**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 1.0 – Draft for Public Comment**

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

**Foreword**

This is a supplement to the IHE Patient Care Coordination Technical Framework 11.0. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on May 25, 2018 for Public Comment. Comments are invited and can be submitted at [http://ihe.net/PCC\_Public\_Comments](http://ihe.net/PCC_Public_Comments/). In order to be considered in development of the Trial Implementation version of the supplement, comments must be received by June 24, 2018.

This supplement describes changes to the existing technical framework documents.

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

Amend Section X.X by the following:

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

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

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

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

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

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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]](#footnote-2) FHIR®[[2]](#footnote-3) 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](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 | |

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.
2. See HL7 patient care work group discussion: [*http://wiki.hl7.org/index.php?title=ClinicalNote\_FHIR\_Resource\_Proposal*](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*](http://wiki.hl7.org/index.php?title=January_2018_WGM_New_Orleans;_Jan_27_to_Feb_8)
3. There are a number of issues relating to the FHIR mapping and resources needed to support this profile:
4. Investigate the FHIR process for defining the resources required to fulfill NEMSIS.
5. The injury information may need to be more extensive modeling in FHIR.
6. There is no value set in FHIR relating to the level of care of ambulance units.
7. Extensions in FHIR need to me made to help include some of the needed attributes.
8. 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
9. 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.
10. 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.
11. 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.
12. 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.
13. The EMS Situation
14. The EMS Medical Allergies and Environment/Food Allergies are used to populate the standard Allergies and Adverse Reactions Section.
15. The EMS Current Medications is used to populate the standard Medications Section.
16. 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.
17. The EMS Physical Assessment us used to populate the standard Physical Examination Section.
18. The EMS Medications Administered is used to populate the standard Medications Administered and Allergies and Adverse Reactions Sections.
19. The Pregnancy Status, Last Oral Intake and Last Known Well data elements have been populated to a new Review of Systems – EMS Section.
20. Public Comment is requested as to whether there are additional EMS specific data elements/Sections which need to be mapped into the EMS Patient Care Medical Summary. This should be limited to information which may be used for Patient care in the future.
21. There are a number of LOINC and templateID OIDs which need to be assigned. This work will be completed after Public Comment.
22. Public Comment is requested as to whether the Advance Direct Type Vocabulary is US Realm specific.
23. In consideration of reusable vital sign concepts:
24. 8884-9 Heart rate rhythm is used for the vital signs instead of 67519-9 Cardiac rhythm NEMSIS
25. 72089-6 Total score [NIH Stroke Scale] is used for the vital signs instead of 67520-7 Stroke scale overall interpretation NEMSIS
26. 11454-6 Responsiveness assessment at First encounter is used for the vital signs instead of 67775-7 Level of responsiveness NEMSIS
27. 2710-2 Oxygen Saturation is used for the vital signs instead of 2708-6 Oxygen saturation in Arterial blood
28. 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
29. 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
30. The following vital signs are not included in the specification:
31. 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).
32. 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?
33. Pulse Rhythm is not currently included in the EMS Patient Care Report. No definition exists in either the IHE or HL7 CDA®[[3]](#footnote-4) specifications.
34. 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.
35. MedicationClinical Drug (2.16.840.1.113883.3.88.12.80.17)
36. Medication omission reason (2.16.840.1.113883.17.3.5.42)
37. The following attributes are not modeled in this specification because this use case focuses on communicating relevant information from EMS into the hospital:
38. Medication Response Observation
39. Medication Prior Administration Observation
40. Prior Aid Vitals
41. Patient age (can be computed from birthdate)
42. Barrier to care
43. 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.,
44. we have the ability to document Drug Treatment Unknown and No Drug Therapy Prescribed
45. There are currently no codes to indicate the Patient is on Anticoagulants (without specifying the substance).
46. 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.
47. 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.
48. Reason for not Administering the Medication was moved forward.
49. Medication Complications were moved to the standard Allergies and Adverse Reactions Section.
50. Medication Response Observation was not moved forward.
51. Medications Prior to Administration was not moved forward.
52. 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. Public Comment input is requested to review the Vital Sign observation additions within this profile for recommendations whether any of these metrics may be better documented in Review of Systems – EMS
53. Public Comment input is requested to review the expansion of the Coded Detail Physical Examination to include a new Mental Status Entry based upon the HL7 C-CDA R2 IG. new Mental Status Assessment.
54. Public Comment input is requested to review the decision to make the EMS Billing Section optional, understanding that Domain specific requirements may further constraint this section (e.g., in the US this will be RE). Furthermore, does the LOINC code for the Level of Service need to be changed to support the creation of a new Billing Section/Entry.
55. Public Comment input is requested to review the EMS Cardiac Arrest Event Section to ensure there aren’t any US Specific concepts.
56. Public Comment input is requested to review the transformation of the EMS Patient Care Report information for use in the Reason for Referral Section.
57. Public Comment input is requested to determine if the EMS Disposition Section Value Sets need to be updated to meet international needs.
58. Public Comment input is requested to determine if the Trauma Center Criteria Value Set need to be updated to meet international needs.
59. Public Comment input is requested to review the EMS Past Medical History. 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. Should the EMS Past Medical History be moved forward anyway?
60. Public Comment input is 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. Which concepts should be moved forward: just the IHE PCC Procedure Entry, the EMS Procedures Performed or both?
61. 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.
62. Should there be a special section to “vital signs obtained prior to EMS” that should be specially tagged?
63. Review the FHIR mapping for Hospital capability. If this current mapping is correct when it will be kept, however it may potentially need to be under “observation”.
64. 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.
65. Review the FHIR mapping for the “protocol age category”.
66. 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.
67. We are interpreting the “return of spontaneous circulation” as an outcome of a procedure performed by the EMS crew. Therefore, it would be recorded in a procedure resource that indicated the CPR and the outcome. Any spontaneous return of circulation caused by the prior CPR administration then this would be noted by the EMTs’ initial Vitals observations.
68. 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. Vehicle Dispatch Location US National Grid Coordinates

o. Beginning Odometer Reading of Responding Vehicle

1. On-Scene Odometer Reading of Responding Vehicle
2. Patient Destination Odometer Reading of Responding Vehicle
3. Ending Odometer Reading of Responding Vehicle
4. EMD Performed
5. EMD Card Number
6. Dispatch Center Name or ID
7. Unit Dispatched CAD Record ID
8. Response Urgency
9. First EMS Unit on Scene
10. Other EMS or Public Safety Agencies at Scene
11. Other EMS or Public Safety Agency ID Number
12. Type of Other Service at Scene
13. Date/Time Initial Responder Arrived on Scene
14. Numbers of Patients on Scene
15. Scene GPS Location
16. Scene US National Grid Coordinates
17. Incident Facility or Location Name
18. Mile Post or Major Roadway
19. Incident Street Address
20. Incident Apartment, Suite, or Room
21. Scene Cross Street or Directions
22. Time Units of Duration of Complaint
23. Patient's Occupational Industry
24. Patient's Occupation
25. Presence of Emergency Information Form
26. Destination GPS Location
27. Destination Location US National Grid Coordinates
28. Type of Destination
29. Hospital In-Patient Destination
30. 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.

# General Introduction and Shared Appendices

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

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

# Appendix A – Actor Summary Definitions

Add the following actors to the IHE Technical Frameworks General Introduction Appendix A:

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

# Appendix B – Transaction Summary Definitions

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

No new transactions

Volume 1 – Profiles

## Copyright Licenses

NA

## Domain-specific additions

None

Add new Section X

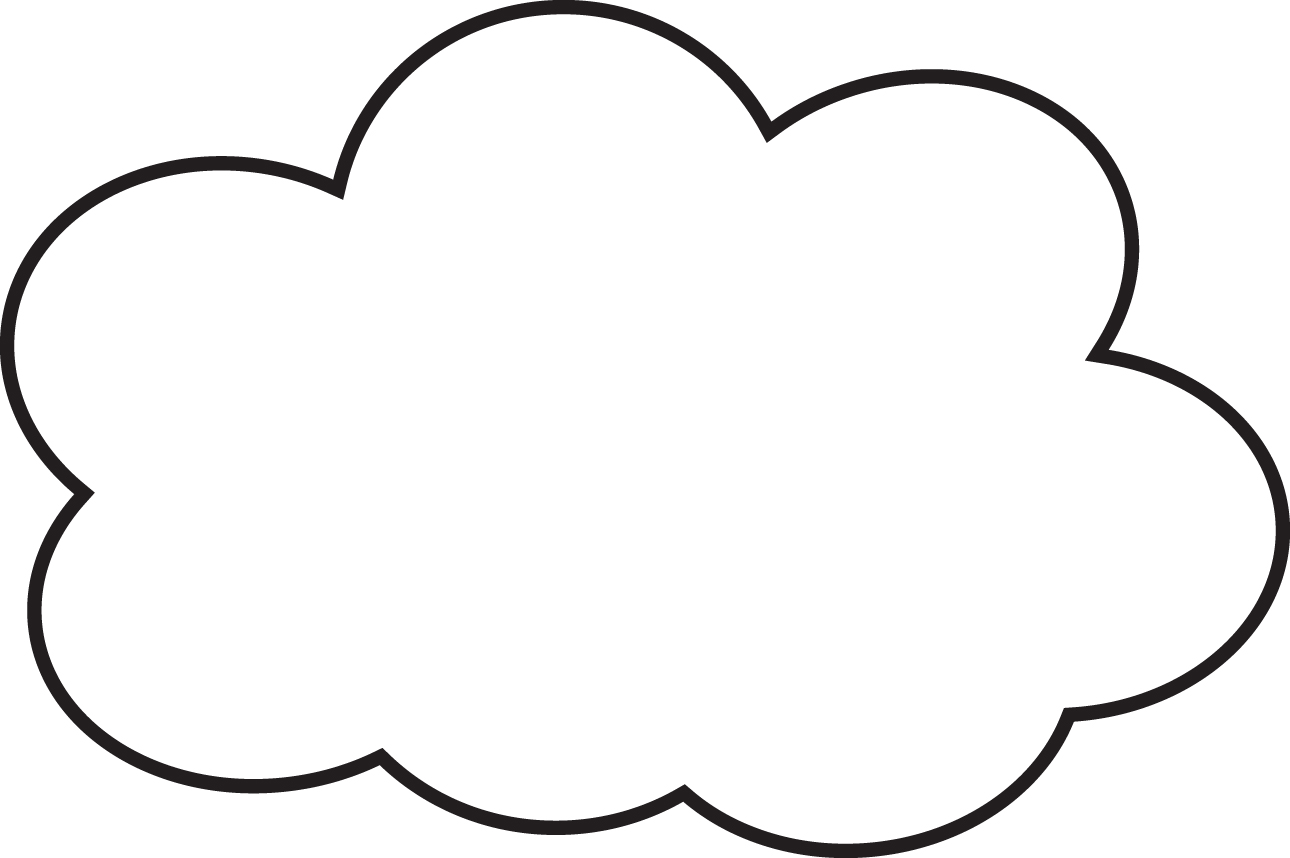
# X Paramedicine Care Summary (PCS) Profile

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).



Content Consumer

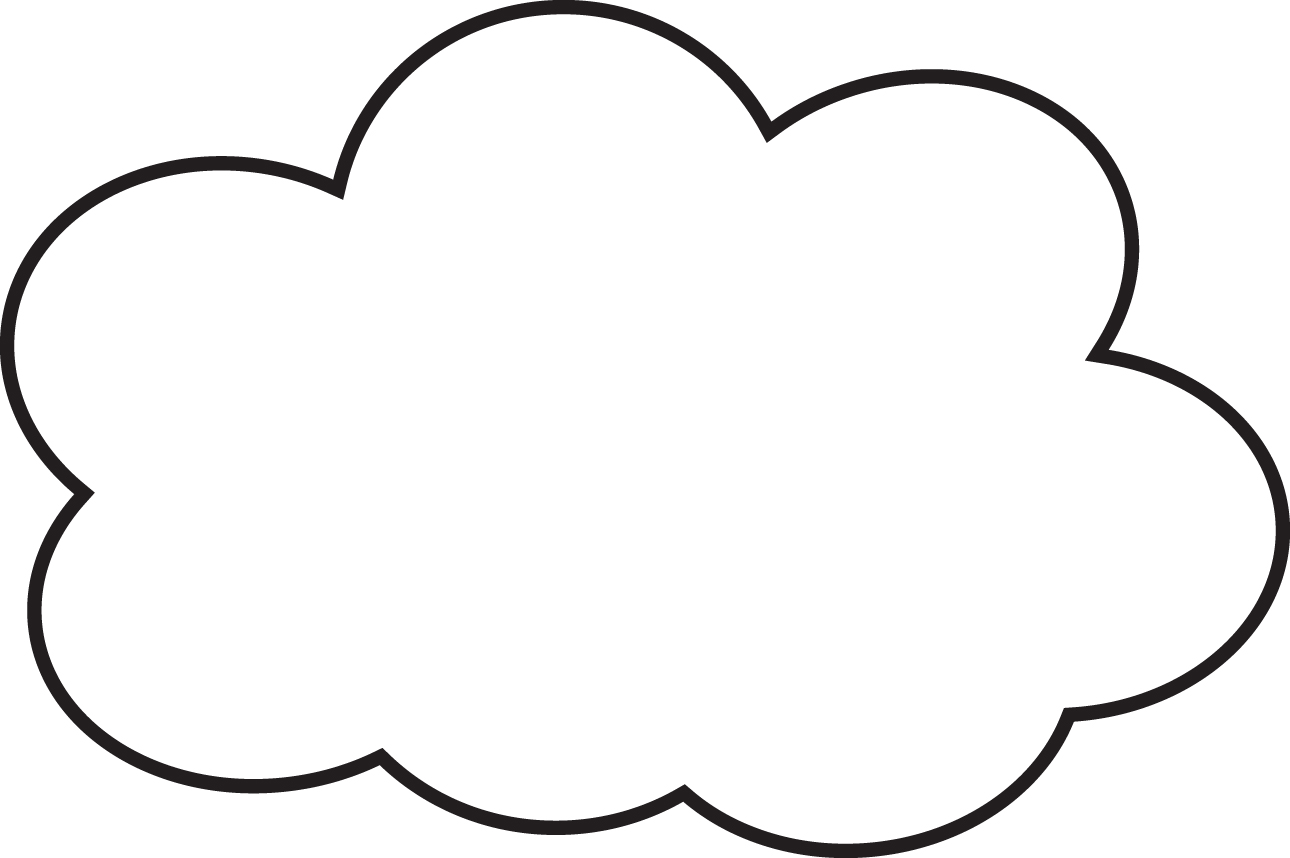
Content Creator

Document Sharing

[PCC-1]

Figure X.1-1: PCS Actor Diagram

Figure X.1-2: PCS Actor Diagram



Transport Data Consumer

Transport Data Creator

Provide Document Bundle [ITI-65]

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

Table X.1-1: PCS Profile – Actors and Transactions

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

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

A product implementation using this profile may group actors from this profile with actors from a workflow or transport profile to be functional. The grouping of the content module described in this profile to specific actors is described in more detail in Required Actor Groupings 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 Document OID | R | PCC TF-3: 6.3.1.D |
| Content Consumer | Paramedicine Care Summary Document OID | O | PCC TF-3: 6.3.1.D |

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

Transactional requirements are documented in 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 transmission of a PCS document (OID = ) to a Content Consumer.

The PCS Content Creator creates the document that summarizes the emergency transport encounter that contains the data elements defined in PCC TF-3: 6.3.1.D

#### X.1.1.2 Content Consumer

A Content Consumer is responsible for viewing, importing, or other processing options for PCS document (OID=) content created by a PCS Content Creator. This is specified in [PCC-1] document sharing transaction in PCC TF-2: 3.1

#### X.1.1.3 Transport Data Consumer

The Transport Data Consumer is responsible for receiving content provided by the Transport Data Creator. This is specified in the Provide Document Bundle [ITI-65] transaction in ITI TF-2: 2.65.

#### X.1.1.4 Transport Data Creator

The Transport Data Creator shall be responsible for the creation of content and transmission of a PCS document to a Transport Data Consumer. This is specified in the Provide Document Bundle [ITI-65] transaction in ITI TF-2: 2.65.

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

## X.2 PCS Actor Options

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

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

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

### X.2.1 Quality Data Import Option

This option defines the processing requirements placed on the content consumers for providing access and importing quality data from selected sections of the Patient Care Report. The discrete data import data details are in Volume 3, Section 6.6.x.4.

### X.2.2 Trauma Data Import Option

This option defines the processing requirements placed on the content consumers for providing access and importing trauma data from selected sections of the Patient Care Report. The discrete data import data details are in Volume 3, Section 6.6.x.5.

## X.3 PCS Required Actor Groupings

There are no required actor groupings for this profile.

## X.4 PCS Overview

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

### 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 provided during the transport. The EMS ePCR is completed and then electronically provided to the hospital.

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

Transport Data Creator

Transport Data Consumer

Document Sharing [PCC-1]

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 during transport, and documented

EMS sends sthe 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 ePCR is closed out and the full report is provided to the hospital

The patient care is continued in the hospital

## X.5 PCS Security Considerations

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

## X.6 PCS Cross Profile Considerations

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

The use of the IHE XD\* family of transactions is encouraged to support standards-based interoperability between systems acting as the PCS Content Creator and PCS Content Consumer. However, this profile does not require any groupings with ITI XD\* actors to facilitate transport of the content document it defines.

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.

## X.7 PCS Cross Profile Considerations

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

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/>.

| 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. |
| 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). |
| 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. |
| 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. |
| 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. |
| 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 |
| 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. |
| 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). |
| 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. |
| 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. |
| 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. |
| 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 | The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.). |
| 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

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

# 6 Content Modules

### 6.3.1 CDA Document Content Modules

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

The Paramedicine Care Summary 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.

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

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

##### 6.3.1.D.2 LOINC Code

The LOINC code for this document is XX-ParamedicineCareSummary.

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

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

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

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

Table 6.3.1.D.4-1: Paramedicine Care Summary (PCS) – Data Element Requirement Mappings to CDA

| Paramedicine Data Element | CDA |
| --- | --- |
| 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 |
| 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 |
| 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 |
| 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 Used | EMS Injury Incident Description Section |
| ACN System/Company Providing ACN Data | N/A |
| ACN Incident ID | N/A |
| ACN Call Back Phone Number | N/A |
| Date/Time of ACN Incident | N/A |
| ACN Incident Location | N/A |
| ACN Incident Vehicle Body Type | N/A |
| ACN Incident Vehicle Manufacturer | N/A |
| ACN Incident Vehicle Make | N/A |
| ACN Incident Vehicle Model | N/A |
| ACN Incident Vehicle Model Year | N/A |
| ACN Incident Multiple Impacts | N/A |
| ACN Incident Delta Velocity | N/A |
| ACN High Probability of Injury  ACN Incident PDOF | N/A |
| ACN Incident PDOF | N/A |
| ACN Incident Rollover | N/A |
| ACN Vehicle Seat Location | N/A |
| Seat Occupied | EMS Injury Incident Description Section |
| ACN Incident Seatbelt Use | N/A |
| ACN Incident Airbag Deployed | N/A |
| 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 |
| 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 |
| 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 Performed Section |
| Procedure Performed Prior to this Unit's EMS Care | EMS Procedures Performed Section |
| Procedure | EMS Procedures Performed Section |
| Size of Procedure Equipment | EMS Procedures Performed Section |
| Number of Procedure Attempts | EMS Procedures Performed Section |
| Procedure Successful | EMS Procedures Performed Section |
| Procedure Complication | EMS Procedures Performed Section |
| Response to Procedure | EMS Procedures Performed Section |
| Procedure Crew Members ID | EMS Procedures Performed Section |
| Role/Type of Person Performing the Procedure | EMS Procedures Performed Section |
| Procedure Authorization | EMS Procedures Performed Section |
| Procedure Authorizing Physician | 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 Device Being Confirmed | EMS Procedures Performed Section |
| Airway Device Placement Confirmed Method | EMS Procedures Performed Section |
| Tube Depth | EMS Procedures Performed Section |
| Type of Individual Confirming Airway Device Placement | EMS Procedures Performed Section |
| Crew Member ID | 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 |
| Medical Device Serial Number | 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 |
| 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 |
| 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 | 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.D.5 Paramedicine Care Summary (PCS) Document Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Paramedicine Care Summary (PCS) Document Content Module, using the Template ID as the key identifier.

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

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

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Template Name | | Paramedicine Care Summary (PCS) | | | |
| Template ID | | <oid/uid> | | | |
| Parent Template | | 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 "xxxxx-3 (waiting for code)" 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 |  |
| 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 |  |
| R  [1..\*] |  | Personal Information: Patient Address | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| R  [1..\*] |  | Personal Information: Patient ID | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| R  [1..\*] |  | Personal Information: Patient Telecom | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| O  [0..1] |  | Personal Information: Administrative Gender | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 |  |
| O  [0..1] |  | Personal Information: Ethnicity | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 | 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 | 6.3.2.H.2 |
| O  [0..1] |  | Personal Information: Race | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 | 6.3.2.H.3 |
| O  [0..\*] |  | Personal Information: **sDTCRaceCode** | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 | 6.3.2.H.3 |
| O  [0..\*] |  | Personal Information: Religious Affiliation | 1.3.6.1.4.1.19376.1.5.3.1.1.1 | PCC TF-2 | 6.3.2.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 | 6.3.2.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.D.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.D.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.D.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.D.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 |  |
| 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.D.5.5, 6.3.D.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 | IHEPCC 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 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Head | 1.3.6.1.4.1.19376.1.5.3.1.1.9.18 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Neurologic System | 1.3.6.1.4.1.19376.1.5.3.1.1.9.35 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Ears, Nose, Mouth and Throat | 1.3.6.1.4.1.19376.1.5.3.1.1.9.20 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Neck | 1.3.6.1.4.1.19376.1.5.3.1.1.9.24 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Thorax and Lungs | 1.3.6.1.4.1.19376.1.5.3.1.1.9.26 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Heart | 1.3.6.1.4.1.19376.1.5.3.1.1.9.29 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Abdomen | 1.3.6.1.4.1.19376.1.5.3.1.1.9.31 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Genitalia | 1.3.6.1.4.1.19376.1.5.3.1.1.9.36 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Musculoskeletal System | 1.3.6.1.4.1.19376.1.5.3.1.1.9.34 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Extremities | 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
|  |  | + Eye | 1.3.6.1.4.1.19376.1.5.3.1.1.9.19 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
| **RE** [1..N] |  | + Mental Status | 1.3.6.1.4.1.19376.1.5.3.1.1.21.2.1 | IHEPCC TF-2: 6.3.3.4.30 | 6.3.D.5.8 |
| R [1..1] |  | EMS Procedures Performed 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.D.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 | IHE PCC TF-2: 6.3.3.4.5 | 6.3.D.5.4 |
| R [1..] |  | Reason for Referral | 1.3.6.1.4.1.19376.1.5.3.1.3.1 | IHE PCC TF-2: 6.3.3.1.1 | 6.3.D.5.7 |
| R [1..1] |  | History Present Illness | 1.3.6.1.4.1.19376.1.5.3.1.3.4 | IHE PCC TF-2: 6.3.3.2.1 | 6.3.D.5.10 |
| R [1..1] |  | Active Problems | 1.3.6.1.4.1.19376.1.5.3.1.3.6 | IHE PCC TF-2: 6.3.3.2.3 | 6.3.D.5.11 |
| RE [1..1] |  | Review of Systems-EMS | TBD [need OID] | IHE PCC TF-2: 6.3.3.10.S2 |  |

###### 6.3.1.D.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.D.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.D.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 encoded 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 SHALL be drawn from the EMSLevelOfService - 2.16.840.1.113883.17.3.11.70 [HL7 EMS PCR] value set.).

###### 6.3.1.D.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 |
| 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.D.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 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.D.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.D.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.D.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 IHE PCC [TF-2] assessment concepts. The assessment <value> element shall be encoded in the /value concept.

|  |  |  |  |
| --- | --- | --- | --- |
| **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 | OID TBD | 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 IHE PCC [TF-2] assessment target site. The target site location <value> element shall be encoded in the /targetSiteCode/code concept.

|  |  |  |  |
| --- | --- | --- | --- |
| **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.D.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.D.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.D.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.D.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.D.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 1.3.6.1.4.1.19376.1.5.3.1.1.2and so must conform to the requirements of those templates as well this document specification, PCS *templateID*.

A complete example of the Paramedicine Care Summary (PCS) Document Content Module is available on the IHE ftp server at: <ftp://ftp.ihe.net/TF_Implementation_Material/PCC/PCS/>.

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

Add to Section 6.3.2 Header Content Modules

### 6.3.2 CDA Header Content Modules

#### 6.3.2.H 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 | 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 |
| **TBD** | **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 | | TBD | | | |
| 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 | TBD | 6.3.4.E1 |  |

<component>

<section>

<templateId root=’TBD’/>

<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 | | TBD | | | |
| 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 [1..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 [1..1] |  | Last Oral Intake | TBD | 6.3.4.E2 |  |
| R2 [1..1] |  | Last Known Well | TBD | 6.3.4.E3 |  |

<component>

<section>

<templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.18'/>

<templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.9.13'/>

<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.

### 6.3.4 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 | | | | oid | | | | | | |
| 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

Table 6.3.4.E2-1: Last Oral Intake Entry

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Template Name | | | | Last Oral Intake Entry | | | | | | |
| Template ID | | | | Oid | | | | | | |
| 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 | | oid | | |
| 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 | Oid-TBD, 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

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 |

## 6.6 HL7 FHIR Content Module

### 6.6.X Transport Content

#### 6.6.X.1 Referenced Standards

* HL7 Version 3 Domain Analysis Model: Emergency Medical Services, Release 1 <[http://www.hl7.org/implement/standards/product\_brief.cfm?product\_id=39>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=39%3e)
* HL7 Version 3 Domain Information Model; Emergency Medical Services, Release 1 <[http://www.hl7.org/implement/standards/product\_brief.cfm?product\_id=302>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=302%3e)
* HL7 Version 3 Implementation Guide for CDA Release 2 - Level 3: Emergency Medical Services; Patient Care Report, Release 2 - US Realm <[http://www.hl7.org/implement/standards/product\_brief.cfm?product\_id=438>](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=438%3e)
* HL7 Version 3 Domain Analysis Model: Trauma Registry Data Submission, Release <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=363>
* HL7 CDA® R2 Implementation Guide: Trauma Registry Data Submission, Release 1 - US Realm <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=355>
* HL7 Version 2.7.1 Implementation Guide: Message Transformations with OASIS Tracking of Emergency Patients (TEP), Release 1 <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=439>
* 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>

#### 6.6.X.2 Trigger Events

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

#### 6.6.X.3 Message Semantics

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

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

| FHIR Resource location | Cardinality | Structured Definition |
| --- | --- | --- |
| Composition | 1..1 | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.Composition](http://ihe.net/fhir/StructureDefinition/IHE.PCS.Composition%20) |
| Patient | 1..1 | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.Patinet](http://ihe.net/fhir/StructureDefinition/IHE.PCS.Patinet%20) |
| Condition | 0..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.Condition](http://ihe.net/fhir/StructureDefinition/IHE.PCS.Condition%20) |
| Procedure | 0..\* | <http://ihe.net/fhir/StructureDefinition/IHE.PCS.Procedure> |
| Medication Administration | 0..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.MedicationAdministration](http://ihe.net/fhir/StructureDefinition/IHE.PCS.MedicationAdministration%20) |
| Medication Statement | 0..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.MedicalStatement](http://ihe.net/fhir/StructureDefinition/IHE.PCS.MedicalStatement%20%20) |
| Observation | 1..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.Observation](http://ihe.net/fhir/StructureDefinition/IHE.PCS.Observation%20) |
| Encounter | 1..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.Encounter](http://ihe.net/fhir/StructureDefinition/IHE.PCS.Encounter%20) |
| Location | 1..1 | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.Location](http://ihe.net/fhir/StructureDefinition/IHE.PCS.Location%20) |
| Related Person | 0..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.RelatedPerson](http://ihe.net/fhir/StructureDefinition/IHE.PCS.RelatedPerson%20) |
| Allergy Intolerance | 0..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.AllergyIntolerance](http://ihe.net/fhir/StructureDefinition/IHE.PCS.AllergyIntolerance%20) |
| Adverse Event | 0..1 | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.AdverseEvent](http://ihe.net/fhir/StructureDefinition/IHE.PCS.AdverseEvent%20) |
| Clinical Impression | 1..\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.ClinicalImpression](http://ihe.net/fhir/StructureDefinition/IHE.PCS.ClinicalImpression%20) |
| Device | 0..1\* | [http://ihe.net/fhir/StructureDefinition/IHE.PCS.Device](http://ihe.net/fhir/StructureDefinition/IHE.PCS.Device%20) |

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

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

| 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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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(Acccount.coverage.(Coverage.issuer)) | O [0..1] | The patient's employer's Name. |  |
| Patient's Employer's Address | Encounter.account(Acccount.coverage(Coverage.identifier)) | O [0..1] | The street address of the patient's employer. |  |
| Patient's Employer's City | Encounter.account(Acccount.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(Acccount.coverage(Coverage.identifier)) | O [0..1] | The state of the patient's employer. |  |
| Patient's Employer's Zip Code | Encounter.account(Acccount.coverage(Coverage.identifier)) | O [0..1] | The ZIP Code of the patient's employer. |  |
| Patient's Employer's Country | Encounter.account(Acccount.coverage(Coverage.identifier)) | O [0..1] | The country of the patient's employer. |  |
| Patient's Employer's Primary Phone Number | Encounter.account(Acccount.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. |  |
| 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. |  |
| 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. |  |
| 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 – priorCprProvidedType  \*\*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). |  |
| Date/Time Resuscitation Discontinued | Encounter🡨Procedure.performedPeriod.end | RE  [0..1] | The date/time resuscitation was discontinued. |  |
| Reason CPR/Resuscitation Discontinued | Encounter🡨Procedure -resuscitationDiscontinuedReason  \*\*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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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. |  |
| 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 | HealthService.characteristic | O  [0..\*] | The primary hospital capability associated with the patient's condition for this transport (e.g., Trauma, STEMI, Peds, etc.). |  |
| 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 Quality Data Import Option

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

| 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 Performed Section |
| Procedure | Encounter🡨Procedure.code | EMS Procedures Performed 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 |
| 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 | 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 |
| 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.5 Trauma Data Import Option

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

| 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 |
| 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 |
| 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 IHE PCC, 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.

| 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 |

Appendices

N/A

1. HL7 is the registered trademark of Health Level Seven International. [↑](#footnote-ref-2)
2. FHIR is the registered trademark of Health Level Seven International. [↑](#footnote-ref-3)
3. CDA is the registered trademark of Health Level Seven International. [↑](#footnote-ref-4)