-3 |  |
| RE | 0..1 | Blood Glucose Level | 2339-0 |  |
| RE | 0..1 | Glasgow Coma Score-Eye | 9267-6 |  |
| RE | 0..1 | Glasgow Coma Score-Verbal | 9270-0 |  |
| RE | 0..1 | Glasgow Coma Score-Motor | 9268-4 |  |
| RE | 0..1 | Glasgow Coma Score-Qualifier | 55285-1 |  |
| RE | 0..1 | Total Glasgow Coma Score | 9269-2 |  |
| RE | 0..1 | Temperature | 8310-5 |  |
| RE | 0..1 | Temperature Method | 8327-9 |  |
| RE | 0..1 | Level of Responsiveness (AVPU) | 11454-6 |  |
| RE | 0..1 | Pain Scale Score | 38208-5 |  |
| RE | 0..1 | Pain Scale Type | 80316-3 |  |
| RE | 0..1 | Stroke Scale Score | 72089-6 |  |
| RE | 0..1 | Stroke Scale Type | 67521-5 |  |
| RE | 0..1 | Reperfusion Checklist | 67523-1 |  |
| RE | 0..1 | APGAR 1 minute 5 minute 10 Minute | 48334-7 48333-9 48332-1 |  |
| RE | 0..1 | Revised Trauma Score | Pending |  |
| RE | 0..1 | Estimated Body Weight in Kilograms | 3141-9 |  |
| RE | 0..1 | Length Based Tape Measure | 8302-2 |  |

###### 6.3.1.D.5.11 Coded Detailed Physical Exam Constraint

Within the Coded Detailed Physical Exam section the Content Creator SHALL be able to create the following subsections:

| Optionality | Cardinality | Name |
| --- | --- | --- |
| RE | 0..1 | Coded Detailed Physical Examination Section |
| RE | 0..1 | Integumentary System Section |
| RE | 0..1 | Head |
| RE | 0..1 | Ears, Nose, Mouth, and Throat Section |
| RE | 0..1 | Neck |
| RE | 0..1 | Thorax and Lungs |
| RE | 0..1 | Heart |
| RE | 0..1 | Abdomen |
| RE | 0..1 | Abdominal Assessment Finding Location |
| RE | 0..1 | Abdomen Assessment |
| RE | 0..1 | Genitalia |
| RE | 0..1 | Back and Spine Assessment Finding Location |
| RE | 0..1 | Back and Spine Assessment |
| RE | 0..1 | Extremity Assessment Finding Location |
| RE | 0..1 | Extremities Assessment |
| RE | 0..1 | Eye Assessment Finding Location |
| RE | 0..1 | Eye Assessment |
| RE | 0..1 | Neurologic System |

###### 6.3.1.D.5.12 Coded Event Outcome Constraint

Within the Coded Event Outcome section the Content Creator SHALL be able to create a Patient Transfer entry (Template ID 1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1 [PCC TF-2]) to identify the destination facility for the patient, expressing the address in: .../participant/participantRole/addr

The address SHALL support the following elements:

| Optionality | Cardinality | Name |
| --- | --- | --- |
| RE | 0..1 | Destination Street Address |
| RE | 1..1 | Destination City |
| R | 1..1 | Destination State |
| R | 1..1 | Destination County |
| R | 1..1 | Destination ZIP Code |
| RE | 1..1 | Destination Country |

##### 6.3.1.D.6 Routine Interfacility Patient Transport (RIPT) Conformance

CDA Release 2.0 documents that conform to the requirements of this document content module shall indicate their conformance by the inclusion of the <templateId> XML elements in the header of the document.

A CDA Document may conform to more than one template. This content module inherits from the Medical summary (1.3.6.1.4.1.19376.1.5.3.1.1.2) and so must conform to the requirements of those templates as well this document specification, Routine Interfacility Patient Transport Document (TemplateID).

Add to Section 6.3.2 Header Content Modules

### 6.3.2 CDA Header Content Modules

No new Header Elements.

### 6.3.3 CDA Section Content Modules

Add to Section 6.3.3.10 Section Content Modules

##### 6.3.3.10.S1 Certification of Medical Necessity - Section Content Module

Table 6.3.3.10.S1-1: Certification of Medical Necessity Section

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Template Name | | Certification of Medical Necessity | | | |
| Template ID | | 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.12 | | | |
| Parent Template | | None | | | |
| General Description | | Indication of whether a physician certification statement (PCS) is available documenting the medical necessity for the EMS encounter. The Certification of Medical Necessity section includes the information necessary to document the justification for the medical transport, including the name and role of the person authorizing the medical transport. This information can be used to generate a Certificate of Medical Necessity (CMN) document for signature. | | | |
| Section Code | | 52016-3, LOINC, “Ambulance transport, Physician certification for transport information Set” | | | |
| Author | | Patient’s doctor or physician | | | |
| Informant | | Patient's nurse or discharge planner | | | |
| Subject | | current recordTarget | | | |
| Opt and Card | Condition | Data Element or Section Name | Template ID | Specification Document | Vocabulary  Constraint |
| Entries | | | | | |
| R [1..1] |  | Medical Necessity Entry | 1.3.6.1.4.1.19376.1.5.3.1.4.23 | PCC TF-3: 6.3.4.E |  |

##### 6.3.3.10.S2 Transport Instructions - Section Content Module

Table 6.3.3.10.S2-1: Transport Instructions Section

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Template Name | | Transport Instructions | | | |
| Template ID | | 1.3.6.1.4.1.19376.1.5.3.1.1.26.1.7 | | | |
| Parent Template | | None | | | |
| General Description | | This section contains narrative information provided by the patient’s care provider(s) to indicate any care that should be rendered during the transport. | | | |
| Section Code | | 74213-0, LOINC, “Discharge instructions” | | | |
| Author | | Patient’s care provider(s) | | | |
| Informant | | Patient's nurse or discharge planner | | | |
| Subject | | current recordTarget | | | |
| Opt and Card | Condition | Data Element or Section Name | Template ID | Specification Document | Vocabulary  Constraint |
| Entries | | | | | |
| None |  |  |  |  |  |

### 6.3.4 CDA Entry Content Modules

Add to Section 6.3.4.E Entry Content Modules

#### 6.3.4.E Medical Necessity Entry 1.3.6.1.4.1.19376.

The Medical Necessity observation is a Simple Observation that records the Reason for Physician Certification Statement.

##### 6.3.4.E.1 Specification

< observation classCode='OBS' moodCode='EVN'>

<templateId root=’ 1.3.6.1.4.1.19376.1.5.3.1.4.13’

<templateId root='1.3.6.1.4.1.19376.'/>

<id root='' extension=''/>

<code code='15515-0' displayName='Ambulance transport, Medical reason for transport ' codeSystem='2.16.840.1.113883.6.1' codeSystemName=' LOINC' />

<text><reference value='#xxx'/></text>

<value xsi:type=’CE’ ></value>

<effectiveTime value=''/>

<performer typeCode='PRF'>

<assignedEntity>

<code></code>

<assignedPerson><name></name></assignedPerson>

</assignedEntity>

</performer>

</observation>

###### 6.3.4.E.1.1 moodCode='EVN'>

The Medical Necessity is recorded in an observation element, to describe the patient’s medical necessity taken during the encounter. In event mood (moodCode='EVN'), this records the Medical Necessity.

###### 6.3.4.E.1.2 <templateId root='1.3.6.1.4.1.19376.1.5.3/>

The templateId indicates that this Medical Necessity entry conforms to the constraints of this content module.

###### 6.3.4.E.1.3 <id root='' extension=''/>

This required element shall contain an identifier.

###### 6.3.4.E.1.4 <code code='' displayName='' codeSystem='' codeSystemName='' />

This required element indicates the medical reason for ambulance transport. The code be 15515-0, LOINC, “Ambulance transport, Medical reason for transport”.

###### 6.3.4.E.1.5 <value xsi:type='CE' .../>

The <value> element shall be present, and shall the coded reason for transport.

###### 6.3.4.E.1.6 <text><reference value='#xxx'/></text>

The <text> element shall contain a narrative of the physician medical necessity statement.

###### 6.3.4.E.1.7 <effectiveTime><low value=''/><effectiveTime/>

This <low> element records the time and date that the Physician Certification Statement was signed.

###### 6.3.4.E.1.8 <performer typeCode='PRF'> <assignedEntity> <assignedPerson><name></assignedPerson></assignedEntity></performer>

The <performer> element shall be present, representing the Name of Individual Signing Physician Certification Statement in the <assignedEntity><assignedPerson><name> element.

###### 6.3.4.E.1.9 <performer> <assignedEntity><code> </assignedEntity></performer>

The <performer> element shall be present representing the healthcare provider type of the individual signing the Physician Certification Statement in the <assignedEntity><code> element.

###### 6.3.4.E.1.10 <entryRelationship typeCode='DRIV'>

Observations of Medical Necessity should provide an indication of whether a physician certification statement (PCS) is available documenting the medical necessity for the EMS encounter.

###### 6.3.4.E.1.11 <observation> <templateId root=' '/></observation>

An observation of whether a physician certification statement (PCS) is available SHALL be included if known.

###### 6.3.4.E.1.12 <code code='52018-9' displayName='Ambulance transport, Physician certification for transport indicator' codeSystem='2.16.840.1.113883.6.1'/> codeSystemName='LOINC'

This observation is an indication of whether a physician certification statement (PCS) is available documenting the medical necessity or the EMS encounter as indicated by the <code> element.

###### 6.3.4.E.1.13 <value xsi:type='BL' value='true|false'/>

The observation of whether a physician certification statement (PCS) is available may include a <value> element using the Boolean (xsi:type=' BL' ) data type to indicate simply whether or not the statement exists.

###### 6.3.4.E.1.14 <reference typeCode='REFR'><externalDocument classCode='DOC' moodCode='EVN'><id root=' ' extension=' '/><text><reference value=' '/></text>

The observation of whether a physician certification statement (PCS) is available may contain a single reference to an external document. That reference shall be recorded as shown above. The <id> element shall contain the appropriate root and extension attributes to identify the document. The <text> element may be present to provide a URL link to the document in the value attribute of the <reference> element. If the <reference> element is present, the PCS in the narrative shall contain a <linkHTML> element to the same URL found in the value attribute.

Add to Section 6.5 Value Sets

## 6.4 Section not applicable

This heading is not currently used in a CDA document.

## 6.5 Transport Reason Value Sets

### 6.5.1 Transport Reason 1.3.6.1.4.1.19376.1.5.3.1.1.13.2.13

| Coding Scheme | SNOMED-CT |
| --- | --- |
| 160685001 | Bed-ridden |
| 23852006 | Cardiac monitoring (regime/therapy) |
| 716777001 | Hemodynamic monitoring (regime/therapy) |
| 419284004 | Altered mental status (finding) |
| 67722007 | At risk for joint contractures (finding) |
| 65108000 | At risk for joint contractures (finding) |
| 225999004 | At risk for violence (finding) |
| 86340006 | At risk of deep vein thrombosis (finding) |
| 425423002 | Intravenous therapy (regime/therapy) |
| 238136002 | Pain provoked by movement (finding) |
| 134291007 | Morbid obesity (disorder) |
| 373062004 | Multiple fractures (disorder) |
| 225602000 | Device used (finding) |
| 35497000 | Restraint maintenance (procedure) |
| 26544005 | Unable to sit unsupported (finding) |
| 40174006 | Muscle weakness (finding) |
| 707808001 | Isolation procedure (procedure) |
| 410204009 | Oxygen therapy support (regime/therapy) |
| 62330004 | Oxygen therapy management (procedure) |
| 722179007 | Decreased muscle function (finding) |
| 225563000 | Dependent for sitting (finding) |
| 160685001 | Pressure ulcer of buttock (disorder) |

## 6.6 HL7 FHIR Content Module

### 6.6.1 Care Plan

Reserved for CarePlan

### 6.6.2 Subscription

Reserved for Subscription

### 6.6.3 Transport Content

The following table shows the mapping of the FHIR Resources supporting the content for each of the NEMSIS Data Elements/Attributes. Transport Data Responder SHALL support the Resources identified by this table. Transport Data Consumers SHALL retrieve clinician sourced Transport content from the specified resource for each attribute.

| NEMSIS Data Element | FHIR Resource location | Cardinality | Transport Data Description | Constraint |
| --- | --- | --- | --- | --- |
| Last name | Patient.name | RE [0..1] | The patient's last (family) name |  |
| First name | Patient.name | RE [0..1] | The patient's first (given) name |  |
| middle initial | Patient.name | RE [0..1] | The patient's middle name, if any |  |
| home address | Patient.address | RE [0..1] | Patient's address of residence |  |
| home city | Patient.address | RE [0..1] | The patient's primary city or township of residence. |  |
| home country | Patient.address | RE [0..1] | The patient's home county or parish of residence. |  |
| home state | Patient.address | RE [0..1] | The state, territory, or province where the patient resides. |  |
| home zip code | Patient.address | RE [0..1] | The patient's ZIP code of residence. |  |
| country of residence | Patient.address | RE [0..1] | The country of residence of the patient. |  |
| home census tract |  | O [0..1] | The census tract in which the patient lives |  |
| social security number | Patient.identifier | O [0..1] | The patient's social security number |  |
| gender | Patient.gender | RE [0..1] | The Patient's Gender |  |
| race | Patient.extension(us-core-race) | RE [0..1] | The patient's race as defined by the OMB (US Office of Management and Budget) |  |
| Age | Patient.identifier | RE [0..1] | The patient's age (either calculated from date of birth or best approximation) |  |
| Age Units | Patient.identifier | RE [0..1] | The unit used to define the patient's age |  |
| Date of Birth | Patient.birthDate | RE [0..1] | The patient's date of birth |  |
| Patient's Phone Number | Patient.telecom | RE [0..1] | The patient's phone number |  |
| Primary Method of Payment | Coverage.type | RE [0..1] | The primary method of payment or type of insurance associated with this EMS encounter |  |
| Document type: Certificate of medical necessity (CMN) | Claim | RE [0..1] |  | Where code is LOINC = 52016-3 Ambulance transport, Physician certification for transport Information set) |
| Physician Certification Statement Signed | Claim.entry.value  Claim.entry.code | RE [0..1] | Indication of whether a physician certification statement (PCS) is available documenting the medical necessity or the EMS encounter. | Where code is LOINC = 52017-1 Ambulance transport, Physician certification for transport statement (narrative)Ambulance transport |
| Date Physician Certification Statement Signed | Claim.time | RE [0..1] | The date the Physician Certification Statement was signed |  |
| Reason for Physician Certification Statement | Claim.event.code | RE [0..\*] | The reason for EMS transport noted on the Physician Certification Statement |  |
| Healthcare Provider Type Signing Physician Certification Statement | Claim.author.practicionerRole.role | RE [0..1] | The type of health care provider who signed the Physician Certification Statement |  |
| Last Name of Individual Signing Physician Certification Statement | Claim.author.practicioner.name | RE [0..1] | The last name of the healthcare provider who signed the Physician Certification Statement. |  |
| First Name of Individual Signing Physician Certification Statement | Claim.author.practicioner.name | RE [0..1] | The first name of the healthcare provider who signed the Physician Certification Statement. |  |
| Insurance Company ID | Coverage.type | RE [0..1] | The ID Number of the patient's insurance company. |  |
| Insurance Company Name | Coverage.issuer | RE [0..1] | The name of the patient's insurance company. |  |
| Insurance Company Billing Priority | Claim.priority | RE [0..1] | The billing priority or order for the insurance company. |  |
| Insurance Company Address | Coverage.issuer | RE [0..1] | The mailing address of the Insurance Company |  |
| Insurance Company City | Coverage.issuer | RE [0..1] | The insurance company's city or township used for mailing purposes. |  |
| Insurance Company State | Coverage.issuer | RE [0..1] | The insurance company's state, territory, or province, or District of Columbia. |  |
| Insurance Company Zipcode | Coverage.issuer | RE [0..1] | The insurance company's ZIP Code |  |
| Insurance Company Country | Coverage.issuer | RE [0..1] | The insurance company's country |  |
| Insurance Group ID | Coverage.identifier | RE [0..1] | The ID number of the patient's insurance group |  |
| Insurance Policy ID Number | Coverage.identifier | RE [0..1] | The ID number of the patient's insurance policy |  |
| Last Name of the Insured | Coverage.identifier | RE [0..1] | The last (family) name of the person insured by the insurance company. |  |
| First Name of the Insured | Coverage.identifier | RE [0..1] | The first (given) name of the person insured by the insurance company |  |
| Middle initial/name of the Insured | Coverage.identifier | RE [0..1] | The middle name, if any, of the person insured by the insurance company. |  |
| Relationship to the Insured | Coverage.identifier | RE [0..1] | The relationship of the patient to the primary insured person |  |
| Insurance Group Name | Coverage.identifier | RE [0..1] | The name of the patient's insurance group. |  |
| Closest Relative/Guardian Last Name | RelatedPerson.name | RE [0..1] | The last (family) name of the patient's closest relative or guardian |  |
| Closest Relative/Guardian First Name | RelatedPerson.name | RE [0..1] | The first (given) name of the patient's closest relative or guardian |  |
| Closest Relative/Guardian Middle Initial/Name | RelatedPerson.name | RE [0..1] | The middle name/initial, if any, of the closest patient's relative or guardian. |  |
| Closest Relative/Guardian Street Address | RelatedPerson.address | RE [0..1] | The street address of the residence of the patient's closest relative or guardian |  |
| Closest Relative/Guardian City | RelatedPerson.address | RE [0..1] | The primary city or township of residence of the patient's closest relative or guardian. |  |
| Closest Relative/Guardian State | RelatedPerson.address | RE [0..1] | The state of residence of the patient's closest relative or guardian. |  |
| Closest Relative/Guardian Zip Code | RelatedPerson.address | RE [0..1] | The ZIP Code of the residence of the patient's closest relative or guardian. |  |
| Closest Relative/Guardian Country | RelatedPerson.address | RE [0..1] | The country of residence of the patient's closest relative or guardian. |  |
| Closest Relative/Guardian Phone Number | RelatedPerson.telecom | RE [0..1] | The phone number of the patient's closest relative or guardian |  |
| Closest Relative/Guardian Relationship | RelatedPerson.relationship | RE [0..1] | The relationship of the patient's closest relative or guardian |  |
| Patient's Employer | Coverage.issuer | O [0..1] | The patient's employer's Name |  |
| Patient's Employer's Address | Coverage.identifier | O [0..1] | The street address of the patient's employer |  |
| Patient's Employer's City | Coverage.identifier | O [0..1] | The city or township of the patient's employer used for mailing purposes |  |
| Patient's Employer's State | Coverage.identifier | O [0..1] | The state of the patient's employer |  |
| Patient's Employer's Zip Code | Coverage.identifier | O [0..1] | The ZIP Code of the patient's employer |  |
| Patient's Employer's Country | Coverage.identifier | O [0..1] | The country of the patient's employer |  |
| Patient's Employer's Primary Phone Number | Coverage.identifier | O [0..1] | The employer's primary phone number. |  |
| Last Name of Patient's Practitioner | Practitioner.name | RE [0..1] | Indication of whether or not there were any patient specific barriers to serving the patient at the scene |  |
| First Name of Patient's Practitioner | Practitioner.name | RE [0..1] | The last name of the patient's practitioner |  |
| Middle Initial/Name of Patient's Practitioner | Practitioner.name | RE [0..1] | The first name of the patient's practitioner |  |
| Advanced Directives | Claim.subType | RE [0..1] | The presence of a valid DNR form, living will, or document directing end of life or healthcare treatment decisions. |  |
| Medication Allergies | AllergyIntolerance.substance | RE [0..\*] | The patient's medication allergies |  |
| Environmental/Food Allergies | AllergyIntolerance.substance | RE [0..\*] | The patient's known allergies to food or environmental agents. |  |
| Medical/Surgical History | ClinicalImpression.finding | RE [0..\*] | The patient's pre-existing medical and surgery history of the patient |  |
| Medical/Surgical History | ClinicalImpression.date | RE [0..\*] | The patient's pre-existing medical and surgery history of the patient |  |
| Medical/Surgical History | Condition.code | RE [0..\*] | The patient's pre-existing medical and surgery history of the patient |  |
| Medical/Surgical History | Condition.onset[x] | RE [0..\*] | The patient's pre-existing medical and surgery history of the patient |  |
| Medical/Surgical History | Procedure.performed[x] | RE [0..\*] | The patient's pre-existing medical and surgery history of the patient |  |
| Medical/Surgical History | Procedure.code | RE [0..\*] | The patient's pre-existing medical and surgery history of the patient |  |
| The Patient's Type of Immunization | Immunization.identifier | O [0..1] | The immunization type of the patient. |  |
| Immunization Year | Immunization.date | O [0..1] | The year associated with each immunization type |  |
| Current Medications | MedicationStatement.medication[x] | RE [0..1] | The medications the patient currently takes |  |
| Current Medication Dose | MedicationStatement.dosage | RE [0..1] | The numeric dose or amount of the patient's current medication |  |
| Current Medication Dosage Unit | MedicationStatement.dosage | RE [0..1] | The dosage unit of the patient's current medication |  |
| Current Medication Administration Route | MedicationStatement.dosage.route | RE [0..1] | The administration route (po, SQ, etc.) of the patient's current medication |  |
| Presence of Emergency Information Form | N/A | N/A | Indication of the presence of the Emergency Information Form associated with patient's with special healthcare needs. |  |
| Pregnancy | Condition.code | RE [0..1] | Indication of the possibility by the patient's history of current pregnancy. | Where code is "pregnant" |
| Last Oral Intake | ClinicalImpression.finding | O [0..\*] | Date and Time of last oral intake. |  |
| Date/Time Vital Signs Taken | Observation.issued | RE [0..1] | The date/time vital signs were taken on the patient. |  |
| Cardiac Rhythm / Electrocardiography (ECG) | Observation.value[x] | RE [0..1] | The cardiac rhythm / ECG and other electrocardiography findings of the patient as interpreted by EMS personnel. |  |
| ECG Type | Observation.related.type | RE [0..1] | The type of ECG associated with the cardiac rhythm. |  |
| Method of ECG Interpretation | Observation.method | RE [0..1] | The method of ECG interpretation. |  |
| SBP (Systolic Blood Pressure) | Observation.value[x] | RE [0..1] | The patient's systolic blood pressure. |  |
| DBP (Diastolic Blood Pressure) | Observation.value[x] | RE [0..1] | The patient's diastolic blood pressure. |  |
| Method of Blood Pressure Measurement | Observation.method | RE [0..1] | Indication of method of blood pressure measurement. |  |
| Mean Arterial Pressure | Observation.value[x] | RE [0..1] | The patient's mean arterial pressure. |  |
| Heart Rate | Observation.value[x] | RE [0..1] | The patient's heart rate expressed as a number per minute. |  |
| Method of Heart Rate Measurement | Observation.method | RE [0..1] | The method in which the Heart Rate was measured. Values include auscultated, palpated, electronic monitor. |  |
| Pulse Oximetry | Observation.value[x] | RE [0..1] | The patient's oxygen saturation. |  |
| Pulse Rhythm | Observation.value[x] | RE [0..1] | The clinical rhythm of the patient's pulse. |  |
| Respiratory Rate | Observation.value[x] | RE [0..1] | The patient's respiratory rate expressed as a number per minute. |  |
| Respiratory Effort | Observation.value[x] | RE [0..1] | The patient's respiratory effort. |  |
| End Title Carbon Dioxide (ETCO2) | Observation.value[x] | RE [0..1] | The numeric value of the patient's exhaled end tidal carbon dioxide (ETCO2) level measured as a unit of pressure in millimeters of mercury (mmHg). |  |
| Carbon Monoxide (CO) | Observation.value[x] | RE [0..1] | The numeric value of the patient's carbon monoxide level measured as a percentage (%) of carboxyhemoglobin (COHb). |  |
| Blood Glucose Level | Observation.value[x] | RE [0..1] | The patient's blood glucose level. |  |
| Glasgow Coma Score-Eye | Observation.value[x] | RE [0..1] | The patient's Glasgow Coma Score Eye opening. |  |
| Glasgow Coma Score-Verbal | Observation.value[x] | RE [0..1] | The patient's Glasgow Coma Score Verbal. |  |
| Glasgow Coma Score-Motor | Observation.value[x] | RE [0..1] | The patient's Glasgow Coma Score Motor |  |
| Glasgow Coma Score-Qualifier | Observation.value[x] | RE [0..1] | Documentation of factors which make the GCS score more meaningful. |  |
| Total Glasgow Coma Score | Observation.value[x] | RE [0..1] | The patient's total Glasgow Coma Score. |  |
| Temperature | Observation.value[x] | RE [0..1] | The patient's body temperature in degrees Celsius/centigrade. |  |
| Temperature Method | Observation.value[x] | RE [0..1] | The method used to obtain the patient's body temperature. |  |
| Level of Responsiveness (AVPU) | Observation.value[x] | RE [0..1] | The patient's highest level of responsiveness. |  |
| Pain Scale Score | Observation.value[x] | RE [0..1] | The patient's indication of pain from a scale of 0-10. |  |
| Pain Scale Type | Observation.value[x] | RE [0..1] | The type of pain scale used. |  |
| Stroke Scale Score | Observation.value[x] | RE [0..1] | The findings or results of the Stroke Scale Type (eVitals.30) used to assess the patient exhibiting stroke-like symptoms. |  |
| Stroke Scale Type | Observation.value[x] | RE [0..1] | The type of stroke scale used. |  |
| Reperfusion Checklist | Observation.value[x] | RE [0..1] | The results of the patient's Reperfusion Checklist for potential Thrombolysis use. |  |
| APGAR | Observation.value[x] | RE [0..1] | The patient's total APGAR score (0-10). |  |
| Revised Trauma Score | Observation.value[x] | RE [0..1] | The patient's Revised Trauma Score. |  |
| Date/Time of Laboratory or Imaging Result | DiagnosticOrder.event.dateTime | RE [0..1] | The data and time for the specific laboratory result |  |
| Study/Result Prior to this Unit's EMS Care | DiagnosticReport.result | RE [0..1] | Indicates that the laboratory result occurred prior to this EMS units care. |  |
| Laboratory Result Type | DiagnosticReport.result | RE [0..1] | The type of the laboratory value. |  |
| Laboratory Result | DiagnosticReport.result | RE [0..1] | The value or result of the laboratory test (Units may vary). |  |
| Imaging Study Type | ImagingStudy.procedure | RE [0..1] | The type of x-ray or imaging study. |  |
| Imaging Study Results | DiagnosticReport.result | RE [0..1] | The description or interpretation of the results of the imaging study. |  |
| Imaging Study File or Waveform Graphic Type | ImagingStudy.procedure | RE [0..1] | The description of the image study file or waveform graphic stored in Imaging Study File or Waveform Graphic (eLabs.08). |  |
| Imaging Study File or Waveform Graphic | ImagingStudy.series.instance.content | RE [0..1] | The imaging study file. |  |
| Estimated Body Weight in Kilograms | Observation.interpretation | RE [0..1] | The patient's body weight in kilograms either measured or estimated |  |
| Length Based Tape Measure | Observation.interpretation | RE [0..1] | The length-based color as taken from the tape. |  |
| Date/Time of Assessment | Observation.issued | RE [0..1] | The date/time of the assessment |  |
| Skin Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's skin. |  |
| Head Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's head. |  |
| Face Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's face. |  |
| Neck Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's neck. |  |
| Chest/Lungs Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's chest/lungs. |  |
| Heart Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's heart. |  |
| Abdominal Assessment Finding Location | Observation.bodySite | RE [0..1] | The location of the patient's abdomen assessment findings. |  |
| Abdominal Assessment Finding Location | Observation.bodySite | RE [0..1] | The location of the patient's abdomen assessment findings. |  |
| Abdomen Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's abdomen. |  |
| Pelvis/Genitourinary Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's pelvis/genitourinary. |  |
| Back and Spine Assessment Finding Location | Observation.bodySite | RE [0..1] | The location of the patient's back and spine assessment findings. |  |
| Back and Spine Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's spine (Cervical, Thoracic, Lumbar, and Sacral) and back exam. |  |
| Extremity Assessment Finding Location | Observation.bodySite | RE [0..1] | The location of the patient's extremity assessment findings. |  |
| Extremities Assessment | Observation.interpretation | RE [0..1] | The assessment findings associated with the patient's extremities. |  |
| Eye Assessment Finding Location | Observation.bodySite | RE [0..1] | The location of the patient's eye assessment findings. |  |
| Eye Assessment | Observation.interpretation | RE [0..1] | The assessment findings of the patient's eye examination. |  |
| Mental Status Assessment | Observation.interpretation | RE [0..1] | The assessment findings of the patient's mental status examination. |  |
| Neurological Assessment | Observation.interpretation | RE [0..1] | The assessment findings of the patient's neurological examination. |  |
| Stroke/CVA Symptoms Resolved | Condition.clinicalStatus | RE [0..1] | Indication if the Stroke/CVA Symptoms resolved and when. | Where condition is stroke/CVA symptoms where clinicalStatus is resolved |
| Destination Street Address | Location.address | RE [0..1] | The street address of the destination the patient was delivered or transferred to | Patient destination street address |
| Destination City | Location.address | RE [0..1] | The city of the destination the patient was delivered or transferred to (physical address). |  |
| Destination State | Location.address | RE [0..1] | The state of the destination the patient was delivered or transferred to. |  |
| Destination County | Location.address | RE [0..1] | The destination county in which the patient was delivered or transferred to. |  |
| Destination ZIP Code | Location.address | RE [0..1] | The destination ZIP code in which the patient was delivered or transferred to. |  |
| Destination Country | Location.address | RE [0..1] | The country of the destination. |  |

Appendices

NA

# Volume 3 Namespace Additions

Add the following terms to the IHE Namespace:

NA

1. HL7 is the registered trademark of Health Level Seven International. [↑](#footnote-ref-1)
2. FHIR is the registered trademark of Health Level Seven International. [↑](#footnote-ref-2)
3. CDA is the registered trademark of Health Level Seven International. [↑](#footnote-ref-3)
4. Retrieved 1/15/2017 from <http://www.medscape.com/viewarticle/834566> [↑](#footnote-ref-4)