Integrating the Healthcare Enterprise

IHE PCC
Technical Framework Supplement

Paramedicine Care Summary
(PCS)

HL7® FHIR® STU 3

Using Resources at FMM Level 0-5

Revision 1.1 – Trial Implementation

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Please verify you have the most recent version of this document. See here for Trial Implementation and Final Text versions and here for Public Comment versions.

Foreword

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

This supplement is published on September 13, 2018 for trial implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the Patient Care Coordination Technical Framework. Comments are invited and can be submitted at http://www.ihe.net/PCC_Public_Comments.

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.

Information about the IHE Patient Care Coordination domain can be found at 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 and http://ihe.net/Profiles.

The current version of the IHE Patient Care Coordination Technical Framework can be found at http://ihe.net/Technical_Frameworks.

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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 PCS Profile uses the emerging HL7®[1] FHIR®[2] specification. The FHIR release profiled in this supplement is STU 3. HL7 describes the STU (Standard for Trial Use) standardization state at https://www.hl7.org/fhir/versions.html.

In addition, HL7 provides a rating of the maturity of FHIR content based on the FHIR Maturity Model (FMM): level 0 (draft) through 5 (normative ballot ready). The FHIR Maturity Model is described at http://hl7.org/fhir/http://hl7.org/fhir/versions.html#maturity.

Key FHIR STU 3 content, such as Resources or ValueSets, used in this profile, and their FMM levels are:

FHIR Content (Resources, Values Sets, etc.)	FMM Level
Composition	2
Organization	3
Patient	5
Encounter	2
HealthService	2
Observation	5
Procedure	3
AllergyIntolerance	3
MedicationStatement	3
MedicationAdministration	2
AdverseEvent	0
Device	2
DocumentReference	3

[1] HL7 is the registered trademark of Health Level Seven International.
[2] FHIR is the registered trademark of Health Level Seven International.

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 results 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. 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.
    a. 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*
2. There are a number of issues relating to the FHIR mapping and resources needed to support this profile:
    a. Investigate the FHIR process for defining the resources required to fulfill NEMSIS.
    b. The injury information may need to be more extensive modeling in FHIR.
    c. There is no value set in FHIR relating to the level of care of ambulance units.
    d. Extensions in FHIR need to me made to help include some of the needed attributes.
    e. IHE has filed a ticket against the FHIR specification #16237 to allow for EMS events to be recorded in a status history without the use of the extension
    f. IHE has filed a ticket against the FHIR specification #16238 to allow for there to be an outcome element for the end of the encounter.
    g. Document reference for Advanced Directives in the FHIR mapping table can support the use case as it exists today. Currently there are ongoing efforts within HL7 to make available the clauses of an advanced directives available in coded form.
3. Should there be a section which explicitly describes the differences in EMS PCR concepts as opposed to the IHE Medical Summary Sections. For example, the Advanced Directives Section in the Medical Summary allows for the inclusion of the Advanced Directive documentation (or links to the documentation). The EMS PCR provides coding as to the type of Advanced Directives which the EMS knows exists. OR do we just create a new Section in 6.3.1.D.5x and discuss the content.

a. The EMS Situation Chief Complaint is used to populate the Reason for Referral as well as the Primary Symptoms, Other Associated Symptoms, and Provider's Primary and Secondary Impressions.
b. The EMS Situation
c. The EMS Medical Allergies and Environment/Food Allergies are used to populate the standard Allergies and Adverse Reactions Section.
d. The EMS Current Medications is used to populate the standard Medications Section.
e. The EMS Vital Signs are used to populate the standard Vital Signs Section. Note: This includes Body Weight which is documented in the EMS Physical Assessment Section.
f. The EMS Physical Assessment us used to populate the standard Physical Examination Section.
g. The EMS Medications Administered is used to populate the standard Medications Administered and Allergies and Adverse Reactions Sections.
h. The Pregnancy Status, Last Oral Intake and Last Known Well data elements have been populated to a new Review of Systems – EMS Section.

4. In consideration of reusable vital sign concepts:
   a. 8884-9 Heart rate rhythm is used for the vital signs instead of 67519-9 Cardiac rhythm NEMSIS
   b. 72089-6 Total score [NIH Stroke Scale] is used for the vital signs instead of 67520-7 Stroke scale overall interpretation NEMSIS
   c. 11454-6 Responsiveness assessment at First encounter is used for the vital signs instead of 67775-7 Level of responsiveness NEMSIS
   d. 2710-2 Oxygen Saturation is used for the vital signs instead of 2708-6 Oxygen saturation in Arterial blood
   e. Also included in vital sign metrics is 80341-1 Respiratory effort, which is not in the EMS Run Report, but is part of the data dictionary for this specification
   f. The EMS VITAL SIGNS created a new Vital Signs Organizer to contain all of the additional Vital Signs collected. This has been modelled using the IHE PCC Vital Signs adding the additional vital sign observations
5. The following vital signs are not included in the specification:
   a. Reperfusion check list - This is a checklist and does not appear to be a vital sign. If it is required, it needs to be modelled and additional information needs to be (what are the outputs that need to be captured).
   b. The Respiratory Effort is not currently included in the EMS Patient Care Report. Are there any constraints that should be placed on the Respiratory Effort vocabulary?
   c. Pulse Rhythm is not currently included in the EMS Patient Care Report. No definition exists in either the IHE or HL7 CDA®[3] specifications.
6. The following HL7 EMS Patient Care Report value sets are referenced, but no Value Sets have been defined. This information is needed so that the specification can be complete and decisions can be made on whether the value set needs to be internationalized.

[3] CDA is the registered trademark of Health Level Seven International.

a. MedicationClinical Drug (2.16.840.1.113883.3.88.12.80.17)
b. Medication omission reason (2.16.840.1.113883.17.3.5.42)

7. The following attributes are not modeled in this specification because this use case focuses on communicating relevant information from EMS into the hospital:
   a. Medication Response Observation
   b. Medication Prior Administration Observation
   c. Patient age (can be computed from birthdate)
   d. Barrier to care
8. In order to use the standard Medications Section from the Medical Summary, a number of the EMS Current Medication concepts were transformed. Public Comment is requesting that these transformations be verified.,
   a. we have the ability to document Drug Treatment Unknown and No Drug Therapy Prescribed
   b. There are currently no codes to indicate the Patient is on Anticoagulants (without specifying the substance).
   c. What should the SNOMED CT parent be to specify allergen (This should be an existing international value set). Recommendation is to use the HL7 Allergen Type mapped to SNOMED CT.
9. In order to use the standard Medications Administered Section from the Medical Summary, a number of the EMS Medications Administered concepts were transformed (and other were not). Public Comment is requesting that these transformations be reviewed.
   a. Reason for not Administering the Medication was moved forward.
   b. Medication Complications were moved to the standard Allergies and Adverse Reactions Section.
   c. Medication Response Observation was not moved forward.
   d. Medications Prior to Administration was not moved forward.
10. A new Review of Systems – EMS section has been created which includes information related to Pregnancy Status, Last Oral Intake, and Time Last Known Well.
11. Public Comment input is requested to review the EMS Cardiac Arrest Event Section to ensure there aren't any US Specific concepts.
12. Public Comment input is requested to review the transformation of the EMS Patient Care Report information for use in the Reason for Referral Section.
13. Public Comment input is requested to review whether the EMS Situation Section should be moved forward since most of the information is transformed to other Sections within the EMS Patient Care Medical Summary.
14. Should there be a special section to "vital signs obtained prior to EMS" that should be specially tagged?
15. Review the FHIR mapping for the Medications sections. There seem to have a combination of complex and simple uses for the FHIR structuring and we are unsure is it is appropriate to be mixing the two.
16. Review the FHIR mapping for the "protocol age category".
17. A complete example of the Paramedicine Care Summary (PCS) Document Content Module should be made to be available on the IHE ftp server at: ftp://ftp.ihe.net/TF_Implementation_Material/PCC/PCS/.

18. The LOINC code more specific to the CDA documents will be requested.
19. The following data elements do not currently have FHIR resources that they can be mapped to. When they are created they will be added to the 6.6.X.3.2 FHIR Resource Data Specifications table.
    a. eSoftware Creator
    b. eSoftware Name
    c. eSoftware Version
    d. Standby Purpose
    e. Primary Role of the Unit
    f. Type of dispatch delay
    g. Type of response delay
    h. Type of scene delay
    i. Type of transport delay
    j. Type of turn-around delay
    k. EMS vehicle (unit) number
    l. EMS unit call sign
    m. Vehicle Dispatch GPS Location
    n. EMD Performed
    o. EMD Card Number
    p. Dispatch Center Name or ID
    q. Unit Dispatched CAD Record ID
    r. Response Urgency
    s. First EMS Unit on Scene
    t. Date/Time Initial Responder Arrived on Scene
    u. Numbers of Patients on Scene
    v. Scene GPS Location
    w. Incident Facility or Location Name
    x. Incident Street Address
    y. Incident Apartment, Suite, or Room
    z. Time Units of Duration of Complaint
    aa. Patient's Occupational Industry
    bb. Patient's Occupation
    cc. Presence of Emergency Information Form
    dd. Destination GPS Location
    ee. Type of Destination
    ff. Hospital In-Patient Destination
    gg. Date/Time of Destination Prearrival Alert or Activation

Closed Issues

1. (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.

2. The PCS Profile leverages Sections/Entries from the HL7 EMS Patient Care Report which have US Realm Constraints, and used, were they exists, sections and entries that represent the information from the IHE CDA content modules so that discrete import and interpretation are able to be more readily used by EMRs that already support IHE Medical Summary.
3. The PCS Profile adds to the IHE Medical Summary constraints those identified by the HL7 EMS Patient Care Report that support the EMS concepts.
4. The EMS Advance Directives concept is different from the IHE PCC Advance Directive concept, so both are being maintained within the EMS Patient Care Medical Summary.
5. Only Header Data Elements that are constrained are listed in the Header Information Table. It is assumed that all the other header information is inherited from the Medical Summary.
6. Committee removed Billing section requirements from volume 3 and keep billing constraints in volume 4 and keep the codes the way that they are (7/16/2018).
7. Committee moved to add "Per EMS" to the element name for Hospital capability as seen by the EMS reporting. The Mapping will remain the same. (7/18/18).
8. Public Comment input was requested to review the EMS Procedures Performed. Currently the information in this Section does match the IHE PCC concept of List of Surgeries as a Procedure Entry. Committee moves forward using the procedure entry for IHE and using an extension to be able to continue with an IHE extension of the procedure entry that includes the concepts found in the Hl7 EMS Procedures Performed. (7/18/18).
9. Committee moves forward with the EMS Past Medical History Section from the HL7 spec. Even though there is currently there is not enough information in this Section (e.g., start/end dates, if the condition still exists) to transform it into a standard Past Medical History, committee moves forward anyway.
10. Committee has determined that there were no international needs for the EMS Disposition Section Value Sets to be updated for international needs and will move forward with this value set. (7/18/18).
11. Comment has determined that all additional EMS specific data elements/Sections which need to be mapped into the patient medical record via the Paramedicine Care Summary-Complete Report; however, the data in the Paramedicine Care Summary – Clinical subset should be limited to information which may be used for patient care.
12. OIDs have been assigned and added into the profile.
13. The Advance Direct Type Vocabulary is not US Realm specific.
14. A new Mental Status Entry based upon the HL7 C-CDA R2 IG has been creeated.
15. We are interpreting the "return of spontaneous circulation" as a vital sign.
16. The Clinical subset is reduced to the entry level.
17. We are interpreting the "Type of CPR provided" as the techniques used by those performing CPR prior to the EMS arrival. If this were to be used to describe the type of CPR provided by EMS it would be recorded as a procedure.

General Introduction and Shared Appendices

The IHE Technical Framework General Introduction and Shared Appendices 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
Content Creator	Generates the transport information and sends it to the Content Consumer
Content Consumer	Receives the paramedical data

Appendix B – Transaction Summary Definitions

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

No new transactions

Volume 1 – Profiles

Copyright Licenses

NA

Domain-specific additions

None

Add new Section X

X Paramedicine Care Summary (PCS) Profile

Currently, interventions and assessments are written into an ambulance electronic Patient Care Record (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 to improve patient care and to save lives.

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).

Figure X.1-1: 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]	Responder	R	PCC TF-2: 3.1

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 PCC TF-1: X.3 or in Cross Profile Considerations PCC TF-1: X.6.

Table X.1-2 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.1-2: PCS – Actors and Content Modules

Actors	Content Modules	Optionality	Reference
Content Creator	Paramedicine Care Summary – Clinical Subset Document 1.3.6.1.4.1.19376.1.5.3.1.1.29.1	R	PCC TF-3: 6.3.1.D1
	Paramedicine Care Summary – Complete Report Document 1.3.6.1.4.1.19376.1.5.3.1.1.30.1	R	PCC TF-3: 6.3.1.D2
Content Consumer	Paramedicine Care Summary – Clinical Subset Document 1.3.6.1.4.1.19376.1.5.3.1.1.29.1	O	PCC TF-3: 6.3.1.D1
	Paramedicine Care Summary – Complete Report Document 1.3.6.1.4.1.19376.1.5.3.1.1.30.1	O	PCC TF-3: 6.3.1.D2

X.1.1 Actor Descriptions and Actor Profile Requirements

Transactional requirements are documented in PCC TF-2 Transactions. This section documents any additional requirements on profile's actors.

Content module requirements are documented in PCC TF-2 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 sharing of two documents that summarize the emergency transport encounter Paramedicine Care Summary – Clinical Subset (PCS-CS) containing the data elements defined in PCC TF-3: 6.3.1.D1 or, where the FHIR Option is used, containing the FHIR Composition bundle defined in PCC TF-3:6.6.x.2.1
- Paramedicine Care Summary – Complete Report (PCS-CR) containing the data elements defined in PCC TF-3: 6.3.1.D2, or, where the FHIR Option is used, containing the FHIR Composition bundle defined in PCC TF-3:6.6.x.2.1

X.1.1.1.1 Trigger Events

Upon patient handoff from the paramedicine care team to the receiving facility, a Paramedicine Care Summary – Clinical Subset will be shared with the receiving facility using the Document Sharing [PCC-1] transaction.

When the full Paramedicine Care Summary data is available, a Paramedicine Care Summary – Complete Report will be shared with the receiving facility using the Document Sharing [PCC-1] transactions.

X.1.1.2 Content Consumer

A Content Consumer is responsible for viewing, importing, or other processing options for Paramedicine Care Summary – Clinical Subset (1.3.6.1.4.1.19376.1.5.3.1.1.29.1) and Paramedicine Care Summary – Complete Report (1.3.6.1.4.1.19376.1.5.3.1.1.30.1) documents content created by a PCS Content Creator. This is specified in [PCC-1] document sharing transaction in PCC TF-2: 3.1

X.2 PCS Actor Options

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

Table X.2-1: Paramedicine Care Summary – Actors and Options

Actor	Option Name	Reference
Content Creator	CDA Option [Note1]	Section X.2.1
	FHIR Option [Note1]	Section X.2.2
Content Consumer	View Option [Note2]	PCC TF-2: 3.1.1
	Document Import Option [Note2]	PCC TF-2: 3.1.2
	Section Import Option [Note2]	PCC TF-2: 3.1.3
	Discrete Data Import Option [Note2]	PCC TF-2: 3.1.4
	Clinical Subset Data Import Option [Note3]	Section X.2.5
	Quality Data Import Option [Note3]	Section X.2.3
	Trauma Data Import Option [Note3]	Section X.2.4

Note 1: The Content Creator must be able to support at least one of these options.

Note 2: The Content Consumer must implement at least one of these options.

Note 3: If the Content Consumer implements any of these options, it must also support the Discrete Data Import Option.

X.2.1 CDA Option

This option defines the processing requirements placed on the Content Creators for producing a CDA structured document version of the Paramedicine Care Summary documents. The CDA details are in Volume 3, Section 6.3.1

X.2.2 FHIR Option

This option defines the processing requirements placed on the Content Creators for producing a FHIR document bundle version of the Paramedicine Care Summary documents. The FHIR bundle details are in Volume 3, Section 6.6.x.2.

X.2.3 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 Paramedicine Care Summary. The discrete data import data details are in Volume 3, Section 6.6.x.5.

X.2.4 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 Paramedicine Care Summary. The discrete data import data details are in Volume 3, Section 6.6.x.6.

X.2.5 Clinical Subset Data Import Option

This option defines the processing requirements placed on the Content Consumers for providing access and importing the clinical subset data from selected sections of the Paramedicine Care Summary. The discrete data import data details are in Volume 3, Section 6.6.x.4.

X.3 PCS Required Actor Groupings

There are no required actor groupings for this profile.

X.4 PCS Overview

Transferring patient information from a Paramedicine ePCR using a send transaction can increase the efficiency of patient hand off between ambulance and hospitals.

The data elements relating to paramedicine care are described in Appendix A.

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 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.

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 indicative 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. After ensuring that the patient is not on any blood thinners, the EMT administers aspirin to the patient. The patient felt relief after he was given aspirin. However, after feeling this relief, he falls into cardiac arrest. Compressions are started and maintained until arrival at the hospital. The patient information is made available to the hospital system and the hospital has full access to the EKG data, vitals, and interventions that were shared during the transport. The EMS ePCR is completed and then electronically shared with the hospital to be available for quality metrics. This sharing can be either directly or through a document sharing infrastructure.

X.4.2.1.2 Emergency Response for Heart Attack Patient Process Flow

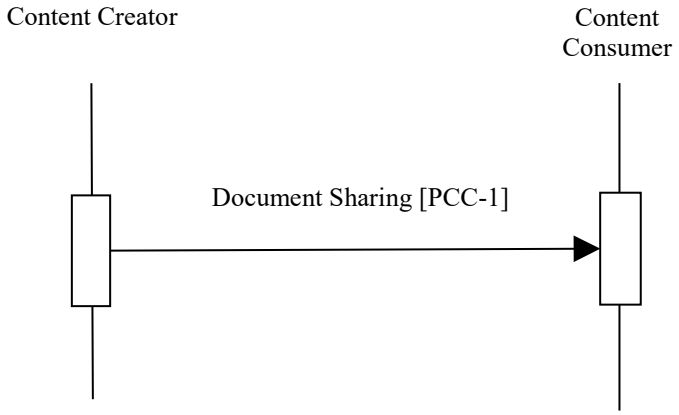

Figure X.4.2.1.2-1: Basic Process Flow in PCS Profile

Pre-conditions:

The person calling 911 is suffering from an emergent issue.

An EMS response team is sent out for the call.

Main Flow:

EMS provider arrives on scene and inputs the patient information into the ePCR.

Interventions are performed and documented during transport.

EMS, either directly or through a document sharing infrastructure, provides the information for the current patient condition and interventions that were performed to the hospital.

The patient care is transferred to the hospital staff.

Post-conditions:

The patient care is continued in the hospital.

The Paramedicine Care Summary – Complete, is completed and the full report is provided either directly or through a document sharing infrastructure, to the hospital.

X.5 PCS Security Considerations

See ITI TF-2.x: Appendix Z.8 "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.

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) Profile 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. A 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 – Paramedicine Data Elements Used in the Paramedicine Care Summary

A.1 Data Elements Table

The list of data elements are informed by https://nemsis.org/.

Table A.1-1: Paramedicine Data Elements Used in Paramedicine Care Summary (PCS)

Paramedicine Data Element	Paramedicine Data Description
Patient Care Report Number	The unique number automatically assigned by the EMS agency for each Patient Care Report (PCR). This should be a unique number for the EMS agency for all of time.
eSoftware Creator	The name of the vendor, manufacturer, and developer who designed the application that created this record.
eSoftware Name	The name of the application used to create this record.
eSoftware Version	The version of the application used to create this record.
EMS Agency Number	The state-assigned provider number of the responding agency.
EMS Agency Name	The name of the Emergency medical services company.
Incident number	The incident number assigned by the Emergency Dispatch System.
EMS response number	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	The type of service or category of service requested of the EMS Agency responding for this specific EMS event.
Standby Purpose	The main reason the EMS Unit is on Standby as the Primary Type of Service for the EMS event.
Primary Role of the Unit	The primary role of the EMS Unit which responded to this specific EMS event.
Type of dispatch delay	The dispatch delays, if any, associated with the dispatch of the EMS unit to the EMS event.
Type of response delay	The response delays, if any, of the EMS unit associated with the EMS event.
Type of scene delay	The scene delays, if any, of the EMS unit associated with the EMS event.
Type of transport delay	The transport delays, if any, of the EMS unit associated with the EMS event.
Type of turn-around delay	The turn-around delays, if any, of EMS unit associated with the EMS event.
EMS vehicle (unit) number	The unique physical vehicle number of the responding unit.
EMS unit call sign	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	The level of care (BLS or ALS) the unit is able to provide based on the units' treatment capabilities for this EMS response.
Vehicle Dispatch Location	The EMS location or healthcare facility representing the geographic location of the unit or crew at the time of dispatch.
Vehicle Dispatch GPS Location	The GPS coordinates associated with the EMS unit at the time of dispatch documented in decimal degrees.
Vehicle Dispatch Location US National Grid Coordinates	The US National Grid Coordinates for the EMS Vehicle's Dispatch Location.

Paramedicine Data Element	Paramedicine Data Description
Beginning Odometer Reading of Responding Vehicle	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	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	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	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	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	The documentation of response mode techniques used for this EMS response.
Complaint Reported by Dispatch	The complaint dispatch reported to the responding unit.
EMD Performed	Indication of whether Emergency Medical Dispatch was performed for this EMS event.
EMD Card Number	The EMD card number reported by dispatch, consisting of the card number, dispatch level, and dispatch mode.
Dispatch Center Name or ID	The name or ID of the dispatch center providing electronic data to the PCR for the EMS agency, if applicable.
Dispatch Priority (Patient Acuity)	The actual, apparent, or potential acuity of the patient's condition as determined through information obtained during the EMD process.
Unit Dispatched CAD Record ID	The unique ID assigned by the CAD system for the specific unit response.
Crew ID Number	The state certification/licensure ID number assigned to the crew member.
Crew Member Level	The functioning level of the crew member ID during this EMS patient encounter.
Crew Member Response Role	The role(s) of the role member during response, at scene treatment, and/or transport.
PSAP Call Date/Time	The date/time the phone rings (emergency call to public safety answering point or other designated entity) requesting EMS services.
Dispatched Notified Date/Time	The date/time dispatch was notified by the Emergency call taker (if a separate entity).
Unit Notified by Dispatch Date/Time	The date/time the responding unit was notified by dispatch.
Dispatch Acknowledged Date/Time	The date/time the dispatch was acknowledged by the EMS Unit.
Unit En Route Date/Time	The date/time the unit responded; that is, the time the vehicle started moving.
Unit Arrived on Scene Date/Time	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	The date/time the responding unit arrived at the patient's side.
Transfer of EMS Patient Care Date/Time	The date/time the patient was transferred from this EMS agency to another EMS agency for care.
Unit Left Scene Date/Time	The date/time the responding unit left the scene with a patient (started moving).

Paramedicine Data Element	Paramedicine Data Description
Arrival at Destination Landing Area Date/Time	The date/time the Air Medical vehicle arrived at the destination landing area.
Patient Arrived at Destination Date/Time	The date/time the responding unit arrived with the patient at the destination or transfer point.
Destination Patient Transfer of Care Date/Time	The date/time that patient care was transferred to the destination healthcare facilities staff.
Unit Back In-Service Date/Time	The date/time the unit back was back in service and available for response (finished with call, but not necessarily back in-home location).
Unit Canceled Date/Time	The date/time the unit was canceled.
Unit Back at Home Location Date/Time	The date/time the responding unit was back in their service area. With agencies who utilized Agency Status Management, home location means the service area as assigned through the agency status management protocol.
EMS Call Complete Date/Time	The date/time the responding unit completed all tasks associated with the event including transfer of the patient, and such things as cleaning and restocking.
EMS Patient ID	The unique ID for the patient within the Agency.
Last name	The patient's last (family) name.
First name	The patient's first (given) name.
middle initial	The patient's middle name, if any.
home address	Patient's address of residence.
home city	The patient's primary city or township of residence.
home country	The patient's home county or parish of residence.
home state	The state, territory, or province where the patient resides.
home zip code	The patient's ZIP code of residence.
country of residence	The country of residence of the patient.
home census tract	The census tract in which the patient lives.
social security number	The patient's social security number.
Gender	The Patient's Gender.
Race	The patient's race as defined by the OMB (US Office of Management and Budget).
Age	The patient's age (either calculated from date of birth or best approximation).
Age Units	The unit used to define the patient's age.
Date of Birth	The patient's date of birth.
Patient's Phone Number	The patient's phone number.
Primary Method of Payment	The primary method of payment or type of insurance associated with this EMS encounter.
Closest Relative/Guardian Last Name	The last (family) name of the patient's closest relative or guardian.
Closest Relative/Guardian First Name	The first (given) name of the patient's closest relative or guardian.
Closest Relative/Guardian Middle Initial/Name	The middle name/initial, if any, of the closest patient's relative or guardian.
Closest Relative/Guardian Street Address	The street address of the residence of the patient's closest relative or guardian.
Closest Relative/Guardian City	The primary city or township of residence of the patient's closest relative or guardian.
Closest Relative/Guardian State	The state of residence of the patient's closest relative or guardian.

Paramedicine Data Element	Paramedicine Data Description
Closest Relative/Guardian Zip Code	The ZIP Code of the residence of the patient's closest relative or guardian.
Closest Relative/Guardian Country	The country of residence of the patient's closest relative or guardian.
Closest Relative/Guardian Phone Number	The phone number of the patient's closest relative or guardian.
Closest Relative/Guardian Relationship	The relationship of the patient's closest relative or guardian.
Patient's Employer	The patient's employer's Name.
Patient's Employer's Address	The street address of the patient's employer.
Patient's Employer's City	The city or township of the patient's employer used for mailing purposes.
Patient's Employer's State	The state of the patient's employer.
Patient's Employer's Zip Code	The ZIP Code of the patient's employer.
Patient's Employer's Country	The country of the patient's employer.
Patient's Employer's Primary Phone Number	The employer's primary phone number.
Response Urgency	The urgency in which the EMS agency began to mobilize resources for this EMS encounter.
First EMS Unit on Scene	Documentation that this EMS Unit was the first EMS Unit for the EMS Agency on the Scene.
Other EMS or Public Safety Agencies at Scene	Other EMS agency names that were at the scene, if any.
Other EMS or Public Safety Agency ID Number	The ID number for the EMS Agency or Other Public Safety listed in eScene.02.
Type of Other Service at Scene	The type of public safety or EMS service associated with Other Agencies on Scene.
Date/Time Initial Responder Arrived on Scene	The time that the initial responder arrived on the scene, if applicable.
Numbers of Patients on Scene	Indicator of how many total patients were at the scene.
Mass Casualty Incident	Indicator if this event would be considered a mass casualty incident (overwhelmed existing EMS resources).
Triage Classification for MCI Patient	The color associated with the initial triage assessment/classification of the MCI patient.
Incident Location Type	The kind of location where the incident happened.
Incident Facility Code	The state, regulatory, or other unique number (code) associated with the facility if the Incident is a Healthcare Facility.
Scene GPS Location	The GPS coordinates associated with the Scene.
Scene US National Grid Coordinates	The US National Grid Coordinates for the Scene.
Incident Facility or Location Name	The name of the facility, business, building, etc. associated with the scene of the EMS event.
Mile Post or Major Roadway	The mile post or major roadway associated with the incident locations.
Incident Street Address	The street address where the patient was found, or, if no patient, the address to which the unit responded.
Incident Apartment, Suite, or Room	The number of the specific apartment, suite, or room where the incident occurred.
Incident City	The number of the specific apartment, suite, or room where the incident occurred.

Paramedicine Data Element	Paramedicine Data Description
Incident State	The state, territory, or province where the patient was found or to which the unit responded (or best approximation).
Incident ZIP Code	The ZIP code of the incident location.
Scene Cross Street or Directions	The nearest cross street to the incident address or directions from a recognized landmark or the second street name of an intersection.
Incident County	The county or parish where the patient was found or to which the unit responded (or best approximation).
Incident Country	The country of the incident location.
Incident Census Tract	The census tract in which the incident occurred.
Date/Time of Symptom Onset	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	Indication whether or not there was an injury.
Complaint Type	The type of patient healthcare complaint being documented.
Complaint	The statement of the problem by the patient or the history provider.
Duration of Complaint	The duration of the complaint.
Time Units of Duration of Complaint	The time units of the duration of the patient's complaint.
Chief complaint Anatomic Location	The primary anatomic location of the chief complaint as identified by EMS personnel.
Chief Complain organ system	The primary organ system of the patient injured or medically affected.
Primary Symptom	The primary sign and symptom present in the patient or observed by EMS personnel.
Other Associated symptoms	Other symptoms identified by the patient or observed by EMS personnel.
Provider's Primary Impressions	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).
Provider’s Secondary Impressions	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	The acuity of the patient's condition upon EMS arrival at the scene.
Work-related Illness/Injury	Indication of whether or not the illness or injury is work related.
Patient's Occupational Industry	The occupational industry of the patient's work.
Patient's Occupation	The occupation of the patient.
Patient Activity	The activity the patient was involved in at the time the patient experienced the onset of symptoms or experienced an injury.
Date/Time Last Known Well	The estimated date and time the patient was last known to be well or in their usual state of health. This is described or estimated by the patient, family, and/or bystanders.
Cause of Injury	The category of the reported/suspected external cause of the injury.
Mechanism of Injury	The mechanism of the event which caused the injury.
Trauma Center Criteria	Physiologic and Anatomic Field Trauma Triage Criteria (steps 1 and 2) as defined by the Centers for Disease Control.
Vehicular, Pedestrian, or Other Injury Risk Factor	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	The area or location of initial impact on the vehicle based on 12-point clock diagram.
Location of Patient in Vehicle	The seat row location of the vehicle at the time of the crash with the front seat numbered as 1.

Paramedicine Data Element	Paramedicine Data Description
Use of Occupant Safety Equipment	Safety equipment in use by the patient at the time of the injury.
Airbag Deployment	Indication of Airbag Deployment
Height of Fall (feet)	The distance in feet the patient fell, measured from the lowest point of the patient to the ground.
OSHA Personal Protective Equipment Used	Documentation of the use of OSHA required protective equipment used by the patient at the time of injury.
ACN System/Company Providing ACN Data	The agency providing the Automated Collision Notification (ACN) Data.
ACN Incident ID	The Automated Collision Notification Incident ID.
ACN Call Back Phone Number	The Automated Collision Notification Call Back Phone Number (US Only).
Date/Time of ACN Incident	The Automated Collision Notification Incident Date and Time.
ACN Incident Location	The Automated Collision Notification GPS Location.
ACN Incident Vehicle Body Type	The Automated Collision Notification Vehicle Body Type.
ACN Incident Vehicle Manufacturer	The Automated Collision Notification Vehicle Manufacturer (e.g., General Motors, Ford, BMW, etc.).
ACN Incident Vehicle Make	The Automated Collision Notification Vehicle Make (e.g., Cadillac, Ford, BMW, etc.).
ACN Incident Vehicle Model	The Automated Collision Notification Vehicle Model (e.g., Escalade, Taurus, X6M, etc.).
ACN Incident Vehicle Model Year	The Automated Collision Notification Vehicle Model Year (e.g., 2010).
ACN Incident Multiple Impacts	The Automated Collision Notification Indication of Multiple Impacts associated with the collision.
ACN Incident Delta Velocity	The Automated Collision Notification Delta Velocity (Delta V) force associated with the crash.
ACN High Probability of Injury	The Automated Collision Notification of the High Probability of Injury.
ACN Incident PDOF	The Automated Collision Notification Principal Direction of Force (PDOF).
ACN Incident Rollover	The Automated Collision Notification Indication that the Vehicle Rolled Over.
ACN Vehicle Seat Location	The Automated Collision Notification Indication of the Occupant(s) Seat Location(s) within the vehicle.
Seat Occupied	Indication if seat is occupied based on seat sensor data.
ACN Incident Seatbelt Use	The Automated Collision Notification Indication of Seatbelt use by the occupant(s).
ACN Incident Airbag Deployed	The Automated Collision Notification Indication of Airbag Deployment.
Cardiac Arrest	Indication of the presence of a cardiac arrest at any time during this EMS event.
Cardiac Arrestxx Etiology	Indication of the etiology or cause of the cardiac arrest (classified as cardiac, non-cardiac, etc.).
Resuscitation Attempted By EMS	Indication of an attempt to resuscitate the patient who is in cardiac arrest (attempted, not attempted due to DNR, etc.).
Arrest Witnessed By	Indication of who the cardiac arrest was witnessed by.
CPR Care Provided Prior to EMS Arrival	Documentation of the CPR provided prior to EMS arrival.
Who Provided CPR Prior to EMS Arrival	Documentation of who performed CPR prior to this EMS unit's arrival.
AED Use Prior to EMS Arrival	Documentation of AED use Prior to EMS Arrival

Paramedicine Data Element	Paramedicine Data Description
Who Used AED Prior to EMS Arrival	Documentation of who used the AED prior to this EMS unit's arrival.
Type of CPR Provided	Documentation of the type/technique of CPR used by EMS.
First Monitored Arrest Rhythm of the Patient	Documentation of what the first monitored arrest rhythm which was noted.
Any Return of Spontaneous Circulation	Indication whether or not there was any return of spontaneous circulation.
Date/Time of Cardiac Arrest	The date/time of the cardiac arrest (if not known, please estimate).
Date/Time Resuscitation Discontinued	The date/time resuscitation was discontinued.
Reason CPR/Resuscitation Discontinued	The reason that CPR or the resuscitation efforts were discontinued.
Cardiac Rhythm on Arrival at Destination	The patient's cardiac rhythm upon delivery or transfer to the destination.
End of EMS Cardiac Arrest Event	The patient's outcome at the end of the EMS event.
Date/Time of Initial CPR	The initial date and time that CPR was started by anyone.
Barriers to Patient Care	N/A
Last Name of Patient's Practitioner	The last name of the patient's practitioner.
First Name of Patient's Practitioner	The first name of the patient's practitioner.
Middle Initial/Name of Patient's Practitioner	The middle initial/name of the patient's practitioner.
Advanced Directives	The presence of a valid DNR form, living will, or document directing end of life or healthcare treatment decisions.
Medication Allergies	The patient's medication allergies
Environmental/Food Allergies	The patient's known allergies to food or environmental agents.
Medical/Surgical History	The patient's pre-existing medical and surgery history of the patient.
Medical/Surgical History	The patient's pre-existing medical and surgery history of the patient.
Medical/Surgical History	The patient's pre-existing medical and surgery history of the patient.
Medical/Surgical History	The patient's pre-existing medical and surgery history of the patient.
Medical/Surgical History	The patient's pre-existing medical and surgery history of the patient.
Medical/Surgical History	The patient's pre-existing medical and surgery history of the patient.
Current Medications	The medications the patient currently takes.
Current Medication Dose	The numeric dose or amount of the patient's current medication.
Current Medication Dosage Unit	The dosage unit of the patient's current medication.
Current Medication Administration Route	The administration route (po, SQ, etc.) of the patient's current medication.
Presence of Emergency Information Form	Indication of the presence of the Emergency Information Form associated with patients with special healthcare needs.
Alcohol/Drug Use Indicators	Indicators for the potential use of alcohol or drugs by the patient related to the patient's current illness or injury.

Paramedicine Data Element	Paramedicine Data Description
Pregnancy	Indication of the possibility by the patient's history of current pregnancy.
Last Oral Intake	Date and Time of last oral intake.
Date/Time Vital Signs Taken	The date/time vital signs were taken on the patient.
Vitals Obtained Prior to this Unit's EMS Care	Indicates that the information which is documented was obtained prior to the documenting EMS units care.
Cardiac Rhythm / Electrocardiography (ECG)	The cardiac rhythm / ECG and other electrocardiography findings of the patient as interpreted by EMS personnel.
ECG Type	The type of ECG associated with the cardiac rhythm.
Method of ECG Interpretation	The method of ECG interpretation.
SBP (Systolic Blood Pressure)	The patient's systolic blood pressure.
DBP (Diastolic Blood Pressure)	The patient's diastolic blood pressure.
Method of Blood Pressure Measurement	Indication of method of blood pressure measurement.
Mean Arterial Pressure	The patient's mean arterial pressure.
Heart Rate	The patient's heart rate expressed as a number per minute.
Method of Heart Rate Measurement	The method in which the Heart Rate was measured. Values include auscultated, palpated, electronic monitor.
Pulse Oximetry	The patient's oxygen saturation.
Pulse Rhythm	The clinical rhythm of the patient's pulse.
Respiratory Rate	The patient's respiratory rate expressed as a number per minute.
Respiratory Effort	The patient's respiratory effort.
End Title Carbon Dioxide (ETCO2)	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)	The numeric value of the patient's carbon monoxide level measured as a percentage (%) of carboxyhemoglobin (COHb).
Blood Glucose Level	The patient's blood glucose level.
Glasgow Coma Score-Eye	The patient's Glasgow Coma Score Eye opening.
Glasgow Coma Score-Verbal	The patient's Glasgow Coma Score Verbal.
Glasgow Coma Score-Motor	The patient's Glasgow Coma Score Motor.
Glasgow Coma Score-Qualifier	Documentation of factors which make the GCS score more meaningful.
Total Glasgow Coma Score	The patient's total Glasgow Coma Score.
Temperature	The patient's body temperature in degrees Celsius/centigrade.
Temperature Method	The method used to obtain the patient's body temperature.
Level of Responsiveness (AVPU)	The patient's highest level of responsiveness.
Pain Scale Score	The patient's indication of pain from a scale of 0-10.
Pain Scale Type	The type of pain scale used.
Stroke Scale Score	The findings or results of the Stroke Scale Type (eVitals.30) used to assess the patient exhibiting stroke-like symptoms.
Stroke Scale Type	The type of stroke scale used.
Reperfusion Checklist	The results of the patient's Reperfusion Checklist for potential Thrombolysis use.
APGAR	The patient's total APGAR score (0-10).

Paramedicine Data Element	Paramedicine Data Description
Revised Trauma Score	The patient's Revised Trauma Score.
Estimated Body Weight in Kilograms	The patient's body weight in kilograms either measured or estimated.
Length Based Tape Measure	The length-based color as taken from the tape.
Date/Time of Assessment	The date/time of the assessment.
Skin Assessment	The assessment findings associated with the patient's skin.
Head Assessment	The assessment findings associated with the patient's head.
Face Assessment	The assessment findings associated with the patient's face.
Neck Assessment	The assessment findings associated with the patient's neck.
Chest/Lungs Assessment	The assessment findings associated with the patient's chest/lungs.
Heart Assessment	The assessment findings associated with the patient's heart.
Abdominal Assessment Finding Location	The location of the patient's abdomen assessment findings.
Abdominal Assessment Finding Location	The location of the patient's abdomen assessment findings.
Abdomen Assessment	The assessment findings associated with the patient's abdomen.
Pelvis/Genitourinary Assessment	The assessment findings associated with the patient's pelvis/genitourinary.
Back and Spine Assessment Finding Location	The location of the patient's back and spine assessment findings.
Back and Spine Assessment	The assessment findings associated with the patient's spine (Cervical, Thoracic, Lumbar, and Sacral) and back exam.
Extremity Assessment Finding Location	The location of the patient's extremity assessment findings.
Extremities Assessment	The assessment findings associated with the patient's extremities.
Eye Assessment Finding Location	The location of the patient's eye assessment findings.
Eye Assessment	The assessment findings of the patient's eye examination.
Mental Status Assessment	The assessment findings of the patient's mental status examination.
Neurological Assessment	The assessment findings of the patient's neurological examination.
Stroke/CVA Symptoms Resolved	Indication if the Stroke/CVA Symptoms resolved and when.
Protocols Used	The protocol used by EMS personnel to direct the clinical care of the patient.
Protocol Age Category	The age group the protocol is written to address.
Date/Time Medication Administered	The date/time medication administered to the patient.
Medication Administered Prior to this Unit's EMS Care	Indicates that the medication administration which is documented was administered prior to this EMS units care.
Medication Given	The medication given to the patient.
Medication Administered Route	The route medication was administered to the patient.
Medication Dosage	The dose or amount of the medication given to the patient.
Medication Dosage Units	The unit of medication dosage given to patient.
Response to Medication	The patient's response to the medication.

Paramedicine Data Element	Paramedicine Data Description
Medication Complication	Any complication (abnormal effect on the patient) associated with the administration of the medication to the patient by EMS.
Medication Crew (Healthcare Professionals) ID	The statewide assigned ID number of the EMS crew member giving the treatment to the patient
Role/Type of Person Administering Medication	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	The type of treatment authorization obtained.
Medication Authorizing Physician	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.
Date/Time Procedure Performed	The date/time the procedure was performed on the patient.
Procedure Performed Prior to this Unit's EMS Care	Indicates that the procedure which was performed and documented was performed prior to this EMS units care.
Procedure	The procedure performed on the patient.
Size of Procedure Equipment	The size of the equipment used in the procedure on the patient.
Number of Procedure Attempts	The number of attempts taken to complete a procedure or intervention regardless of success.
Procedure Successful	Indicates that this individual procedure attempt which was performed on the patient was successful.
Procedure Complication	Any complication (abnormal effect on the patient) associated with the performance of the procedure on the patient.
Response to Procedure	The patient's response to the procedure.
Procedure Crew Members ID	The statewide assigned ID number of the EMS crew member performing the procedure on the patient.
Role/Type of Person Performing the Procedure	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	The type of treatment authorization obtained.
Procedure Authorizing Physician	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	The location of the vascular access site attempt on the patient, if applicable.
Indications for Invasive Airway	The clinical indication for performing invasive airway management.
Date/Time Airway Device Placement Confirmation	The date and time the airway device placement was confirmed.
Airway Device Being Confirmed	The airway device in which placement is being confirmed.
Airway Device Placement Confirmed Method	The method used to confirm the airway device placement.
Tube Depth	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	The type of individual who confirmed the airway device placement.
Crew Member ID	The statewide assigned ID number of the EMS crew member confirming the airway placement.
Airway Complications Encountered	The airway management complications encountered during the patient care episode.
Suspected Reasons for Failed Airway Management	The reason(s) the airway was unable to be successfully managed.

Paramedicine Data Element	Paramedicine Data Description
Date/Time Decision to Manage the Patient with an Invasive Airway	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	The date and time that the invasive airway attempts were abandoned for the patient.
Medical Device Serial Number	The unique manufacturer's serial number associated with a medical device.
Date/Time of Event (per Medical Device)	The time of the event recorded by the device's internal clock.
Medical Device Event Type	The type of event documented by the medical device.
Medical Device Waveform Graphic Type	The description of the waveform file stored in Waveform Graphic (eDevice.05).
Medical Device Waveform Graphic	The graphic waveform files.
Medical Device Mode (Manual, AED, Pacing, CO2, O2, etc.)	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	The lead or source which the medical device used to obtain the rhythm (if appropriate for the event).
Medical Device ECG Interpretation	The interpretation of the rhythm by the device (if appropriate for the event).
Type of Shock	The type of shock used by the device for the defibrillation (if appropriate for the event).
Shock or Pacing Energy	The energy (in joules) used for the shock or pacing (if appropriate for the event).
Total Number of Shocks Delivered	The number of times the patient was defibrillated, if the patient was defibrillated during the patient encounter.
Pacing Rate	The rate the device was calibrated to pace during the event, if appropriate.
Destination/Transferred To, Name	The destination the patient was delivered or transferred to.
Destination/Transferred To, Code	The code of the destination the patient was delivered or transferred to.
Destination Street Address	The street address of the destination the patient was delivered or transferred to.
Destination City	The city of the destination the patient was delivered or transferred to (physical address).
Destination State	The state of the destination the patient was delivered or transferred to.
Destination County	The destination county in which the patient was delivered or transferred to.
Destination ZIP Code	The destination ZIP code in which the patient was delivered or transferred to.
Destination Country	The country of the destination.
Destination GPS Location	The destination GPS Coordinates to which the patient was delivered or transferred to.
Destination Location US National Grid Coordinates	The US National Grid Coordinates for the Destination Location. This may be the Healthcare Facility US National Grid Coordinates.
Number of Patients Transported in this EMS Unit	The number of patients transported by this EMS crew and unit.
Incident/Patient Disposition	Type of disposition treatment and/or transport of the patient by this EMS Unit.
EMS Transport Method	Transport method by this EMS Unit.
Transport Mode from Scene	Indication whether the transport was emergent or non-emergent.

Paramedicine Data Element	Paramedicine Data Description
additional Transport Mode Descriptors	The documentation of transport mode techniques for this EMS response.
Final Patient Acuity	The acuity of the patient's condition after EMS care.
Reason for Choosing Destination	The reason the unit chose to deliver or transfer the patient to the destination.
Type of Destination	The type of destination the patient was delivered or transferred to.
Hospital In-Patient Destination	The location within the hospital that the patient was taken directly by EMS (e.g., Cath Lab, ICU, etc.).
Hospital Capability Per EMS	The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.) as observed by the Paramedicine entity.
Destination Team Pre-Arrival Alert or Activation	Indication that an alert (or activation) was called by EMS to the appropriate destination healthcare facility team. The alert (or activation) should occur prior to the EMS Unit arrival at the destination with the patient.
Date/Time of Destination Prearrival Alert or Activation	The Date/Time EMS alerted, notified, or activated the Destination Healthcare Facility prior to EMS arrival. The EMS assessment identified the patient as acutely ill or injured based on exam and possibly specified alert criteria.
Disposition Instructions Provided	Information provided to patient during disposition for patients not transported or treated.

Volume 2 – Transactions

No new transactions

Appendices

N/A

Volume 2 Namespace Additions

N/A

Volume 3 – Content Modules

5 IHE Namespaces, Concept Domains and Vocabularies

Add to Section 5 IHE Namespaces, Concept Domains and Vocabularies

5.1 IHE Namespaces

No new namespaces.

5.2 IHE Concept Domains

No new concept domains.

5.3 IHE Format Codes and Vocabularies

5.3.1 IHE Format Codes

The following new Format Codes are introduced with the PCS Profile. A complete listing of IHE Format Codes can be found at http://wiki.ihe.net/index.php/IHE_Format_Codes.

Profile	Format Code	Media Type	Template ID
Paramedicine Care Summary – Clinical Subset (PCS-CS)	urn:ihe:pcc:pcs-cs:2018	text/xml	1.3.6.1.4.1.19376.1.5.3.1.1.29.1
Paramedicine Care Summary – Complete Report (PCS-CR)	urn:ihe:pcc:pcs-cr:2018	text/xml	1.3.6.1.4.1.19376.1.5.3.1.1.30.1

5.3.2 IHEActCode Vocabulary

No new.

5.3.3 IHERoleCode Vocabulary

No new.

6 Content Modules

6.3.1 CDA Document Content Modules

6.3.1.D1 Paramedicine Care Summary – Clinical Subset (PCS-CS) Document Content Module

The Paramedicine Care Summary – Clinical Subset document content module is a Medical Summary and inherits all header constraints from Medical Summary (1.3.6.1.4.1.19376.1.5.3.1.1.2). The intention of this document content module is to provide a mechanism in which to transform the HL7 Emergency Medical Services Patient Care Report into a Medical Summary which can be used by ambulatory and hospital environments for clinical care purposes.

6.3.1.D1.1 Format Code

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

6.3.1.D1.2 LOINC Code

The LOINC code for this document is 67796-3 -ParamedicineCareSummary.

6.3.1.D1.3 Referenced Standards

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

Table 6.3.1.D1.3-1: Paramedicine Care Summary Document – Referenced Standards

Abbreviation	Title	URL
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.D1.4 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.D1.4-1: Paramedicine Care Summary (PCS) – Data Element Requirement Mappings to CDA

Paramedicine Data Element	CDA
Patient Care Report Number	Header

Paramedicine Data Element	CDA
PSAP Call Date/Time	EMS Time Section
Dispatched Notified Date/Time	EMS Time Section
Unit Arrived on Scene Date/Time	EMS Time Section
Arrived at Patient Date/Time	EMS Time Section
Arrival at Destination Landing Area Date/Time	EMS Time Section
Patient Arrived at Destination Date/Time	EMS Time Section
EMS Patient ID	Header
Last name (Family name)	Header
First name (given name)	Header
middle initial	Header
home address	Header
home city	Header
home country	Header
home state	Header
home postal code	Header
country of residence	Header
gender	Header
Race	Header
Age	Header
Age Units	Header
Date of Birth	Header
Patient's Phone Number	Header
Closest Relative/Guardian Last Name	Header
Closest Relative/Guardian First Name	Header
Closest Relative/Guardian Middle Initial/Name	Header
Closest Relative/Guardian Street Address	Header
Closest Relative/Guardian City	Header
Closest Relative/Guardian State	Header
Closest Relative/Guardian Zip code	Header
Closest Relative/Guardian Country	Header
Closest Relative/Guardian Phone Number	Header
Closest Relative/Guardian Relationship	Header
Mass Casualty Incident	EMS Scene Section
Triage Classification for MCI Patient	EMS Scene Section
Incident Location Type	EMS Scene Section
Incident Facility Code	EMS Scene Section
Date/Time of Symptom Onset	EMS Situation Section
Possible Injury	EMS Situation Section
Complaint Type	EMS Situation Section

Paramedicine Data Element	CDA
Complaint	EMS Situation Section
Duration of Complaint	EMS Situation Section
Time Units of Duration of Complaint	EMS Situation Section
Chief complaint Anatomic Location	EMS Situation Section
Chief Complain organ system	EMS Situation Section
Primary Symptom	EMS Situation Section / Reason for Referral
Other Associated symptoms	EMS Situation Section / Reason for Referral
Provider's Primary Impressions	EMS Situation Section / Reason for Referral
Provider's Secondary Impressions	EMS Situation Section / Reason for Referral
Initial Patient Acuity	EMS Situation Section
Work-related Illness/Injury	EMS Situation Section
Patient's Occupational Industry	EMS Situation Section
Patient's Occupation	EMS Situation Section
Patient Activity	EMS Situation Section
Date/Time Last Known Well	EMS Situation Section /Review of Systems-EMS Section
Cause of Injury	EMS Injury Incident Description Section
Mechanism of Injury	EMS Injury Incident Description Section
Vehicular, Pedestrian, or Other Injury Risk Factor	EMS Injury Incident Description Section
Location of Patient in Vehicle	EMS Injury Incident Description Section
Use of Occupant Safety Equipment	EMS Injury Incident Description Section
Airbag Deployment Height of Fall (feet)	EMS Injury Incident Description Section
Cardiac Arrest	EMS Cardiac Arrest Event Section
Cardiac Arrest Etiology	EMS Cardiac Arrest Event Section
Resuscitation Attempted By EMS	EMS Cardiac Arrest Event Section
Arrest Witnessed By	EMS Cardiac Arrest Event Section
CPR Care Provided Prior to EMS Arrival	EMS Cardiac Arrest Event Section
Who Provided CPR Prior to EMS Arrival	EMS Cardiac Arrest Event Section
AED Use Prior to EMS Arrival	EMS Cardiac Arrest Event Section
Who Used AED Prior to EMS Arrival	EMS Cardiac Arrest Event Section
Type of CPR Provided First Monitored Arrest Rhythm of the Patient	EMS Cardiac Arrest Event Section
Any Return of Spontaneous Circulation	EMS Cardiac Arrest Event Section
Neurological Outcome at Hospital Discharge	EMS Cardiac Arrest Event Section
Date/Time of Cardiac Arrest	EMS Cardiac Arrest Event Section
Date/Time Resuscitation Discontinued	EMS Cardiac Arrest Event Section
Reason CPR/Resuscitation Discontinued	EMS Cardiac Arrest Event Section
Cardiac Rhythm on Arrival at Destination	EMS Cardiac Arrest Event Section
Date/Time of Initial CPR	EMS Cardiac Arrest Event Section

Paramedicine Data Element	CDA
Barriers to Patient Care	N/A
Advanced Directives	EMS Advance Directives Section
Medication Allergies	Allergy and Intolerances Concern Entry
Environmental/Food Allergies	Allergy and Intolerances Concern Entry
Medical/Surgical History	EMS Past Medical History Section
Current Medications	Medication Section
Current Medication Dose	Medication Section
Current Medication Dosage Unit	Medication Section
Current Medication Administration Route	Medication Section
Alcohol/Drug Use Indicators	EMS Social History Section
Pregnancy	Review of Systems - EMS Section
Last Oral Intake	Review of Systems-EMS Section
Date/Time Vital Signs Taken	Coded Vital Signs Section
Obtained Prior to this Unit's EMS Care	N/A
Cardiac Rhythm / Electrocardiography (ECG)	EMS Cardiac Arrest Event Section
ECG Type	EMS Cardiac Arrest Event Section
Method of ECG Interpretation	EMS Cardiac Arrest Event Section
SBP (Systolic Blood Pressure)	Coded Vital Signs Section
DBP (Diastolic Blood Pressure)	Coded Vital Signs Section
Method of Blood Pressure Measurement	Coded Vital Signs Section
Mean Arterial Pressure	Coded Vital Signs Section
Heart Rate	Coded Vital Signs Section
Method of Heart Rate Measurement	Coded Vital Signs Section
Pulse Oximetry	Coded Vital Signs Section
Pulse Rhythm	N/A
Respiratory Rate	Coded Vital Signs Section
Respiratory Effort	N/A
End Title Carbon Dioxide (ETCO2)	Coded Vital Signs Section
Carbon Monoxide (CO)	Coded Vital Signs Section
Blood Glucose Level	Coded Vital Signs Section
Glasgow Coma Score-Eye	Coded Vital Signs Section
Glasgow Coma Score-Verbal	Coded Vital Signs Section
Glasgow Coma Score-Motor	Coded Vital Signs Section
Glasgow Coma Score-Qualifier	Coded Vital Signs Section
Total Glasgow Coma Score	Coded Vital Signs Section
Temperature	Coded Vital Signs Section
Temperature Method	Coded Vital Signs Section
Level of Responsiveness (AVPU)	Coded Vital Signs Section
Pain Scale Score	Coded Vital Signs Section

Paramedicine Data Element	CDA
Pain Scale Type	Coded Vital Signs Section
Stroke Scale Score	Coded Vital Signs Section
Stroke Scale Type	Coded Vital Signs Section
Reperfusion Checklist	Coded Vital Signs Section
APGAR	Coded Vital Signs Section
Revised Trauma Score	Coded Vital Signs Section
Estimated Body Weight in Kilograms	Coded Vital Signs Section
Length Based Tape Measure	Coded Vital Signs Section
Date/Time of Assessment	Coded Detail Physical Examination Section
Skin Assessment	Coded Detail Physical Examination Section
Head Assessment	Coded Detail Physical Examination Section
Face Assessment	Coded Detail Physical Examination Section
Neck Assessment	Coded Detail Physical Examination Section
Chest/Lungs Assessment	Coded Detail Physical Examination Section
Heart Assessment	Coded Detail Physical Examination Section
Location (of the patient's abdomen assessment findings.)	Coded Detail Physical Assessment Section
Abdominal Assessment Finding Location	Coded Detail Physical Assessment Section
Abdominal Assessment Finding Location	Coded Detail Physical Assessment Section
Abdomen Assessment	Coded Detail Physical Examination Section
Pelvis/Genitourinary Assessment	Coded Detail Physical Examination Section
Back and Spine Assessment Finding Location	Coded Detail Physical Examination Section
Back and Spine Assessment	Coded Detail Physical Examination Section
Extremity Assessment Finding Location	Coded Detail Physical Examination Section
Extremities Assessment	Coded Detail Physical Examination Section
Eye Assessment Finding Location	Coded Detail Physical Examination Section
Eye Assessment	Coded Detail Physical Examination Section
Mental Status Assessment	Coded Detail Physical Examination Section
Neurological Assessment	Coded Detail Physical Examination Section
Stroke/CVA Symptoms Resolved	Coded Detail Physical Examination Section
Date/Time Medication Administered	Medications Administered Section
Medication Administered Prior to this Unit's EMS Care	N/A
Medication Given	Medications Administered Section
Medication Administered Route	Medications Administered Section
Medication Dosage	Medications Administered Section
Medication Dosage Units	Medications Administered Section
Response to Medication	N/A
Medication Complication	Allergy and Intolerances Concern Entry
Date/Time Procedure Performed	EMS Procedures Performed Section

Paramedicine Data Element	CDA
Procedure Performed Prior to this Unit's EMS Care	EMS Procedures Performed Section
Procedure	EMS Procedures Performed Section
Number of Procedure Attempts	EMS Procedures Performed Section
Procedure Complication	EMS Procedures Performed Section
Vascular Access Location	EMS Procedures Performed Section
Indications for Invasive Airway	EMS Procedures Performed Section
Date/Time Airway Device Placement Confirmation	EMS Procedures Performed Section
Airway Complications Encountered	EMS Procedures Performed Section
Suspected Reasons for Failed Airway Management	EMS Procedures Performed Section
Date/Time Decision to Manage the Patient with an Invasive Airway	EMS Procedures Performed Section
Date/Time Invasive Airway Placement Attempts Abandoned	EMS Procedures Performed Section
Date/Time of Event (per Medical Device)	EMS Procedures Performed Section
Medical Device Event Type	EMS Procedures Performed Section
Medical Device Waveform Graphic Type	EMS Procedures Performed Section
Medical Device Waveform Graphic	EMS Procedures Performed Section
Medical Device Mode (Manual, AED, Pacing, CO2, O2, etc.)	EMS Cardiac Arrest Event Section
Medical Device ECG Lead	EMS Cardiac Arrest Event Section
Medical Device ECG Interpretation	EMS Cardiac Arrest Event Section
Type of Shock	EMS Cardiac Arrest Event Section
Shock or Pacing Energy	EMS Cardiac Arrest Event Section
Total Number of Shocks Delivered	EMS Cardiac Arrest Event Section
Pacing Rate	EMS Cardiac Arrest Event Section

6.3.1.D1.5 Paramedicine Care Summary – Clinical Subset (PCS - CS) Document Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Paramedicine Care Summary – Clinical Subset (PCS-CS) 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.

Note: The only header items that are mentioned are the items that are constrained.

Table 6.3.1.D1.5-1: Paramedicine Care Summary (PCS) Document Content Module Specification

Template Name		Paramedicine Care Summary – Clinical Subset (PCS-CS)			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.1.29.1			
Parent Template		Medical Summary (1.3.6.1.4.1.19376.1.5.3.1.1.2)			
General Description		The Paramedicine Care Summary will contain the patient's paramedicine care information and interventions.			
Document Code		SHALL BE 67796-3Code 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					
R [1..1]		Personal Information: Patient Name	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..1]		Personal Information: Patient Date of Birth	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..*]		Personal Information: Patient Address	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..*]		Personal Information: Patient ID	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..*]		Personal Information: Patient Telecom	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
O [0..1]		Personal Information: Administrative Gender	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
O [0..1]		Personal Information: Ethnicity	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.1
RE [0..1]		Personal Information: Marital Status	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.2
O [0..1]		Personal Information: Race	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.3
O [0..*]		Personal Information: sDTCRaceCode	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.3
O [0..*]		Personal Information: Religious Affiliation	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.4
RE [0..1]		Personal Information: Language Communication	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.5
Sections					
RE [0..1]		EMS Advance Directives	2.16.840.1.113883.17.3.10.1.12	HL7 EMS Run Report R2	6.3.D1.5.1
R [1..1]		Allergy and Intolerances Concern Entry	3.6.1.4.1.193796.1.5.3.1.4.5.3	PCC TF-2: 6.3.3.2.11	6.3.D1.5.2

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]		Medication Section	1.3.6.1.4.1.19376.1.5.3.1.3.19	PCC TF-2: 6.3.3.3.1	6.3.D1.5.4
R [1..1]		EMS Injury Incident Description Section	2.16.840.1.113883.17.3.10.1.17	PCC TF-2:6.3.3.10.S4	6.3.1.D1.5.12
O [0..1]		Medications Administered Section	1.3.6.1.4.1.19376.1.5.3.1.3.21	PCC TF-2: 6.3.3.3.3, 6.3.3.2.11	6.3.D1.5.4, 6.3.D1.5.11
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]		Coded Detail Physical Examination	1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1	PCC TF-2: 6.3.3.4.30	
RE [1..N]		+ Integumentary System	1.3.6.1.4.1.19376.1.5.3.1.1.9.17	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Head	1.3.6.1.4.1.19376.1.5.3.1.1.9.18	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Neurologic System	1.3.6.1.4.1.19376.1.5.3.1.1.9.35	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Ears, Nose, Mouth and Throat	1.3.6.1.4.1.19376.1.5.3.1.1.9.20	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Neck	1.3.6.1.4.1.19376.1.5.3.1.1.9.24	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Thorax and Lungs	1.3.6.1.4.1.19376.1.5.3.1.1.9.26	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Heart	1.3.6.1.4.1.19376.1.5.3.1.1.9.29	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Abdomen	1.3.6.1.4.1.19376.1.5.3.1.1.9.31	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Genitalia	1.3.6.1.4.1.19376.1.5.3.1.1.9.36	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Musculoskeletal System	1.3.6.1.4.1.19376.1.5.3.1.1.9.34	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Extremities	1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
		+ Eye	1.3.6.1.4.1.19376.1.5.3.1.1.9.19	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
RE [1..N]		+ Mental Status	1.3.6.1.4.1.19376.1.5.3.1.1.21.2.1	PCC TF-2: 6.3.3.4.30	6.3.D1.5.7
R [1..1]		EMS Procedures and Interventions Section	1.3.6.1.4.1.19376.1.5.3.1.1.13.2.14	PCC TF-2: 6.3.3.10.S5	
R [1..1]		EMS Scene Section	2.16.840.1.113883.17.3.10.1.8	PCC TF-2: 6.3.3.10.S6	
R [1..1]		EMS Situation Section	2.16.840.1.113883.17.3.10.1.9	PCC TF-2: 6.3.3.10.S7	
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]		Code Vital Signs Section	1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2	PCC TF-2: 6.3.3.4.5	6.3.D1.5.3
R [1..]		Reason for Referral	1.3.6.1.4.1.19376.1.5.3.1.3.1	PCC TF-2: 6.3.3.1.1	6.3.D1.5.6
R [1..1]		History Present Illness	1.3.6.1.4.1.19376.1.5.3.1.3.4	PCC TF-2: 6.3.3.2.1	6.3.D1.5.9
R [1..1]		Active Problems	1.3.6.1.4.1.19376.1.5.3.1.3.6	PCC TF-2: 6.3.3.2.3	6.3.D1.5.10
RE [1..1]		Review of Systems-EMS	1.3.6.1.4.1.19376.1.5.3.1.3.39	PCC TF-2: 6.3.3.10.S2	

6.3.1.D1.5.1 EMS Advance Directives Observation Constraints

The Advance Directive Type shall be drawn from the Advance Directive Type concept domain as defined by local jurisdiction. The <value> element shall be encoded in the /value concept (e.g., In the US the value shall be drawn from the AdvanceDirectiveType - 2.16.840.1.113883.17.3.11.63 [HL7 EMS PCR] value set.).

6.3.1.D1.5.2 Allergies – Allergy and Intolerance Concern Entry Constraint

The Drug Allergies allergen SHOULD be drawn from the RxNorm coding system 2.16.840.1.113883.6.88 unless otherwise specified by local jurisdiction. The <value> element SHALL be encoded in the participant/participantRole/playingEntity/code concept.

The Non-Drug Allergies allergen SHALL be drawn from the SNOMED CT coding system. The <value> element SHALL be encoded in the participant/participantRole/playingEntity/code concept.

In the case that the existence of the drug or non-drug allergy is known, but not the substance type, the allergen SHALL be coded using {6497000, SNOMED CT, Substance Type Unknown}. The <value> element SHALL be encoded in the participant/participantRole/playingEntity/code concept.

In the case that there are no known drug allergies the allergen SHALL be coded using {409137002, SNOMED CT, No Known Drug Allergies}. The <value> element SHALL be encoded in participant/participantRole/playingEntity/code concept.

6.3.1.D1.5.3 Coded Vital Signs Section – Vital Signs Observation Constraints

The following additional vital sign observation entries SHALL be supported using the LOINC codes, with the specified data types and unit. The Coded Vital Signs Section SHALL include one or more Vital Signs Observation (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.13.2 [PCC TF-2]). For pain scale and stroke scale SHALL include the Type.

Table 6.3.1.D1.5.3-1: Vital Signs Descriptions and LOINC Codes

LOINC	Description	Units	Type
8478-0	MEAN ARTERIAL PRESSURE	mm[Hg]	PQ
19889-5	END TITLE CARBON DIOXIDE (ETCO2)	%	PQ
20563-3	CARBON MONOXIDE (CO)	%	PQ
2339-0	BLOOD GLUCOSE LEVEL	mg/dl	PQ
9267-6	GLASGOW COMA SCORE-EYE	n/a	PQ
9268-4	GLASGOW MOTOR	n/a	PQ
9270-0	GLASGOW COMA SCORE.VERBAL	n/a	PQ
9269-2	TOTAL GLASGOW COMA SCORE	n/a	PQ
9267-6	GLASCOW QUALIFIER	n/a	PQ
38208-5	PAIN SCALE SCORE	n/a	PQ
80316-3	PAIN SCALE TYPE	n/a	PQ
72089-6	STROKE SCALE SCORE	n/a	PQ
67521-5	STROKE SCALE TYPE	n/a	PQ
48334-7	APGAR 1 MINUTE	n/a	PQ
48333-9	APGAR 5 MINUTE	n/a	PQ
48332-1	APGAR 10 MINUTE	n/a	PQ
80341-1	RESPIRATORY EFFORT	n/a	PQ
11454-6	RESPONSIVENESS ASSESSMENT AT FIRST ENCOUNTER	n/a	PQ

In addition, the following attributes will be supported for the additional LOINC definitions:

The Method of Measurement SHALL be included in the Vital Signs Observation for the following vital signs:

- Systolic Blood Pressure
- Diastolic Blood Pressure
- Mean Arterial Pressure
- Temperature
- Stroke Score
- and Heart Rate (if LOINC /value 8886-4 is designated).

The <methodCode>element SHALL be encoded in the /methodCode concept.

The Stroke Scale Type SHALL be drawn from the StrokeScale concept domain as defined by local jurisdiction. (e.g., In the US the value set SHALL be drawn from the StrokeScale (templateID 2.16.840.1.113883.17.3.11.88 [HL7 EMS PCR]) value set. The <value> element SHALL be encoded the in /methodCode concept.

The Glasgow Qualifier SHALL be drawn from the GlasgowComaScoreSpecialCircumstances (templateID 2.16.840.1.113883.17.3.11.89 [HL7 EMS PCR]) value set. The <value> element SHALL be encoded in the /value concept.

The Stroke Type SHALL be drawn from the Stroke Scale Interpretation concept domain as defined by local jurisdiction. (e.g., In the US the value set shall be Stroke (templateID 2.16.840.1.113883.17.3.11.93 [HL7 EMS PCR]) Value Set. The <value> element SHALL be encoded the /methodCode concept.

The Level of Responsiveness SHALL be drawn from the LevelOfResponsiveness (templateID 2.16.840.1.113883.17.3.11.21 [HL7 EMS PCR]) value set. The <value> element SHALL be encoded the concept in /value concept.

6.3.1.D1.5.4 Current Medications –Constraints

The following special cases exist for encoding the product medication:

- In the case that the patient is currently on anticoagulants and no medication details are provided for the anticoagulants, the product SHALL be coded using {81839001, SNOMED CT, Anticoagulant (product)}. The product SHALL be encoded in the Product Entry (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.7.2 [PCC TF-2]) /manufacturedProduct/manufacturedMaterial/code concept.
- In the case that the patient is currently on medications, but none of the medication details exist and the patient is not on anticoagulants, the Medications Section (templateIDs 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2]) SHALL be coded using {182904002, SNOMED CT, Drug Treatment Unknown}. The <code> element SHALL be encoded in the substanceAdminstration/act/code concept.
- In the case that the patient is currently not on medications, the Medications Section (template IDs 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2]) SHALL be coded using {182849000, SNOMED CT, No Drug Therapy Prescribed}. The <code> element SHALL be encoded in the substanceAdminstration/act/code concept.

The routeCode shall be drawn from the Medication Administration Route concept domain as defined by local jurisdiction. The <routeCode> element shall be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/routeCode concept. (e.g., In the US the value set SHALL be drawn from the EMSLevelOfService – MedicationAdminstrationRoute 2.16.840.1.113883.17.3.11.43 [HL7 [HL7 EMS PCR] value set).

The manufacturedMaterial shall be drawn from the Manufactured Material concept domain as defined by local jurisdiction. The <code> element shall be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/consumable/manufacturedProduct/manufacturedMaterial concept (e.g., In the US the value set shall be drawn from the RxNorm 2.16.840.1.113883.6.88 value set).

6.3.1.D1.5.5 Medications Administered –Constraints

In the case that the medication is not administered, this shall be reflected in the substanceAdministration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2]). The negationInd SHALL be set to "true", and an entryRelationship SHALL contain exactly one [1..1] @typeCode="RSON" drawn from the

MedicationNotGiven Reason (2.16.840.1.113883.17.3.11.92 [HL7 EMS PCR]) value est and encoded in the /value concept.

The routeCode shall be drawn from the Medication Administration Route concept domain as defined by local jurisdiction. The <routeCode> Element SHALL be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/routeCode concept (e.g., In the US the value set shall be drawn from the EMSLevelOfService – MedicationAdminstrationRoute 2.16.840.1.113883.17.3.11.43 [HL7 EMS PCR] value set).

The manufacturedMaterial shall be drawn from the Medical Clinical Drug concept domain as defined by the local jurisdiction. The <manufacturedMaterial> element SHALL be encoded the in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/consumable/manufacturedProduct/manufactureredMaterial concept (e.g., In the US the value set shall be drawn from the MedicationClinicalDrug 2.16.840.1.113883.3.88.12.80.17 [HL7 EMS PCR] value set).

The assignedEntity shall be drawn from the Provider Role concept domain as defined by local jurisdiction. The <ProviderRole> element SHALL be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/performer/assignedEntity/code concept (e.g., In the US the value set shall be drawn from the ProviderRole 2.16.840.1.113883.17.3.11.46 [HL7 EMS PCR] value set.).

If a complication is identified as part of the administration of a medication, the medication complication SHALL be documented in Allergies and Other Adverse Reaction Section (templateID 1.3.6.1.4.1.19376.1.5.3.1.3.13 [PCC TF-2]).

6.3.1.D1.5.6 Reason for Referral Constraints

The EMS Situation narrative SHALL be documented in the Reason For Referral Section within the Reason For Referral Section (templateID 1.3.6.1.4.1.19376.1.5.3.1.3.1 [PCC TF-2]).

The EMS Situation Patient's Primary and Secondary Symptoms SHALL be documented in the Reason for Referral as a Simple Observation (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.1[TF-2]).

The EMS Situation Provider's Primary Impression and Provider's Secondary Impression SHALL be documented in the Reason for Referral Section as a Condition Entry (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.5 [PCC TF-2]) .

6.3.1.D1.5.7 Physical Examination Constraints

The physical examination assessment findings SHALL be drawn from the HL7 EMS PCR assessment value sets. The following table provides the mappings between the HL7 EMS PCR and [PCC TF-2] assessment concepts. The assessment <value> element shall be encoded in the /value concept.

Table 6.3.1.D1.5.7-1: Physical Examination Assessment Concepts

IHE Assessment Concept	IHE PCC templateID	HL7 EMS PCR Assessment Concept	HL7 EMS PCR Value Set
Integumentary System	1.3.6.1.4.1.19376.1.5.3.1.1.9.17	Skin	2.16.840.1.113883.17.3.11.25
Head Assessment	1.3.6.1.4.1.19376.1.5.3.1.1.9.18	Head	2.16.840.1.113883.17.3.11.26
Neurologic System	1.3.6.1.4.1.19376.1.5.3.1.1.9.35	Neurological	2.16.840.1.113883.17.3.11.40
Ears, Nose, Mouth and Throat	1.3.6.1.4.1.19376.1.5.3.1.1.9.20	Face	2.16.840.1.113883.17.3.11.27
Neck	1.3.6.1.4.1.19376.1.5.3.1.1.9.24	Neck	2.16.840.1.113883.17.3.11.28
Thorax and Lungs	1.3.6.1.4.1.19376.1.5.3.1.1.9.26	Chest And Lung	2.16.840.1.113883.17.3.11.29
Heart	1.3.6.1.4.1.19376.1.5.3.1.1.9.29	Heart	2.16.840.1.113883.17.3.11.30
Abdomen	1.3.6.1.4.1.19376.1.5.3.1.1.9.31	Abdomen	2.16.840.1.113883.17.3.11.32
Genitalia	1.3.6.1.4.1.19376.1.5.3.1.1.9.36	Pelvic And Genitourinary	2.16.840.1.113883.17.3.11.33
Musculoskeletal	1.3.6.1.4.1.19376.1.5.3.1.1.9.34	Back and Spine	2.16.840.1.113883.17.3.11.34
Extremities	1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1	Extremities	2.16.840.1.113883.17.3.11.36
Eye	1.3.6.1.4.1.19376.1.5.3.1.1.1.9.1	Eye	2.16.840.1.113883.17.3.11.38
Mental Status Entry	1.3.6.1.4.1.19376.1.5.3.1.4.25	Mental	2.16.840.1.113883.17.3.11.84

Additionally, the following target site locations SHALL also be drawn from the HL7 EMS PCR finding location value sets and mapped into the [PCC TF-2] assessment target site. The target site location <value> element shall be encoded in the /targetSiteCode/code concept.

Table 6.3.1.D1.5.7-2: Physical Examination Target Site Locations

IHE Target Site Concept	IHE PCC templateID	HL7 EMS PCR Finding Location Concept	HL7 EMS PCR Value Set
Abdomen target site	1.3.6.1.4.1.19376.1.5.3.1.1.9.31	AbdominalFinding Location	2.16.840.1.113883.17.3.11.32
Back and Spine target site	1.3.6.1.4.1.19376.1.5.3.1.1.9.34	BackSpineFindingLocation	2.16.840.1.113883.17.3.11.35
Extremities	1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1	ExtremityFinding Location	2.16.840.1.113883.17.3.11.37
Eye target site	1.3.6.1.4.1.19376.1.5.3.1.1.9.1	EyeFindingLocation	2.16.840.1.113883.17.3.11.39

6.3.1.D1.5.9 History of Present Illness Constraint

The Content Creator SHALL create a text entry within the History of Present Illness Section (templateID 1.3.6.1.4.1.19376.1.5.3.1.3.4 [PCC TF-2]) that contain the narrative description of EMS Patient Care Report Narrative the EMS encounter.

6.3.1.D1.5.10 Active Problems

The EMS Situation Provider's Primary Impression and Provider's Secondary Impression SHALL be documented in the Active Problems Section within the Active Problems Section (templateID 1.3.6.1.4.1.193796.1.5.3.1.3.1 [PCC TF-2]).

6.3.1.D1.5.11 Allergies and Other Adverse Reaction –Constraints

A complication associated with the EMS administration of a medication shall be documented as an Allergy and Other Adverse Reaction. The medication complication SHALL be documented in an Allergy and Intolerance Concern (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.5.3 [PCC TF-2]). The Allergy and Intolerance Concern SHALL contain exactly one [1..1] code/@code="67541-3" (Medication complication NEMSIS) and the <value> element shall be encoded in the /value concept. The value set SHALL be drawn from the MedicationComplication (2.16.840.1.113883.17.3.11.45 [EMS-PCR]) value set.

6.3.1.D1.5.12 EMS Injury Incident Description Section

The Trauma Center Criteria value shall be drawn from the Trauma Center Criteria concept domain as defined by local jurisdiction. The <value> element shall be encoded in the /value concept (e.g., in the US the value set shall be drawn from the TraumaCenterCriteria 2.16.840.1.113883.17.3.11.3 [HL7 EMS PCR] value set.).

6.3.1.D2 Paramedicine Care Summary – Complete Report (PCS-CR) Document Content Module

The Paramedicine Care Summary – Complete Report document content module is a Medical Summary and inherits all header constraints from Paramedicine Care Summary – Clinical Subset (1.3.6.1.4.1.19376.1.5.3.1.1.29.1). This document is extended in order to create a complete report of the Paramedicine services provided.

6.3.1.D2.1 Format Code

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

6.3.1.D2.2 LOINC Code

The LOINC code for this document 67796-3 EMS patient care report..

6.3.1.D2.3 Referenced Standards

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

Table 6.3.1.D2.3-1: Paramedicine Care Summary – Complete Report Document – Referenced Standards

Abbreviation	Title	URL
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.D2.4 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.D2.4-1: Paramedicine Care Summary – Complete Report (PCS-CR) – Data Element Requirement Mappings to CDA

Paramedicine Data Element	CDA
Patient Care Report Number	Header
eSoftware Creator	Header
eSoftware Name	Header
eSoftware Version	Header
EMS Agency Number	Header
EMS Agency Name	Header
Incident number	Header
EMS response number	Header
Type of service requested	Header
Standby Purpose	Header
Primary Role of the Unit	Header
Type of dispatch delay	EMS Response Section
Type of response delay	EMS Response Section
Type of scene delay	EMS Response Section
Type of transport delay	EMS Response Section
Type of turn-around delay	EMS Response Section
EMS vehicle (unit) number	Header
EMS unit call sign	Header
Level of care for this unit	Header
Vehicle Dispatch Location	EMS Response Section
Vehicle Dispatch GPS Location	EMS Response Section
Vehicle Dispatch Location US National Grid Coordinates	EMS Response Section
Beginning Odometer Reading of Responding Vehicle	EMS Response Section
On-Scene Odometer Reading of Responding Vehicle	EMS Response Section
Patient Destination Odometer Reading of Responding Vehicle	EMS Response Section

Paramedicine Data Element	CDA
Ending Odometer Reading of Responding Vehicle	EMS Response Section
Response Mode to Scene	EMS Response Section
Additional Response Mode Descriptors	EMS Response Section
Complaint Reported by Dispatch	EMS Dispatch Section
EMD Performed	EMS Dispatch Section
EMD Card Number	EMS Dispatch Section
Dispatch Center Name or ID	EMS Dispatch Section
Dispatch Priority (Patient Acuity)	EMS Dispatch Section
Unit Dispatched CAD Record ID	EMS Dispatch Section
Crew ID Number	EMS Response Section
Crew Member Level	EMS Response Section
Crew Member Response Role	EMS Response Section
PSAP Call Date/Time	EMS Response Section
Dispatched Notified Date/Time	EMS Response Section
Unit Notified by Dispatch Date/Time	EMS Response Section
Dispatch Acknowledged Date/Time	EMS Response Section
Unit En Route Date/Time	EMS Response Section
Unit Arrived on Scene Date/Time	EMS Response Section
Arrived at Patient Date/Time	EMS Response Section
Transfer of EMS Patient Care Date/Time	EMS Response Section
Unit Left Scene Date/Time	EMS Response Section
Arrival at Destination Landing Area Date/Time	EMS Response Section
Patient Arrived at Destination Date/Time	EMS Response Section
Destination Patient Transfer of Care Date/Time	EMS Response Section
Unit Back in Service Date/Time	EMS Response Section
Unit Canceled Date/Time	EMS Response Section
Unit Back at Home Location Date/Time	EMS Response Section
EMS Call Complete Date/Time	EMS Response Section
EMS Patient ID	Header
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

Paramedicine Data Element	CDA
social security number	Header
gender	Header
Race	Header
Age	Header
Age Units	Header
Date of Birth	Header
Patient's Phone Number	Header
Primary Method of Payment	Payer
Closest Relative/Guardian Last Name	Header
Closest Relative/Guardian First Name	Header
Closest Relative/Guardian Middle Initial/Name	Header
Closest Relative/Guardian Street Address	Header
Closest Relative/Guardian City	Header
Closest Relative/Guardian State	Header
Closest Relative/Guardian Zip code	Header
Closest Relative/Guardian Country	Header
Closest Relative/Guardian Phone Number	Header
Closest Relative/Guardian Relationship	Header
Patient's Employer	Header
Patient's Employer's Address	Header
Patient's Employer's City	Header
Patient's Employer's State	Header
Patient's Employer's Zip code	Header
Patient's Employer's Country	Header
Patient's Employer's Primary Phone Number	Header
Response Urgency	EMS Situation Section
First EMS Unit on Scene	EMS Scene Section
Other EMS or Public Safety Agencies at Scene	EMS Scene Section
Other EMS or Public Safety Agency ID Number	EMS Scene Section
Type of Other Service at Scene	EMS Scene Section
Date/Time Initial Responder Arrived on Scene	EMS Scene Section
Numbers of Patients on Scene	EMS Scene Section
Mass Casualty Incident	EMS Scene Section
Triage Classification for MCI Patient	EMS Scene Section
Incident Location Type	EMS Scene Section
Incident Facility Code	EMS Scene Section
Scene GPS Location	EMS Scene Section

Paramedicine Data Element	CDA
Scene US National Grid Coordinates	EMS Scene Section
Incident Facility or Location Name	EMS Scene Section
Mile Post or Major Roadway	EMS Scene Section
Incident Street Address	EMS Scene Section
Incident Apartment, Suite, or Room	EMS Scene Section
Incident City	EMS Scene Section
Incident State	EMS Scene Section
Incident ZIP Code	EMS Scene Section
Scene Cross Street or Directions	EMS Scene Section
Incident County	EMS Scene Section
Incident Country	EMS Scene Section
Incident Census Tract	EMS Scene Section
Date/Time of Symptom Onset	EMS Situation Section
Possible Injury	EMS Situation Section
Complaint Type	EMS Situation Section
Complaint	EMS Situation Section
Duration of Complaint	EMS Situation Section
Time Units of Duration of Complaint	EMS Situation Section
Chief complaint Anatomic Location	EMS Situation Section
Chief Complain organ system	EMS Situation Section
Primary Symptom	EMS Situation Section / Reason for Referral
Other Associated symptoms	EMS Situation Section / Reason for Referral
Provider's Primary Impressions Provider's Secondary Impressions	EMS Situation Section / Reason for Referral
Initial Patient Acuity	EMS Situation Section
Work-related Illness/Injury	EMS Situation Section
Patient's Occupational Industry	EMS Situation Section
Patient's Occupation	EMS Situation Section
Patient Activity	EMS Situation Section
Date/Time Last Known Well	EMS Situation Section /Review of Systems-EMS Section
Cause of Injury	EMS Injury Incident Description Section
Mechanism of Injury	EMS Injury Incident Description Section
Trauma Center Criteria	EMS Injury Incident Description Section
Vehicular, Pedestrian, or Other Injury Risk Factor	EMS Injury Incident Description Section
Main Area of the Vehicle Impacted by the Collision	EMS Injury Incident Description Section
Location of Patient in Vehicle	EMS Injury Incident Description Section
Use of Occupant Safety Equipment	EMS Injury Incident Description Section
Airbag Deployment Height of Fall (feet)	EMS Injury Incident Description Section
OSHA Personal Protective Equipment	EMS Injury Incident Description Section

Paramedicine Data Element	CDA
Used	
Seat Occupied	EMS Injury Incident Description Section
Cardiac Arrest	EMS Cardiac Arrest Event Section
Cardiac Arrest Etiology	EMS Cardiac Arrest Event Section
Resuscitation Attempted By EMS	EMS Cardiac Arrest Event Section
Arrest Witnessed By	EMS Cardiac Arrest Event Section
CPR Care Provided Prior to EMS Arrival	EMS Cardiac Arrest Event Section
Who Provided CPR Prior to EMS Arrival	EMS Cardiac Arrest Event Section
AED Use Prior to EMS Arrival	EMS Cardiac Arrest Event Section
Who Used AED Prior to EMS Arrival	EMS Cardiac Arrest Event Section
Type of CPR Provided First Monitored Arrest Rhythm of the Patient	EMS Cardiac Arrest Event Section
Any Return of Spontaneous Circulation	EMS Cardiac Arrest Event Section
Neurological Outcome at Hospital Discharge	EMS Cardiac Arrest Event Section
Date/Time of Cardiac Arrest	EMS Cardiac Arrest Event Section
Date/Time Resuscitation Discontinued	EMS Cardiac Arrest Event Section
Reason CPR/Resuscitation Discontinued	EMS Cardiac Arrest Event Section
Cardiac Rhythm on Arrival at Destination	EMS Cardiac Arrest Event Section
End of EMS Cardiac Arrest Event	EMS Cardiac Arrest Event Section
Date/Time of Initial CPR	EMS Cardiac Arrest Event Section
Barriers to Patient Care	N/A
Last Name of Patient's Practitioner	Header
First Name of Patient's Practitioner	Header
Middle Initial/Name of Patient's Practitioner	Header
Advanced Directives	EMS Advance Directives Section
Medication Allergies	Allergies And Adverse Reactions Section
Environmental/Food Allergies	Allergies And Adverse Reactions Section
Medical/Surgical History	EMS Past Medical History Section
Current Medications	Current Medication Section
Current Medication Dose	Current Medication Section
Current Medication Dosage Unit	Current Medication Section
Current Medication Administration Route	Current Medication Section
Presence of Emergency Information Form	EMS Advance Directives Section
Alcohol/Drug Use Indicators	EMS Social History Section
Pregnancy	Review of Systems - EMS Section
Last Oral Intake	Review of Systems-EMS Section
Patient Care Report Narrative	History of Present Illness Section
Date/Time Vital Signs Taken	Coded Vital Signs Section
Obtained Prior to this Unit's EMS Care	N/A

Paramedicine Data Element	CDA
Cardiac Rhythm / Electrocardiography (ECG)	EMS Cardiac Arrest Event Section
ECG Type	EMS Cardiac Arrest Event Section
Method of ECG Interpretation	EMS Cardiac Arrest Event Section
SBP (Systolic Blood Pressure)	Coded Vital Signs Section
DBP (Diastolic Blood Pressure)	Coded Vital Signs Section
Method of Blood Pressure Measurement	Coded Vital Signs Section
Mean Arterial Pressure	Coded Vital Signs Section
Heart Rate	Coded Vital Signs Section
Method of Heart Rate Measurement	Coded Vital Signs Section
Pulse Oximetry	Coded Vital Signs Section
Pulse Rhythm	N/A
Respiratory Rate	Coded Vital Signs Section
Respiratory Effort	N/A
End Title Carbon Dioxide (ETCO2)	Coded Vital Signs Section
Carbon Monoxide (CO)	Coded Vital Signs Section
Blood Glucose Level	Coded Vital Signs Section
Glasgow Coma Score-Eye	Coded Vital Signs Section
Glasgow Coma Score-Verbal	Coded Vital Signs Section
Glasgow Coma Score-Motor	Coded Vital Signs Section
Glasgow Coma Score-Qualifier	Coded Vital Signs Section
Total Glasgow Coma Score	Coded Vital Signs Section
Temperature	Coded Vital Signs Section
Temperature Method	Coded Vital Signs Section
Level of Responsiveness (AVPU)	Coded Vital Signs Section
Pain Scale Score	Coded Vital Signs Section
Pain Scale Type	Coded Vital Signs Section
Stroke Scale Score	Coded Vital Signs Section
Stroke Scale Type	Coded Vital Signs Section
Reperfusion Checklist	Coded Vital Signs Section
APGAR	Coded Vital Signs Section
Revised Trauma Score	Coded Vital Signs Section
Estimated Body Weight in Kilograms	Coded Vital Signs Section
Length Based Tape Measure	Coded Vital Signs Section
Date/Time of Assessment	Coded Detail Physical Examination Section
Skin Assessment	Coded Detail Physical Examination Section
Head Assessment	Coded Detail Physical Examination Section
Face Assessment	Coded Detail Physical Examination Section
Neck Assessment	Coded Detail Physical Examination Section
Chest/Lungs Assessment	Coded Detail Physical Examination Section

Paramedicine Data Element	CDA
Heart Assessment	Coded Detail Physical Examination Section
Location (of the patient's abdomen assessment findings.)	Coded Detail Physical Assessment Section
Abdominal Assessment Finding Location	Coded Detail Physical Assessment Section
Abdominal Assessment Finding Location	Coded Detail Physical Assessment Section
Abdomen Assessment	Coded Detail Physical Examination Section
Pelvis/Genitourinary Assessment	Coded Detail Physical Examination Section
Back and Spine Assessment Finding Location	Coded Detail Physical Examination Section
Back and Spine Assessment	Coded Detail Physical Examination Section
Extremity Assessment Finding Location	Coded Detail Physical Examination Section
Extremities Assessment	Coded Detail Physical Examination Section
Eye Assessment Finding Location	Coded Detail Physical Examination Section
Eye Assessment	Coded Detail Physical Examination Section
Mental Status Assessment	Coded Detail Physical Examination Section
Neurological Assessment	Coded Detail Physical Examination Section
Stroke/CVA Symptoms Resolved	Coded Detail Physical Examination Section
Protocols Used	EMS Protocol Section
Protocol Age Category	EMS Protocol Section
Date/Time Medication Administered	Medications Administered Section
Medication Administered Prior to this Unit's EMS Care	N/A
Medication Given	Medications Administered Section
Medication Administered Route	Medications Administered Section
Medication Dosage	Medications Administered Section
Medication Dosage Units	Medications Administered Section
Response to Medication	N/A
Medication Complication	Allergies and Adverse Reactions Section
Medication Crew (Healthcare Professionals) ID	Medications Administered Section
Role/Type of Person Administering Medication	Medications Administered Section
Medication Authorization	Medications Administered Section
Medication Authorizing Physician	Medications Administered Section
Date/Time Procedure Performed	EMS Procedures and Interventions Section
Procedure Performed Prior to this Unit's EMS Care	EMS Procedures and Interventions Section
Procedure	EMS Procedures and Interventions Section
Size of Procedure Equipment	EMS Procedures and Interventions Section
Number of Procedure Attempts	EMS Procedures and Interventions Section
Procedure Successful	EMS Procedures and Interventions Section
Procedure Complication	EMS Procedures and Interventions Section

Paramedicine Data Element	CDA
Response to Procedure	EMS Procedures and Interventions Section
Procedure Crew Members ID	EMS Procedures and Interventions Section
Role/Type of Person Performing the Procedure	EMS Procedures and Interventions Section
Procedure Authorization	EMS Procedures and Interventions Section
Procedure Authorizing Physician	EMS Procedures and Interventions Section
Vascular Access Location	EMS Procedures and Interventions Section
Indications for Invasive Airway	EMS Procedures and Interventions Section
Date/Time Airway Device Placement Confirmation	EMS Procedures and Interventions Section
Airway Device Being Confirmed	EMS Procedures and Interventions Section
Airway Device Placement Confirmed Method	EMS Procedures and Interventions Section
Tube Depth	EMS Procedures and Interventions Section
Type of Individual Confirming Airway Device Placement	EMS Procedures and Interventions Section
Crew Member ID	EMS Procedures and Interventions Section
Airway Complications Encountered	EMS Procedures and Interventions Section
Suspected Reasons for Failed Airway Management	EMS Procedures and Interventions Section
Date/Time Decision to Manage the Patient with an Invasive Airway	EMS Procedures and Interventions Section
Date/Time Invasive Airway Placement Attempts Abandoned	EMS Procedures and Interventions Section
Medical Device Serial Number	EMS Procedures and Interventions Section
Date/Time of Event (per Medical Device)	EMS Procedures and Interventions Section
Medical Device Event Type	EMS Procedures and Interventions Section
Medical Device Waveform Graphic Type	EMS Procedures and Interventions Section
Medical Device Waveform Graphic	EMS Procedures and Interventions Section
Medical Device Mode (Manual, AED, Pacing, CO2, O2, etc.)	EMS Cardiac Arrest Event Section
Medical Device ECG Lead	EMS Cardiac Arrest Event Section
Medical Device ECG Interpretation	EMS Cardiac Arrest Event Section
Type of Shock	EMS Cardiac Arrest Event Section
Shock or Pacing Energy	EMS Cardiac Arrest Event Section
Total Number of Shocks Delivered	EMS Cardiac Arrest Event Section
Pacing Rate	EMS Cardiac Arrest Event Section
Destination/Transferred To, Name	EMS Situation
Destination/Transferred To, Code	EMS Situation
Destination Street Address	EMS Situation
Destination City	EMS Situation
Destination State	EMS Situation
Destination County	EMS Situation

Paramedicine Data Element	CDA
Destination ZIP Code	EMS Situation
Destination Country	EMS Situation
Destination GPS Location	EMS Situation
Destination Location US National Grid Coordinates	EMS Situation
Number of Patients Transported in this EMS Unit	EMS Disposition Section
Incident/Patient Disposition	EMS Disposition Section
EMS Transport Method	EMS Disposition Section
Transport Mode from Scene	EMS Disposition Section
additional Transport Mode Descriptors	EMS Disposition Section
Final Patient Acuity	EMS Disposition Section
Reason for Choosing Destination	EMS Disposition Section
Type of Destination	EMS Disposition Section
Hospital In-Patient Destination	EMS Disposition Section
Hospital Capability Per EMS	EMS Disposition Section
Destination Team Pre-Arrival Alert or Activation	EMS Disposition Section
Date/Time of Destination Prearrival Alert or Activation	EMS Disposition Section
Disposition Instructions Provided	EMS Disposition Section

6.3.1.D2.5 Paramedicine Care Summary – Complete Report (PCS-CR) Document Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Paramedicine Care Summary – Complete Report (PCS-CR) Document Content Module, using the 1.3.6.1.4.1.19376.1.5.3.1.1.30.1 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.

Note: The only header items that are mentioned are the items that are constrained.

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Template Name		Paramedicine Care Summary – Complete Report (PCS-CR)			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.1.30.1			
Parent Template		Medical Summary (1.3.6.1.4.1.19376.1.5.3.1.1.2)			
General Description		The Paramedicine Care Summary will contain the patient's paramedicine care information and interventions.			
Document Code		SHALL BE 67796-3 EMS patient care report 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					
R [1..1]		Personal Information: Patient Name	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..1]		Personal Information: Patient Date of Birth	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..*]		Personal Information: Patient Address	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..*]		Personal Information: Patient ID	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
R [1..*]		Personal Information: Patient Telecom	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
O [0..1]		Personal Information: Administrative Gender	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	
O [0..1]		Personal Information: Ethnicity	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.1
RE [0..1]		Personal Information: Marital Status	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.2
O [0..1]		Personal Information: Race	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.3
O [0..*]		Personal Information: sDTCRaceCode	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.3
O [0..*]		Personal Information: Religious Affiliation	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1s	6.3.2.H.4
RE [0..1]		Personal Information: Language Communication	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.1	6.3.2.H.5
R [1..1]		Participant			6.3.2.H.6
R [1..1]		documentationOf			6.3.2.H.7

R [1..1]		componentOf			6.3.H.8
Sections					
RE [0..1]		EMS Advance Directives	2.16.840.1.113883.17.3.10.1.12	HL7 EMS Run Report R2	6.3.D2.5.1
R [1..1]		Allergy and Intolerances Concern Entry	3.6.1.4.1.193796.1.5.3.1.4.5.3	PCC TF-2: 6.3.3.2.11	6.3.D2.5.2
O[0..1]		EMS Billing Section	2.16.840.1.113883.17.3.10.1.5	HL7 EMS Run Report R2	6.3.D2.5.3
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]		Medication Section	1.3.6.1.4.1.19376.1.5.3.1.3.19	PCC TF-2: 6.3.3.3.1	6.3.D2.5.5
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	6.3.1.D2.5.13
O [0..1]		Medications Administered Section Allergies and Other Adverse Reactions	1.3.6.1.4.1.19376.1.5.3.1.3.21 1.3.6.1.4.1.19376.1.5.3.1.3.13	PCC TF-2: 6.3.3.3.3, 6.3.3.2.11	6.3.D2.5.5, 6.3.D2.5.12
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]		Coded Detail Physical Examination	1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1	IHE PCC TF-2: 6.3.3.4.30	
RE [1..N]		+ Integumentary System	1.3.6.1.4.1.19376.1.5.3.1.1.9.17	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Head	1.3.6.1.4.1.19376.1.5.3.1.1.9.18	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Neurologic System	1.3.6.1.4.1.19376.1.5.3.1.1.9.35	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Ears, Nose, Mouth and Throat	1.3.6.1.4.1.19376.1.5.3.1.1.9.20	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Neck	1.3.6.1.4.1.19376.1.5.3.1.1.9.24	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Thorax and Lungs	1.3.6.1.4.1.19376.1.5.3.1.1.9.26	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Heart	1.3.6.1.4.1.19376.1.5.3.1.1.9.29	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8

		+ Abdomen	1.3.6.1.4.1.19376.1.5.3.1.1.9.31	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Genitalia	1.3.6.1.4.1.19376.1.5.3.1.1.9.36	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Musculoskeletal System	1.3.6.1.4.1.19376.1.5.3.1.1.9.34	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Extremities	1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
		+ Eye	1.3.6.1.4.1.19376.1.5.3.1.1.9.19	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
RE [1..N]		+ Mental Status	1.3.6.1.4.1.19376.1.5.3.1.1.21.2.1	IHE PCC TF-2: 6.3.3.4.30	6.3.D2.5.8
R [1..1]		EMS Procedures and Interventions Section	2.16.840.1.113883.17.3.10.1.21	HL7 EMS Run Report R2	
RE [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	6.3.D2.5.9
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]		Code Vital Signs Section	1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2	PCC TF-2: 6.3.3.4.5	6.3.D2.5.4
R [1..]		Reason for Referral	1.3.6.1.4.1.19376.1.5.3.1.3.1	PCC TF-2: 6.3.3.1.1	6.3.D2.5.7
R [1..1]		History Present Illness	1.3.6.1.4.1.19376.1.5.3.1.3.4	PCC TF-2: 6.3.3.2.1	6.3.D2.5.10
R [1..1]		Active Problems	1.3.6.1.4.1.19376.1.5.3.1.3.6	PCC TF-2: 6.3.3.2.3	6.3.D2.5.11
RE [1..1]		Review of Systems-EMS	1.3.6.1.4.1.19376.1.5.3.1.3.39	PCC TF-2: 6.3.3.10.S2	

6.3.1.D2.5.1 EMS Advance Directives Observation Constraints

The Advance Directive Type shall be drawn from the Advance Directive Type concept domain as defined by local jurisdiction. The <value> element shall be encoded in the /value concept (e.g., In the US the value shall be drawn from the AdvanceDirectiveType - 2.16.840.1.113883.17.3.11.63 [HL7 EMS PCR] value set.).

6.3.1.D2.5.2 Allergies – Allergy and Intolerance Concern Entry Constraint

The Drug Allergies allergen SHOULD be drawn from the RxNorm coding system 2.16.840.1.113883.6.88 unless otherwise specified by local jurisdiction. The <value> element SHALL be encoded in the participant/participantRole/playingEntity/code concept.

The Non-Drug Allergies allergen SHALL be drawn from the SNOMED CT coding system. The <value> element SHALL be encoded in the participant/participantRole/playingEntity/code concept.

In the case that the existence of the drug or non-drug allergy is known, but not the substance type, the allergen SHALL be coded using {6497000, SNOMED CT, Substance Type Unknown}. The <value> element SHALL be encoded in the participant/participantRole/playingEntity/code concept.

In the case that there are no known drug allergies the allergen SHALL be coded using {409137002, SNOMED CT, No Known Drug Allergies}. The <value> element SHALL be encoded in participant/participantRole/playingEntity/code concept.

6.3.1.D2.5.3 EMS Billing EMS LevelOfService Observation Constraints

The EMS Level of Service shall be drawn from the Level of EMS Level of Service concept domain as defined by local jurisdiction. The <value> element SHALL be eEncoded in the concept in EMS Level of Service Observation (templateID 2.16.840.1.1133883.17.3.10.1.92)/value concept (e.g., in the US the value set SHALL be drawn from the EMSLevelOfService - 2.16.840.1.113883.17.3.11.70 [HL7 EMS PCR] value set.).

6.3.1.D2.5.4 Coded Vital Signs Section – Vital Signs Observation Constraints

The following additional vital sign observation entries SHALL be supported using the LOINC codes, with the specified data types and unit. The Coded Vital Signs Section SHALL include one or more Vital Signs Observation (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.13.2 [PCC TF-2]).

LOINC	Description	Units	Type
8478-0	MEAN ARTERIAL PRESSURE	mm[Hg]	PQ
19889-5	END TITLE CARBON DIOXIDE (ETCO2)	%	PQ
20563-3	CARBON MONOXIDE (CO)	%	PQ
2339-0	BLOOD GLUCOSE LEVEL	mg/dl	PQ
9267-6	GLASGOW COMA SCORE-EYE	n/a	PQ
9268-4	GLASGOW MOTOR	n/a	PQ
9270-0	GLASGOW COMA SCORE.VERBAL	n/a	PQ
9269-2	TOTAL GLASGOW COMA SCORE	n/a	PQ
9267-6	GLASCOW QUALIFIER	n/a	PQ
38208-5	PAIN SCALE SCORE	n/a	PQ
80316-3	PAIN SCALE TYPE	n/a	PQ
72089-6	STROKE SCALE SCORE	n/a	PQ

LOINC	Description	Units	Type
67521-5	STROKE SCALE TYPE	n/a	PQ
48334-7	APGAR 1 MINUTE	n/a	PQ
48333-9	APGAR 5 MINUTE	n/a	PQ
48332-1	APGAR 10 MINUTE	n/a	PQ
80341-1	RESPIRATORY EFFORT	n/a	PQ
11454-6	RESPONSIVENESS ASSESSMENT AT FIRST ENCOUNTER	n/a	PQ

In addition, the following attributes will be supported for the additional LOINC definitions:

The Method of Measurement SHALL be included in the Vital Signs Observation for the following vital signs:

- Systolic Blood Pressure
- Diastolic Blood Pressure
- Mean Arterial Pressure
- Temperature
- Stroke Score
- and Heart Rate (if LOINC /value 8886-4 is designated).

The <methodCode>element SHALL be encoded in the /methodCode concept.

The Stroke Scale Type SHALL be drawn from the StrokeScale concept domain as defined by local jurisdiction. (e.g., In the US the value set SHALL be drawn from the StrokeScale (templateID 2.16.840.1.113883.17.3.11.88 [HL7 EMS PCR]) value set. The <value> element SHALL be encoded the in /methodCode concept.

The Glasgow Qualifier SHALL be drawn from the GlasgowComaScoreSpecialCircumstances (templateID 2.16.840.1.113883.17.3.11.89 [HL7 EMS PCR]) value set. The <value> element SHALL be encoded in the /value concept.

The Stroke Type SHALL be drawn from the Stroke Scale Interpretation concept domain as defined by local jurisdiction. (e.g., In the US the value set shall be Stroke (templateID 2.16.840.1.113883.17.3.11.93 [HL7 EMS PCR]) Value Set. The <value> element SHALL be encoded the /methodCode concept.

The Level of Responsiveness SHALL be drawn from the LevelOfResponsiveness (templateID 2.16.840.1.113883.17.3.11.21 [HL7 EMS PCR]) value set. The <value> element SHALL be encoded the concept in /value concept.

6.3.1.D2.5.5 Current Medications –Constraints

The following special cases exist for encoding the product medication:

- In the case that the patient is currently on anticoagulants and no medication details are provided for the anticoagulants, the product SHALL be coded using {81839001, SNOMED CT, Anticoagulant (product)}. The product SHALL be encoded in the Product

Entry (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.7.2[PCC TF-2]) /manufacturedProduct/manufacturedMaterial/code concept.

- In the case that the patient is currently on medications, but none of the medication details exist and the patient is not on anticoagulants, the Medications Section (templateIDs 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2]) SHALL be coded using {182904002, SNOMED CT, Drug Treatment Unknown}. The <code> element SHALL be encoded in the substanceAdminstration/act/code concept.
- In the case that the patient is currently not on medications, the Medications Section (template IDs 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2]) SHALL be coded using {182849000, SNOMED CT, No Drug Therapy Prescribed}. The <code> element SHALL be encoded in the substanceAdminstration/act/code concept.

The routeCode shall be drawn from the Medication Administration Route concept domain as defined by local jurisdiction. The <routeCode> element shall be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/routeCode concept. (e.g., In the US the value set SHALL be drawn from the EMSLevelOfService – MedicationAdminstrationRoute 2.16.840.1.113883.17.3.11.43 [HL7 [HL7 EMS PCR] value set).

The manufacturedMaterial shall be drawn from the Manufactured Material concept domain as defined by local jurisdiction. The <code> element shall be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/consumable/manufacturedProduct/manufacturedMaterial concept (e.g., In the US the value set shall be drawn from the RxNorm 2.16.840.1.113883.6.88 value set).

6.3.1.D2.5.6 Medications Administered –Constraints

In the case that the medication is not administered, this shall be reflected in the substanceAdministration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2]). The negationInd SHALL be set to "true", and an entryRelationship SHALL contain exactly one [1..1] @typeCode="RSON" drawn from the MedicationNotGiven Reason (2.16.840.1.113883.17.3.11.92 [HL7 EMS PCR]) value est and encoded in the /value concept.

The routeCode shall be drawn from the Medication Administration Route concept domain as defined by local jurisdiction. The <routeCode> Element SHALL be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/routeCode concept (e.g., In the US the value set shall be drawn from the EMSLevelOfService – MedicationAdminstrationRoute 2.16.840.1.113883.17.3.11.43 [HL7 EMS PCR] value set).

The manufacturedMaterial shall be drawn from the Medical Clinical Drug concept domain as defined by the local jurisdiction. The <manufacturedMaterial> element SHALL be encoded the in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-

2])/consumable/manufacturedProduct/manufactureredMaterial concept (e.g., In the US the value set shall be drawn from the MedicationClinicalDrug 2.16.840.1.113883.3.88.12.80.17 [HL7 EMS PCR] value set).

The assignedEntity shall be drawn from the Provider Role concept domain as defined by local jurisdiction. The <ProviderRole> element SHALL be encoded in the substanceAdminstration (templateID 2.16.840.1.113883.10.20.1.24 and 1.3.6.1.4.1.19376.1.5.3.1.4.7 [PCC TF-2])/performer/assignedEntity/code concept (e.g., In the US the value set shall be drawn from the ProviderRole 2.16.840.1.113883.17.3.11.46 [HL7 EMS PCR] value set.).

If a complication is identified as part of the administration of a medication, the medication complication SHALL be documented in Allergies and Other Adverse Reaction Section (templateID 1.3.6.1.4.1.19376.1.5.3.1.3.13 [PCC TF-2]).

6.3.1.D2.5.7 Reason for Referral Constraints

The EMS Situation narrative SHALL be documented in the Reason For Referral Section within the Reason For Referral Section (templateID 1.3.6.1.4.1.19376.1.5.3.1.3.1 [PCC TF-2]).

The EMS Situation Patient's Primary and Secondary Symptoms SHALL be documented in the Reason for Referral as a Simple Observation (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.1[TF-2]).

The EMS Situation Provider's Primary Impression and Provider's Secondary Impression SHALL be documented in the Reason for Referral Section as a Condition Entry (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.5 [PCC TF-2]) .

6.3.1.D2.5.8 Physical Examination Constraints

The physical examination assessment findings SHALL be drawn from the HL7 EMS PCR assessment value sets. The following table provides the mappings between the HL7 EMS PCR and [PCC TF-2] assessment concepts. The assessment <value> element shall be encoded in the /value concept.

Table 6.3.1.D2.5.8-1: Physical Examination Assessment Concepts

IHE Assessment Concept	IHE PCC templateID	HL7 EMS PCR Assessment Concept	HL7 EMS PCR Value Set
Integumentary System	1.3.6.1.4.1.19376.1.5.3.1.1.9.17	Skin	2.16.840.1.113883.17.3.11.25
Head Assessment	1.3.6.1.4.1.19376.1.5.3.1.1.9.18	Head	2.16.840.1.113883.17.3.11.26
Neurologic System	1.3.6.1.4.1.19376.1.5.3.1.1.9.35	Neurological	2.16.840.1.113883.17.3.11.40
Ears, Nose, Mouth and Throat	1.3.6.1.4.1.19376.1.5.3.1.1.9.20	Face	2.16.840.1.113883.17.3.11.27
Neck	1.3.6.1.4.1.19376.1.5.3.1.1.9.24	Neck	2.16.840.1.113883.17.3.11.28
Thorax and Lungs	1.3.6.1.4.1.19376.1.5.3.1.1.9.26	Chest And Lung	2.16.840.1.113883.17.3.11.29
Heart	1.3.6.1.4.1.19376.1.5.3.1.1.9.29	Heart	2.16.840.1.113883.17.3.11.30
Abdomen	1.3.6.1.4.1.19376.1.5.3.1.1.9.31	Abdomen	2.16.840.1.113883.17.3.11.32

IHE Assessment Concept	IHE PCC templateID	HL7 EMS PCR Assessment Concept	HL7 EMS PCR Value Set
Genitalia	1.3.6.1.4.1.19376.1.5.3.1.1.9.36	Pelvic And Genitourinary	2.16.840.1.113883.17.3.11.33
Musculoskeletal	1.3.6.1.4.1.19376.1.5.3.1.1.9.34	Back and Spine	2.16.840.1.113883.17.3.11.34
Extremities	1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1	Extremities	2.16.840.1.113883.17.3.11.36
Eye	1.3.6.1.4.1.19376.1.5.3.1.1.1.9.1	Eye	2.16.840.1.113883.17.3.11.38
Mental Status Entry	1.3.6.1.4.1.19376.1.5.3.1.4.25	Mental	2.16.840.1.113883.17.3.11.84

Additionally, the following target site locations SHALL also be drawn from the HL7 EMS PCR finding location value sets and mapped into the [PCCTF-2] assessment target site. The target site location <value> element shall be encoded in the /targetSiteCode/code concept.

Table 6.3.1.D2.5.8-2: Physical Examination Target Site Loactions

IHE Target Site Concept	IHE PCC templateID	HL7 EMS PCR Finding Location Concept	HL7 EMS PCR Value Set
Abdomen target site	1.3.6.1.4.1.19376.1.5.3.1.1.9.31	AbdominalFinding Location	2.16.840.1.113883.17.3.11.32
Back and Spine target site	1.3.6.1.4.1.19376.1.5.3.1.1.9.34	BackSpineFindingLocation	2.16.840.1.113883.17.3.11.35
Extremities	1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1	ExtremityFinding Location	2.16.840.1.113883.17.3.11.37
Eye target site	1.3.6.1.4.1.19376.1.5.3.1.1.9.1	EyeFindingLocation	2.16.840.1.113883.17.3.11.39

6.3.1.D2.5.9 EMS Response Unit Level Of Care Capability Observation Constraint

The <value> element for Unit Level Of Care Capability observation/value SHALL be drawn from a value set bound to concept domain UnitLevelOfCare.

The concept domain for Unit Level Of Care Capability is defined by local jurisdiction (e.g., In the US the value set shall be drawn from the UnitLevelOfCare 2.16.840.1.113883.17.3.11.105 [HL7 EMS PCR] value set.).

6.3.1.D2.5.10 History of Present Illness Constraint

The Content Creator SHALL create a text entry within the History of Present Illness Section (templateID 1.3.6.1.4.1.19376.1.5.3.1.3.4 [PCC TF-2]) that contain the narrative description of EMS Patient Care Report Narrative the EMS encounter.

6.3.1.D2.5.11 Active Problems

The EMS Situation Provider's Primary Impression and Provider's Secondary Impression SHALL be documented in the Active Problems Section within the Active Problems Section (templateID 1.3.6.1.4.1.193796.1.5.3.1.3.1 [PCC TF-2]).

6.3.1.D2.5.12 Allergies and Other Adverse Reaction –Constraints

A complication associated with the EMS administration of a medication shall be documented as an Allergy and Other Adverse Reaction. The medication complication SHALL be documented in an Allergy and Intolerance Concern (templateID 1.3.6.1.4.1.19376.1.5.3.1.4.5.3 [PCC TF-2]). The Allergy and Intolerance Concern SHALL contain exactly one [1..1] code/@code="67541-3" (Medication complication NEMSIS) and the <value> element shall be encoded in the /value concept. The value set SHALL be drawn from the MedicationComplication (2.16.840.1.113883.17.3.11.45 [EMS-PCR]) value set.

6.3.1.D2.5.13 EMS Injury Incident Description Section

The Trauma Center Criteria value shall be drawn from the Trauma Center Criteria concept domain as defined by local jurisdiction. The <value> element shall be eEncoded in the concept in the /value concept (e.g., in the US the value set shall be drawn from the TraumaCenterCriteria 2.16.840.1.113883.17.3.11.3 [HL7 EMS PCR] value set.).

6.3.1.D2.6 PCS Conformance and Example

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

A CDA Document may conform to more than one template. This content module inherits from the Medical Summary 1.3.6.1.4.1.19376.1.5.3.1.1.2 and so must conform to the requirements of those templates as well this document specification, PCS-CR 1.3.6.1.4.1.19376.1.5.3.1.1.29.1 PCS *templateID*.

Note that this is an example and is meant to be informative and not normative. This example shows the PCS-CR 1.3.6.1.4.1.19376.1.5.3.1.1.29.1 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 CDA Header Content Module

6.3.2.H.1 Ethnicity Vocabulary Constraints

Collection of Ethnicity information may be restricted by some jurisdictions as constrained by national extension. When used, ethnicity SHALL use values from the Ethnicity concept domain as specified by jurisdiction.

6.3.2.H.2 Marital Status Vocabulary Constraint

The value for Marital status/ code SHALL be drawn from HL7 Marital Status value set 2.16.840.1.113883.1.11.12212 [HL7 EMS PCR] unless further extended by national extension.

6.3.2.H.3 Race Vocabulary Constraint

Collection of Race information may be restricted by some jurisdictions as constrained by national extension. When used, race SHALL use values from the Race concept domain as specified by jurisdiction.

6.3.2.H.4 Religious Affiliation Vocabulary Constraint

Collection of Religious Affiliation information may be restricted by some jurisdictions as constrained by national extension. When used, Religious Affiliation SHALL use values from the Ethnicity concept domain as specified by jurisdiction.

6.3.2.H.5 Language Communication Vocabulary Constraint

The value for Language Communication/ code SHALL be drawn from the ISO Language value set 639-2 unless further extended by national extension.

6.3.2.H.6 Participant Constraint

The Participant SHOULD contain an associatedEntity may be restricted by jurisdictions as constrained by national extension. When used, participant/associatedEntity/code SHALL use values from the DestinationType concept domain as specified by jurisdiction.

6.3.2.H.7 documentationOf Vocabulary Constraint

The serviceEvent may be restricted by jurisdictions as constrained by national extension. The documentationOf/serviceEvent/code SHALL use values from the ServiceType concept domain as specified by jurisdiction.

The serviceEvent performer may be restricted by jurisdictions as constrained by national extension. The documentationOf/serviceEvent/performer/functionCode/code SHALL use values from the ProviderResponseRole concept domain as specified by jurisdiction.

The serviceEvent performer assignedEntity may be restricted by jurisdictions as constrained by national extension. The documentationOf/serviceEvent/performer/assignedEntity/code SHALL use values from the CrewRoleLevel concept domain as specified by jurisdiction.

6.3.2.H.8 componentOf Vocabulary Constraint

The Health Care Facility may be restricted by jurisdictions as constrained by national extension. The componentOf/encompassingEncounter/location/healthCareFacility/code SHALL use values from the UnitResponseRole concept domain as specified by jurisdiction.

6.3.3 CDA Section Content Modules

Modify the table in Section 6.3.3.4.30 to add the items listed as Bold/Underline below

6.3.3.4.30 Coded Detailed Physical Examination Section 1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1

Template ID	1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1	
Parent Template	Detailed Physical Examination (1.3.6.1.4.1.19376.1.5.3.1.1.9.15)	
General Description	The Coded Detailed Physical Examination section shall contain a narrative description of the patient's physical findings. It shall include subsections, if known, for the exams that are performed.	
LOINC Code	**Opt**	**Description**
29545-1	R	PHYSICAL EXAMINATION
Subsections	**Opt**	**Description**
1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2	R2	Coded Vital Signs Vital signs may be a subsection of the physical examination or they may stand alone.
1.3.6.1.4.1.19376.1.5.3.1.1.9.16	R2	General Appearance
1.3.6.1.4.1.19376.1.5.3.1.1.9.48	R2	Visible Implanted Medical Devices
1.3.6.1.4.1.19376.1.5.3.1.1.9.17	R2	Integumentary System
1.3.6.1.4.1.19376.1.5.3.1.1.9.18	R2	Head
1.3.6.1.4.1.19376.1.5.3.1.1.9.19	R2	Eyes
1.3.6.1.4.1.19376.1.5.3.1.1.9.20	R2	Ears, Nose, Mouth and Throat
1.3.6.1.4.1.19376.1.5.3.1.1.9.21	R2	Ears
1.3.6.1.4.1.19376.1.5.3.1.1.9.22	R2	Nose
1.3.6.1.4.1.19376.1.5.3.1.1.9.23	R2	Mouth, Throat, and Teeth
1.3.6.1.4.1.19376.1.5.3.1.1.9.24	R2	Neck
1.3.6.1.4.1.19376.1.5.3.1.1.9.25	R2	Endocrine System
1.3.6.1.4.1.19376.1.5.3.1.1.9.26	R2	M Thorax and Lungs
1.3.6.1.4.1.19376.1.5.3.1.1.9.27	R2	Chest Wall
1.3.6.1.4.1.19376.1.5.3.1.1.9.28	R2	Breasts
1.3.6.1.4.1.19376.1.5.3.1.1.9.29	R2	Heart

1.3.6.1.4.1.19376.1.5.3.1.1.9.30	R2	Respiratory System
1.3.6.1.4.1.19376.1.5.3.1.1.9.31	R2	Abdomen
1.3.6.1.4.1.19376.1.5.3.1.1.9.32	R2	Lymphatic System
1.3.6.1.4.1.19376.1.5.3.1.1.9.33	R2	Vessels
1.3.6.1.4.1.19376.1.5.3.1.1.9.34	R2	Musculoskeletal System
1.3.6.1.4.1.19376.1.5.3.1.1.9.35	R2	Neurologic System
1.3.6.1.4.1.19376.1.5.3.1.1.9.36	R2	Genitalia
1.3.6.1.4.1.19376.1.5.3.1.1.9.37	R2	Rectum
1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1	R2	Extremities
1.3.6.1.4.1.19376.1.5.3.1.1.21.2.10	R2	Pelvis
1.3.6.1.4.1.19376.1.5.3.1.3.38	**R2**	**Mental Status Organizer**

Add to Section 6.3.3.10 Section Content Modules

6.3.3.10.S1 Mental Status Organizer- Section Content Module

Table 6.3.3.10.S1-1: Mental Status Organizer Section

Template Name		Mental Status Organizer Section			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.3.38			
Parent Template		None			
General Description		The Mental Status Organizer template may be used to group related Mental Status Observations (e.g., results of mental tests) and associated Assessment Scale Observations into subcategories and/or groupings by time. Subcategories can be things such as Mood and Affect, Behavior, Thought Process, Perception, Cognition, etc. NOTE: This is modelled to be consistent with HL7 C-CDA R2, for consistency, but re-defining for international use.			
Section Code		75275-8, LOINC, "Cognitive Function"			
Author		May vary			
Informant		May vary			
Subject		current recordTarget			
Opt and Card	**Condition**	**Data Element or Section Name**	**Template ID**	**Specification Document**	**Vocabulary Constraint**
Entries					
R [1..*]		Mental Status Observation entry	1.3.6.1.4.1.19376.1.5.3.1.4.25	6.3.4.E1	

```
<component>
  <section>
    <templateId root=' 1.3.6.1.4.1.19376.1.5.3.1.3.38'/>
    <id root=' ' extension=' '/>
    <code code=' 75275-8' displayName='Cognitive Function'
      codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC'/>
    <text>
      Text as described above
    </text>
  </section>
</component>
```

Figure 6.3.3.10.S1-1: Specification for Mental Status Organizer Section

6.3.3.10.S2 Review of Systems - EMS - Section Content Module

Table 6.3.3.10.S2-1: Review of Systems - EMS Section

Template Name		Review of Systems - EMS			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.3.39			
Parent Template		Review of Systems (1.3.6.1.4.1.19376.1.5.3.1.3.18)			
General Description		The EMS review of systems section shall contain only required and optional subsections dealing with the responses the patient gave to a set of routine questions on body systems in general and specific risks not covered in general review of systems.			
Section Code		10187-3, LOINC, "Review of Systems"			
Author		May vary			
Informant		May vary			
Subject		current recordTarget			
Opt and Card	**Condition**	**Data Element or Section Name**	**Template ID**	**Specification Document**	**Vocabulary Constraint**
Subsections					
R2 [0..1]		Pregnancy Status Review	1.3.6.1.4.1.19376.1.5.3.1.1.9.47	PCC TF-3:6.3.3.2.34	6.3.3.10.S.1
Entries					
R2 [0..1]		Last Oral Intake	1.3.6.1.4.1.19376.1.5.3.1.4.26	6.3.4.E2	
R2 [0..1]		Last Known Well	1.3.6.1.4.1.19376.1.5.3.1.4.27	6.3.4.E3	

```
<component>
  <section>
    <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.18'/>
    <templateId root=’ 1.3.6.1.4.1.19376.1.5.3.1.3.39’/>
    <id root=' ' extension=' '/>
    <code code='10187-3' displayName='REVIEW OF SYSTEMS'
      codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC'/>
    <text>
      Text as described above
    </text>
    <component>
      <section>
        <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.9.47'/>
        <!-- Required if known Pregnancy Status Review Section content -->
      </section>
    </component>
    <entry>
         :
      <!-- Required if known Last Oral Intake Entry element -->
        <templateId root=’TBD’/>
         :
    </entry>
    <entry>
         :
      <!-- Required if known Last Known Well Entry element -->
        <templateId root=’TBD’/>
         :
    </entry>
  </section>
</component>
```

Figure 6.3.3.10.S2-1: Specification for Review of Systems - EMS Section

6.3.3.10.S2.1 Pregnancy Status Vocabulary Constraint

The value for Pregnancy Status/ code SHALL be drawn from the Pregnancy value set 2.16.840.1.113883.17.3.11.42 [HL7 EMS PCR] unless further extended by national extension.

6.3.3.10.S3 EMS Procedures and Interventions Section Content Module

Table 6.3.3.10.S3-1: EMS Procedures and Interventions Section

Template Name		EMS Procedures and Interventions Section			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.1.13.2.14			
Parent Template		Procedures and Interventions Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11)			
General Description		The EMS Procedures and Interventions Section shall contain coded procedures performed during Pre-hospital paramedical care including information related to the success, unsuccessful attempts, and patient response as documented by the paramedicine care provider.			
Section Code		29554-3, LOINC, "Procedure"			
Author		May vary			
Informant		May vary			
Subject		current recordTarget			
Opt and Card	**Condition**	**Data Element or Section Name**	**Template ID**	**Specification Document**	**Vocabulary Constraint**
Entries					
R [1..1]		Procedure	1.3.6.1.4.1.19376.1.5.3.1.4.19	PCC TF-2: 6.3.4.33	
R2 [0..1]		Abandoned Procedure Reason Observation	2.16.840.1.1133883.17.3.10.1.130	HL7 EMS Run Report R2	
R2 [0..1]		Procedure Prior Indicator	2.16.840.1.1133883.17.3.10.1.131	HL7 EMS Run Report R2	
R2 [0..1]		Procedure Number Of Attempts Observation	2.16.840.1.1133883.17.3.10.1.132	HL7 EMS Run Report R2	
R2 [0..1]		Procedure Successful Observation	2.16.840.1.1133883.17.3.10.1.133	HL7 EMS Run Report R2	
R2 [0..1]		Procedure Complications Observation	2.16.840.1.1133883.17.3.10.1.179	HL7 EMS Run Report R2	
R2 [0..1]		Procedure Patient Response Observation	2.16.840.1.1133883.17.3.10.1.135	HL7 EMS Run Report R2	
R2 [0..1]		Airway Confirmation Observation	2.16.840.1.1133883.17.3.10.1.175	HL7 EMS Run Report R2	

6.3.3.10.S3.1 <effectiveTime><low value="/><high value="/></effectiveTime>

This element should be present, and records the time at which the procedure occurred (in EVN mood), the desired time of the procedure in INT mood. If an abandoned time is recorded, the time it is abandoned is reflected in effectiveTime(high).

6.3.3.10.S3.2 <approachSiteCode code=" displayName=" codeSystem=" codeSystemName="/>

This element may be present to indicate the procedure approach. Required conditionally if procedure code is intravenous catheterization, using valueSet IVSite - 2.16.840.1.113883.17.3.11.56 unless otherwise constrained by jurisdiction.

6.3.3.10.S3.3 <performer>

For procedures in EVN mood, at least one performer should be present that identifies the provider of the service given. More than one performer may be present. The <time> element should be used to indicate the duration of the participation of the performer when it is substantially different from that of the effectiveTime of the procedure.

Such performers **SHALL** contain exactly one [1..1] **`assignedEntity`**

a. This assignedEntity **SHALL** contain exactly one [1..1] **`id`** indicating the performer's jurisdiction license number as defined by the jurisdiction
b. This assignedEntity **SHALL** contain exactly one [1..1] **`code`** which **SHALL** use values from the Provider Role concept domain as specified by jurisdiction.

6.3.3.10.S3.4 @negationInd

Required to document a procedure not performed, with required entryRelationship typeCode=RSON

6.3.3.10.S3.5 <entryRelationship typeCode='RSON'>

A <procedure> act may indicate one or more reasons for the procedure. These reasons identify the concern that was the reason for the procedure via an Internal Reference (see PCC TF-2: 6.3.4.10 Internal References) to the concern. The extension and root of each observation present must match the identifier of a concern entry contained elsewhere within the CDA document. For procedures not performed, this is used to document the "reason not performed", documenting the reason using valueSet Reason Procedure not Performed Superset - 2.16.840.1.113883.17.3.11.100 unless otherwise specified by jurisdiction.


```
<component>
  <section>
    <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11'/>
    <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.14'/>
    <id root=' ' extension=' '/>
    <code code='29554-3' displayName='Procedure'
      codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC'/>
    <text>
      Text as described above
    </text>
    <entry>
         :
      <!-- Required Procedure Entry element -->
        <templateId root='1.3.6.1.4.1.19376.1.5.3.1.4.19'/>
         :
    </entry>
    <entry>
         :
      <!-- Required if known Abandoned Procedure Reason Observation Entry
element -->
        <templateId root='2.16.840.1.1133883.17.3.10.1.130'/>
         :
    </entry>
    <entry>
         :
      <!-- Required if known Procedure Prior Indicator Entry element -->
        <templateId root='2.16.840.1.1133883.17.3.10.1.131'/>
         :
    </entry>
    <entry>
         :
      <!-- Required if known Procedure Number Of Attempts Observation Entry
element -->
        <templateId root='2.16.840.1.1133883.17.3.10.1.132'/>
         :
    </entry>
    <entry>
         :
      <!-- Required if known Procedure Successful Observation Entry element -
->
        <templateId root='2.16.840.1.1133883.17.3.10.1.133'/>
         :
    </entry>
    <entry>
         :
      <!-- Required if known Procedure Complications Observation Entry
element -->
        <templateId root='2.16.840.1.1133883.17.3.10.1.179'/>
         :
    </entry>
    <entry>
         :
      <!-- Required if known Procedure Patient Response Observation Entry
element -->
        <templateId root='2.16.840.1.1133883.17.3.10.1.135'/>
```

```
        :
    </entry>
    <entry>
        :
      <!-- Required if known Airway Confirmation Observation Entry element --
>
        <templateId root='2.16.840.1.1133883.17.3.10.1.175'/>
        :
    </entry>
  </section>
</component>
```

Figure 6.3.3.10.S3.5-1: EMS Procedures and Interventions Section

6.3.3.10.S4 EMS Injury Incident Description Clinical Section Content Module

Table 6.3.3.10.S4-1: EMS Injury Incident Description Clinical Section

Template Name	EMS Injury Incident Description Clinical Section
Template ID	1.3.6.1.4.1.19376.1.5.3.1.3.40
Parent Template	EMS Injury Incident Description Section (2.16.840.1.113883.17.3.10.1.17 HL7 EMS Run Report R2)
General Description	The EMS Injury Incident Description Clinical Section shall contain injury information where the Pre-hospital paramedical care was in response to an injury.
Section Code	67800-3, LOINC, "EMS injury incident description Narrative"
Author	May vary
Informant	May vary
Subject	current recordTarget

Opt and Card	Condition	Data Element or Section Name	Template ID	Specification Document	Constraint
Entries					
R [1..1]		Injury Cause Category	2.16.840.1.1133883.17.3.10.1.50	HL7 EMS Run Report R2	
RE [0..1]		Injury Mechanism	2.16.840.1.1133883.17.3.10.1.51	HL7 EMS Run Report R2	
R [1..1]		Trauma Center Criteria	2.16.840.1.1133883.17.3.10.1.52	HL7 EMS Run Report R2	6.3.3.10.S4.1
R [1..1]		Injury Risk Factor	2.16.840.1.1133883.17.3.10.1.53	HL7 EMS Run Report R2	
O [0..1]		Vehicle Impact Area	2.16.840.1.1133883.17.3.10.1.54	HL7 EMS Run Report R2	6.3.3.10.S4.2
O [0..1]		Patient Location In Vehicle	2.16.840.1.1133883.17.3.10.1.55	HL7 EMS Run Report R2	6.3.3.10.S4.3
O [0..1]		Vehicle Occupant Safety Equipment	2.16.840.1.1133883.17.3.10.1.56	HL7 EMS Run Report R2	

O [0..1]		Airbag Deployment Status	2.16.840.1.1133883.17.3.10.1.57	HL7 EMS Run Report R2	
O [0..1]		Height Of Fall	2.16.840.1.1133883.17.3.10.1.58	HL7 EMS Run Report R2	
O [0..1]		Disaster Type	2.16.840.1.1133883.17.3.10.1.59	HL7 EMS Run Report R2	

6.3.3.10.S4.1 Trauma Center Criteria

This entry is required by the parent section, but SHALL be NULL as this information is not relevant to clinical care.

6.3.3.10.S4.2 Vehicle Impact Area

This entry is optional in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.3.10.S4.3 Patient Location In Vehicle

This entry is optional in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.3.10.S5 EMS Procedures and Interventions Clinical Section Content Module

Table 6.3.3.10.S5-1: EMS Procedures and Interventions Clinical Section

Template Name		EMS Procedures and Interventions Clinical Section			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.1.13.2.14			
Parent Template		Procedures and Interventions Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11) EMS Procedures and Interventions Section (1.3.6.1.4.1.19376.1.5.3.1.1.13.2.14)			
General Description		The EMS Procedures and Interventions Clinical Section shall contain coded procedures performed during Pre-hospital paramedical care including information related to the success, unsuccessful attempts, and patient response as documented by the paramedicine care provider. This section is limited to the information needed for continued clinical care at the receiving facility.			
Section Code		29554-3, LOINC, "Procedure"			
Author		May vary			
Informant		May vary			
Subject		current recordTarget			
Opt and Card	**Condition**	**Data Element or Section Name**	**Template ID**	**Specification Document**	**Constraint**
Entries					
R [1..1]		Procedure	1.3.6.1.4.1.19376.1.5.3.1.4.19	PCC TF-2: 6.3.4.33	
R2 [0..1]		Abandoned Procedure Reason Observation	2.16.840.1.1133883.17.3.10.1.130	HL7 EMS Run Report R2	

R2 [0..1]		Procedure Prior Indicator	2.16.840.1.1133883.17.3.10.1.131	HL7 EMS Run Report R2	
R2 [0..1]		Procedure Number Of Attempts Observation	2.16.840.1.1133883.17.3.10.1.132	HL7 EMS Run Report R2	
O [0..1]		Procedure Successful Observation	2.16.840.1.1133883.17.3.10.1.133	HL7 EMS Run Report R2	6.3.3.10.S5.1
R2 [0..1]		Procedure Complications Observation	2.16.840.1.1133883.17.3.10.1.179	HL7 EMS Run Report R2	
O [0..1]		Procedure Patient Response Observation	2.16.840.1.1133883.17.3.10.1.135	HL7 EMS Run Report R2	6.3.3.10.S5.2
R2 [0..1]		Airway Confirmation Observation	2.16.840.1.1133883.17.3.10.1.175	HL7 EMS Run Report R2	6.3.3.10.S5.3

6.3.3.10.S5.1 Procedure Successful Observation

This entry is R2 in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.3.10.S5.2 Procedure Patient Response Observation

This entry is Optional in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.3.10.S5.3 Procedure Patient Response Observation

This entry is R2 in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.3.10.S6 EMS Scene Clinical Section Content Module

Table 6.3.3.10.S6-1: EMS Scene Clinical Section

Template Name		EMS Scene Clinical Section			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.3.41			
Parent Template		EMS Scene Section 2.16.840.1.113883.17.3.10.1.8 (HL7 EMS Run Report R2)			
General Description		The EMS Scene Clinical Section shall contain information about the environment in which the patient is found for the Pre-hospital paramedical care.			
Section Code		67665-0, LOINC, " EMS scene Narrative"			
Author		May vary			
Informant		May vary			
Subject		current recordTarget			
Opt and Card	**Condition**	**Data Element or Section Name**	**Template ID**	**Specification Document**	**Constraint**
Entries					
R [1..1]		First Unit Indicator	2.16.840.1.1133883.17.3.10.1.84	HL7 EMS Run Report R2	6.3.3.10.S6.1
R [1..1]		Scene Patient Count	2.16.840.1.1133883.17.3.10.1.86	HL7 EMS Run Report R2	6.3.3.10.S6.2
R [1..1]		Mass Casualty Indicator	2.16.840.1.1133883.17.3.10.1.87	HL7 EMS Run Report R2	
R [1..1]		Location Type Observation	2.16.840.1.1133883.17.3.10.1.88	HL7 EMS Run Report R2	

6.3.3.10.S6.1 First Unit Indicator

This entry is R in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.3.10.S2.2 Procedure Patient Response Observation

This entry is R in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.3.10.S7 EMS Situation Clinical Section Content Module

Table 6.3.3.10.S7-1: EMS Situation Clinical Section

Template Name		EMS Situation Clinical Section			
Template ID		1.3.6.1.4.1.19376.1.5.3.1.3.42			
Parent Template		EMS Situation Section 2.16.840.1.113883.17.3.10.1.9 (HL7 EMS Run Report R2)			
General Description		The EMS Situation Clinical Section shall contain information about patient symptoms and complaints during the Pre-hospital paramedical care.			
Section Code		67666-8, LOINC, "EMS situation Narrative"			
Author		May vary			
Informant		May vary			
Subject		current recordTarget			
Opt and Card	**Condition**	**Data Element or Section Name**	**Template ID**	**Specification Document**	**Constraint**
Entries					
R [1..1]		Complaint	2.16.840.1.1133883.17.3.10.1.63	HL7 EMS Run Report R2	
R [1..1]		Possible Injury	2.16.840.1.1133883.17.3.10.1.64	HL7 EMS Run Report R2	
R [1..1]		Provider Primary Impression	2.16.840.1.1133883.17.3.10.1.65	HL7 EMS Run Report R2	
R [1..1]		Primary Symptom	2.16.840.1.1133883.17.3.10.1.66	HL7 EMS Run Report R2	
R [1..1]		Other Symptoms	2.16.840.1.1133883.17.3.10.1.67	HL7 EMS Run Report R2	
R [1..1]		Provider Secondary Impressions	2.16.840.1.1133883.17.3.10.1.68	HL7 EMS Run Report R2	
R [1..1]		Initial Patient Acuity	2.16.840.1.1133883.17.3.10.1.69	HL7 EMS Run Report R2	6.3.3.10.S7.1

6.3.3.10.S7.1 Initial Patient Acuity

This entry is R in the parent section, but SHALL be omitted or NULL as this information is not relevant to clinical care.

6.3.4 CDA Entry Content Modules

Add to Section 6.3.4.E Entry Content Modules

6.3.4.E1 Mental Status Entry Content Module

Table 6.3.4.E1-1: Mental Status Entry

Template Name	Mental Status Entry				
Template ID	1.3.6.1.4.1.19376.1.5.3.1.4.25				
Parent Template	NA				
General Description	Qualitative assessment of condition of patient's mental status.				
Class/Mood	**Code**		**Data Type**	**Value**	
OBS/EVN	75275-8, LOINC, Cognitive Function		CD	SNOMED CT (CodeSystem: 2.16.840.1.113883.6.96)	
Opt and Card	**entryRelationship**	**Description**	**Template ID**	**Specification Document**	**Vocabulary Constraint**
R [1..1]		Simple Observation	1.3.6.1.4.1.19376.1.5.3.1.4.13		Concept Domain Mental Status

6.3.4.E2 Last Oral Intake Entry Content Module

1285 **Table 6.3.4.E2-1: Last Oral Intake Entry**

Template Name	Last Oral Intake Entry				
Template ID	1.3.6.1.4.1.19376.1.5.3.1.4.26				
Parent Template	1.3.6.1.4.1.19376.1.5.3.1.4.13				
General Description	Time of patient's last oral intake				
Class/Mood	**Code**		**Data Type**	**Value**	
OBS/EVN	67517-3, LOINC, Last oral intake [Date and time] NEMSIS		TS	NA	
Opt and Card	**entryRelationship**	**Description**	**Template ID**	**Specification Document**	**Vocabulary Constraint**
R [1..1]		Simple Observation	1.3.6.1.4.1.19376.1.5.3.1.4.13		NA

6.3.4.E3 Last Known Well Entry Content Module

Table 6.3.4.E3-1: Last Known Well Entry

Template Name	Last Known Well Entry		
Template ID	1.3.6.1.4.1.19376.1.5.3.1.4.27		
Parent Template	1.3.6.1.4.1.19376.1.5.3.1.4.13		
General Description	The time prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current condition or at his or her baseline state of health.		
Class/Mood	**Code**	**Data Type**	**Value**
OBS/EVN	1.3.6.1.4.1.19376.1.5.3.1.4.27, LOINC, Time last known well [Date and time]	TS	NA

6.5 PCC Value Sets and Concept Domains

6.5.X Paramedicine Care Summary Concept Domains

1290 The Concept Domains below are used in the Paramedicine Care Summary.

Paramedicine Care Summary
Ethnicity
Marital Status
Race
Religious Affiliation
Language Communication
Data Enterer
Confidentiality code
Destination
Service Type
advanced directives
Allergen
EMS Level of Service
Medications Administration route
UnitLevelOfCare
UnitResponseRole
Manufactured Material
Destination type
ProviderResponseRole
CrewRoleLevel
ProviderRole

6.6 HL7 FHIR Content Module

6.6.X Transport Content

6.6.X.1 Referenced Standards

Title	URL
HL7 Version 3 Domain Analysis Model: Emergency Medical Services, Release 1	<http://www.hl7.org/implement/standards/product_brief.cfm?product_id=39>
HL7 Version 3 Domain Information Model; Emergency Medical Services, Release 1	<http://www.hl7.org/implement/standards/product_brief.cfm?product_id=302>
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>
HL7 Version 3 Domain Analysis Model: Trauma Registry Data Submission,	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
National Trauma Data Standard Data Dictionary	https://www.facs.org/~/media/files/quality%20programs/trauma/ntdb/ntds/data%20dictionaries/ntds%20data%20dictionary%202018.ashx
HL7 FHIR standard STU3	http://hl7.org/fhir/STU3/index.html

1295 #### 6.6.X.2.1 FHIR Resource Bundle Content

The first column of this table refers to the options that these structure definitions apply to, e.g., complete report (CR), Clinical Subset (CS), Quality (Q), Trauma (T).

Table 6.6.X.2.1-1: FHIR Resource Bundle Structure Definitions

Found In	FHIR Resource location	Optionality	Cardinality	Structured Definition
CR, CS, Q, T	Composition	R	1..1	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Composition
CR, Q	Patient	R	1..1	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Patinet
T, CS	Patient	RE	0..1	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS-CS.Patinet
CR, CS, Q, T	Condition	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Condition
CR, CS, Q, T	Procedure	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Procedure
CR, CS, Q, T	Medication Administration	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.MedicationAdministration
CR, CS, Q,	Medication Statement	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.MedicationStatement

Found In	FHIR Resource location	Optionality	Cardinality	Structured Definition
CR, CS, Q, T	Observation	R	1..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Observation
CR, Q	Encounter	R	1..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Encounter
CS, T	Encounter	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS-CS.Encounter
CR, Q	Location	R	1..1	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Location
CS, T	Location	RE	0..1	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS-CS.Location
CR, CS,	Related Person	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.RelatedPerson
CR, CS, Q, T	Allergy Intolerance	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.AllergyIntolerance
CR, CS, Q, T	Adverse Event	RE	0..1	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.AdverseEvent
CR, CS, Q, T	Clinical Impression	R	1..*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.ClinicalImpression
CR, CS, Q, T	Device	RE	0..1*	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.Device
CR, CS, Q, T	Document Reference	RE	0.1	http://ihe.net/fhir/StructureDefinition/IHE.PCC.PCS.DocumentReference

6.6.X.2.2 FHIR Resource Data Specifications

The following table shows the mapping of the FHIR Resources supporting the content for EMS Data Elements/Attributes. The Content Creator SHALL support the Resources identified by this table. Content Consumer SHALL receive paramedicine content from the specified resource for each attribute.

Table 6.6.X.2.2-1: FHIR Resource Data Specification Data Elements

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Patient Care Report Number	Resource.Composition	RE [0..1]	The unique number automatically assigned by the EMS agency for each Patient Care Report (PCR). This should be a unique number for the EMS agency for all of time.	
EMS Agency Number	Organization.Identifier	RE [0..1]	The state-assigned provider number of the responding agency.	
EMS Agency Name	Organization.name	RE [0..1]	N/A	
Incident number	Encounter.Identifier	RE [0..1]	The incident number assigned by the emergency Dispatch System.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
EMS response number	Encounter.Identifier	RE [0..1]	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	Encounter.type	RE [0..1]	The type of service or category of service requested of the EMS Agency responding for this specific EMS event.	
Level of care for this unit	HealthService.characteristic	RE [0..1]	The level of care (BLS or ALS) the unit is able to provide based on the units' treatment capabilities for this EMS response.	
Vehicle Dispatch Location	HealthService.location	O [0..1]	The EMS location or healthcare facility representing the geographic location of the unit or crew at the time of dispatch.	
Response Mode to Scene	Encounter.encounter-responceMode **IHE extension**	RE [0..1]	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	Encounter.encounter-responceModeDescriptor **IHE extension**	RE [0..1]	The documentation of response mode techniques used for this EMS response.	
Complaint Reported by Dispatch	Encounter.reason	RE [0..*]	The complaint dispatch reported to the responding unit.	
Dispatch Priority (Patient Acuity)	Encounter.priority Encounter.priority.code	RE [0..1]	The actual, apparent, or potential acuity of the patient's condition as determined through information obtained during the EMD process.	
Crew ID Number	Encounter.participant.individual (Practitioner.identifier)	RE [0..1]	The state certification/licensure ID number assigned to the crew member.	
Crew Member Level	Encounter.participant.individual (Practitioner.qualification.code)	RE [0..1]	The functioning level of the crew member ID during this EMS patient encounter.	
Crew Member Response Role	Encounter.participant.type	RE [0..1]	The role(s) of the role member during response, at scene treatment, and/or transport.	
PSAP Call Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the phone rings (emergencycall to public safety answering point or other designated entity) requesting EMS services.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Dispatched Notified Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time dispatch was notified by the emergency call taker (if a separate entity).	
Unit Notified by Dispatch Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the responding unit was notified by dispatch.	
Dispatch Acknowledged Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the dispatch was acknowledged by the EMS Unit.	
Unit En Route Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the unit responded; that is, the time the vehicle started moving.	
Unit Arrived on Scene Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the responding unit arrived on the scene; that is, the time the vehicle stopped moving at the scene.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Arrived at Patient Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the responding unit arrived at the patient's side.	
Transfer of EMS Patient Care Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the patient was transferred from this EMS agency to another EMS agency for care.	
Unit Left Scene Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the responding unit left the scene with a patient (started moving).	
Arrival at Destination Landing Area Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the Air Medical vehicle arrived at the destination landing area.	
Patient Arrived at Destination Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	RE [0..1]	The date/time the responding unit arrived with the patient at the destination or transfer point.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Destination Patient Transfer of Care Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	O [0..1]	The date/time that patient care was transferred to the destination healthcare facilities staff.	
Unit Back In Service Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	O [0..1]	The date/time the unit back was back in service and available for response (finished with call, but not necessarily back in home location).	
Unit Canceled Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	O [0..1]	The date/time the unit was canceled.	
Unit Back at Home Location Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	O [0..1]	The date/time the responding unit was back in their service area. With agencies who utilized Agency Status Management, home location means the service area as assigned through the agency status management protocol.	
EMS Call Complete Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	O [0..1]	The date/time the responding unit completed all tasks associated with the event including transfer of the patient, and such things as cleaning and restocking.	
EMS Patient ID	Encounter.subject (Patient.identifier)	RE [0..1]	The unique ID for the patient within the Agency.	
Last name	Encounter.subject (Patient.name)	RE [0..1]	The patient's last (family) name.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
First name	Encounter.subject (Patient.name)	RE [0..1]	The patient's first (given) name.	
middle initial	Encounter.subject (Patient.name)	RE [0..1]	The patient's middle name, if any.	
home address	Encounter.subject (Patient.address)	RE [0..1]	Patient's address of residence.	
home city	Encounter.subject (Patient.address)	RE [0..1]	The patient's primary city or township of residence.	
home country	Encounter.subject (Patient.address)	RE [0..1]	The patient's home county or parish of residence.	
home state	Encounter.subject (Patient.address)	RE [0..1]	The state, territory, or province where the patient resides.	
home zip code	Encounter.subject (Patient.address)	RE [0..1]	The patient's ZIP code of residence.	
country of residence	Encounter.subject (Patient.address)	RE [0..1]	The country of residence of the patient.	
home census tract	Encounter.subject (Patient.address)	O [0..1]	The census tract in which the patient lives.	
social security number	Encounter.subject (Patient.identifier)	O [0..1]	The patient's social security number.	
gender	Encounter.subject (Patient.gender)	RE [0..1]	The Patient's Gender.	PCC TF-3: 3.6.6.X.4.1
Race	Encounter.subject (Patient.race (US extension))	O [0..*]	The patient's race as defined by the OMB (US Office of Management and Budget).	PCC TF-3: 3.6.6.X.4.2
Age	Encounter.subject (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	Encounter.subject (Patient.identifier)	RE [0..1]	The unit used to define the patient's age.	
Date of Birth	Encounter.subject (Patient.birthDate)	RE [0..1]	The patient's date of birth.	
Patient's Phone Number	Encounter.subject (Patient.telecom)	RE [0..1]	The patient's phone number.	
Primary Method of Payment	Encounter.subject (Coverage.type)	RE [0..1]	The primary method of payment or type of insurance associated with this EMS encounter.	
Closest Relative/Guardian Last Name	Encounter.subject (RelatedPerson.name)	RE [0..1]	The last (family) name of the patient's closest relative or guardian.	
Closest Relative/Guardian First Name	Encounter.subject (RelatedPerson.name)	RE [0..1]	The first (given) name of the patient's closest relative or guardian.	
Closest Relative/Guardian Middle Initial/Name	Encounter.subject (RelatedPerson.name)	RE [0..1]	The middle name/initial, if any, of the closest patient's relative or guardian.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Closest Relative/Guardian Street Address	Encounter.subject (RelatedPerson.address)	RE [0..1]	The street address of the residence of the patient's closest relative or guardian.	
Closest Relative/Guardian City	Encounter.subject (RelatedPerson.address)	RE [0..1]	The primary city or township of residence of the patient's closest relative or guardian.	
Closest Relative/Guardian State	Encounter.subject (RelatedPerson.address)	RE [0..1]	The state of residence of the patient's closest relative or guardian.	
Closest Relative/Guardian Zip Code	Encounter.subject (RelatedPerson.address)	RE [0..1]	The ZIP Code of the residence of the patient's closest relative or guardian.	
Closest Relative/Guardian Country	Encounter.subject (RelatedPerson.address)	RE [0..1]	The country of residence of the patient's closest relative or guardian.	
Closest Relative/Guardian Phone Number	Encounter.subject (RelatedPerson.telecom)	RE [0..1]	The phone number of the patient's closest relative or guardian.	
Closest Relative/Guardian Relationship	Encounter.subject (RelatedPerson.relationship)	RE [0..1]	The relationship of the patient's closest relative or guardian.	
Patient's Employer	Encounter.account(Accco unt.coverage.(Coverage.issuer))	O [0..1]	The patient's employer's Name.	
Patient's Employer's Address	Encounter.account(Accco unt.coverage(Coverage.identifier))	O [0..1]	The street address of the patient's employer.	
Patient's Employer's City	Encounter.account(Accco unt.coverage(Coverage.identifier))	O [0..1]	The city or township of the patient's employer used for mailing purposes.	
Patient's Employer's State	Encounter.account(Accco unt.coverage(Coverage.identifier))	O [0..1]	The state of the patient's employer.	
Patient's Employer's Zip Code	Encounter.account(Accco unt.coverage(Coverage.identifier))	O [0..1]	The ZIP Code of the patient's employer.	
Patient's Employer's Country	Encounter.account(Accco unt.coverage(Coverage.identifier))	O [0..1]	The country of the patient's employer.	
Patient's Employer's Primary Phone Number	Encounter.account(Accco unt.coverage(Coverage.identifier))	O [0..1]	The employer's primary phone number.	
Mass Casualty Incident	Encounter.encounter-massCasualty **IHE extension**	RE [0..1]	Indicator if this event would be considered a mass casualty incident (overwhelmed existing EMS resources).	
Triage Classification for MCI Patient	Encounter.priority Encounter.priority.code	RE [0..1]	The color associated with the initial triage assessment/classification of the MCI patient.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Incident Location Type	Encounter.encounter-incidentLocationType **IHE extension**	RE [0..1]	The kind of location where the incident happened.	
Incident Facility Code	Encounter.encounter-incidentFacilityCode **IHE extension**	RE [0..1]	The state, regulatory, or other unique number (code) associated with the facility if the Incident is a Healthcare Facility.	
Incident City	Encounter.encounter-incidentLocationAddress **IHE extension**	RE [0..1]	The number of the specific apartment, suite, or room where the incident occurred.	
Incident State	Encounter.encounter-incidentLocationAddress **IHE extension**	RE [0..1]	The state, territory, or province where the patient was found or to which the unit responded (or best approximation).	
Incident ZIP Code	Encounter.encounter-incidentLocationAddress **IHE extension**	RE [0..1]	The ZIP code of the incident location.	
Incident County	Encounter.encounter-incidentLocationAddress **IHE extension**	RE [0..1]	The county or parish where the patient was found or to which the unit responded (or best approximation).	
Incident Country	Encounter.encounter-incidentLocationAddress **IHE extension**	RE [0..1]	The country of the incident location.	
Date/Time of Symptom Onset	Encounter.diagnosis.condition(condition. onsetDateTime)	RE [0..1]	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	Encounter.diagnosis.condition(condition.code)	RE [0..1]	Indication whether or not there was an injury.	
Complaint Type	Encounter.diagnosis.condition(Condition.category)	RE [0..*]	The type of patient healthcare complaint being documented.	
Complaint	Encounter.diagnosis.condition(Condition.note)	RE [0..*]	The statement of the problem by the patient or the history provider.	
Duration of Complaint	Encounter.diagnosis.condition(Condition.abatemetDateTime)	RE [0..1]	The duration of the complaint.	
Chief complaint Anatomic Location	Encounter.diagnosis.condition(Condition.bodySite)	RE [0..1]	The primary anatomic location of the chief complaint as identified by EMS personnel.	
Chief Complain organ system	Encounter.diagnosis.condition(Condition.bodySite)	RE [0..1]	The primary organ system of the patient injured or medically affected.	
Primary Symptom	Encounter.diagnosis.condition(Condition.evidence.code)	RE [0..1]	The primary sign and symptom present in the patient or observed by EMS personnel.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Other Associated symptoms	Encounter.diagnosis.condition(Condition.evidence.code)	RE [0..*]	Other symptoms identified by the patient or observed by EMS personnel.	
Provider's Primary Impressions	Encounter←Observation.value[x]	RE [0..1]	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).	
Provider's Secondary Impressions	Encounter←Observation.value[x]	RE [0..1]	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	Encounter←Observation.interpretation	RE [0..1]	The acuity of the patient's condition upon EMS arrival at the scene.	
Work-related Illness/Injury	Encounter←Observation.note	RE [0..1]	Indication of whether or not the illness or injury is work related.	
Patient Activity	Encounter←Observation.value[x]	RE [0..1]	The activity the patient was involved in at the time the patient experienced the onset of symptoms or experienced an injury.	
Date/Time Last Known Well	Encounter←Observation.value[x]	RE [0..1]	The estimated date and time the patient was last known to be well or in their usual state of health. This is described or estimated by the patient, family, and/or bystanders.	
Cause of Injury	Encounter←Observation.value[x]	RE [0..*]	The category of the reported/suspected external cause of the injury.	
Mechanism of Injury	No mapping available	RE [0..1]	The mechanism of the event which caused the injury.	
Trauma Center Criteria	Encounter←Observation.value[x]	RE [0..*]	Physiologic and Anatomic Field Trauma Triage Criteria (steps 1 and 2) as defined by the Centers for Disease Control.	
Vehicular, Pedestrian, or Other Injury Risk Factor	Encounter←Observation.value[x]	RE [0..*]	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	Encounter←Observation.value[x]	RE [0..1]	The area or location of initial impact on the vehicle based on 12-point clock diagram.	
Location of Patient in Vehicle	Encounter←Observation.value[x]	RE [0..1]	The seat row location of the vehicle at the time of the crash with the front seat numbered as 1.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Use of Occupant Safety Equipment	Encounter←Observation.value[x]	RE [0..1]	Safety equipment in use by the patient at the time of the injury.	
Airbag Deployment	Encounter←Observation.value[x]	RE [0..1]	Indication of Airbag Deployment.	
Height of Fall (feet)	Encounter←Observation.value[x]	RE [0..1]	The distance in feet the patient fell, measured from the lowest point of the patient to the ground.	
OSHA Personal Protective Equipment Used	Encounter←Observation.value[x]	RE [0..*]	Documentation of the use of OSHA required protective equipment used by the patient at the time of injury.	
Cardiac Arrest	Encounter←Observation.value[x]	RE [0..1]	Indication of the presence of a cardiac arrest at any time during this EMS event.	
Cardiac Arrest Etiology	Encounter←Observation.value[x]	RE [0..1]	Indication of the etiology or cause of the cardiac arrest (classified as cardiac, non-cardiac, etc.).	
Resuscitation Attempted By EMS	Encounter←Procedure.code	RE [0..1]	Indication of an attempt to resuscitate the patient who is in cardiac arrest (attempted, not attempted due to DNR, etc.).	
Arrest Witnessed By	Encounter.encounter – witness (Person) **IHE Extension**	RE [0..*]	Indication of who the cardiac arrest was witnessed by.	
CPR Care Provided Prior to EMS Arrival	Encounter.encounter – priorCprProvided **IHE Extension**	RE [0..1]	Documentation of the CPR provided prior to EMS arrival.	
Who Provided CPR Prior to EMS Arrival	Encounter.encounter – priorCprProvidedRole **IHE Extension**	RE [0..*]	Documentation of who performed CPR prior to this EMS unit's arrival.	
AED Use Prior to EMS Arrival	Encounter.encounter – priorAedProvided **IHE Extension**	RE [0..1]	Documentation of AED use Prior to EMS Arrival.	
Who Used AED Prior to EMS Arrival	Encounter.encounter – priorAedProvidedRole **IHE Extension**	RE [0..1]	Documentation of who used the AED prior to this EMS unit's arrival.	
Type of CPR Provided	Encounter.encounter – CprProvidedType **IHE Extension**	RE [0..1]	Documentation of the type/technique of CPR used by EMS.	
First Monitored Arrest Rhythm of the Patient	Encounter←Observation.value[x]	RE [0..1]	Documentation of what the first monitored arrest rhythm which was noted.	
Any Return of Spontaneous Circulation	Encounter←Procedure.outcome	RE [0..1]	Indication whether or not there was any return of spontaneous circulation.	
Date/Time of Cardiac Arrest	Encounter←Observation.effective[x]	RE [0..1]	The date/time of the cardiac arrest (if not known, please estimate).	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Date/Time Resuscitation Discontinued	Encounter←Procedure.performedPeriod.end	RE [0..1]	The date/time resuscitation was discontinued.	
Reason CPR/Resuscitation Discontinued	Encounter←Procedure - resuscitationDiscontinued Reason **IHE Extension**	RE [0..1]	The reason that CPR or the resuscitation efforts were discontinued.	
Cardiac Rhythm on Arrival at Destination	Encounter←Observation.value[x]	RE [0..1]	The patient's cardiac rhythm upon delivery or transfer to the destination.	
End of EMS Cardiac Arrest Event	Encounter←Procedure – **IHE Extension**	RE [0..1]	The patient's outcome at the end of the EMS event.	
Date/Time of Initial CPR	Encounter←Procedure.performedPeriod.start	RE [0..1]	The initial date and time that CPR was started by anyone.	
Barriers to Patient Care	Encounter←Observation.value[x]	RE [0..*]	N/A	
Last Name of Patient's Practitioner	Encounter.subject (Patient.GeneralPractitioner)	O [0..1]	The last name of the patient's practitioner.	
First Name of Patient's Practitioner	Encounter.subject (Patient.GeneralPractitioner)	O [0..1]	The first name of the patient's practitioner.	
Middle Initial/Name of Patient's Practitioner	Encounter.subject (Patient.GeneralPractitioner)	O [0..1]	The middle initial/name of the patient's practitioner.	
Advanced Directives	DocumentReference	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	Encounter.diagnosis.condition(ClinicalImpression.finding)	RE [0..*]	The patient's pre-existing medical and surgery history of the patient.	
Medical/Surgical History	Encounter.diagnosis.condition(ClinicalImpression.date)	RE [0..*]	The patient's pre-existing medical and surgery history of the patient.	
Medical/Surgical History	Encounter.diagnosis.condition(Condition.code)	RE [0..*]	The patient's pre-existing medical and surgery history of the patient.	
Medical/Surgical History	Encounter.diagnosis.condition(Condition.onset[x])	RE [0..*]	The patient's pre-existing medical and surgery history of the patient.	
Medical/Surgical History	Encounter.diagnosis.condition(Procedure.performed[x])	RE [0..*]	The patient's pre-existing medical and surgery history of the patient.	
Medical/Surgical History	Encounter.diagnosis.condition(Procedure.code)	RE [0..*]	The patient's pre-existing medical and surgery history of the patient.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
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.	
Alcohol/Drug Use Indicators	Encounter←Observation.value[x]	RE [0..*]	Indicators for the potential use of alcohol or drugs by the patient related to the patient's current illness or injury.	
Pregnancy	Encounter.diagnosis.condition(Condition.code)	RE [0..1]	Indication of the possibility by the patient's history of current pregnancy.	Where code is "pregnant"
Last Oral Intake	Encounter←Observation.value[x]	O [0..*]	Date and Time of last oral intake.	
Date/Time Vital Signs Taken	Encounter←Observation.issued	RE [0..1]	The date/time vital signs were taken on the patient.	
Vitals Obtained Prior to this Unit's EMS Care	Encounter←Observation.value[x]	RE [0..1]	Indicates that the information which is documented was obtained prior to the documenting EMS units care.	
Cardiac Rhythm / Electrocardiography (ECG)	Encounter←Observation.value[x]	RE [0..1]	The cardiac rhythm / ECG and other electrocardiography findings of the patient as interpreted by EMS personnel.	
ECG Type	Encounter←Observatio.type	RE [0..1]	The type of ECG associated with the cardiac rhythm.	
Method of ECG Interpretation	Encounter←Observation.method	RE [0..1]	The method of ECG interpretation.	
SBP (Systolic Blood Pressure)	Encounter←Observation.value[x]	RE [0..1]	The patient's systolic blood pressure.	
DBP (Diastolic Blood Pressure)	Encounter←Observation.value[x]	RE [0..1]	The patient's diastolic blood pressure.	
Method of Blood Pressure Measurement	Encounter←Observation.method	RE [0..1]	Indication of method of blood pressure measurement.	
Mean Arterial Pressure	Encounter←Observation.value[x]	RE [0..1]	The patient's mean arterial pressure.	
Heart Rate	Encounter←Observation.value[x]	RE [0..1]	The patient's heart rate expressed as a number per minute.	
Method of Heart Rate Measurement	Encounter←Observation.method	RE [0..1]	The method in which the Heart Rate was measured. Values include auscultated, palpated, electronic monitor.	
Pulse Oximetry	Encounter←Observation.value[x]	RE [0..1]	The patient's oxygen saturation.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Pulse Rhythm	Encounter←Observation.value[x]	RE [0..1]	The clinical rhythm of the patient's pulse.	
Respiratory Rate	Encounter←Observation.value[x]	RE [0..1]	The patient's respiratory rate expressed as a number per minute.	
Respiratory Effort	Encounter←Observation.value[x]	RE [0..1]	The patient's respiratory effort.	
End Title Carbon Dioxide (ETCO2)	Encounter←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)	Encounter←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	Encounter←Observation.value[x]	RE [0..1]	The patient's blood glucose level.	
Glasgow Coma Score-Eye	Encounter←Observation.value[x]	RE [0..1]	The patient's Glasgow Coma Score Eye opening.	
Glasgow Coma Score-Verbal	Encounter←Observation.value[x]	RE [0..1]	The patient's Glasgow Coma Score Verbal.	
Glasgow Coma Score-Motor	Encounter←Observation.value[x]	RE [0..1]	The patient's Glasgow Coma Score Motor.	
Glasgow Coma Score-Qualifier	Encounter←Observation.value[x]	RE [0..1]	Documentation of factors which make the GCS score more meaningful.	
Total Glasgow Coma Score	Encounter←Observation.value[x]	RE [0..1]	The patient's total Glasgow Coma Score.	
Temperature	Encounter←Observation.value[x]	RE [0..1]	The patient's body temperature in degrees Celsius/centigrade.	
Temperature Method	Encounter←Observation.value[x]	RE [0..1]	The method used to obtain the patient's body temperature.	
Level of Responsiveness (AVPU)	Encounter←Observation.value[x]	RE [0..1]	The patient's highest level of responsiveness.	
Pain Scale Score	Encounter←Observation.value[x]	RE [0..1]	The patient's indication of pain from a scale of 0-10.	
Pain Scale Type	Encounter←Observation.value[x]	RE [0..1]	The type of pain scale used.	
Stroke Scale Score	Encounter←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	Encounter←Observation.value[x]	RE [0..1]	The type of stroke scale used.	
Reperfusion Checklist	Encounter←Observation.value[x]	RE [0..1]	The results of the patient's Reperfusion Checklist for potential Thrombolysis use.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
APGAR	Encounter←Observation.value[x]	RE [0..1]	The patient's total APGAR score (0-10).	
Revised Trauma Score	Encounter←Observation.value[x]	RE [0..1]	The patient's Revised Trauma Score.	
Estimated Body Weight in Kilograms	Encounter←Observation.interpretation	RE [0..1]	The patient's body weight in kilograms either measured or estimated.	
Length Based Tape Measure	Encounter←Observation.interpretation	RE [0..1]	The length-based color as taken from the tape.	
Date/Time of Assessment	Encounter←Observation.issued	RE [0..1]	The date/time of the assessment.	
Skin Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's skin.	
Head Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's head.	
Face Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's face.	
Neck Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's neck.	
Chest/Lungs Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's chest/lungs.	
Heart Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's heart.	
Abdominal Assessment Finding Location	Encounter←Observation.bodySite	RE [0..1]	The location of the patient's abdomen assessment findings.	
Abdominal Assessment Finding Location	Encounter←Observation.bodySite	RE [0..1]	The location of the patient's abdomen assessment findings.	
Abdomen Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's abdomen.	
Pelvis/Genitourinary Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's pelvis/genitourinary.	
Back and Spine Assessment Finding Location	Encounter←Observation.bodySite	RE [0..1]	The location of the patient's back and spine assessment findings.	
Back and Spine Assessment	Encounter←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	Encounter←Observation.bodySite	RE [0..1]	The location of the patient's extremity assessment findings.	
Extremities Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings associated with the patient's extremities.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Eye Assessment Finding Location	Encounter←Observation.bodySite	RE [0..1]	The location of the patient's eye assessment findings.	
Eye Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings of the patient's eye examination.	
Mental Status Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings of the patient's mental status examination.	
Neurological Assessment	Encounter←Observation.interpretation	RE [0..1]	The assessment findings of the patient's neurological examination.	
Stroke/CVA Symptoms Resolved	Encounter.diagnosis.condition(Condition.clinicalStatus)	RE [0..1]	Indication if the Stroke/CVA Symptoms resolved and when.	Where condition is stroke/CVA symptoms where clinicalStatus is resolved
Protocols Used	Encounter←Procedure.basedOn(Reference(procedure)	RE [0..*]	The protocol used by EMS personnel to direct the clinical care of the patient.	
Protocol Age Category	Encounter←Procedure.basedOn(Reference(procedure.category)	RE [0..1]	The age group the protocol is written to address.	
Date/Time Medication Administered	Encounter←MedicationAdministration.effective[x] Encounter←MedicationAdministration.effective.date/time	RE [0..1]	The date/time medication administered to the patient.	
Medication Administered Prior to this Unit's EMS Care	Encounter←MedicationAdministration.effective[x] Encounter←MedicationAdministration.effective.date/time	O [0..*]	Indicates that the medication administration which is documented was administered prior to this EMS units care.	
Medication Given	Encounter←MedicationAdministration.resource	RE [0..1]	The medication given to the patient.	
Medication Administered Route	Encounter←MedicationAdministration.dosage.route	RE [0..1]	The route medication was administered to the patient.	
Medication Dosage	Encounter←MedicationAdministration.dosage	RE [0..1]	The dose or amount of the medication given to the patient.	
Medication Dosage Units	Encounter←MedicationAdministration.dosage.dose	RE [0..1]	The unit of medication dosage given to patient.	
Response to Medication	Encounter←MedicationAdministration.note	RE [0..1]	The patient's response to the medication.	
Medication Complication	Encounter←AdverseEvent.reaction Encounter←AdverseEvent.Description	RE [0..*]	Any complication (abnormal effect on the patient) associated with the administration of the medication to the patient by EMS.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Medication Crew (Healthcare Professionals) ID	Encounter←MedicationAdministration.performer	RE [0..1]	The statewide assigned ID number of the EMS crew member giving the treatment to the patient.	
Role/Type of Person Administering Medication	Encounter←MedicationAdministration.performer.actor.practitioner.role	RE [0..1]	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	Encounter←MedicationAdministration.prescription	RE [0..1]	The type of treatment authorization obtained.	
Medication Authorizing Physician	Encounter←MedicationAdministration.prescription.medicationRequest.requester	RE [0..1]	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.	
Date/Time Procedure Performed	Encounter←Procedure.performed[x].performed.dateTime	RE [0..1]	The date/time the procedure was performed on the patient.	
Procedure Performed Prior to this Unit's EMS Care	Encounter←Procedure.performed[x].performed.dateTime	O [0..1]	Indicates that the procedure which was performed and documented was performed prior to this EMS units care.	
Procedure	Encounter←Procedure.code	RE [0..1]	The procedure performed on the patient.	
Size of Procedure Equipment	Encounter←Procedure.usedReference	RE [0..1]	The size of the equipment used in the procedure on the patient.	
Number of Procedure Attempts	Encounter←Procedure.partOf.observation.value[x]	RE [0..*]	The number of attempts taken to complete a procedure or intervention regardless of success.	
Procedure Successful	Encounter←Procedure Procedure.outcome	RE [0..1]	Indicates that this individual procedure attempt which was performed on the patient was successful.	
Procedure Complication	Encounter←Procedure Procedure.status	RE [0..*]	Any complication (abnormal effect on the patient) associated with the performance of the procedure on the patient.	
Response to Procedure	Encounter←Procedure Procedure.outcome	RE [0..1]	The patient's response to the procedure.	
Procedure Crew Members ID	Encounter←Procedure Procedure.performer	RE [0..1]	The statewide assigned ID number of the EMS crew member performing the procedure on the patient.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Role/Type of Person Performing the Procedure	Encounter←Procedure Procedure.performer.role	RE [0..1]	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	Encounter←Procedure Procedure.basedOn.procedureRequest	RE [0..1]	The type of treatment authorization obtained.	
Procedure Authorizing Physician	Encounter←Procedure Procedure.basedOn.procedureRequest.requester	RE [0..1]	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	Encounter←Procedure Procedure.bodySite	RE [0..1]	The location of the vascular access site attempt on the patient, if applicable.	
Indications for Invasive Airway	Encounter←Procedure Procedure.ReasonReference Encounter←Procedure Procedure.ReasonCode	RE [0..*]	The clinical indication for performing invasive airway management.	
Date/Time Airway Device Placement Confirmation	Encounter←Procedure Procedure.performedDateTime	RE [0..1]	The date and time the airway device placement was confirmed.	
Airway Device Being Confirmed	Encounter←Procedure Procedure.outcome Procedure.code	RE [0..1]	The airway device in which placement is being confirmed.	
Airway Device Placement Confirmed Method	Encounter←Procedure Procedure.outcome.code	RE [0..1]	The method used to confirm the airway device placement.	
Tube Depth	Encounter←Procedure Procedure.note	RE [0..1]	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	Encounter←Procedure Procedure.outcome	RE [0..1]	The type of individual who confirmed the airway device placement.	
Crew Member ID	Encounter←Procedure Procedure.performer	RE [0..1]	The statewide assigned ID number of the EMS crew member confirming the airway placement.	
Airway Complications Encountered	Encounter←Procedure Procedure.status	RE [0..*]	The airway management complications encountered during the patient care episode.	
Suspected Reasons for Failed Airway Management	Encounter←Procedure Procedure.outcome	RE [0..*]	The reason(s) the airway was unable to be successfully managed.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Date/Time Decision to Manage the Patient with an Invasive Airway	Encounter←Procedure Procedure.outcome.note	RE [0..1]	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	Encounter←Procedure Procedure.outcome	RE [0..1]	The date and time that the invasive airway attempts were abandoned for the patient.	
Medical Device Serial Number	Encounter←Device.identifier	RE [0..1]	The unique manufacturer's serial number associated with a medical device.	
Date/Time of Event (per Medical Device)	Encounter←Device.TimeDate	RE [0..1]	The time of the event recorded by the device's internal clock.	
Medical Device Event Type	Encounter←Observation.value[x]	RE [0..1]	The type of event documented by the medical device.	
Medical Device Waveform Graphic Type	Encounter←Observation.value[x]	RE [0..1]	The description of the waveform file stored in Waveform Graphic (eDevice.05).	
Medical Device Waveform Graphic	Encounter←Observation.value[x]	RE [0..*]	The graphic waveform file.	
Medical Device Mode (Manual, AED, Pacing, CO2, O2, etc.)	Encounter.device – MedicalDeviceMode **IHE Extension**	RE [0..1]	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	Encounter←Device.type	RE [0..1]	The lead or source which the medical device used to obtain the rhythm (if appropriate for the event).	
Medical Device ECG Interpretation	Encounter←Observation.Interpretation	RE [0..*]	The interpretation of the rhythm by the device (if appropriate for the event).	
Type of Shock	Encounter←Procedure – DeviceShockType **IHE Extension**	RE [0..*]	The type of shock used by the device for the defibrillation (if appropriate for the event).	
Shock or Pacing Energy	Encounter←Procedure – DeviceShockPacingEnergy **IHE Extension**	RE [0..1]	The energy (in joules) used for the shock or pacing (if appropriate for the event).	
Total Number of Shocks Delivered	Encounter←Procedure – DeviceNumberOfShocksDelivered **IHE Extension**	RE [0..*]	The number of times the patient was defibrillated, if the patient was defibrillated during the patient encounter.	
Pacing Rate	Encounter←Procedure – DeviceRate **IHE Extension**	RE [0..*]	The rate the device was calibrated to pace during the event, if appropriate.	
Destination/Transferred To, Name	Encounter.encounter-destinationName **IHE extension**	RE [0..1]	The destination the patient was delivered or transferred to.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Destination/Transferred To, Code	Encounter.encounter-destinationIdentifier **IHE extension**	RE [0..1]	The code of the destination the patient was delivered or transferred to.	
Destination Street Address	Encounter.encounter-destinationAddress **IHE extension**	RE [0..1]	The street address of the destination the patient was delivered or transferred to.	Patient destination street address
Destination City	Encounter.encounter-destinationAddress	RE [0..1]	The city of the destination the patient was delivered or transferred to (physical address).	
Destination State	**IHE extension**	RE [0..1]	The state of the destination the patient was delivered or transferred to.	
Destination County	Encounter.encounter-destinationAddress	RE [0..1]	The destination county in which the patient was delivered or transferred to.	
Destination ZIP Code	**IHE extension**	RE [0..1]	The destination ZIP code in which the patient was delivered or transferred to.	
Destination Country	Encounter.encounter-destinationAddress	RE [0..1]	The country of the destination.	
Number of Patients Transported in this EMS Unit	Encounter.encounter-numberOfPatients **IHE extension**	RE [0..*]	The number of patients transported by this EMS crew and unit.	
Incident/Patient Disposition	Encounter.encounter-treatment **IHE extension**	RE [0..1]	Type of disposition treatment and/or transport of the patient by this EMS Unit.	
EMS Transport Method	Encounter.encounter-transportMode **IHE extension**	RE [0..1]	Transport method by this EMS Unit.	
Transport Mode from Scene	Encounter.encounter-transportMode **IHE extension**	RE [0..1]	Indication whether the transport was emergent or non-emergent.	
additional Transport Mode Descriptors	Encounter.encounter-transportModeDescriptors **IHE extension**	O [0..*]	The documentation of transport mode techniques for this EMS response.	
Final Patient Acuity	Encounter←Observation.interpretation	RE [0..1]	The acuity of the patient's condition after EMS care.	
Reason for Choosing Destination	Encounter←Procedure Procedure.ReasonReference	RE [0..*]	The reason the unit chose to deliver or transfer the patient to the destination.	
Hospital Capability Per EMS	HealthService.characteristic	O [0..*]	The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.) as observed by the EMS entity.	

Paramedicine Data Element	FHIR Resource location	Cardinality	EMS Data Description	Constraint
Destination Team Pre-Arrival Alert or Activation	Encounter.encounter- Pre-arrivalAlertActivated **IHE extension**	RE [0..*]	Indication that an alert (or activation) was called by EMS to the appropriate destination healthcare facility team. The alert (or activation) should occur prior to the EMS Unit arrival at the destination with the patient.	
Disposition Instructions Provided	Encounter.encounter-dispositionInstructionsProvided **IHE extension**	RE [0..*]	Information provided to patient during disposition for patients not transported or treated.	

6.6.X.4 Clinical Subset Data Import Option

1310 The Content Consumer supporting the Clinical Subset Data Import Option SHALL require receiving system to import the discrete data elements identified in the following table.

Table 6.6.X.4-1: Clinical Subset Data Import Option FHIR and CDA Mapping

Paramedicine Data Element	FHIR Resource location	CDA Location
Patient Care Report Number	Resource.Composition	Header
Complaint Reported by Dispatch	Encounter.reason	Reason for Referral
PSAP Call Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Time Section
Unit Arrived on Scene Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Time Section
Arrived at Patient Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Time Section
Arrival at Destination Landing Area Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Time Section

Paramedicine Data Element	FHIR Resource location	CDA Location
Patient Arrived at Destination Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Time Section
EMS Patient ID	Encounter.subject (Patient.identifier)	Header
Last name	Encounter.subject (Patient.name)	Header
First name	Encounter.subject (Patient.name)	Header
middle initial	Encounter.subject (Patient.name)	Header
home address	Encounter.subject (Patient.address)	Header
home city	Encounter.subject (Patient.address)	Header
home country	Encounter.subject (Patient.address)	Header
home state	Encounter.subject (Patient.address)	Header
home postal code	Encounter.subject (Patient.address)	Header
gender	Encounter.subject (Patient.gender)	Header
Race	Encounter.subject (Patient.race (US extension))	Header
Age	Encounter.subject (Patient.identifier)	Header
Age Units	Encounter.subject (Patient.identifier)	Header
Date of Birth	Encounter.subject (Patient.birthDate)	Header
Patient's Phone Number	Encounter.subject (Patient.telecom)	Header
Closest Relative/Guardian Last Name	Encounter.subject (RelatedPerson.name)	Header
Closest Relative/Guardian First Name	Encounter.subject (RelatedPerson.name)	Header
Closest Relative/Guardian Middle Initial/Name	Encounter.subject (RelatedPerson.name)	Header
Closest Relative/Guardian Street Address	Encounter.subject (RelatedPerson.address)	Header
Closest Relative/Guardian City	Encounter.subject (RelatedPerson.address)	Header
Closest Relative/Guardian State	Encounter.subject (RelatedPerson.address)	Header
Closest Relative/Guardian postal code	Encounter.subject (RelatedPerson.address)	Header

Paramedicine Data Element	FHIR Resource location	CDA Location
Closest Relative/Guardian Country	Encounter.subject (RelatedPerson.address)	Header
Closest Relative/Guardian Phone Number	Encounter.subject (RelatedPerson.telecom)	Header
Closest Relative/Guardian Relationship	Encounter.subject (RelatedPerson.relationship)	Header
Mass Casualty Incident	Encounter.encounter- massCasualty **IHE extension**	EMS Scene Section
Triage Classification for MCI Patient	Encounter.priority Encounter.priority.code	EMS Scene Section
Incident Location Type	Encounter.encounter-incidentLocationType **IHE extension**	EMS Scene Section
Incident Facility Code	Encounter.encounter-incidentFacilityCode **IHE extension**	EMS Scene Section
Date/Time of Symptom Onset	Encounter.diagnosis.condition(condition. onsetDateTime)	EMS Situation Section
Possible Injury	Encounter.diagnosis.condition(condition.code)	EMS Situation Section
Complaint Type	Encounter.diagnosis.condition(Condition.category)	EMS Situation Section
Complaint	Encounter.diagnosis.condition(Condition.note)	EMS Situation Section
Duration of Complaint	Encounter.diagnosis.condition(Condition.abatemetDateTime)	EMS Situation Section
Chief complaint Anatomic Location	Encounter.diagnosis.condition(Condition.bodySite)	EMS Situation Section
Chief Complain organ system	Encounter.diagnosis.condition(Condition.bodySite)	EMS Situation Section
Primary Symptom	Encounter.diagnosis.condition(Condition.evidence.code)	EMS Situation Section / Reason for Referral
Other Associated symptoms	Encounter.diagnosis.condition(Condition.evidence.code)	EMS Situation Section / Reason for Referral
Provider's Primary Impressions	Encounter←Observation.value[x]	EMS Situation Section / Reason for Referral
Provider's Secondary Impressions	Encounter←Observation.value[x]	EMS Situation Section / Reason for Referral
Initial Patient Acuity	Encounter←Observation.interpretation	EMS Situation Section
Work-related Illness/Injury	Encounter←Observation.note	EMS Situation Section
Patient's Occupational Industry	N/A	EMS Situation Section

Paramedicine Data Element	FHIR Resource location	CDA Location
Patient's Occupation	N/A	EMS Situation Section
Patient Activity	Encounter←Observation.value[x]	EMS Situation Section
Date/Time Last Known Well	Encounter←Observation.value[x]	EMS Situation Section /Review of Systems-EMS Section
Cause of Injury	Encounter←Observation.value[x]	EMS Injury Incident Description Section
Mechanism of Injury	No mapping available	EMS Injury Incident Description Section
Location of Patient in Vehicle	Encounter←Observation.value[x]	EMS Injury Incident Description Section
Use of Occupant Safety Equipment	Encounter←Observation.value[x]	EMS Injury Incident Description Section
Height of Fall (feet)	Encounter←Observation.value[x]	EMS Injury Incident Description Section
Cardiac Arrest	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
Cardiac Arrest Etiology	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
Resuscitation Attempted By EMS	Encounter←Procedure.code	EMS Cardiac Arrest Event Section
Arrest Witnessed By	Encounter.encounter – witness (Person) **IHE Extension**	EMS Cardiac Arrest Event Section
CPR Care Provided Prior to EMS Arrival	Encounter.encounter – priorCprProvided **IHE Extension**	EMS Cardiac Arrest Event Section
Who Provided CPR Prior to EMS Arrival	Encounter.encounter – priorCprProvidedRole **IHE Extension**	EMS Cardiac Arrest Event Section
AED Use Prior to EMS Arrival	Encounter.encounter – priorAedProvided **IHE Extension**	EMS Cardiac Arrest Event Section
Who Used AED Prior to EMS Arrival	Encounter.encounter – priorAedProvidedRole **IHE Extension**	EMS Cardiac Arrest Event Section
Type of CPR Provided	Encounter.encounter – CprProvidedType **IHE Extension**	EMS Cardiac Arrest Event Section
First Monitored Arrest Rhythm of the Patient	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
Any Return of Spontaneous Circulation	Encounter←Procedure.outcome	EMS Cardiac Arrest Event Section
Date/Time of Cardiac Arrest	Encounter←Observation.effective[x]	EMS Cardiac Arrest Event Section
Date/Time Resuscitation Discontinued	Encounter←Procedure.performedPeriod.end	EMS Cardiac Arrest Event Section
Reason CPR/Resuscitation Discontinued	Encounter←Procedure - resuscitationDiscontinuedReason **IHE Extension**	EMS Cardiac Arrest Event Section

Paramedicine Data Element	FHIR Resource location	CDA Location
Cardiac Rhythm on Arrival at Destination	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
End of EMS Cardiac Arrest Event	Encounter←Procedure – **IHE Extension**	EMS Cardiac Arrest Event Section
Date/Time of Initial CPR	Encounter←Procedure.performedPeriod.start	EMS Cardiac Arrest Event Section
Barriers to Pt care	Encounter←Observation.value[x]	N/A
Advanced Directives	DocumentReference	EMS Advance Directives Section
Medication Allergies	AllergyIntolerance.substance	Allergy and Intolerances Concern Entry
Environmental/Food Allergies	AllergyIntolerance.substance	Allergy and Intolerances Concern Entry
Medical/Surgical History	Encounter.diagnosis.condition(ClinicalImpression.finding)	EMS Past Medical History Section
Medical/Surgical History	Encounter.diagnosis.condition(ClinicalImpression.date)	EMS Past Medical History Section
Medical/Surgical History	Encounter.diagnosis.condition(Condition.code)	EMS Past Medical History Section
Medical/Surgical History	Encounter.diagnosis.condition(Condition.onset[x])	EMS Past Medical History Section
Medical/Surgical History	Encounter.diagnosis.condition(Procedure.performed[x])	EMS Past Medical History Section
Medical/Surgical History	Encounter.diagnosis.condition(Procedure.code)	EMS Past Medical History Section
Current Medications	MedicationStatement.medication[x]	Medication Section
Current Medication Dose	MedicationStatement.dosage	Medication Section
Current Medication Dosage Unit	MedicationStatement.dosage	Medication Section
Current Medication Administration Route	MedicationStatement.dosage.route	Medication Section
Alcohol/Drug Use Indicators	Encounter←Observation.value[x]	EMS Social History Section
Pregnancy	Encounter.diagnosis.condition(Condition.code)	Review of Systems - EMS Section
Last Oral Intake	Encounter←Observation.value[x]	Review of Systems-EMS Section
Date/Time Vital Signs Taken	Encounter←Observation.issued	Coded Vital Signs Section
Vitals Obtained Prior to this Unit's EMS Care	Encounter←Observation.value[x]	N/A
Cardiac Rhythm / Electrocardiography (ECG)	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
ECG Type	Encounter←Observatio.type	EMS Cardiac Arrest Event Section

Paramedicine Data Element	FHIR Resource location	CDA Location
Method of ECG Interpretation	Encounter←Observation.method	EMS Cardiac Arrest Event Section
SBP (Systolic Blood Pressure)	Encounter←Observation.value[x]	Coded Vital Signs Section
DBP (Diastolic Blood Pressure)	Encounter←Observation.value[x]	Coded Vital Signs Section
Method of Blood Pressure Measurement	Encounter←Observation.method	Coded Vital Signs Section
Mean Arterial Pressure	Encounter←Observation.value[x]	Coded Vital Signs Section
Heart Rate	Encounter←Observation.value[x]	Coded Vital Signs Section
Method of Heart Rate Measurement	Encounter←Observation.method	Coded Vital Signs Section
Pulse Oximetry	Encounter←Observation.value[x]	Coded Vital Signs Section
Pulse Rhythm	Encounter←Observation.value[x]	N/A
Respiratory Rate	Encounter←Observation.value[x]	Coded Vital Signs Section
Respiratory Effort	Encounter←Observation.value[x]	N/A
End Title Carbon Dioxide (ETCO2)	Encounter←Observation.value[x]	Coded Vital Signs Section
Carbon Monoxide (CO)	Encounter←Observation.value[x]	Coded Vital Signs Section
Blood Glucose Level	Encounter←Observation.value[x]	Coded Vital Signs Section
Glasgow Coma Score-Eye	Encounter←Observation.value[x]	Coded Vital Signs Section
Glasgow Coma Score-Verbal	Encounter←Observation.value[x]	Coded Vital Signs Section
Glasgow Coma Score-Motor	Encounter←Observation.value[x]	Coded Vital Signs Section
Glasgow Coma Score-Qualifier	Encounter←Observation.value[x]	Coded Vital Signs Section
Total Glasgow Coma Score	Encounter←Observation.value[x]	Coded Vital Signs Section
Temperature	Encounter←Observation.value[x]	Coded Vital Signs Section
Temperature Method	Encounter←Observation.value[x]	Coded Vital Signs Section
Level of Responsiveness (AVPU)	Encounter←Observation.value[x]	Coded Vital Signs Section
Pain Scale Score	Encounter←Observation.value[x]	Coded Vital Signs Section
Pain Scale Type	Encounter←Observation.value[x]	Coded Vital Signs Section
Stroke Scale Score	Encounter←Observation.value[x]	Coded Vital Signs Section
Stroke Scale Type	Encounter←Observation.value[x]	Coded Vital Signs Section
Reperfusion Checklist	Encounter←Observation.value[x]	Coded Vital Signs Section
APGAR	Encounter←Observation.value[x]	Coded Vital Signs Section

Paramedicine Data Element	FHIR Resource location	CDA Location
Revised Trauma Score	Encounter←Observation.value[x]	Coded Vital Signs Section
Estimated Body Weight in Kilograms	Encounter←Observation.interpretation	Coded Vital Signs Section
Length Based Tape Measure	Encounter←Observation.interpretation	Coded Vital Signs Section
Date/Time of Assessment	Encounter←Observation.issued	Coded Detail Physical Examination Section
Skin Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Head Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Face Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Neck Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Chest/Lungs Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Heart Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Abdominal Assessment Finding Location	Encounter←Observation.bodySite	Coded Detail Physical Assessment Section
Abdominal Assessment Finding Location	Encounter←Observation.bodySite	Coded Detail Physical Assessment Section
Abdomen Assessment	Encounter←Observation.interpretation	Coded Detail Physical Assessment Section
Pelvis/Genitourinary Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Back and Spine Assessment Finding Location	Encounter←Observation.bodySite	Coded Detail Physical Examination Section
Back and Spine Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Extremity Assessment Finding Location	Encounter←Observation.bodySite	Coded Detail Physical Examination Section
Extremities Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Eye Assessment Finding Location	Encounter←Observation.bodySite	Coded Detail Physical Examination Section
Eye Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Mental Status Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Neurological Assessment	Encounter←Observation.interpretation	Coded Detail Physical Examination Section
Stroke/CVA Symptoms Resolved	Encounter.diagnosis.condition(Condition.clinicalStatus)	Coded Detail Physical Examination Section

Paramedicine Data Element	FHIR Resource location	CDA Location
Date/Time Medication Administered	Encounter←MedicationAdministration.effective[x] Encounter←MedicationAdministration.effective.date/time	Medications Administered Section
Medication Administered Prior to this Unit's EMS Care	Encounter←MedicationAdministration.effective[x] Encounter←MedicationAdministration.effective.date/time	N/A
Medication Given	Encounter←MedicationAdministration.resource	Medications Administered Section
Medication Administered Route	Encounter←MedicationAdministration.dosage.route	Medications Administered Section
Medication Dosage	Encounter←MedicationAdministration.dosage	Medications Administered Section
Medication Dosage Units	Encounter←MedicationAdministration.dosage.dose	Medications Administered Section
Response to Medication	Encounter←MedicationAdministration.note	N/A
Medication Complication	Encounter←AdverseEvent.reaction Encounter←AdverseEvent.Description	Allergy and Intolerances Concern Entry
Date/Time Procedure Performed	Encounter←Procedure.performed[x].performed.dateTime	EMS Procedures Performed Section
Procedure Performed Prior to this Unit's EMS Care	Encounter←Procedure.performed[x].performed.dateTime	EMS Procedures Performed Section
Procedure	Encounter←Procedure.code	EMS Procedures Performed Section
Number of Procedure Attempts	Encounter←Procedure.partOf.observation.value[x]	EMS Procedures Performed Section
Procedure Successful	Encounter←Procedure Procedure.outcome	EMS Procedures Performed Section
Procedure Complication	Encounter←Procedure Procedure.status	EMS Procedures Performed Section
Response to Procedure	Encounter←Procedure Procedure.outcome	EMS Procedures Performed Section
Vascular Access Location	Encounter←Procedure Procedure.bodySite	EMS Procedures Performed Section
Indications for Invasive Airway	Encounter←Procedure Procedure.ReasonReference Encounter←Procedure Procedure.ReasonCode	EMS Procedures Performed Section
Date/Time Airway Device Placement Confirmation	Encounter←Procedure Procedure.performedDateTime	EMS Procedures Performed Section

Paramedicine Data Element	FHIR Resource location	CDA Location
Airway Device Being Confirmed	Encounter←Procedure Procedure.outcome Procedure.code	EMS Procedures Performed Section
Crew Member ID	Encounter←Procedure Procedure.performer	EMS Procedures Performed Section
Airway Complications Encountered	Encounter←Procedure Procedure.status	EMS Procedures Performed Section
Suspected Reasons for Failed Airway Management	Encounter←Procedure Procedure.outcome	EMS Procedures Performed Section
Date/Time Decision to Manage the Patient with an Invasive Airway	Encounter←Procedure Procedure.outcome.note	EMS Procedures Performed Section
Date/Time Invasive Airway Placement Attempts Abandoned	Encounter←Procedure Procedure.outcome	EMS Procedures Performed Section
Date/Time of Event (per Medical Device)	Encounter←Device.TimeDate	EMS Cardiac Arrest Event Section
Medical Device Event Type	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
Medical Device Waveform Graphic Type	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
Medical Device Waveform Graphic	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
Medical Device Mode (Manual, AED, Pacing, CO2, O2, etc.)	Encounter.device – MedicalDeviceMode **IHE Extension**	EMS Cardiac Arrest Event Section
Medical Device ECG Lead	Encounter←Device.type	EMS Cardiac Arrest Event Section
Medical Device ECG Interpretation	Encounter←Observation.Interpretation	EMS Cardiac Arrest Event Section
Type of Shock	Encounter←Procedure – DeviceShockType **IHE Extension**	EMS Cardiac Arrest Event Section
Shock or Pacing Energy	Encounter←Procedure – DeviceShockPacingEnergy **IHE Extension**	EMS Cardiac Arrest Event Section
Total Number of Shocks Delivered	Encounter←Procedure – DeviceNumberOfShocksDelivered **IHE Extension**	EMS Cardiac Arrest Event Section
Pacing Rate	Encounter←Procedure – DeviceRate **IHE Extension**	EMS Cardiac Arrest Event Section

6.6.X.5 Quality Data Import Option

1315 The Content Consumer supporting the Quality Data Import Option SHALL require receiving system to import the discrete data elements identified in the following table.

Table 6.6.X.5-1: Quality Data Import Option FHIR and CDA Mapping

Paramedicine Data Element	FHIR Resource Location	CDA Location
Patient Care Report Number type	Resource.composition.type	Header
Patient Care Report Number	Resource.composition.type	Header
EMS Organization Identifier	Organization.Identifier	Header
Type of service requested	Encounter.type	Header
Level of care for this unit	HealthService.characteristic	Header
Additional Response Mode Descriptors	Encounter.encounter-responceModeDescriptor **IHE extension**	EMS Response Section
Date/Time Procedure Performed	Encounter←Procedure.performed[x].performed.dateTime	EMS Procedures and Interventions Section
Procedure	Encounter←Procedure.code	EMS Procedures and Interventions Section
PSAP Call Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Unit Arrived on Scene Date/Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Patient Contact Date/time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Complaint	Encounter.diagnosis.condition(Condition.note)	EMS Situation Section
Primary Symptom	Encounter.diagnosis.condition(Condition.evidence.code)	EMS Situation Section / Reason for Referral

Paramedicine Data Element	FHIR Resource Location	CDA Location
Other Associated symptoms	Encounter.diagnosis.condition(Condition.evidence.code)	EMS Situation Section / Reason for Referral
Provider's Primary Impressions	Encounter←Observation.value[x]	EMS Situation Section / Reason for Referral
Provider's Secondary Impressions	Encounter←Observation.value[x]	EMS Situation Section / Reason for Referral
Date/Time Last Known Well	Encounter←Observation.value[x]	EMS Situation Section /Review of Systems-EMS Section
Destination/Transferred To, Name	Encounter.encounter- destinationName **IHE extension**	EMS Situation
Destination/Transferred To, Code	Encounter.encounter-destinationIdentifier **IHE extension**	EMS Situation
Incident/Patient Disposition	Encounter.encounter- treatment **IHE extension**	EMS Disposition Section
Type of Destination	Encounter.encounter- destinationType **IHE extension**	EMS Disposition Section
Hospital Capability Per EMS	HealthService.characteristic	EMS Disposition Section
Destination Team Pre-Arrival Alert or Activation	Encounter.encounter- Pre-arrivalAlertActivated **IHE extension**	EMS Disposition Section
Resuscitation Attempted By EMS	Encounter←Procedure.code	EMS Cardiac Arrest Event Section
Arrest Witnessed By	Encounter.encounter – witness (Person) **IHE Extension**	EMS Cardiac Arrest Event Section
CPR Care Provided Prior to EMS Arrival	Encounter.encounter – priorCprProvided **IHE Extension**	EMS Cardiac Arrest Event Section
Who Provided CPR Prior to EMS Arrival	Encounter.encounter – priorCprProvidedRole **IHE Extension**	EMS Cardiac Arrest Event Section
AED Use Prior to EMS Arrival	Encounter.encounter – priorAedProvided **IHE Extension**	EMS Cardiac Arrest Event Section
Who Used AED Prior to EMS Arrival	Encounter.encounter – priorAedProvidedRole **IHE Extension**	EMS Cardiac Arrest Event Section
Type of CPR Provided	Encounter.encounter – priorCprProvidedType **IHE Extension**	EMS Cardiac Arrest Event Section
Any Return of Spontaneous Circulation	Encounter←Procedure.outcome	EMS Cardiac Arrest Event Section

Paramedicine Data Element	FHIR Resource Location	CDA Location
Date/Time of Initial CPR	Encounter←Procedure.performedPeriod.start	EMS Cardiac Arrest Event Section
Advanced Directives	DocumentRefernce	EMS Advance Directives Section
SBP (Systolic Blood Pressure)	Encounter←Observation.value[x]	Coded Vital Signs Section
DBP (Diastolic Blood Pressure)	Encounter←Observation.value[x]	Coded Vital Signs Section
Heart Rate	Encounter←Observation.value[x]	Coded Vital Signs Section
Pulse Oximetry	Encounter←Observation.value[x]	Coded Vital Signs Section
Respiratory Rate	Encounter←Observation.value[x]	Coded Vital Signs Section
Blood Glucose Level	Encounter←Observation.value[x]	Coded Vital Signs Section
Cardiac Rhythm / Electrocardiography (ECG)	Encounter←Observation.value[x]	EMS Cardiac Arrest Event Section
Stroke Scale Score	Encounter←Observation.value[x]	Coded Vital Signs Section
Pain Scale Score	Encounter←Observation.value[x]	Coded Vital Signs Section
Medication Given	Encounter←MedicationAdministration.resource	Medications Administered Section
Age	Encounter.subject (Patient.identifier)	Header
Age Units	Encounter.subject (Patient.identifier)	Header
Date of Birth	Encounter.subject (Patient.birthDate)	Header
Cause of Injury	Encounter.Observation.value	EMS Injury Incident Description Section
Mass Casualty	Encounter.encounter- massCasualty **IHE extension**	EMS Scene Section
Mechanism of Injury	No Mapping Available	EMS Injury Incident Description Section

6.6.X.6 Trauma Data Import Option

The Content Consumer supporting the Trauma Data Import Option SHALL support discrete import of the data elements identified in the following table.

Table 6.6.X.6-1: Trauma Data Import Option FHIR and CDA Mapping

Paramedicine Data Element	FHIR Resource Location	CDA Location
EMS Dispatch Date	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section

Paramedicine Data Element	FHIR Resource Location	CDA Location
Ems Dispatch Time	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Ems Unit Arrival Date At Scene Or Transferring Facility	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Ems Unit Arrival Time At Scene Or Transferring Facility	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Ems Unit Departure Date From Scene Or Transferring Facility	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Ems Unit Departure Time From Scene Or Transferring Facility	Encounter.statusHistory.code Encounter.statusHistory.period.start Encounter.statusHistory – Type **IHE Extension*	EMS Response Section
Transport Mode	Encounter.encounter- transportMode **IHE extension**	EMS Disposition Section
Other Transport Mode	Encounter.encounter- transportMode **IHE extension**	EMS Disposition Section
Initial Field Systolic Blood Pressure	Encounter←Observation.value[x]	Coded Vital Signs Section
Initial Field Pulse Rate	Encounter←Observation.value[x]	Coded Vital Signs Section
Initial Field Respiratory Rate	Encounter←Observation.value[x]	Coded Vital Signs Section
Initial Field Oxygen Saturation	Encounter←Observation.value[x]	Coded Vital Signs Section
Initial Field Gcs – Eye	Encounter←Observation.value[x]	Coded Vital Signs Section
Initial Field Gcs – Verbal	Encounter←Observation.value[x]	Coded Vital Signs Section

Paramedicine Data Element	FHIR Resource Location	CDA Location
Initial Field Gcs – Motor	Encounter←Observation.value[x]	Coded Vital Signs Section
Initial Field Gcs – Total	Encounter←Observation.value[x]	Coded Vital Signs Section
Inter-Facility Transfer	Encounter.encounter- transportMode **IHE extension**	EMS Disposition Section
Trauma Center Criteria	Encounter←Observation.value[x]	EMS Injury Incident Description Section
Vehicular, Pedestrian, Other Risk Injury	No Mapping Available	EMS Injury Incident Description Section

Appendices

N/A

Volume 4 – National Extensions

Add appropriate Country section

4 National Extensions

4.I National Extensions for IHE USA

4.I.1 Comment Submission

This national extension document was authored under the sponsorship and supervision of the IHE Patient Care Coordination Technical Committee who welcome comments on this document and the IHE USA initiative. Comments should be directed to: http://www.ihe.net/PCC_Public_Comments.

4.I.2 Paramedicine Care Summary PCS

4.I.2.1 PCS US Volume 3 Constraints

4.I.2.1.1 PCS US Volume 3 Attribute Constraints

The following attribute cardinalities constraints apply in the US.

Table 4.I.2.1.1-1: US Attribute Cardinality Constraints

Attribute	Cardinality
Race	RE [0..*]
Ethnicity	RE [0..1]
Religious Affiliation	RE [0..*]

4.I.2.1.2 PCS US Volume 3 Section Constraints

The following additional cardinality constraints apply to the Paramedicine Care document specification and entries in Table 6.3.1.D.5-1 Paramedicine Care Summary (PCS) Document Content Module Specification

Table 4.I.2.1.2-1: PCS US Section Constraints

Cardinality	Section Element	Value Set OID	Specification Document	Vocabulary Constraint
R [1..1]	EMS Protocol Section	2.16.840.1.113883.17.3.10.1.7	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	6.3.D.5.3

4.I.2.2 PCS Value Set Binding for US 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.

Table 4.I.2.2-1: PCS Value Set Binding for US Realm Concept Domains

UV Concept Domain	US Realm Vocabulary Binding or Single Code Binding	Value Set OID
Ethnicity	Ethnicity Group	2.16.840.1.114222.4.11.837
Marital Status	HL7 Marital Status	2.16.840.1.113883.1.11.12212
Race	RaceCategory	2.16.840.1.114222.4.11.836
sDTCRaceCode	Race	2.16.840.1.113883.1.11.14914
Religious Affiliation	HL7 Religious Affiliation	2.16.840.1.113883.1.11.19185
Language Communication	Language	2.16.840.1.113883.1.11.11526
Data Enterer	Assigned entity	2.16.840.1.113883.4.6
Confidentiality code	HL7 BasicConfidentialityKind	2.16.840.1.113883.1.11.16926
Provider role	ProviderRole	2.16.840.1.113883.17.3.11.46
Destination	associatedEntity	2.16.840.1.113883.11.20.9.33
DestinationType	DestinationType	2.16.840.1.113883.17.3.11.69
Service Type	Service Type	2.16.840.1.113883.17.3.11.79
advanced directives	AdvanceDirectiveType	2.16.840.1.113883.17.3.11.63
Allergen	RxNorm	2.16.840.1.113883.6.88
UnitLevelOfCare	UnitLevelOfCare	2.16.840.1.113883.17.3.11.105
Medications Administration route	FDA Route of Administration	2.16.840.1.113883.17.3.11.43
Manufactured Material	RxNorm	2.16.840.1.113883.6.88
ProviderResponseRole	ProviderResponseRole	2.16.840.1.113883.17.3.11.80
CrewRoleLevel	CrewRoleLevel	2.16.840.1.113883.17.3.11.81
UnitResponseRole	UnitResponseRole	2.16.840.1.113883.17.3.11.82
StrokeScale	StrokeScale	2.16.840.1.113883.17.3.11.88
Trauma Center Criteria	TraumaCenterCriteria	2.16.840.1.113883.17.3.11.3
EMS Level Of Service	EMSLevelOfService	2.16.840.1.113883.17.3.11.70

Appendices

N/A

