**Integrating the Healthcare Enterprise**



**IHE PCC**

**Technical Framework Supplement**

**Paramedicine Care Summary**

**(PCS)**

<For FHIR based profiles, indicate the FHIR release & the FMM levels of the contents. Delete otherwise.>

HL7® FHIR® STU x

Using Resources at FMM Level n-n

**Revision x.x – Draft in Preparation for Public Comment (*or* Trial Implementation)**

<The IHE Documentation Specialist will change the title to just “Draft for Public Comment” or “Trial Implementation” upon publication. Leave “as is” until then.>

Date: <Month xx, 20xx>

Author: <Domain> Technical Committee

Email: <domain\_name@ihe.net>

**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 <Domain Name> Technical Framework <VX.X>. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

*<For Public Comment:>* This supplement is published on <Month XX, 201x> for Public Comment. Comments are invited and can be submitted at <http://www.ihe.net/Public_Comment/#domainname>. In order to be considered in development of the Trial Implementation version of the supplement, comments must be received by <Month XX, 201X>.

*<For Trial Implementation:>* This supplement is published on <Month XX, 201X> 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 <Domain Name> Technical Framework. Comments are invited and can be submitted at <http://www.ihe.net/Public_Comment/#domainname>.

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 [www.ihe.net](http://www.ihe.net/).

Information about the IHE <Domain Name> domain can be found at [ihe.net/IHE\_Domains](file:///D:\Google%20Drive\01_IHE\AppData\Roaming\Microsoft\Word\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 <Domain name>Technical Framework can be found at [http://ihe.net/Technical\_Frameworks](http://ihe.net/Technical_Frameworks/).

*<Comments may be submitted on IHE Technical Framework templates any time at* [*http://ihe.net/Templates\_Public\_Comments*](http://ihe.net/Templates_Public_Comments/)*. Please enter comments/issues as soon as they are found. Do not wait until a future review cycle is announced.>*

CONTENTS

[Introduction to this Supplement 8](#_Toc500238740)

[Open Issues and Questions 8](#_Toc500238741)

[Closed Issues 9](#_Toc500238742)

[General Introduction and Shared Appendices 10](#_Toc500238743)

[Appendix A – Actor Summary Definitions 10](#_Toc500238744)

[Appendix B – Transaction Summary Definitions 10](#_Toc500238745)

[Appendix D – Glossary 11](#_Toc500238746)

[Volume 1 – Profiles 12](#_Toc500238747)

[<*Copyright Licenses>* 12](#_Toc500238748)

[<*Domain-specific additions>* 12](#_Toc500238749)

[X Paramedicine Care Summary (PCS) Profile 13](#_Toc500238750)

[X.1 PCS Actors, Transactions, and Content Modules 13](#_Toc500238751)

[X.1.1 Actor Descriptions and Actor Profile Requirements 16](#_Toc500238752)

[X.1.1.1 <Actor A> 17](#_Toc500238753)

[X.1.1.2 <Actor B> 17](#_Toc500238754)

[X.2 PCS Actor Options 17](#_Toc500238755)

[X.2.1 <Option Name> 18](#_Toc500238756)

[X.3 PCS Required Actor Groupings 19](#_Toc500238757)

[X.4 PCS Overview 22](#_Toc500238758)

[X.4.1 Concepts 22](#_Toc500238759)

[X.4.2 Use Cases 22](#_Toc500238760)

[X.4.2.1 Use Case #1: <simple name> 22](#_Toc500238761)

[X.4.2.1.1 <simple name> Use Case Description 22](#_Toc500238762)

[X.4.2.1.2 <simple name> Process Flow 23](#_Toc500238763)

[X.5 PCS Security Considerations 25](#_Toc500238764)

[X.6 PCS Cross Profile Considerations 25](#_Toc500238765)

[Appendices 27](#_Toc500238766)

[Appendix A – <Appendix Title> 28](#_Toc500238767)

[A.1 <Title> 28](#_Toc500238768)

[A.1.1 <Title> 28](#_Toc500238769)

[Appendix B – <Appendix Title> 29](#_Toc500238770)

[B.1 <Title> 29](#_Toc500238771)

[B.1.1 <Title> 29](#_Toc500238772)

[Volume 2 – Transactions 30](#_Toc500238773)

[3.Y <Transaction Name [Domain Acronym-#]> 30](#_Toc500238774)

[3.Y.1 Scope 30](#_Toc500238775)

[3.Y.2 Actor Roles 30](#_Toc500238776)

[3.Y.3 Referenced Standards 31](#_Toc500238777)

[3.Y.4 Interaction Diagram 31](#_Toc500238778)

[3.Y.4.1 <Message 1 Name> 32](#_Toc500238779)

[3.Y.4.1.1 Trigger Events 32](#_Toc500238780)

[3.Y.4.1.2 Message Semantics 32](#_Toc500238781)

[3.Y.4.1.3 Expected Actions 32](#_Toc500238782)

[3.Y.4.2 <Message 2 Name> 32](#_Toc500238783)

[3.Y.4.2.1 Trigger Events 33](#_Toc500238784)

[3.Y.4.2.2 Message Semantics 33](#_Toc500238785)

[3.Y.4.2.3 Expected Actions 33](#_Toc500238786)

[3.Y.5 Protocol Requirements 33](#_Toc500238787)

[3.Y.6 Security Considerations 33](#_Toc500238788)

[3.Y.6.1 Security Audit Considerations 33](#_Toc500238789)

[3.Y.6.(z) <Actor> Specific Security Considerations 34](#_Toc500238790)

[Appendices 35](#_Toc500238791)

[Appendix A – <Appendix Title> 36](#_Toc500238792)

[A.1 <Title> 36](#_Toc500238793)

[A.1.1 <Title> 36](#_Toc500238794)

[Appendix B – <Appendix Title> 37](#_Toc500238795)

[B.1 <Title> 37](#_Toc500238796)

[B.1.1 <Title> 37](#_Toc500238797)

[Volume 2 Namespace Additions 38](#_Toc500238798)

[Volume 3 – Content Modules 39](#_Toc500238799)

[5 IHE Namespaces, Concept Domains and Vocabularies 40](#_Toc500238800)

[5.1 IHE Namespaces 40](#_Toc500238801)

[5.2 IHE Concept Domains 40](#_Toc500238802)

[5.3 IHE Format Codes and Vocabularies 41](#_Toc500238803)

[5.3.1 IHE Format Codes 41](#_Toc500238804)

[5.3.2 IHEActCode Vocabulary 41](#_Toc500238805)

[5.3.3 IHERoleCode Vocabulary 42](#_Toc500238806)

[6 Content Modules 43](#_Toc500238807)

[6.3.1 CDA Document Content Modules 43](#_Toc500238808)

[6.3.1.D <Content Module Name (Acronym)> Document Content Module 44](#_Toc500238809)

[6.3.1.D.1 Format Code 44](#_Toc500238810)

[6.3.1.D.2 Parent Template 44](#_Toc500238811)

[6.3.1.D.3 Referenced Standards 44](#_Toc500238812)

[6.3.1.D.4 Data Element Requirement Mappings to CDA 45](#_Toc500238813)

[6.3.1.D.5 <Content Module Name (Acronym, if applicable)> Document Content Module Specification 46](#_Toc500238814)

[6.3.1.D.5.1 <Header Element or Section Name> <Vocabulary Constraint or Condition> 48](#_Toc500238815)

[6.3.1.D.5.2 <Header Element or Section Name> <Vocabulary Constraint or Condition> 48](#_Toc500238816)

[6.3.1.D.5.3 <Header Element or Section Name> <Vocabulary Constraint or Condition> 48](#_Toc500238817)

[6.3.1.D.5.4 <Header Element or Section Name> <Vocabulary Constraint or Condition> 49](#_Toc500238818)

[6.3.1.D.5.5 <Template Title name> <Vocabulary Constraint or Condition> 51](#_Toc500238819)

[6.3.1.D.5.6 <Template Title name> <Vocabulary Constraint or Condition> 51](#_Toc500238820)

[6.3.1.D.6 <Document and Acronym Name> Conformance and Example 52](#_Toc500238821)

[6.3.2 CDA Header Content Modules 53](#_Toc500238822)

[6.3.2.H <Header Element Module Name> Header Content Module 53](#_Toc500238823)

[6.3.2.H.1 <Description Name> <e.g., Responsible Party> <Specification Document *or* Vocabulary Constraint> 54](#_Toc500238824)

[6.3.2.H.2 <Description Name> <Specification Document OR Vocabulary Constraint> 54](#_Toc500238825)

[6.3.2.H.3 <Description Name> <Specification Document OR Vocabulary Constraint> 54](#_Toc500238826)

[6.3.3 CDA Section Content Modules 56](#_Toc500238827)

[6.3.3.10.S <Section Module Name> - Section Content Module 56](#_Toc500238828)

[6.3.3.10.S.1 <Data Element or Section Name> <Condition, Specification Document, or Vocabulary Constraint> 57](#_Toc500238829)

[6.3.3.10.S.2 <Data Element or Section Name> <Condition, Specification Document, or Vocabulary Constraint> 57](#_Toc500238830)

[6.3.3.10.S.3 <Data Element or Section Name> <Condition, Specification Document, or Vocabulary Constraint> 58](#_Toc500238831)

[6.3.3.10.S Medical History - Cardiac Section 11329-0 58](#_Toc500238832)

[6.3.4 CDA Entry Content Modules 60](#_Toc500238833)

[6.3.4.E <Entry Content Module Name> Entry Content Module 61](#_Toc500238834)

[6.3.4.E.1 Simple Observation (wall motion) Vocabulary Constraints 62](#_Toc500238835)

[6.3.4.E.2 Simple Observation (wall morphology) Constraints 62](#_Toc500238836)

[<e.g.,6.3.4.E Result Observation - Cardiac 63](#_Toc500238837)

[6.4 Section not applicable 65](#_Toc500238838)

[6.5 <Domain Acronym> Value Sets and Concept Domains 66](#_Toc500238839)

[6.5.x <Value Set Name/Concept Domain Name> <oid> 66](#_Toc500238840)

[<e.g.,6.5.1 Drug Classes Used in Cardiac Procedure 1.3.6.1.4.1.19376.1.4.1.5.15 66](#_Toc500238841)

[6.5.1 UV\_CardiacProcedureDrugClasses 67](#_Toc500238842)

[Appendices 68](#_Toc500238843)

[Appendix A – <Appendix Title> 69](#_Toc500238844)

[A.1 <Title> 69](#_Toc500238845)

[A.1.1 <Title> 69](#_Toc500238846)

[Appendix B – <Appendix Title> 70](#_Toc500238847)

[B.1 <Title> 70](#_Toc500238848)

[B.1.1 <Title> 70](#_Toc500238849)

[Volume 4 – National Extensions 71](#_Toc500238850)

[4 National Extensions 71](#_Toc500238851)

[4.I National Extensions for <Country Name or IHE Organization> 71](#_Toc500238852)

[4.I.1 Comment Submission 71](#_Toc500238853)

[4.I.2 Paramedicine Care Summary <(Profile Acronym)> 71](#_Toc500238854)

[4.I.2.1PCS Value Set Binding for <Country Name or IHE Organization> Realm Concept Domains 71](#_Toc500238855)

[4.I.2.1 PCS Value Set Binding for US Realm Concept Domains 72](#_Toc500238856)

[4.I.2.1.1 US\_CardiacProcedureDrugClasses (1.3.6.1.4.1.19376.1.4.1.5.15) 72](#_Toc500238857)

[4.I.2.2PCS <Type of Change> 72](#_Toc500238858)

[4.I+1 National Extensions for <Country Name or IHE Organization> 72](#_Toc500238859)

[Appendices 73](#_Toc500238860)

[Appendix A – <Appendix Title> 74](#_Toc500238861)

[A.1 <Title> 74](#_Toc500238862)

[A.1.1 <Title> 74](#_Toc500238863)

[Appendix B – <Appendix Title> 75](#_Toc500238864)

[B.1 <Title> 75](#_Toc500238865)

[B.1.1 <Title> 75](#_Toc500238866)

# 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 <profile acronym> Profile (or This Technical Framework Supplement) uses the emerging HL7® FHIR® specification. The FHIR release profiled in this supplement is STU <x>. 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 <x> content, such as Resources or ValueSets, used in this profile, and their FMM levels are:

|  |  |
| --- | --- |
| FHIR Content  (Resources, ValueSets, etc. | FMM Level |
|  |  |
|  |  |
| *<e.g. Communication* | *2>* |

When a patient is transported for a medical emergency to a hospital, scene information, transfer information, patient assessments, and interventions are only verbally available to hospitals when the patient arrives. This resulting in inefficiencies and potential errors in the patient care process. This profile will map the flow of the patient information from the ambulance patient record, commonly known as the electronic Patient Care Record (ePCR), to the hospital Electronic Medical Record (EMR).

## Open Issues and Questions

1. Do we use CDA or FHIR, or both? What are the consequence of these choices?
2. What are the implications to this profile of the current developments in HL7 related to supporting Document and/or Note sourcing, retrieval, creation, and consumption? There are ongoing conversations in the Patient Care Workgroup around coming up with a proposal for managing documents and notes within FHIR. Some viewpoints are focused on simply locating clinical documents and/or notes (i.e. metadata) whereas as other viewpoints desire to explore what content might actually be included in the documents and notes.

See HL7 patient care work group discussion: <http://wiki.hl7.org/index.php?title=ClinicalNote_FHIR_Resource_Proposal> See Monday Q2 HL7 WGM discussion related to this topic: <http://wiki.hl7.org/index.php?title=January_2018_WGM_New_Orleans;_Jan_27_to_Feb_8>

1. Investigate the FHIR process for defining the resources required to fulfill NEMSIS.

## Closed Issues

1. What are the implications to this profile of the current developments in HL7 related to supporting Document and/or Note sourcing, retrieval, creation, and consumption? There are ongoing conversations in the Patient Care Workgroup around coming up with a proposal for managing documents and notes within FHIR. Some viewpoints are focused on simply locating clinical documents and/or notes (i.e. metadata) whereas as other viewpoints desire to explore what content might actually be included in the documents and notes.

(2/12/2018) Committee decided to use both CDA and FHIR. This is the same approach used in RIPT. CDA is more prevalent in "production" settings and is expected to remain so for the expected future and thus needs to be included. FHIR will help to "future-proof" by providing an implementation path for vendors that are newer to the market and not willing to invest in a full CDA supported infrastructure.

# General Introduction and Shared Appendices

The [IHE Technical Framework General Introduction and Shared Appendices](http://ihe.net/Technical_Frameworks/#GenIntro) are components shared by all of the IHE domain technical frameworks. Each technical framework volume contains links to these documents where appropriate.

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 Appendix A:

| Actor Name | Definition |
| --- | --- |
| Transport Data Creator | Generates the transport information and sends it to the Transport Data Consumer |
| Transport Data Consumer | Receives the transport data |

# Appendix B – Transaction Summary Definitions

Add the following transactions to the IHE Technical Frameworks General Introduction Appendix B:

| Transaction Name and Number | Definition |
| --- | --- |
| Mobile access to Healthcare Documents | …………………… |

Volume 1 – Profiles

## <*Copyright Licenses>*

## <*Domain-specific additions>*

Add new Section #

# X Paramedicine Care Summary (PCS) Profile

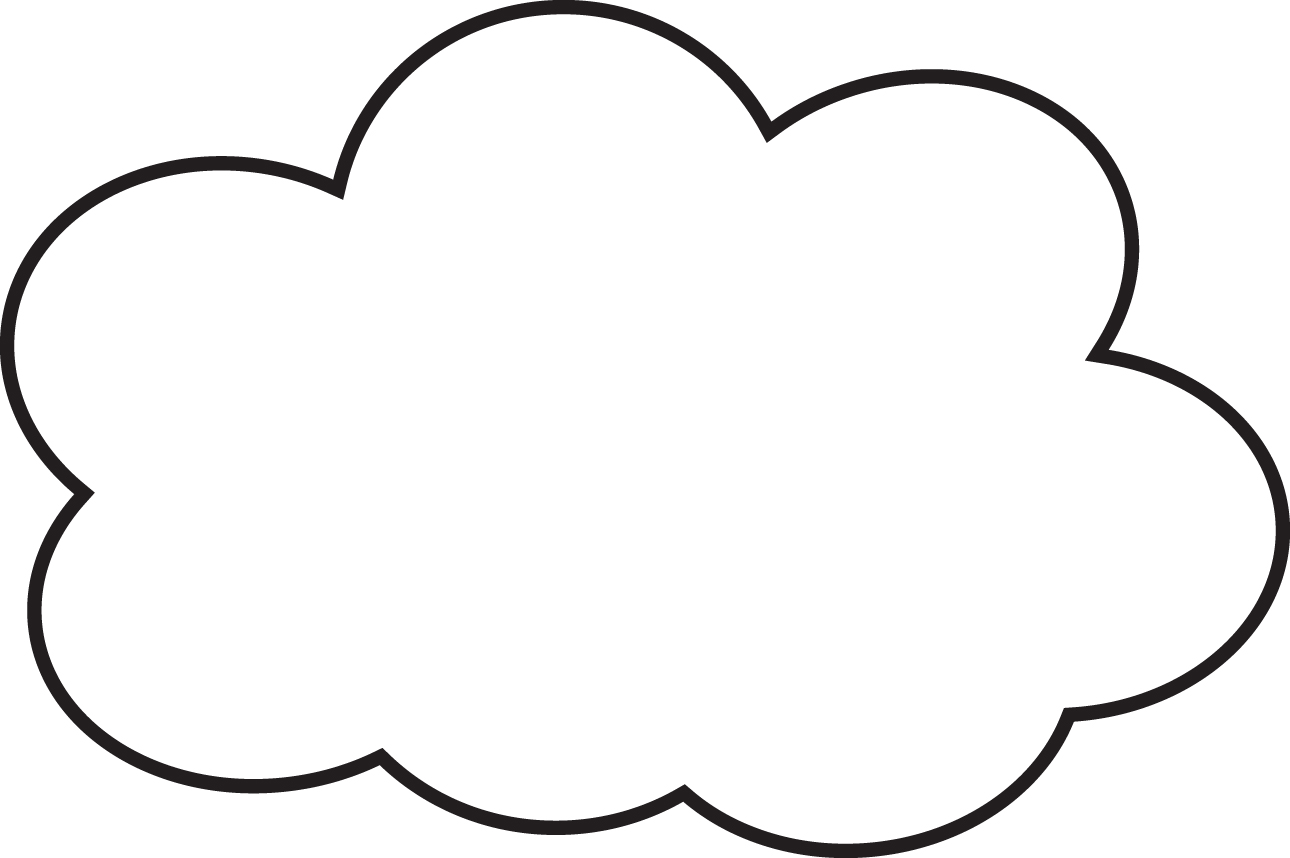
Currently, interventions and assessments are written into an ambulance ePCR, and are either manually updated by the Emergency Medical Services (“EMS”) crew, or collected from electronic devices (e.g., hemodynamic monitor). The ePCR is updated with treatments and interventions that are administered during the transport. The hospital will not typically have access to paper or electronic versions of this patient information until the report is finished and signed in the ePCR and it is requested by the hospital. In this profile, the prehospital and paramedicine interventions and patient assessments are made available to the hospital/emergency room IT system electronically when the patient arrives, or in advance of patient arrival to the hospital. This informs medical decision making during the hospital treatment and provides the opportunity to save patient lives.

This profile provides a mechanism for paramedicine systems to send relevant patient data captured during transport (e.g., patient medical history, medications, allergies, updated vitals, interventions) to the hospital EMR systems ahead of the patient’s arrival to the hospital. This allows for the hospital staff to understand the patient condition prior to arrival providing much greater opportunity for life saving decisions.

## X.1 PCS 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. IHE Transactions can be found in the Technical Frameworks General Introduction Appendix B. Both appendices are located at <http://ihe.net/Technical_Frameworks/#GenIntro>

Figure X.1-1 shows the actors directly involved in the PCS 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 required grouping are shown in conjoined boxes (see Section X.3).



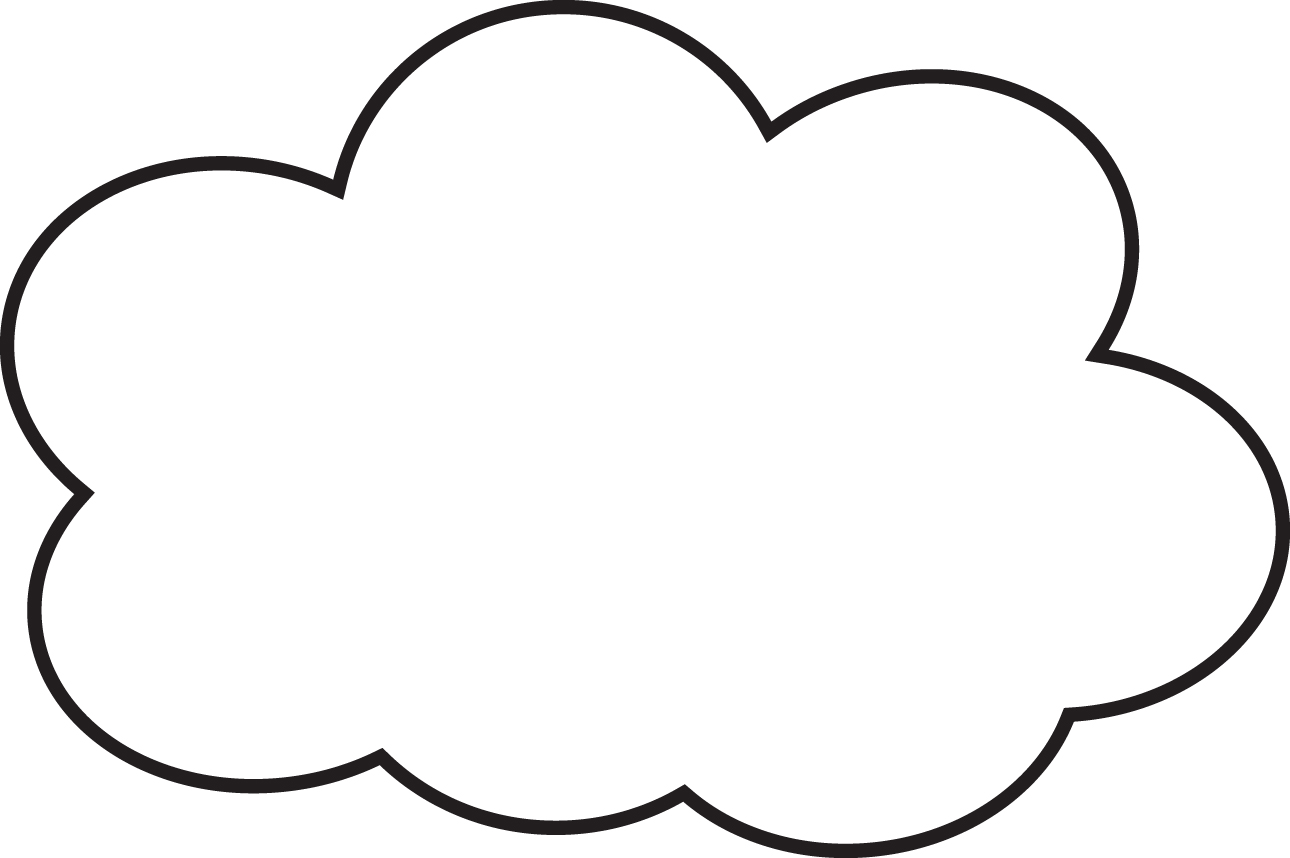
Content Consumer

Content Creator

Document Sharing

[PCC-1]

Figure X.1-1: PCS Actor Diagram



Transport Data Consumer

Transport Data Creator

Provide Document Bundle [ITI-65]

Figure X.1-2: PCS Actor Diagram

Table X.1-1 lists the transactions for each actor directly involved in the PCS 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: PCS Profile - Actors and Transactions

| Actors | Transactions | Initiator or Responder | Optionality | Reference |
| --- | --- | --- | --- | --- |
| Content Creator | Document Sharing [PCC-1] | Initiator | R | PCC TF-2:3.1 |
| Content Consumer | Document Sharing [PCC-1] | Initiator | R | PCC TF-2:3.1 |
| Transport Data Creator | Provide Document Bundle [ITI-65] | Initiator | R | ITI TF-2:2.65 |
| Transport Data Consumer | Provide Document Bundle [ITI-65] | -- | -- | ITI TF-2:2.65 |

Figure X.1-1 shows the actors directly involved in the PCS Profile and the direction that the content is exchanged.

A product implementation using this profile may 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 Required Actor Groupings <DOM> TF-1: X.6 or in Cross Profile Considerations <DOM> TF-1: X.6.

Table X.1-1 lists the content module(s) defined in the PCS 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.1-1 PCS – Actors and Content Modules

| Actors | Content Modules | Optionality | Reference |
| --- | --- | --- | --- |
| Content Creator | Paramedicine Care Summary Document | R | PCC TF-3: 6.3.1.D |
| Content Consumer | Paramedicine Care Summary Document OID | O | PCC TF-3: 6.3.1.D |

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

Transactional requirements are documented in <DOM> TF-2 Transactions. This section documents any additional requirements on profile’s actors.

Content module requirements are documented in <DOM> TF-3 T Content Modules. 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 PCS document to a Content Consumer.

The PCS Content Creator creates the document that summarizes the emergency transport encounter that contains the data elements 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 PCS content created by a PCS Content Creator. This is specified in [PCC-1] document sharing transaction in PCC TF-2.3.1

#### X.1.1.3 Transport Data Consumer

The Transport Data Consumer is responsible for receiving content provided by the Transport Data Creator. This is specified in the Provide Document Bundle [ITI-65] transaction in PCC TF-2.2.65.

#### X.1.1.4 Transport Data Creator

The Transport Data Creator shall be responsible for the creation of content and transmission of a PCS document to a Transport Data Consumer. This is specified in the Provide Document Bundle [ITI-65] transaction in PCC TF-2.2.65.

The PCS Transport Data Creator creates the bundle that summarizes the paramedicine transport encounter that contains the data elements defined in PCC TF-3: 6.6.1.D.

## X.2 PCS Actor Options

**Options tha**t 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: Paramedicine Care Summary – Actors and Options

| Actor | Option Name | Reference |
| --- | --- | --- |
| Transport Data Consumer | Quality Data Import Option | PCS X.2.1 |
| Trauma Data Import Option | PCS X.2.2 |
| Transport Data Creator | No options defined | -- |
| Content Creator | No options defined | -- |
| Content Consumer | View Option | PCC TF-2: 3.1.1 |
|  | Document Import Option | PCC TF-2: 3.1.2 |
|  | Section Import Option | PCC TF-2: 3.1.3 |
|  | Discrete Data Import Option | PCC TF-2: 3.1.4 |
|  | Quality Data Import Option | PCS X.2.1 |
|  | Trauma Data Import Option | PCS X.2.2 |

### X.2.1 Quality Data Import Option

This option defines the processing requirements placed on the content consumers for providing access and importing quality data from selected sections of the Patient Care Report. If the Content consumer option is used, refer to……. If the Transport Data Consumer option is used, refer to…..

### X.2.2 Trauma Data Import Option

This option defines the processing requirements placed on the content consumers for providing access and importing trauma data from selected sections of the Patient Care Report. If the Content consumer option is used, refer to……. If the Transport Data Consumer option is used, refer to…..

## X.3 PCS Required Actor Groupings

There are no required actor groupings for this profile.

## X.4 PCS Overview

To make the flow of the patient information from the ambulance ePCR to the hospital a paperless route during patient transport, a send transaction will be used. This reduces the time spent verbally sharing relevant patient information to hospital staff and reduces errors developed through manual data entry. This provides increased levels of efficiency to hospital providers resulting in better patient care immediately upon arrival to the hospital.

### X.4.1 Concepts

When a hospital is receiving a patient arriving in an emergency ambulance transport, the main source of the patient information is the ambulance crew that performed the emergency transport. This information is not typically electronically transferred and therefore this relay of information is usually verbal. This can draw away from the treatment of the patient. The use of an interoperable transfer of patient information can reduce the time spent relaying information and provide the hospital treatment team with patient information that can help provide useful information that can be used to make decisions on their treatment upon their arrival to the hospital.

### X.4.2 Use Cases

#### X.4.2.1 Use Case #1: Emergency Response for Heart Attack

##### This use case describes how an emergency response for a heart attack is carried out and then how the information on interventions are recorded and provided to a hospital, using this profile.

##### X.4.2.1.1 Emergency Response for Heart Attack Use Case Description

A fifty-year-old man develops heart attack symptoms. He calls 911 for an emergency transport to a hospital. The emergency transport team is able to retrieve some of the patient’s medical history, current medications and allergies from the patient and inputs this information in their Electronic Patient Care Record (ePCR). The patient told EMTs that he had already taken his prescribed nitroglycerine thirty minutes before calling 911 when the chest pain first presented. A 12 lead EKG was established to monitor the patient’s heart rhythm and the rhythm shows abnormalities conducive to a myocardial infarction. The EMT starts an intravenous line in the patient’s left arm. During the transport the patient’s chest pain increases and breathing is elevated. Ensuring the patient is not on any blood thinners, the EMT administers aspirin to the patient. The patient felt a relief in chest pain after taking the aspirin, however, soon falls into cardiac arrest. Compressions are started and maintained until arrival to the hospital. The patient information is made available to the hospital system and the hospital has full access to the EKG, vitals, and interventions provided during the transport. The EMS ePCR is completed and then electronically provided to the hospital.

##### X.4.2.1.2 Emergency Response for Heart Attack Process Flow

Transport Data Creator

Transport Data Consumer

Send PCS Data [PCC-XX]

Figure X.4.2.2-1: Basic Process Flow in PCS Profile

**Pre-conditions**:

1. The person calling 911 is suffering from an emergent issue
2. An EMS response team is sent out for the call

**Main Flow**:

1. EMS provider arrives on scene and inputs the patient information into the ePCR.
2. Interventions are performed during transport, and documented
3. EMS pushes the information for the current patient condition and interventions that were performed to the hospital
4. The patient care is transferred to the hospital staff.

**Post-conditions:**

1. The ePCR is closed out and the full report is provided to the hospital
2. The patient care is continued in the hospital

## X.5 PCS Security Considerations

## See [ITI TF-2.x Appendix Z.8](http://ihe.net/uploadedFiles/Documents/ITI/IHE_ITI_Suppl_Appx-Z.pdf) “Mobile Security Considerations”

## X.6 PCS Cross Profile Considerations

The information that is imported by the Paramedicine Care Summary (PCS) content consumer implementing the quality option may be leveraged to support content needed for the Quality Outcome Reporting for EMS (QORE) profile.

The use of the IHE XD\* family of transactions is encouraged to support standards-based interoperability between systems acting as the PCS Content Creator and PCS 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 PCS Content Creator or 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 PCS 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 PCS 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 PCS Content Creator. A Document Recipient in XDR might be grouped with the PCS Content Consumer.

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

Appendices

# Appendix A – Required Data Elements for Emergency Ambulance Transport Summary

## A.1 Data Elements Table

| Ambulance 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. |
| Response | EMS Agency Number | Version2 Element - E02\_01 | The state-assigned provider number of the responding agency |
| EMS Agency Name | None |  |
| Incident number | Version2 Element - E02\_02 | The incident number assigned by the 911 Dispatch System |
| EMS response number | Version2 Element - E02\_03 | The internal EMS response number which is unique for each EMS Vehicle's (Unit) response to an incident within an EMS Agency. |
| Type of service requested | Version2 Element - E02\_04 | The type of service or category of service requested of the EMS Agency responding for this specific EMS event |
| Standby Purpose | None | The main reason the EMS Unit is on Standby as the Primary Type of Service for the EMS event. |
| Primary Role of the Unit | Version2 Element - E02\_05 | The primary role of the EMS Unit which responded to this specific EMS event |
| Type of dispetche delay | Version2 Element - E02\_06 | The dispatch delays, if any, associated with the dispatch of the EMS unit to the EMS event. |
| Type of response delay | Version2 Element - E02\_07 | The response delays, if any, of the EMS unit associated with the EMS event. |
| Type of scene delay | Version2 Element - E02\_08 | The scene delays, if any, of the EMS unit associated with the EMS event. |
| Type of transport delay | Version2 Element - E02\_09 | The transport delays, if any, of the EMS unit associated with the EMS event. |
| Type of turn-around delay | Version2 Element - E02\_10 | The turn-around delays, if any, of EMS unit associated with the EMS event. |
| EMS vehical (unit) number | Version2 Element - E02\_11 | The unique physical vehicle number of the responding unit. |
| EMS unit call sign | Version2 Element - E02\_12 | The EMS unit number used to dispatch and communicate with the unit. This may be the same as the EMS Unit/Vehicle Number in many agencies. |
| Level of care for this unit | None | The level of care (BLS or ALS) the unit is able to provide based on the units' treatment capabilities for this EMS response. |
| Vehical Dispatch Location | Version2 Element - E02\_13 | The EMS location or healthcare facility representing the geographic location of the unit or crew at the time of dispatch. |
| Vehical Dispatch GPS Location | Version2 Element - E02\_15 | The GPS coordinates associated with the EMS unit at the time of dispatch documented in decimal degrees. |
| Vehicle Dispatch Location US National Grid Coordinates | None | The US National Grid Coordinates for the EMS Vehicle's Dispatch Location. |
| Beginning Odometer Reading of Responding Vehicle | Version2 Element - E02\_16 | The mileage (counter or odometer reading) of the vehicle at the beginning of the call (when the wheels begin moving). If EMS vehicle/unit is via water or air travel document the number in "hours" as it relates to the documentation of Boat, Fixed Wing, or Rotor Craft in eDisposition.16 (EMS Transport Method) |
| On-Scene Odometer Reading of Responding Vehicle | Version2 Element - E02\_17 | The mileage (counter or odometer reading) of the vehicle when it arrives at the scene. If EMS vehicle/unit is via water or air travel document the number in "hours" as it relates to the documentation of Boat, Fixed Wing, or Rotor Craft in eDisposition.16 (EMS Transport Method) |
| Patient Destination Odometer Reading of Responding Vehicle | Version2 Element - E02\_18 | The mileage (counter or odometer reading) of the vehicle when it arrives at the patient's destination. If EMS vehicle/unit is via water or air travel document the number in "hours" as it relates to the documentation of Boat, Fixed Wing, or Rotor Craft in eDisposition.16 (EMS Transport Method) |
| Ending Odometer Reading of Responding Vehicle | Version2 Element - E02\_19 | If using a counter, this is the mileage traveled beginning with dispatch through the transport of the patient to their destination and ending when back in service, starting from 0. If EMS vehicle/unit is via water or air travel document the number in "hours" as it relates to the documentation of boat, Fixed Wing, or Rotor Craft in eDisposition.16 |
| Response Mode to Scene | Version2 Element - E02\_20 | The indication whether the response was emergent or non-emergent. An emergent response is an immediate response (typically using lights and sirens). |
| Additional Response Mode Descriptors | None | The documentation of response mode techniques used for this EMS response. |
| Times | Dispatched Notified Date/Time | Version2 Element - E05\_03 | The date/time dispatch was notified by the 911 call taker (if a separate entity). |
| Unit Arrived on Scene Date/Time | Version2 Element - E05\_06 | The date/time the responding unit arrived on the scene; that is, the time the vehicle stopped moving at the scene. |
| Arrived at Patient Date/Time | Version2 Element - E05\_07 | The date/time the responding unit arrived at the patient's side. |
| Transfer of EMS Patient Care Date/Time | Version2 Element - E05\_08 | The date/time the patient was transferred from this EMS agency to another EMS agency for care. |
| Unit Left Scene Date/Time | Version2 Element - E05\_09 | The date/time the responding unit left the scene with a patient (started moving). |
| Arrival at Destination Landing Area Date/Time | None | The date/time the Air Medical vehicle arrived at the destination landing area. |
| Patient Arrived at Destination Date/Time | Version2 Element - E05\_10 | The date/time the responding unit arrived with the patient at the destination or transfer point. |
| Destination Patient Transfer of Care Date/Time | None | The date/time that patient care was transferred to the destination healthcare facilities staff. |
| Scene | First EMS Unit on Scene | None | Documentation that this EMS Unit was the first EMS Unit for the EMS Agency on the Scene |
| Type of Other Service at Scene | Version2 Element - E08\_02 | The type of public safety or EMS service associated with Other Agencies on Scene |
| Date/Time Initial Responder Arrived on Scene | Version2 Element - E08\_04 | The time that the initial responder arrived on the scene, if applicable. |
| Numbers of Patients on Scene | Version2 Element - E08\_05 | Indicator of how many total patients were at the scene |
| Mass Casualty Incident | Version2 Element - E08\_06 | Indicator if this event would be considered a mass casualty incident (overwhelmed existing EMS resources) |
| Triage Classification for MCI Patient | None | The color associated with the initial triage assessment/classification of the MCI patient. |
| Incident Location Type | Version2 Element - E08\_07 | The kind of location where the incident happened |
| Situation | Date/Time of Symptom Onset | Version2 Element - E05\_01 | The date and time the symptom began (or was discovered) as it relates to this EMS event. This is described or estimated by the patient, family, and/or healthcare professionals. |
| Possible Injury | Version2 Element - E09\_04 | Indication whether or not there was an injury |
| Complaint Type | None | The type of patient healthcare complaint being documented. |
| Complaint | Version2 Element - E09\_05 | The statement of the problem by the patient or the history provider. |
| Duration of Complaint | Version2 Element - E09\_06 | The duration of the complaint |
| Time Units of Duration of Complaint | Version2 Element - E09\_07 | The time units of the duration of the patient's complaint |
| Chief complaint Anatomic Location | Version2 Element - E09\_11 | The primary anatomic location of the chief complaint as identified by EMS personnel |
| Chief Complain organ system | Version2 Element - E09\_12 | The primary organ system of the patient injured or medically affected. |
| Priamry Symptom | Version2 Element - E09\_13 | The primary sign and symptom present in the patient or observed by EMS personnel |
| Other Associated symptoms | Version2 Element - E09\_14 | Other symptoms identified by the patient or observed by EMS personnel |
| Provider's Primary Impressions | Version2 Element - E09\_15 | The EMS personnel's impression of the patient's primary problem or most significant condition which led to the management given to the patient (treatments, medications, or procedures). |
| Proveider's Secondary Impressions | Version2 Element - E09\_16 | The EMS personnel's impression of the patient's secondary problem or most significant condition which led to the management given to the patient (treatments, medications, or procedures). |
| Initial Patient Acuity | None | The acuity of the patient's condition upon EMS arrival at the scene. |
| Injury | Cause of Injury | Version2 Element - E10\_01 | The category of the reported/suspected external cause of the injury. |
| Mechanism of Injury | Version2 Element - E10\_03 | The mechanism of the event which caused the injury |
| Vehicular, Pedestrian, or Other Injury Risk Factor | Version2 Element - E10\_04 | Mechanism and Special Considerations Field Trauma Triage Criteria (steps 3 and 4) as defined by the Centers for Disease Control. |
| Main Area of the Vehicle Impacted by the Collision | Version2 Element - E10\_05 | The area or location of initial impact on the vehicle based on 12-point clock diagram. |
| Location of Patient in Vehicle | Version2 Element - E10\_06 | The seat row location of the vehicle at the time of the crash with the front seat numbered as 1 |
| Use of Occupant Safety Equipment | Version2 Element - E10\_08 | Safety equipment in use by the patient at the time of the injury |
| Airbag Deployment | Version2 Element - E10\_09 | Indication of Airbag Deployment |
| Height of Fall (feet) | Version2 Element - E10\_10 | The distance in feet the patient fell, measured from the lowest point of the patient to the ground |
| OSHA Personal Protective Equipment Used | None | Documentation of the use of OSHA required protective equipment used by the patient at the time of injury. |
| Arrest | Cardiac Arrest | Version2 Element - E11\_01 | Indication of the presence of a cardiac arrest at any time during this EMS event. |
| Cardiac Arrest Etiology | Version2 Element - E11\_02 | ndication of the etiology or cause of the cardiac arrest (classified as cardiac, non-cardiac, etc.) |
| Resuscitation Attempted By EMS | Version2 Element - E11\_03 | Indication of an attempt to resuscitate the patient who is in cardiac arrest (attempted, not attempted due to DNR, etc.) |
| Arrest Witnessed By | Version2 Element - E11\_04 | Indication of who the cardiac arrest was witnessed by |
| CPR Care Provided Prior to EMS Arrival | None | Documentation of the CPR provided prior to EMS arrival |
| Who Provided CPR Prior to EMS Arrival | None | Documentation of who performed CPR prior to this EMS unit's arrival. |
| AED Use Prior to EMS Arrival | None | Documentation of AED use Prior to EMS Arrival |
| Who Used AED Prior to EMS Arrival | None | Documentation of who used the AED prior to this EMS unit's arrival. |
| Type of CPR Provided | None | Documentation of the type/technique of CPR used by EMS. |
| First Monitored Arrest Rhythm of the Patient | Version2 Element - E11\_05 | Documentation of what the first monitored arrest rhythm which was noted |
| Any Return of Spontaneous Circulation | Version2 Element - E11\_06 | Indication whether or not there was any return of spontaneous circulation. |
| Date/Time of Cardiac Arrest | Version2 Element - E11\_08 | The date/time of the cardiac arrest (if not known, please estimate). |
| Date/Time Resuscitation Discontinued | Version2 Element - E11\_09 | The date/time resuscitation was discontinued. |
| Reason CPR/Resuscitation Discontinued | Version2 Element - E11\_10 | The reason that CPR or the resuscitation efforts were discontinued. |
| Cardiac Rhythm on Arrival at Destination | Version2 Element - E11\_11 | The patient's cardiac rhythm upon delivery or transfer to the destination |
| End of EMS Cardiac Arrest Event | None | The patient's outcome at the end of the EMS event. |
| Date/Time of Initial CPR | None | The initial date and time that CPR was started by anyone. |
| Exam | Date/Time of Assessment | Version2 Element - E16\_03 | The date/time of the assessment |
| Skin Assessment | Version2 Element - E16\_04 | The assessment findings associated with the patient's skin. |
| Head Assessment | Version2 Element - E16\_05 | The assessment findings associated with the patient's head. |
| Face Assessment | None | The assessment findings associated with the patient's face. |
| Neck Assessment | Version2 Element - E16\_06 | The assessment findings associated with the patient's neck. |
| Chest/Lungs Assessment | Version2 Element - E16\_07 | The assessment findings associated with the patient's chest/lungs. |
| Heart Assessment | Version2 Element - E16\_08 | The assessment findings associated with the patient's heart. |
| Abdominal Assessment Finding Location | None | The location of the patient's abdomen assessment findings. |
| Abdominal Assessment Finding Location | None | The location of the patient's abdomen assessment findings. |
| Abdomen Assessment | Version2 Element - E16\_09 | The assessment findings associated with the patient's abdomen. |
| Pelvis/Genitourinary Assessment | Version2 Element - E16\_13 | The assessment findings associated with the patient's pelvis/genitourinary. |
| Back and Spine Assessment Finding Location | None | The location of the patient's back and spine assessment findings. |
| Back and Spine Assessment | Version2 Element - E16\_14 | The assessment findings associated with the patient's spine (Cervical, Thoracic, Lumbar, and Sacral) and back exam. |
| Extremity Assessment Finding Location | None | The location of the patient's extremity assessment findings. |
| Extremities Assessment | Version2 Element - E16\_17 | The assessment findings associated with the patient's extremities. |
| Eye Assessment Finding Location | None | The location of the patient's eye assessment findings. |
| Eye Assessment | Version2 Element - E16\_21 | The assessment findings of the patient's eye examination. |
| Mental Status Assessment | Version2 Element - E16\_23 | The assessment findings of the patient's mental status examination. |
| Neurological Assessment | Version2 Element - E16\_24 | The assessment findings of the patient's neurological examination. |
| Stroke/CVA Symptoms Resolved | None | Indication if the Stroke/CVA Symptoms resolved and when. |
| Medications | Date/Time Medication Administered | Version2 Element - E18\_01 | The date/time medication administered to the patient |
| Medication Administered Prior to this Unit's EMS Care | Version2 Element - E18\_02 | Indicates that the medication administration which is documented was administered prior to this EMS units care |
| Medication Given | Version2 Element - E18\_03 | The medication given to the patient |
| Medication Administered Route | Version2 Element - E18\_04 | The route medication was administered to the patient |
| Medication Dosage | Version2 Element - E18\_05 | The dose or amount of the medication given to the patient |
| Medication Dosage Units | Version2 Element - E18\_06 | The unit of medication dosage given to patient |
| Response to Medication | Version2 Element - E18\_07 | The patient's response to the medication |
| Medication Complication | Version2 Element - E18\_08 | Any complication (abnormal effect on the patient) associated with the administration of the medication to the patient by EMS |
| Medication Crew (Healthcare Professionals) ID | Version2 Element - E18\_09 | The statewide assigned ID number of the EMS crew member giving the treatment to the patient |
| Role/Type of Person Administering Medication | None | The type (level) of EMS or Healthcare Professional Administering the Medication. For medications administered prior to EMS arrival, this may be a non-EMS healthcare professional. |
| Medication Authorization | Version2 Element - E18\_10 | The type of treatment authorization obtained |
| Medication Authorizing Physician | Version2 Element - E18\_11 | The name of the authorizing physician ordering the medication administration if the order was provided by any manner other than protocol (standing order) in EMedications.11 |
| Procedures | Date/Time Procedure Performed | Version2 Element - E19\_01 | The date/time the procedure was performed on the patient |
| Procedure Performed Prior to this Unit's EMS Care | Version2 Element - E19\_02 | Indicates that the procedure which was performed and documented was performed prior to this EMS units care. |
| Procedure | Version2 Element - E19\_03 | The procedure performed on the patient. |
| Size of Procedure Equipment | Version2 Element - E19\_04 | The size of the equipment used in the procedure on the patient |
| Number of Procedure Attempts | Version2 Element - E19\_05 | The number of attempts taken to complete a procedure or intervention regardless of success. |
| Procedure Successful | Version2 Element - E19\_06 | Indicates that this individual procedure attempt which was performed on the patient was successful. |
| Procedure Complication | Version2 Element - E19\_07 | Any complication (abnormal effect on the patient) associated with the performance of the procedure on the patient |
| Response to Procedure | Version2 Element - E19\_08 | The patient's response to the procedure |
| Procedure Crew Members ID | Version2 Element - E19\_09 | The statewide assigned ID number of the EMS crew member performing the procedure on the patient |
| Role/Type of Person Performing the Procedure | None | The type (level) of EMS or Healthcare Professional performing the procedure. For procedures performed prior to EMS arrival, this may be a non-EMS healthcare professional. |
| Procedure Authorization | Version2 Element - E19\_10 | The type of treatment authorization obtained |
| Procedure Authorizing Physician | Version2 Element - E19\_11 | The name of the authorizing physician ordering the procedure, if the order was provided by any manner other than protocol (standing order) in eProcedures.11 |
| Vascular Access Location | Version2 Element - E19\_12 | The location of the vascular access site attempt on the patient, if applicable. |
| Airway | Indications for Invasive Airway | None | The clinical indication for performing invasive airway management. |
| Date/Time Airway Device Placement Confirmation | None | The date and time the airway device placement was confirmed. |
| Airway Device Being Confirmed | None | The airway device in which placement is being confirmed. |
| Airway Device Placement Confirmed Method | None | The method used to confirm the airway device placement. |
| Tube Depth | None | The measurement at the patient's teeth/lip of the tube depth in centimeters (cm) of the invasive airway placed. |
| Type of Individual Confirming Airway Device Placement | None | The type of individual who confirmed the airway device placement. |
| Crew Member ID | None | The statewide assigned ID number of the EMS crew member confirming the airway placement. |
| Airway Complications Encountered | None | The airway management complications encountered during the patient care episode. |
| Suspected Reasons for Failed Airway Management | None | The reason(s) the airway was unable to be successfully managed. |
| Date/Time Decision to Manage the Patient with an Invasive Airway | None | The date and time the decision was made to manage the patient's airway with an invasive airway device. |
| Date/Time Invasive Airway Placement Attempts Abandoned | None | The date and time that the invasive airway attempts were abandoned for the patient. |
| Device | Medical Device Serial Number | None | The unique manufacturer's serial number associated with a medical device. |
| Date/Time of Event (per Medical Device) | Version2 Element - E21\_01 | The time of the event recorded by the device's internal clock |
| Medical Device Event Type | Version2 Element - E21\_02 | The type of event documented by the medical device. |
| Medical Device Waveform Graphic Type | Version2 Element - E21\_03 | The description of the waveform file stored in Waveform Graphic (eDevice.05). |
| Medical Device Waveform Graphic | Version2 Element - E21\_04 | The graphic waveform file. |
| Medical Device Mode (Manual, AED, Pacing, CO2, O2, etc) | Version2 Element - E21\_05 | The mode of operation the device is operating in during the defibrillation, pacing, or rhythm analysis by the device (if appropriate for the event) |
| Medical Device ECG Lead | Version2 Element - E21\_06 | The lead or source which the medical device used to obtain the rhythm (if appropriate for the event) |
| Medical Device ECG Interpretation | Version2 Element - E21\_07 | The interpretation of the rhythm by the device (if appropriate for the event) |
| Type of Shock | Version2 Element - E21\_08 | The type of shock used by the device for the defibrillation (if appropriate for the event) |
| Shock or Pacing Energy | Version2 Element - E21\_09 | The energy (in joules) used for the shock or pacing (if appropriate for the event) |
| Total Number of Shocks Delivered | Version2 Element - E21\_10 | The number of times the patient was defibrillated, if the patient was defibrillated during the patient encounter. |
| Pacing Rate | Version2 Element - E21\_11 | The rate the device was calibrated to pace during the event, if appropriate. |

|  |
| --- |
|  |

Volume 2 – Transactions

Add Section 3.Y

## 3.Y Send PCS Data [PCC-XX]

The Transport Data Creator sends specific patient information to the Transport Data Consumer.

### 3.Y.1 Scope

This transaction is used to connect paramedicine systems to hospital systems after an emergency transport.

### 3.Y.2 Actor Roles

Table 3.Y.2-1: Actor Roles

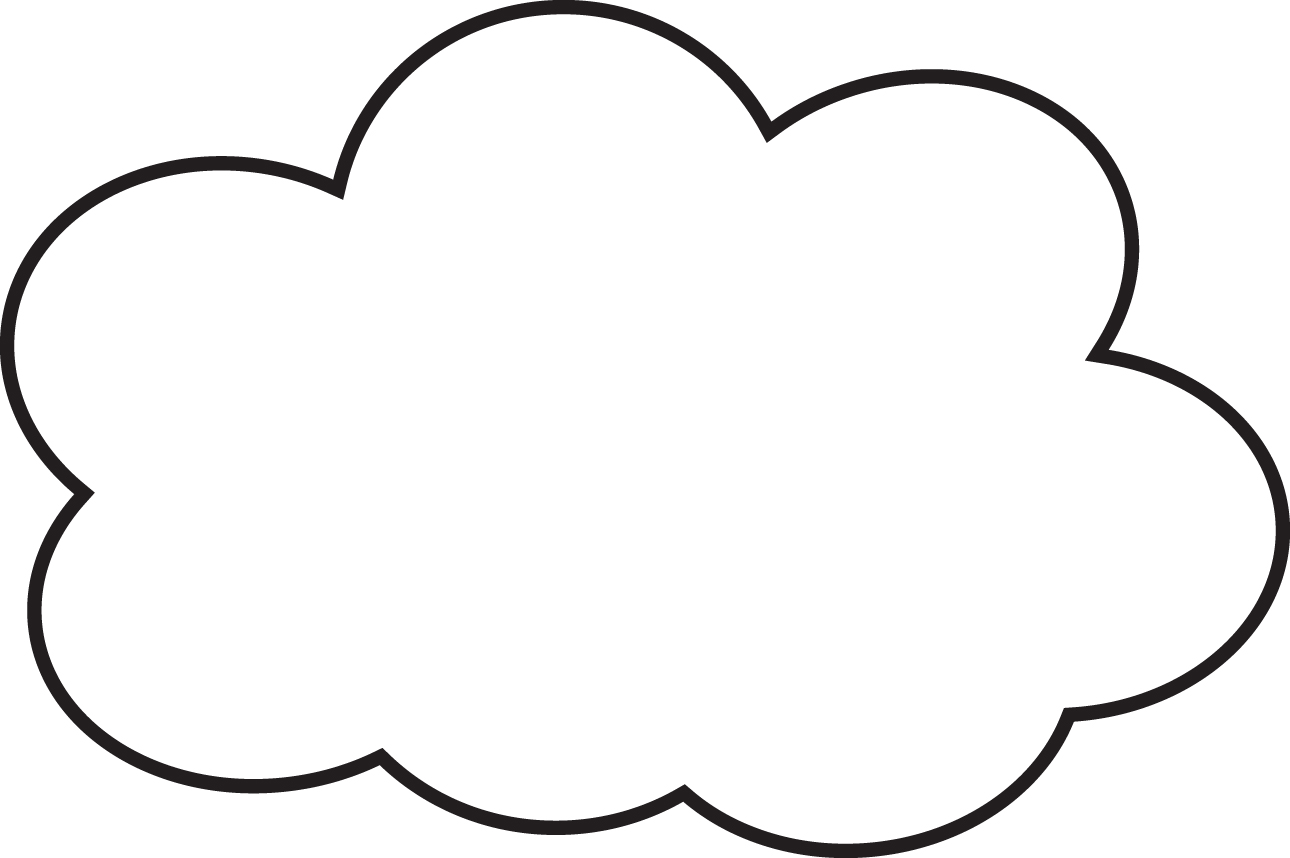
|  |  |
| --- | --- |
| **Actor:** | Transport Data Creator |
| **Role:** | The Transport Data Creator sends important and required paramedicine care information to the Transport Data Consumer system. |
| **Actor:** | Transport Data Consumer |
| **Role:** | Transport Data Consumer receives and consumes the paramedicine information that is sent in by the Transport Data Creator. |
| **Actor:** | Content Creator |
| **Role:** | The Content Creator sends important and required paramedicine care information to the Content Consumer. |
| **Actor:** | Content Consumer |
| **Role:** | The Content Consumer receives the important and required paramedicine care information from the Content Creator. |

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.Y.3 Referenced Standards

* HL7 Version 3 Domain Analysis Model: Emergency Medical Services, Release 1 <[http://www.hl7.org/implement/standards/product\_brief.cfm?product\_id=39>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=39%3e)
* HL7 Version 3 Domain Information Model; Emergency Medical Services, Release 1 <[http://www.hl7.org/implement/standards/product\_brief.cfm?product\_id=302>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=302%3e)
* HL7 Version 3 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>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=438%3e)
* HL7 Version 3 Domain Analysis Model: Trauma Registry Data Submission, Release <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=363>
* HL7 CDA® R2 Implementation Guide: Trauma Registry Data Submission, Release 1 - US Realm <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=355>
* HL7 Version 2.7.1 Implementation Guide: Message Transformations with OASIS Tracking of Emergency Patients (TEP), Release 1 <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=439>
* FHIR reference
* MHD reference

### 3.Y.4 Interaction Diagram



Transport Data Creator

Transport Data Consumer

Provide Document Bundle [ITI – 65]

#### 3.Y.4.1 Send PCS Data

The Transport Data Creator Sends the required paramedicine information to the Transport Data Consumer. For more details on the content for this section please see section 3.Y.4.1.2.

##### 3.Y.4.1.1 Trigger Events

Any time there a patient transport to a facility from a paramedicine entity the receiving hospital needs to receive the relevant patient information to inform their decisions when the patient arrives.

##### 3.Y.4.1.2 Message Semantics

The Document Source shall initiate a FHIR “transaction” using a “create” action by sending an HTTP POST request methods composed of a FHIR Bundle Resource containing the DocumentManifest resource, one or more DocumentReference Resources, zero or more List Resources, and zero or more Binary Resources to the Document Recipient. Refer to ITI TF-3: 4.5.1 for details on the FHIR Resources and how Document Sharing metadata attributes are 580 mapped. The media type of the HTTP body shall be either application/fhir+json or application/fhir+xml. Document SourceProvide Document Bundle Request MessageDocument RecipientProvide Document Bundle Response MessageIHE IT Infrastructure Technical Framework Supplement – Mobile access to Health Documents(MHD)

Bundle {

* Composition,
* Patient – 1..1,
* RelatedPerson – 0..\*,
* Coverage – 0..\*,
* Practitioner – 0..\*
* Claim – 0..\*
* AllergyIntolerance – 0..\*
* Procedure – 0..\*
* Immunization – 0..\*
* MedicationStatement – 0..\*
* ClinicalImpression – 1..\*
* DiagnosticOrder – 1..\*
* DiagnosticReport – 1..\*
* ImagingStudy – 0..\*
* Observation – 1..\*
* Condition – 0..\*
* Location – 1..1
* Device – 0..1\*
* EpisodeOfCare (period)- 1..\*
* EncounterTime – 1..\*

##### 3.Y.4.1.3 Expected Actions

The Transport Data Creator initiates the send for the resources specified in PCC TF-XXXXX Transport Content using HTTP or HTTPS SEND, and the Transport Data Consumer responds using the resources specified in PCC TF-XXXX PCS Transport Content according to the FHIR SEND specification with the requested transport information or an error message. See: <http://hl7.org/fhir/STU3/index.html>

### 3.Y.5 Protocol Requirements

<In this section, the selected protocol bindings of the transactions are explained in detail (like SOAP or HTTP bindings).For an example, see the QRPH DEX Profile or ITI TF-2b:3.34.5, 3.35.5. Indicate NA if not used.>

### 3.Y.6 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.Y.6.1 Security Audit Considerations

There has to be a trusted connection between the Transport Data Creator and Transport Data Consumer. This will be carried out in implementation and can either be a business relationship or a secured connection done through ATNA. The Transport Data Consumer has control of what information will be consumed. 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 Transport Data Consumer and Transport Data Creator. For further guidance, see ITI TF Supplement: Appendix Z.

##### 3.Y.6.(z) Transport Data Creator Specific Security Considerations

None

##### 3.Y.6.(z) Transport Data Consumer Specific Security Considerations

None

Appendices

<Detailed cross transaction relationships or mapping details are described in an appendix in Volume 2x. Volume 2 appendices may be informational or normative. Immediately after the title of a Volume 2 appendix, provide a very explicit statement defining whether this new appendix is informative or normative.

If there are no Volume 2 appendices, enter “Not applicable” and delete the Appendix A and Appendix B placeholder sections.>

# Appendix A – <Appendix Title>

Appendix A text.

## A.1 <Title>

Appendix A.1 text.

### A.1.1 <Title>

Appendix A.1.1 text.

# Appendix B – <Appendix Title>

Appendix B text.

## B.1 <Title>

Appendix B.1 text.

### B.1.1 <Title>

Appendix B.1.1 text.

# Volume 2 Namespace Additions

<For Public Comment, please explicitly identify all new OIDs, UIDs, URNs, etc., defined specifically for this profile. These items should be collected from the sections above, and listed here as additions to the applicable domain OID Registry. This section will be deleted prior to inclusion into the Technical Framework as Final Text, but should be present for publication of Public Comment and Trial Implementation.>

At Trial Implementation publication, the domain technical committee **must** ensure that all new OIDs, UIDs, URNs, etc., defined specifically for this profile have been recorded in their OID Registry. This section will be deleted prior to inclusion into the Technical Framework Volumes as Final Text but should be present for publication of Public Comment and Trial Implementation.>

The <domain name> registry of OIDs is located at <link to your OID registry(ies)

Additions to the <Domain Name> OID Registry are:

Volume 3 – Content Modules

<The current version of the supplement template only addresses HL7 v3 CDA Content Modules. All CDA Content Modules will go in Section 6 of Volume 3 of each domain’s Technical Framework document. In the future, this supplement template may have additional sections for DICOM Content Modules (section 7 of Volume 3) and other types of Content Modules (section 8, etc., of Volume 3).

<Please note that prior to the release of the new template set, some domains may have defined CDA Content Modules in Volume 2 (e.g., PCC); however, going forward CDA Content Modules will be defined in Volume 3.>

# 5 IHE Namespaces, Concept Domains and Vocabularies

Add to Section 5 IHE Namespaces, Concept Domains and Vocabularies

## 5.1 IHE Namespaces

No new name spaces

## 5.2 IHE Concept Domains

No new concept domains

## 5.3 IHE Format Codes and Vocabularies

### 5.3.1 IHE Format Codes

| Profile | Format Code | Media Type | Template ID |
| --- | --- | --- | --- |
| Paramedicine Care Summary (PCS) | urn:ihe:pcc:pcs:2018 | text/xml | <oids> |

# 6 Content Modules

### 6.3.1 CDA Document Content Modules

#### 6.3.1.D Paramedicine Care Summary (PCS) Document Content Module

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

The XDSDocumentEntry format code for this content is **urn:ihe:pcc:pcs:2018**

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

Patient Care Report 2.16.840.1.113883.17.3.10.2

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

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

Table 6.3.1.D.3-1: Paramedicine Care Summary Document - Referenced Standards

|  |  |  |
| --- | --- | --- |
| Abbreviation | Title | URL |
| NEMSIS | National EMS Information Services | <http://www.nemsis.org/index.html> |
| 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: Paramedicine Care Summary (PCS) - Data Element Requirement Mappings to CDA

| Paramedicine Data Element | 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 |
| 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 Paramedicine Care Summary (PCS) Document Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Paramedicine Care Summary (PCS) 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 Paramedicine Care Summary (PCS) Document Content Module Specification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Template Name | | Paramedicine Care Summary (PCS) | | | |
| Template ID | | <oid/uid> | | | |
| Parent Template | | Patient Care Report 2.16.840.1.113883.17.3.10.2 | | | |
| General Description | | The Paramedicine Care Summary will contain the patient’s paramedicine care information and interventions. | | | |
| Document Code | | SHALL BE "67796-3" Code System LOINC (CodeSystem: 2.16.840.1.113883.6.1 LOINC), “EMS Patient Care Report” | | | |
| Opt and Card | Condition | Header Element or Section Name | Template ID | Specification Document | Vocabulary Constraint |
| Header Elements | | | | | |
|  |  | Date of Birth | <oid> | HL7 EMS Run Report R2 |  |
| <e.g., R [0..1] |  | Ethnicity |  | HL7 EMS Run Report R2 |  |
| <e.g., M [1..1] |  | Patient Name |  | HL7 EMS Run Report R2 |  |
|  |  | Race |  | HL7 EMS Run Report R2 |  |
|  |  | **sDTCRaceCode** |  | HL7 EMS Run Report R2 |  |
|  |  | Administrative Gender |  | HL7 EMS Run Report R2 |  |
|  |  | Author |  | HL7 EMS Run Report R2 | Constrain the roles |
|  |  | Custodian |  |  |  |
|  |  | Destination |  |  |  |
|  |  | Service type |  |  |  |
| Sections | | | | | |
| RE [0..1] |  | EMS Advanced Directives | 2.16.840.1.113883.17.3.10.1.12 | HL7 EMS Run Report R2 | <reference to section of TF or supplement document for explanation, if applicable> |
| R [1..1] |  | EMS Allergies And Adverse Reactions Section | 2.16.840.1.113883.17.3.10.1.13 | HL7 EMS Run Report R2 |  |
| RE [0..1] |  | EMS Billing Section | 2.16.840.1.113883.17.3.10.1.5 | HL7 EMS Run Report R2 | Pending |
| O [0..1] |  | EMS Cardiac Arrest Event Section | 2.16.840.1.113883.17.3.10.1.14 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Current Medication Section | 2.16.840.1.113883.17.3.10.1.15 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Dispatch Section | 2.16.840.1.113883.17.3.10.1.2 | HL7 EMS Run Report R2 |  |
| O [0..1] |  | EMS Disposition Section | 2.16.840.1.113883.17.3.10.1.4 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Injury Incident Description Section | 2.16.840.1.113883.17.3.10.1.17 | HL7 EMS Run Report R2 |  |
| O [0..1] |  | EMS Medications Administered Section | 2.16.840.1.113883.17.3.10.1.18 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Past Medical History Section | 2.16.840.1.113883.17.3.10.1.19 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Patient Care Narrative Section | 2.16.840.1.113883.17.3.10.1.1 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Personnel Adverse Event Section | 2.16.840.1.113883.17.3.10.1.6 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Physical Assessment Section | 2.16.840.1.113883.17.3.10.1.20 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Procedures Performed Section | 2.16.840.1.113883.17.3.10.1.21 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Protocol Section | 2.16.840.1.113883.17.3.10.1.7 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Response Section | 2.16.840.1.113883.17.3.10.1.3 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Scene Section | 2.16.840.1.113883.17.3.10.1.8 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Situation Section | 2.16.840.1.113883.17.3.10.1.9 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Social History Section | 2.16.840.1.113883.17.3.10.1.22 | HL7 EMS Run Report R2 |  |
| O [0..1] |  | EMS Times Section | 2.16.840.1.113883.17.3.10.1.10 | HL7 EMS Run Report R2 |  |
| R [1..1] |  | EMS Vital Signs Section | 2.16.840.1.113883.17.3.10.1.23 | HL7 EMS Run Report R2 |  |

###### 6.3.1.D.5.1 <Header Element or Section Name> <Vocabulary Constraint or Condition>

<add vocabulary constraint or condition definition>

<remove example below prior to public comment:>

<e.g., The value for serviceEvent / code SHOULD be drawn from value set 1.3.6.1.4.1.19376.1.4.1.5.2 Cardiac Imaging Procedures.

OR

The value for serviceEvent/code SHOULD be drawn from the value set bound to the concept domain UV\_CardiacImagingProcedures.>

###### 6.3.1.D.5.2 <Header Element or Section Name> <Vocabulary Constraint or Condition>

<add vocabulary constraint or condition definition>

<remove example below prior to public comment:>

<e.g., 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]) for each of the cardiac relevant medications identified in Value Set 1.3.6.1.4.1.19376.1.4.1.5.14 Cardiac Drug Classes, encoding the value in substanceAdministration/consumable/ManufacturedProduct/Material/code.

OR

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]) for each of the cardiac relevant medications identified in the value set bound to the concept domain UV\_CardiacRelevantMedications, encoding the value in substanceAdministration/consumable/ManufacturedProduct/Material/code.

>

###### 6.3.1.D.5.3 <Header Element or Section Name> <Vocabulary Constraint or Condition>

<add vocabulary constraint or condition definition>

<remove example below prior to public comment:>

<e.g., Within the Allergies and Other Adverse Reactions section the Content Creator SHALL be able to create an Allergies and Intolerances Concern Entry (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.5.3 [PCC TF-2]) for each of the cardiac imaging agent classes identified in Value Set 1.3.6.1.4.1.19376.1.4.1.5.10 Contrast Agents Classes for Adverse Reactions, encoding the value in observation/participant/participantRole/playingEntity/code.

OR

Within the Allergies and Other Adverse Reactions section the Content Creator SHALL be able to create an Allergies and Intolerances Concern Entry (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.5.3 [PCC TF-2]) for each of the cardiac imaging agent classes identified in value set bound to the concept domain UV ContrastAgentsClasses, encoding the value in observation/participant/participantRole/playingEntity/code.

>

###### 6.3.1.D.5.4 <Header Element or Section Name> <Vocabulary Constraint or Condition>

<add vocabulary constraint or condition definition>

<remove example below prior to public comment:>

<e.g., A DICOM Object Catalog Section SHALL be present if other document sections contain references to DICOM SOP Instances (images, structured report measurements, or other information objects), and MAY be present otherwise.>

**###End Tabular Format - Document**

**###Begin Discrete Conformance Format - Document**

*<Delete the example information contained in the material below (from Cardiology CRC)>*

<e.g., The complete set of body constraints, including those from C-CDA section/entry definitions are:

1. SHALL contain exactly one [1..1] **component** (CONF:9588).
   1. A Cath Report Content **SHALL** have a structuredBody (CONF:9589-CRC).
      1. A Cath Report Content **SHALL** conform to CDA Level 3 (structuredBody containing sections that contain a narrative block and coded entries). In this template (templateId 2.16.840.1.113883.10.20.22.1.6), coded entries are optional. (CONF:9590-CRC).
   2. The component/structuredBody SHALL conform to the section constraints below (CONF:9595-CRC).
      1. Each section SHALL have a title and the title SHALL not be empty (CONF:9937).>

<The following table shows relationships among the templates in the body of a Cath Report Content document.>

Table 6.3.1.D.5-1 <Content Module Name (Acronym)> Document Content Module Specification

| Template Title | Opt and Card | Condition | Template Type | templateId | Vocabulary  Constraints |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| Delete this row and the example information in the rows below. | | | | | |
| <e.g., Cath Report Content | R[1..1] |  | document | 1.3.6.1.4.1.19376.1.4.1.1.2 | 6.3.1.D.5.1 |
| Document Summary-Cardiac Section | O[0..1] |  | Section | 1.3.6.1.4.1.19376.1.4.1.2.16 |  |
| Medical History - Cardiac Section | R[1..1] |  | Section | 1.3.6.1.4.1.19376.1.4.1.2.17 |  |
| Procedure Activity Observation | O[0..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.13 |  |
| Procedure Activity Procedure | O[0..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.14 |  |
| Problem Observation - Cardiac | O[0..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.4 |  |
| Age Observation | O[0..1] |  | Entry | 2.16.840.1.113883.10.20.22.4.31 |  |
| Health Status Observation | O[0..1] | 6.3.1.D.5.2 | Entry | 2.16.840.1.113883.10.20.22.4.5 |  |
| Problem Status | O[0..1] |  | Entry | 2.16.840.1.113883.10.20.22.4.6 |  |
| Severity Observation | O[0..1] |  | Entry | 2.16.840.1.113883.10.20.22.4.8 |  |
| Allergies Section | R[1..1] |  | Section | 2.16.840.1.113883.10.20.22.2.6 |  |
| Allergy Problem Act | O[0..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.30 |  |
| Allergy Observation | R[1..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.7 |  |
| Allergy Status Observation | O[0..1] |  | Entry | 2.16.840.1.113883.10.20.22.4.28 |  |
| Reaction Observation | O[0..1] |  | Entry | 2.16.840.1.113883.10.20.22.4.9 |  |
| Severity Observation | O[0..1] |  | Entry | 2.16.840.1.113883.10.20.22.4.8 |  |
| Family History – Cardiac Section | O[0..1] |  | Section | 1.3.6.1.4.1.19376.1.4.1.2.18 |  |
| Problem Observation - Cardiac | O[0..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.4 |  |
| Social History Section | O[0..1] |  | Section | 2.16.840.1.113883.10.20.22.2.17 |  |
| Physical Exam Section | R[1..1] |  | Section | 2.16.840.1.113883.10.20.2.10 |  |
| Vital Signs | R[1..1] |  | Section | 2.16.840.1.113883.10.20.22.2.4.1 |  |
| Vital Signs Organizer | R[1..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.26 |  |
| Vital Sign Observation | R[2..\*] |  | Entry | 2.16.840.1.113883.10.20.22.4.27> |  |

<For each (1:1 correspondence) Vocabulary Constraint or Condition listed in the table above, create an additional section/reference below. Add the Header Element or Section Name and then select either “Vocabulary Constraint” or “Condition” and delete the other word.>

<Note that every Conditional element MUST have an explanatory paragraph referenced below.>

<It is required to use SHALL, SHOULD, or MAY in each definition as defined in Appendix E of the Technical Frameworks General Introduction.>

###### 6.3.1.D.5.5 <Template Title name> <Vocabulary Constraint or Condition>

<add vocabulary constraint or condition definition>

<remove example below prior to public comment:>

<e.g., The value for serviceEvent / code SHOULD be drawn from value set 1.3.6.1.4.1.19376.1.4.1.5.2 Cardiac Imaging Procedures.

OR

The value for serviceEvent / code SHOULD be drawn from the value set bound to the concept domain UV\_CardiacImagingProcedures

>

###### 6.3.1.D.5.6 <Template Title name> <Vocabulary Constraint or Condition>

<add vocabulary constraint or condition definition>

<remove example below prior to public comment:>

<e.g., 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]) for each of the cardiac relevant medications identified in Value Set 1.3.6.1.4.1.19376.1.4.1.5.14 Cardiac Drug Classes, encoding the value in substanceAdministration/consumable/ManufacturedProduct/Material/code.

OR

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]) for each of the cardiac relevant medications identified in the value set bound to the concept domain UV\_CardiagDrugClasses, encoding the value in substanceAdministration/consumable/ManufacturedProduct/Material/code.

>

**###End Discrete Conformance Format - Document**

##### 6.3.1.D.6 <Document and Acronym Name> Conformance and Example

<This section is the same, independent of whether the tabular or discrete conformance formats were chosen.>

<Describe the conformance of this document in terms of inheritance from other templates. Use the OIDs of those templates for clarity. A complete example of this document MUST be placed on the IHE ftp server as part of the Public Comment process of a Content Module supplement at ftp://ftp.ihe.net/TF\_Implementation\_Material/. The file naming convention for these files should be <Domain Acronym>\_PCS\_CDA-sample\_<version number>.xml where version number is the version number of the profile>.

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 *<template name(s) and template ID(s)>* <e.g., CDA-PN, 2.16.840.1.113883.10.20.18.1, and the PCC TF Medical Document, 1.3.6.1.4.1.19376.1.5.3.1.1.1, content modules> and so must conform to the requirements of those templates as well this document specification, *<templateName and templateID>* <e.g., Cardiac Imaging Report template, 1.3.6.1.4.1.19376.1.4.1.1.1>.

A complete example of the <Content Module Name and Acronym> Document Content Module is available on the IHE ftp server at: <indicate location here>.

Note that this is an example and is meant to be informative and not normative. This example shows the <templateId (OIDs)> elements for all of the specified templates.

Add to section 6.3.2 Header Content Modules

### 6.3.2 CDA Header Content Modules

#### 6.3.2.H <Header Element Module Name> Header Content Module

<Authors’ Note: Replicate section 6.3.2.H for each Header Content Module defined in this profile. Number as 6.3.2.H**1**, 6.3.2.H**2**, etc.>

**###Begin Tabular Format - Header**

<Either the Parent Template OR the Header Element may constrain this Header Element, not both. One should be “N/A”.>

<The values in the column “Participations and Act Relationships” must come from the defined terms in the CDA schema. See the IHE Technical Frameworks General Introduction, Appendix E: CDA Conventions.>

Table 6.3.2.H-1 <Content Module Name (Acronym)> Header

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Template Name | | <Template Name> | | | | |
| Template ID | | <oid> | | | | |
| Parent Template | | <Name and oid of parent template or NA> | | | | |
| Header Element | | <CDA Header Elements participant or componentOf or NA>  e.g., componentOf / encompassingEncounter | | | | |
| General Description | | <short textual description. Short paragraph at most.> | | | | |
| Opt and Card | Participation/ Act Relationship | Description | Template | Specification Document | Vocabulary Con-straint |
| x [?..?] | <select from defined part /act relationship terms; App E> | <Header Content description name> | <oid> | <document reference, if applicable> | <Vocab constraint, if applicable> |
|  |  |  |  |  |  |
| <e.g., R [1..1] | RESP | Responsible Party |  | CARD TF-3: 6.3.2.H.1> |  |
| <e.g., R [1..1] | LOC | Health Care Facility |  | CARD TF-3: 6.3.2.H.2> |  |
| <e.g., O [0..1] | REF | Referring Provider |  | CARD TF-3: 6.3.2.H.3> |  |
| <e.g., C [0..1] | ATND | Physician of Record | 2.16.840.1.113883.10.20.6.2.2 | CDA-DIR | CARD TF-3: 6.3.2.H.4> |

*<For each Vocabulary Constraint or Specification Document listed in the table above, create an additional section/reference below. Add the Description Name and then select either “Vocabulary Constraint” or “Spec Document” and delete the other word.>*

*<It is required to use SHALL, SHOULD, or MAY in each definition as defined in Appendix E of the Technical Frameworks General Introduction.>*

*<Also note that the Specification Document link can be a link to an outside document/reference. Do not replicate (cut and paste) sections of other documents into this document since they could become out of sync.>*

##### 6.3.2.H.1 <Description Name> <e.g., Responsible Party> <Specification Document *or* Vocabulary Constraint>

<Describe constraints or other info. This specification may include more information on conditions or cardinality, additions elements, data mappings, or data types, or other information.>

<Delete the example below prior to publishing for Public Comment.>

<e.g., The responsible party element represents only the party responsible for the encounter, not necessarily the entire episode of care.>

<e.g., The responsibleParty element MAY be present. If present, responsibleParty/ assignedEntity SHALL have at least one assignedPerson or representedOrganization element present.>

<e.g., Note: This is identical to CDA-DIR CONF-DIR-67>

<e.g., responsibleParty assignedEntity id SHALL be present with the responsible physician’s identifier.>

<e.g., assignedEntity code SHOULD be present with the responsible physician’s specialty.>

<e.g., assignedEntity MAY include an accreditation element from the **urn:ihe:card** namespace to provide physician accreditation status.>

<e.g., The accreditation element SHALL use the character string (ST) data type.

The accreditation element SHALL appear after the defined elements of the Role class, and before any scoper or player entity elements.>

<e.g., assignedEntity assignedPerson name SHALL be present with the responsible physician’s name.>

##### 6.3.2.H.2 <Description Name> <Specification Document OR Vocabulary Constraint>

##### 6.3.2.H.3 <Description Name> <Specification Document OR Vocabulary Constraint>

**###End Tabular Format – Header**

**###Begin Discrete Conformance Format – Header**

The header for the <*Document Name*> document shall support the following header constraints as noted in this section. Note that this content profile is realm agnostic. These header constraints are based on the C-CDA header constraints but all references to US Realm specific types have been removed.

<An example is provided to demonstrate the desired consistent use and format. Delete this example prior to publication for Public Comment. The statement must be numbered, begin with SHALL/SHOULD/MAY, identify the cardinality using [n..n], the name of the element, and a subitem which describes the value or source of the information.>

<e.g.,

1. SHALL contain exactly one [1..1] **typeId** (CONF:5361).
   1. This typeId SHALL contain exactly one [1..1] **@root**="2.16.840.1.113883.1.3" (CONF:5250).
   2. This typeId SHALL contain exactly one [1..1] **@extension**="POCD\_HD000040" (CONF:5251).
2. SHALL contain exactly one [1..1] **templateId** (CONF:5252) such that it
   1. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.4.1.1.2" for the Cath Report Content document template (CONF:CRC-xxx).
3. SHALL contain exactly one [1..1] **id** (CONF:5363).
   1. This id **SHALL** be a globally unique identifier for the document (CONF:9991).
4. SHALL contain exactly one or two [1..2] **code** (CONF:5253-CRC).
   1. SHALL be selected from ValueSet ProcedureNoteDocumentTypeCodes 2.16.840.1.113883.11.20.6.1 DYNAMIC (CONF:8497). Either or both of the following codes should be included:

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: ProcedureNoteDocumentTypeCodes 2.16.840.1.113883.11.20.6.1 DYNAMIC  Code System: LOINC 2.16.840.1.113883.6.1 | | | |
| LOINC Code | Type of Service ‘Component’ | Setting ‘System’ | Specialty/Training/Professional Level ‘Method\_Type’ |
| 18745-0 | Study report | Heart | Cardiac catheterization |
| 34896-1 | Interventional procedure note | {Setting} | Cardiology |

1. SHALL contain exactly one [1..1] **title** (CONF:5254).
   1. Can either be a locally defined name or the display name corresponding to clinicalDocument/code (CONF:5255).>

**###End Discrete Conformance Format – Header**

### 6.3.3 CDA Section Content Modules

Add to section 6.3.3.10 Section Content Modules

< Authors’ Note: Replicate section 6.3.3.10.S for each Section Content Module defined in this profile. Number as 6.3.3.10.S**1**, 6.3.3.10.S**2**, etc.>

<Authors’ notes: Section naming instructions: If a section is a specialization of an existing section, begin the name with the original section name. For example, if Cardiology is creating a specialization of the “Medical History Section”, the new section should be named “Medical History Section – Cardiac” and not “Cardiac Medical History Section”.>

**###Begin Tabular Format - Section**

<Delete examples in rows of table below prior to Public Comment.>

#### 6.3.3.10.S <Section Module Name> - Section Content Module

Table 6.3.3.10.S-1 <Section Module Name> Section

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Template Name | | <exact same Section Module name listed above> | | | |
| Template ID | | <oid> | | | |
| Parent Template | | <Parent Template Name oid/uid [Domain - Reference] or NA> | | | |
| General Description | | <brief textual description, one paragraph> | | | |
| Section Code | | <Code, Code Scheme, “Section Code Name”> | | | |
| Author | | <If inherited from encompassing content module use “current recordTarget”, unless otherwise specified. Role and entity must be specified if not inherited. > | | | |
| Informant | | <If inherited from encompassing content module use “current recordTarget”, unless otherwise specified.> | | | |
| Subject | | <If inherited from encompassing content module use “current recordTarget”, unless otherwise specified.> | | | |
| Opt and Card | Condition | Data Element or Section Name | Template ID | Specification Document | Vocabulary  Constraint |
| Subsections | | | | | |
| x [?..?] | <ref or link to cond section below, if applicable> | <name of subsection> | <oid> | <reference or link to specification document location, if applicable> | <reference or link to vocab constraint, if applicable> |
| <e.g., O [0..1] |  | Active Problems | 1.3.6.1.4.1.19376.1.5.3.1.3.6 | PCC TF-3> |  |
| <e.g., O [0..1] |  | History of Present Illness | 1.3.6.1.4.1.19376.1.5.3.1.3.4 | PCC TF-3> |  |
| <e.g., O [0..1] |  | History of Past Illness | 2.16.840.1.113883.10.20.2.9 | CDA-PN> |  |
| Entries | | | | | |
| x [?..?] | <ref or link to cond section below, if applicable> | <name of entry> | <oid> | <reference or link to specification document location, if applicable> | <reference or link to vocab constraint, if applicable> |
| <e.g., C [1..\*] | CARD TF-3 6.3.3.x.S.1 | Problem Concern Entry | 1.3.6.1.4.1.19376.1.5.3.1.4.5.2 | PCC TF-3> |  |
| <e.g., C [1..1] |  | Diabetes Problem Entry | 1.3.6.1.4.1.19376.1.4.1.4.1 | CARD TF-3 6.3.3.1> |  |
| <e.g., C [1..1] |  | Angina Problem Entry | 1.3.6.1.4.1.19376.1.4.1.4.2 | CARD TF-3 6.3.3.1> |  |
| <e.g., C [1..\*] | CARD TF-3 6.3.3.x.S.1 | Simple Observation | 1.3.6.1.4.1.19376.1.5.3.1.4.13 | PCC TF-3 | CARD TF-3 6.3.3.x.S.2> |

##### 6.3.3.10.S.1 <Data Element or Section Name> <Condition, Specification Document, or Vocabulary Constraint>

<Describe constraints; refer to other Specification Document, condition, or other info. This specification may include more information on conditions or cardinality, additions elements, data mappings, or data types, or other information.>

<Delete the example below prior to publishing for Public Comment.>

<e.g., The Medical History Section SHALL contain at least one Problem Concern Entry or at least one Simple Observation.

Note: Problems MAY be recorded directly in the Medical History Section, or in one or more subsections such as Active Problems, History of Present Illness, or History of Past Illness.>

##### 6.3.3.10.S.2 <Data Element or Section Name> <Condition, Specification Document, or Vocabulary Constraint>

<Describe constraints, refer to other Specification Document, condition, or other info. This specification may include more information on conditions or cardinality, additions elements, data mappings, or data types, or other information.>

<Delete the example below prior to publishing for Public Comment.>

<e.g., A Content Creator SHALL be able to include a Problem Concern Entry for each of the conditions identified in Value Set [1.3.6.1.4.1.19376.1.4.1.5.4 Cardiac Problems/Concerns](#_1.3.6.1.4.1.19376.1.4.1.5.4__Cardia), encoding the value in act/entryRelationship/observation/code.

A Problem Concern Entry for {73211009, SNOMED CT, diabetes} SHALL use the specialized Diabetes Problem Entry (OID = 1.3.6.1.4.1.19376.1.4.1.4.1).

A Problem Concern Entry for {194828000, SNOMED CT, angina} SHALL use the specialized Angina Problem Entry (OID = 1.3.6.1.4.1.19376.1.4.1.4.2).

OR

A Content Creator SHALL be able to include a Problem Concern Entry for each of the conditions identified in the Concept Domain UV\_CardiacProblems (See section X.X for the description/list of concepts in this domain), encoding the value in act/entryRelationship/observation/code.

A Problem Concern Entry for “diabetes” SHALL use the specialized Diabetes Problem Entry (OID = 1.3.6.1.4.1.19376.1.4.1.4.1).

A Problem Concern Entry for “angina” SHALL use the specialized Angina Problem Entry (OID = 1.3.6.1.4.1.19376.1.4.1.4.2).

>

##### 6.3.3.10.S.3 <Data Element or Section Name> <Condition, Specification Document, or Vocabulary Constraint>

**###End Tabular Format – Section**

**###Begin Discrete Conformance Format – Section**

<An example is provided to demonstrate the desired consistent use and format. Delete this example prior to publication for Public Comment. The statements must be numbered, begin with SHALL/SHOULD/MAY identify the cardinality using [n..n], the name of the element, and a subitem which described the value or source of the information.>

<e.g.,

#### 6.3.3.10.S Medical History - Cardiac Section 11329-0

[section: templateId 1.3.6.1.4.1.19376.1.4.1.2.17(open)]

[section: templateId 2.16.840.1.113883.10.20.22.2.39(open)]

The Medical History section describes all aspects of the medical history of the patient even if not pertinent to the current procedure, and may include chief complaint, past medical history, social history, family history, surgical or procedure history, medication history, and other history information. The history may be limited to information pertinent to the current procedure or may be more comprehensive. The history may be reported as a collection of random clinical statements or it may be reported categorically. Entries for History of Past Illness and History of Present Illness have been consolidated into this section. Social and Family History are discussed in their own sections. For this Cath Report Content profile, this section may also contain history about specific relevant problems as problem observations.

In the event that the patient was transferred from another facility where there was a problem indication that the patient was determined to need a cath procedure, this will be noted as a problem observation in this medical history section as text in the narrative for now until there is a code representing this.

1. SHALL contain exactly two [2..2] templateId (CONF:8160) such that it
   1. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.4.1.2.17" (CONF:10403-CRC).
   2. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.2.39" (CONF:10403).
2. SHALL contain exactly one [1..1] code/@code="11329-0" Medical (General) History (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:8161).
3. SHALL contain exactly one [1..1] title (CONF:8162).
4. SHALL contain exactly one [1..1] text (CONF:8163).
5. MAY contain zero or more [0..\*] entry (CONF:CRC-xxx) such that it
   1. SHALL contain exactly one [1..1] Problem Observation - Cardiac (1.3.6.1.4.1.19376.1.4.1.4.9) (CONF:CRC-xxx).
6. MAY contain zero or more [0..\*] **entry** (CONF:CRC-xxx) such that it
   1. SHALL contain exactly one [1..1] **Procedure Activity Observation** (2.16.840.1.113883.10.20.22.4.13) (CONF:CRC-xxx).
7. MAY contain zero or more [0..\*] entry (CONF:CRC-xxx) such that it
   1. SHALL contain exactly one [1..1] Procedure Activity Procedure (2.16.840.1.113883.10.20.22.4.14) (CONF:CRC-xxx).

<section>

<templateId root="1.3.6.1.4.1.19376.1.4.1.2.17"/>

<templateId root="2.16.840.1.113883.10.20.22.2.39"/>

<code code="11329-0" codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

displayName="MEDICAL (GENERAL) HISTORY"/>

<title>MEDICAL (GENERAL) HISTORY</title>

<text>

<list listType="ordered">

<item>Patient has had a recent issue with chest pain that does not seem to be related to any particular cause.</item>

<item>Previous concerns of heart disease were actually related to other causes.</item>

<item>Patient had recent weight gain due to sedentary lifestyle and

new job.</item>

</list>

</text>

<entry>

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

<templateId root=”1.3.6.1.4.1.19376.1.4.1.9”/>

<id root=”xyz”/>

…

</observation>

</entry>

</entry>

<observation classCode="PROC" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.22.4.14"/>

<!-- Procedure Activity Procedure template -->

...

</observation>

</entry>

</entry>

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

<templateId root="2.16.840.1.113883.10.20.22.4.13"/>

<!-- Procedure Activity Observation template -->

...

</observation>

</entry>

</section>

Figure Example: Example Section example>

**###End Discrete Conformance Format - Section**

### 6.3.4 CDA Entry Content Modules

Add to section 6.3.4.E Entry Content Modules

#### 6.3.4.E <Entry Content Module Name> Entry Content Module

<Authors’ Note: Replicate section 6.3.4.E for each Entry Content Module defined in this profile. Number as 6.3.4.E**1**, 6.3.4.E**2**, etc.>

<If this entry has subsidiary/child entries, these entries are referenced in the table below. Create one row for each subsidiary/child entry.>

**### Begin Tabular Format - Entry**

Table 6.3.4.E-1 <Entry Module Name> Entry

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Template Name | | | | <Template name> | | | | | | |
| Template ID | | | | <oid> | | | | | | |
| Parent Template | | | | <Parent Template Name oid/uid [Domain - Reference]> or NA | | | | | | |
| General Description | | | | <brief textual description, one paragraph> | | | | | | |
| Class/Mood | | Code | | | | Data Type | Value | | | |
| <use one of defined Class/Mood see General Intro App E> | | <Code, code system, code meaning e.g., 18118-0, LOINC, “LV Wall Motion Segmental Findings”> | | | | <Applies only if the Class/ Mood is OBS/EVN. Enumerated in HL7 V3 Data Types R1.> | <If the Class/Mood is OBS/EVN, then this Value field is the constraint on Observation Value. Otherwise, this field should be “N/A”.> | | | |
| Opt and Card | entryRelationship | | Description | | Template ID | | | Specification Document | Vocabulary Constraint |
| <e.g., x [?..?]> |  | | Simple Observation | | oid | | | reference to document e.g., PCC-TF-3 | <reference/link to definition of constraint, often in next paragraph/ subsection e.g., CARD TF-3 6.3.3.4.9.10> |
| <e.g., C [1..\*] | COMP | | Simple Observation | | 1.3.6.1.4.1.19376.1.5.3.1.4.13 | | | PCC TF-2 | CARD TF-3 6.3.4.E.1 (Wall morphology)> |
| <e.g., O [0..1] | COMP | | Simple Observation | | 1.3.6.1.4.1.19376.1.5.3.1.4.13 | | | PCC TF-2 | CARD TF-3 6.3.4.E.2 (Viability)> |
| <e.g., O [0..1] | COMP | | observationMedia Entry | | 1.3.6.1.4.1.19376.1.4.1.4.7 | | | CARD TF-3 6.3.1.6> |  |

##### 6.3.4.E.1 Simple Observation (wall motion) Vocabulary Constraints

<Describe constraints, refer to other Specification Document, condition, or other info. This specification may include more information on conditions or cardinality, additions elements, data mappings, or data types, or other information.>

<Can be in a tabular format or textual description.>

<Delete the example below prior to publishing for Public Comment.>

<e.g., The conditional entries specified in this table SHALL be present based on the exam type as specified in the CDA Header in the documentationOf / serviceEvent / code element.>

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Opt and Card | Condition | observation/code | Data Type | Unit of Measure | Value Set/  Concept Domain |
| <e.g., C [1..\*] | <Identifies the predicate and the if the predicate evaluates as true, then indicate whether mandatory, required or optional  e.g., Required if “exam type” is “LVG” (left ventriculogram)>  R: LVG | 60797005, SNOMED CT, “Cardiac Wall Motion”  <”+” = May be post-coordinated with priorityCode, methodCode, targetSiteCode . See HL7 V3. Include a value directly or include a link to a value set, if applicable.>  e.g., + targetSiteCode from 1.2.840.10008.6.1.219 DICOM CID 3718 Myocardial Wall Segments in Projection | CD | n/a unless the Data Type is PQ or IVL<PQ> | <include link to value set, e.g., 1.3.6.1.4.1.19376.1.4.1.5.20 Wall motion  OR, include value directly as e.g.,  <The Observation Value may also have a post-coordinated interpretation such as:>  +interpretationCode  +negationInd > |
| <e.g., C [1..\*] | R: SPECT, TTE, TEE, CMR  O:CCTA | 60797005, SNOMED CT, “Cardiac Wall Motion”  + targetSiteCode from 1.2.840.10008.6.1.218 DICOM CID 3717 Myocardial Wall Segments | CD | n/a | UV\_WallMotion > |

##### 6.3.4.E.2 Simple Observation (wall morphology) Constraints

<Describe constraints; refer to other Specification Document, condition, or other info. This specification may include more information on conditions or cardinality, additions elements, data mappings, or data types, or other information.>

<Can be in a tabular format or textual description.>

<Delete the example below prior to publishing for Public Comment.>

<e.g., The conditional entries specified in this table SHALL be present based on the exam type as specified in the CDA Header in the documentationOf / serviceEvent / code element.>

| Opt and Card | Condition | observation/code | Data Type | Unit of Measure | Value Set/  Concept Domain |
| --- | --- | --- | --- | --- | --- |
| <e.g., C [1..\*] | R: Cath with LVG | 72724002, SNOMED CT, “Morphology findings”  + targetSiteCode from 1.2.840.10008.6.1.219 DICOM CID 3718 Myocardial Wall Segments in Projection | CD | n/a | 1.3.6.1.4.1.19376.1.4.1.5.19 Myocardium Assessments> |
| <e.g., C [1..\*] | R: SPECT, echo, CMR  O:CCTA | 72724002, SNOMED CT, “Morphology findings”  + targetSiteCode from 1.2.840.10008.6.1.218 DICOM CID 3717 Myocardial Wall Segments | CD | n/a | UV\_MyocardiumAssessments> |

<e.g., The observation/value MAY be a null flavor.>

<e.g., morphological assessment observation MAY have a subsidiary Severity observation (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.1 [PCC TF-2]).>

**### End Tabular Format - Entry**

**### Begin Discrete Conformance Format – Entry**

<An example is provided to demonstrate the desired consistent use and format. Delete this example prior to publication for Public Comment. The statements must be numbered, begin with SHALL/SHOULD/MAY identify the cardinality using [n..n], the name of the element, and a subitem which described the value or source of the information.>

##### <e.g.,6.3.4.E Result Observation - Cardiac

[observation: templateId 1.3.6.1.4.1.19376.1.4.1.4.16 (open)]

A result observation is a clinical statement that a clinician has noted during the Cath Lab procedure. This entry is used to describe the specific procedure findings that were observed during the specific Cath Lab procedure.

The specific result observations are defined in 1.3.6.1.4.1.19376.1.4.1.5.38 Procedure Findings Constraints/ValueSet.

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6) (CONF:7130).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001) (CONF:7131).
3. SHALL contain exactly one [1..1] templateId (CONF:7136) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:9138).
4. SHALL contain at least one [1..\*] id (CONF:7137).
   1. The first id represents this specific globally unique result observation.
   2. The second id represents the lesion ID which should be an assigned numeric code that identifies lesions within a specific targetSiteCode.This lesion ID is used to link lesion specific data in this Result Observation – Cardiac with Procedure Activity Procedure - Cardiac.
5. SHALL contain exactly one [1..1] code (CONF:7133).
   1. SHOULD be from LOINC (CodeSystem: 2.16.840.1.113883.6.1) or SNOMED CT (Value Set: 1.3.6.1.4.1.19376.1.4.1.5.38) (CONF:7166-CRC).
6. SHOULD contain zero or one [0..1] text (CONF:7138).
   1. The text, if present, SHOULD contain zero or one [0..1] reference/@value (CONF:7139).
      1. This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1) (CONF:9119).
7. SHALL contain exactly one [1..1] statusCode="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14) (CONF:7134).
8. SHALL contain exactly one [1..1] effectiveTime (CONF:7140).
   1. represents clinically effective time of the measurement, which may be when the measurement was performed (e.g., a BP measurement), or may be when sample was taken (and measured some time afterwards) (CONF:7141).
9. SHALL contain exactly one [1..1] value with @xsi:type="ANY" (CONF:7143).
10. SHOULD contain zero or more [0..\*] interpretationCode (CONF:7147).
11. MAY contain zero or one [0..1] methodCode (CONF:7148).
12. MAY contain zero or one [0..1] targetSiteCode (CONF:7153).
    1. The targetSiteCode, if present, SHALL contain exactly one [1..1] code where the @code SHALL be selected from ValueSet Body Site 1.3.6.1.4.1.19376.1.4.1.5.32 STATIC (CONF:CRC).
13. MAY contain zero or one [0..1] author (CONF:7149).
14. SHOULD contain zero or more [0..\*] referenceRange (CONF:7150).
    1. The referenceRange, if present, SHALL contain exactly one [1..1] observationRange (CONF:7151).
       1. This observationRange SHALL NOT contain [0..0] code (CONF:7152).
15. SHOULD contain zero or one [0..1] entryRelationship (CONF:CRC-xxx) such that it
    1. SHALL contain exactly one [1..1] @typeCode="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) (CONF:CRC-xxx).
    2. SHALL contain exactly one [1..1] @inversionInd="true" TRUE (CONF:CRC-xxx).
    3. SHALL contain exactly one [1..1] Severity Observation (2.16.840.1.113883.10.20.22.4.8) (CONF:CRC-xxx).

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

<templateId root="1.3.6.1.4.1.19376.1.4.1.4.16"/>

<!-- Result Observation template -->

<id root="c6f88321-67ad-11db-bd13-0800200c9a66"/>

<!-- This second ID represents the lesion ID -->

<id root="107c2dc0-67a5-11db-bd13-0800200c9a66" extension="1"/>

<code code="233970002"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Post procedure stenosis"/>

<text><reference value="1"/></text>

<statusCode code="completed"/>

<effectiveTime value="19991114"/>

<targetSiteCode code="41879009" codeSystem="1.3.6.1.4.1.19376.1.4.1.5.32"

displayName="Distal RCA"/>

<value xsi:type="PQ" value="0" unit="%"/>

<interpretationCode code="N" codeSystem="2.16.840.1.113883.5.83"/>

</observation>

e.g., Figure 6.3.4.E-1: Result observation example >

**### End Discrete Conformance Format - Entry**

## 6.4 Section not applicable

Not applicable

<This heading is not currently used in a CDA document and remains here for section numbering integrity. Do not remove it or renumber sections following it. >

Add to Section 6.5 Value Sets

## 6.5 <Domain Acronym> Value Sets and Concept Domains

<Replicate the Value Set 6.5.x section as many times as needed for this supplement.>

<It is preferable to use tabular format. Add notes as needed. Be aware of potential national licensing issues of coding schemes.>

### 6.5.x <Value Set Name/Concept Domain Name> <oid>

<Add description or clarifications here if necessary.>

|  |  |
| --- | --- |
| Coding Scheme  Concept | <Coding Scheme Name> |
|  |  |
|  |  |
|  |  |
|  |  |

Note: <as necessary, applicable>

OR

|  |
| --- |
| <Concept Domain Name> |
|  |
|  |
|  |
|  |

<Delete the example below prior to publication for Public Comment.>

### <e.g.,6.5.1 Drug Classes Used in Cardiac Procedure 1.3.6.1.4.1.19376.1.4.1.5.15

| Coding Scheme  Concept | SNOMED CT | NDF-RT |
| --- | --- | --- |
| Calcium channel blockers | 48698004 | N0000029119 |
| Beta-blockers | 33252009 | N0000029118 |
| Nitrates | 31970009 | N0000007647 |
| Aminophylline | 55867006 | N0000146397 |

Note: As described in Section 6.1.2.4, the selection of the appropriate coding system for use may be based on local policy or national regulation.

OR

### 6.5.1 UV\_CardiacProcedureDrugClasses

This Concept Domain holds a list of Drug Classes used in Cardiac Procedures. The concepts in this domain must be bound to a value set at implementation.

|  |
| --- |
| Concept Name |
| Calcium channel blockers |
| Beta-blockers |
| Nitrates |
| Aminophylline |

## 6.6 HL7 FHIR Content Module

### 6.6.x Transport Content

### 6.6.X.1 Referenced Standards

* HL7 Version 3 Domain Analysis Model: Emergency Medical Services, Release 1 <[http://www.hl7.org/implement/standards/product\_brief.cfm?product\_id=39>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=39%3e)
* HL7 Version 3 Domain Information Model; Emergency Medical Services, Release 1 <[http://www.hl7.org/implement/standards/product\_brief.cfm?product\_id=302>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=302%3e)
* HL7 Version 3 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>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=438%3e)
* HL7 Version 3 Domain Analysis Model: Trauma Registry Data Submission, Release <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=363>
* HL7 CDA® R2 Implementation Guide: Trauma Registry Data Submission, Release 1 - US Realm <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=355>
* HL7 Version 2.7.1 Implementation Guide: Message Transformations with OASIS Tracking of Emergency Patients (TEP), Release 1 <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=439>
* HL7 FHIR standard STU3 <http://hl7.org/fhir/STU3/index.html>

##### 6.6.X.2 Trigger Events

Upon patient handoff from the paramedicine care to the receiving facility care, a paramedicine care summary bundle is created and sent to the receiving facility using Provide Document Bundle [ITI-65] transaction.

##### 6.6.X.3 Message Semantics

The Transport Data creator shall initiate a Provide Document Bundle Request [ITI-65] transaction providing a bundle as specified in this section. FHIR “transaction” using a “create” action by sending an HTTP POST request methods composed of a FHIR Bundle Resource containing the DocumentManifest resource, one or more DocumentReference Resources, zero or more List Resources, and zero or more Binary Resources to the Document Recipient. Refer to ITI TF-3: 4.5.1 for details on the FHIR Resources and how Document Sharing metadata attributes are mapped. The media type of the HTTP body shall be either application/fhir+json or application/fhir+xml.

### 6.6.X.3.1 FHIR Resource Bundle Content

Bundle {

* Composition,
* Patient – 1..1,
* RelatedPerson – 0..\*,
* Coverage – 0..\*,
* Practitioner – 0..\*
* Claim – 0..\*
* AllergyIntolerance – 0..\*
* Procedure – 0..\*
* Immunization – 0..\*
* MedicationStatement – 0..\*
* ClinicalImpression – 1..\*
* DiagnosticOrder – 1..\*
* DiagnosticReport – 1..\*
* ImagingStudy – 0..\*
* Observation – 1..\*
* Condition – 0..\*
* Location – 1..1
* Device – 0..1\*
* EpisodeOfCare (period)- 1..\*
* EncounterTime – 1..\*

### 6.6.X.3.2 FHIR Resource Data Specifications

The following table shows the mapping of the FHIR Resources supporting the content for EMS Data Elements/Attributes. The Transport Data Creator SHALL support the Resources identified by this table. Transport Data Consumer SHALL receive paramedicine content from the specified resource for each attribute. The Quality Data Options SHALL require receiving systems to discreetly import data elements as indicated in the constraints column.

| EMS 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 | PCC TF-3:3.6.6.X.4.1 |
| Age | Patient.identifier | RE [0..1] | The patient's age (either calculated from date of birth or best approximation) | PCC TF-3:3.6.6.X.4.2 |
| 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. |  |

### 6.6.x.4 Quality Data Import Option

The Transport Data Consumer supporting the Quality Data Import option SHALL support discreet import of the data elements identified in the following table.

| EMS Data Element | Optionality | FHIR Resource Location |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

### 6.6.x.5 Trauma Data Import Option

The Transport Data Consumer supporting the Trauma Data Import option SHALL support discreet import of the data elements identified in the following table.

| EMS Data Element | Optionality | FHIR Resource Location |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

Appendices

*<Add any applicable Volume 3 appendices below.*

*<If there are no Volume 3 appendices, enter “Not applicable” and delete the Appendix A and Appendix B placeholder sections.>*

# Appendix A – <Appendix Title>

Appendix A text.

## A.1 <Title>

Appendix A.1 text.

### A.1.1 <Title>

Appendix A.1.1 text.

# Appendix B – <Appendix Title>

Appendix B text.

## B.1 <Title>

Appendix B.1 text.

### B.1.1 <Title>

Appendix B.1.1 text.

Volume 4 – National Extensions

Add appropriate Country section

# 4 National Extensions

4.I National Extensions for <Country Name or IHE Organization>

<A template for Volume 4 is included in this document for completeness; however, National Extensions are typically developed after a profile has been published for Trial Implementation. If you are developing a new profile for Public Comment, it is recommended that this section be marked “Not Applicable”.>

<Avoid using this section if you can, this is “only if absolutely necessary”. Differences add cost to implementation and testing and can reduce interoperability. Review carefully to determine if the national use case truly requires a difference in the profile mechanisms rather than just differences in system configuration.>

< National Extensions can add requirements above and beyond IHE, but **not** relax requirements. This would prevent Connectathon results based on national testing being recognized elsewhere. For more information, see <http://wiki.ihe.net/index.php?title=National_Extensions_Process>.>

The format of this section is not strongly specified due to the varying nature of national extensions. For an example of National Extensions, see RAD TF 4.>

4.I.1 Comment Submission

This national extension document was authored under the sponsorship and supervision of <sponsor name>, who welcome comments on this document and the IHE <country> initiative. Comments should be directed to:

<Name, organization, title, email address>

4.I.2 Paramedicine Care Summary <(Profile Acronym)>

<Add info or tables>

4.I.2.1PCS Value Set Binding for <Country Name or IHE Organization> Realm Concept Domains

*<This section defines the actual value sets and code systems for any coded concepts that were described by concept domains in the main profile and binds the value set to the coded concepts.>*

*<Add info or tables>*

*<Delete the example below prior to publication for Public Comment.>*

*<e.g.,*

4.I.2.1 PCS Value Set Binding for US Realm Concept Domains

| UV Concept Domain | US Realm Vocabulary Binding or Single Code Binding | Value Set OID |
| --- | --- | --- |
| UV\_CardiacProcedureDrugClasses | US\_CardiacProcedureDrugClasses | 1.3.6.1.4.1.19376.1.4.1.5.15 |

#### 4.I.2.1.1 US\_CardiacProcedureDrugClasses (1.3.6.1.4.1.19376.1.4.1.5.15)

|  |  |  |
| --- | --- | --- |
| Coding Scheme  Concept | SNOMED CT | NDF-RT |
| Calcium channel blockers | 48698004 | N0000029119 |
| Beta-blockers | 33252009 | N0000029118 |
| Nitrates | 31970009 | N0000007647 |
| Aminophylline | 55867006 | N0000146397 |

>

4.I.2.2PCS <Type of Change>

<Add info or tables>

4.I+1 National Extensions for <Country Name or IHE Organization>

<Repeat (and increment) the section above as needed for additional National Extensions>

Appendices

*<Add any applicable Volume 4 appendices below>*

*<If there are no Volume 4 appendices, enter “Not applicable”* *and delete the Appendix A and Appendix B placeholder sections.>*

# Appendix A – <Appendix Title>

Appendix A text.

## A.1 <Title>

Appendix A.1 text.

### A.1.1 <Title>

Appendix A.1.1 text.

# Appendix B – <Appendix Title>

Appendix B text.

## B.1 <Title>

Appendix B.1 text.

### B.1.1 <Title>

Appendix B.1.1 text.