Integrating the Healthcare Enterprise

****

IHE Patient Care Coordination (PCC)

Technical Framework Supplement

**<Postpartum Care Profile  
(PPC )>**

< Public Comment *or*   
Trial Implementation>

Date: <June XX, 20XX>

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Email: <ihe@himss.org>**Foreword**

This page is standard language for all IHE supplements. The Introduction section following will list all other IHE documents that are modified by this supplement. This document is a supplement to the IHE Patient Care Coordination Technical Framework 4.0. The technical framework can be found at http://www.ihe.net/Technical\_Framework/index.cfm#pcc.

This and all IHE supplements are written as changes to a base document. The base document is normally one or more IHE Final Text documents. Supplements tell a technical editor and the reader how to modify the final text (additions, deletions, changes in wording). In order to understand this supplement, the reader needs to read and understand all of the base documents that are modified by this supplement.

In this supplement you will see “boxed” instructions similar to the following:

Replace Section X.X by the following:

These “boxed” instructions are for the author to indicate to the Volume Editor how to integrate the relevant section(s) into the overall Technical Framework.

This format means the reader has to integrate the base documents and the supplement. When the material in the supplement is considered ready for incorporation into the final text of the Technical Framework, the IHE committees will update the technical framework documents with the final text. Supplements are written in this format to avoid duplication material. This means that two IHE documents (one possibly final text, and the other a supplement) should not contain contradictory material.

Text in this document is not considered final for the Technical Framework. It becomes Final Text only after the IHE PCC Technical Committee ballots the supplement (after testing) and agrees that the material is ready for integration with the existing Technical Framework documents.

**It is submitted for Trial Implementation starting August XX, 20XX.**

**Comments on this supplement may be submitted http://forums.rsna.org:**

1. Select the “IHE” forum
2. Select Patient Care Coordination Technical Framework
3. Select 2009-2010 Supplements for Public Comment
4. Select Immunization Care Plan

Please use the Public Comment Template provided there when starting your New Thread.

**Details about IHE may be found at:** www.ihe.net

**Details about the IHE Patient Care Coordination may be found at:** http://www.ihe.net/Domains/index.cfm

**Details about the structure of IHE Technical Frameworks and Supplements may be found at:** http://www.ihe.net/About/process.cfm and http://www.ihe.net/profiles/index.cfm

# Introduction

This supplement is written for Trial Implementation. It is written as changes to the documents listed below. The reader should have already read and understood these documents:

PCC Technical Framework Volume 1, Revision 6.0

PCC Technical Framework Volume 2, Revision 6.0

This supplement also references other documents1. The reader should have already read and understood these documents:

IT Infrastructure Technical Framework Volume 1, Revision 6.0

IT Infrastructure Technical Framework Volume 2, Revision 6.0

The Patient Identifier Cross-Reference (PIX) and Patient Demographic Query (PDQ) HL7 v3 Supplement to the IT Infrastructure Technical Framework.

HL7 and other standards documents referenced in Volume 1 and Volume 2

## Open Issues and Questions

*< List of open issues/ questions that need to be addressed prior to publishing of the Technical Framework>*

How to determine where the document originates: by reference rather than by value. How will the trail to the original be shown?

No specific data elements for Postpartum Care Summary. Using Medical Document Summary (XDS-MS) Is this correct?

Coordinate with Newborn Summary and Labor & Delivery for data elements common to all profiles for Postpartum Visit Summary.

## Closed Issues

*< List of closed issues/ questions with their resolutions that have been addressed prior to publishing of the Technical Framework>*

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Volume 1 – Profiles

Add the following to section 1.1.5

1.1.5 Copyright Permissions

Add the following to section 2.5

2.5 Dependencies of the PCC Integration Profiles

|  |  |  |  |
| --- | --- | --- | --- |
| <Profile Name> | <?> | <?> | <-> |

Add the following to section 2.7

2.7 History of Annual Changes

Add Section X

X Postpartum Care Profile

*<200 words or less describing this profile – this is the Profile Abstract that goes in the Executive Summary document. >*

The normal workflow for pregnancy care includes antepartum care performed in the office (covered by the APS & APR Profiles), delivery and subsequent care in the birthing facility and discharge from the birthing facility (covered by the LDR Profile) and postpartum care. The postpartum visit occurs approximately six weeks after birth. However, if a woman delivered by Cesarean section, or experiences complications, she is likely to be seen earlier.

The Postpartum Care Profile describes the content and format of two summary documents that will be used to complete the pregnancy care record:

1) The Postpartum Care Summary (PCS) is a medical summary of any episode of treatment provided by care providers other than the patient's obstetrician after the patient is discharged from the hospital or birthing facility but before the 6-week postpartum visit.

2) The Postpartum Visit Summary (PVS) is a content profile of the postpartum visit that includes physical examination, labs and counseling. This routine visit usually occurs at 6 weeks after the birth and completes the obstetric care record.

A sample form showing the data elements common to a postpartum visit can be found at: <http://www.acog.org/acb-custom/aa197.pdf> .

A. Postpartum Care Summary (PCS)

X.1 Purpose and Scope

*<This section focuses on purpose and scope by starting with a clear statement of the problem being addressed. It expands on this with statements of specific inclusions and exclusions of scope, value statements to represent why this problem is being solved and diagrams (if applicable) to represent the problem being addressed (and not the solution to the problem).>*

It is not uncommon for new mothers to travel to visit family in the weeks after delivery but prior to their final visit with the obstetrician. When acute conditions arise, the mother may seek treatment at a facility remote from her normal point of care. A summary of the care provided by the remote provider should be available to the mother’s obstetrician-gynecologist for follow on care.

The Postpartum Care Summary (PCS) addresses any care provided from the time of discharge from the hospital/birthing facility up to the point of return to the obstetric care provider’s office, which usually occurs about 6 weeks after the birth.

X.2 Use Cases

*<One or more use cases in the form of user stories that this profile addresses.>*

**Case 1.**

Rose Hips delivered a healthy baby via Cesarean section and was discharged after an uncomplicated hospital stay. Three weeks after discharge from the facility, while visiting relatives in another town, Rose developed a significant urinary tract infection. Rose sees Dr. Neera Nuff at the closest acute care clinic who administers IV antibiotics. The care she received at the acute care clinic, although remote from her obstetrician, is captured and incorporated in the post-partum details for her 6 week postpartum visit.

The typical workflow for Case 1 is as follows:

1. Patient demographics recorded, verified and/or updated as needed.
2. A history and physical assessment is performed.
3. Patient is treated as needed.
4. Treatment is recorded in the patient record.
5. Patient is discharged.
6. Information is shared with obstetric care provider and patient's PHR.

X.3 Actors/Transactions

*<Actors are roles that are played by a system. A system may have multiple actors. This section shall contain Actor/Transaction diagrams and an Actor/Transaction table. See below for general guidelines for Actors/Transactions>*

There are two actors in this profile, the Content Creator and the Content Consumer. Content is created by a Content Creator and is to be consumed by a Content Consumer. The sharing or transmission of content from one actor to the other is addressed by the appropriate use of IHE profiles described below, and is out of scope of this profile. A Document Source or a Portable Media Creator may embody the Content Creator Actor. A Document Consumer, a Document Recipient or a Portable Media Importer may embody the Content Consumer Actor. The sharing or transmission of content or updates from one actor to the other is addressed by the use of appropriate IHE profiles described in the section on Content Bindings with XDS, XDM and XDR. in PCC TF\_2:4.1



**Figure X.3-1 Actor Diagram**

Figure X.3-1 shows the actors directly involved in the <Profile Name> Integration Profile and the relevant transactions between them. Other actors that may be indirectly involved due to their participation in <other related profiles>, etc. are not necessarily shown.



Figure X.3-1. Postpartum Care Summary Actor Diagram

Table X.3-1 lists the transactions for each actor directly involved in the Postpartum Care Summary Profile. In order to claim support of this Integration Profile, an implementation must perform the required transactions (labeled “R”). Transactions labeled “O” are optional. A complete list of options defined by this Profile and that implementations may choose to support is listed in Volume I, Section X.4.

Table X.3-1. <Profile Name> Integration Profile - Actors and Transactions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Actors | Transactions | | Optionality | Section in Vol. 2 | |
|  | |  | | |  | |  |
| Urgent Care Provider | | Record/Update Patient Demographics | | | R | | Z.1 |
| Order/ Receive Labs | | | R | | Z.2 |
| Create and Send Medical Summary | | | R | | Z.3 |
| Record in Patient’s PHR | | | R | | Z.2 |
| Obstetric Care Provider | | Receive Medical Summary | | | R | | Z.3 |
|  | |  | | |  | |  |

X.4 Options

*<This section contains a table describing the additional capabilities available for this profile and references to all sections that state requirements for compliance to the Option. Options in a Profile are synonymous with options on an automobile in that the purchaser of the automobile may choose the sunroof and upgraded stereo options, but is not required to do so in order to purchase and use the automobile. In another example the purchaser may have the option of an automatic transmission or a manual transmission. In this case the purchaser must choose one option or the other as a car cannot be driven without a transmission.>*

Options that may be selected for this Profile are listed in the table X.4-1 along with the Actors to which they apply. Dependencies between options when applicable are specified in notes.

Table X.4-1 <Profile Name> - Actors and Options

| Actor | Options | Vol & Section |
| --- | --- | --- |
| Actor A | *No options defined* | - - |
| Actor F | *No options defined* | - - |
| Actor D/ Actor E | *No options defined* | - - |
| *No options defined* | - - |
| Actor B (Actor C) | *No options defined* | - - |
| *No options defined* | - - |

*<Options are usually the same across PCC Content Profiles, below is an example of what should be used for these types of profiles. In future work these may be moved into a yet to be created PCC Technical Framework Volume 0.>*

|  |  |  |
| --- | --- | --- |
| Actor | Option | Section |
| Content Consumer | View Option (See Note 1)  Document Import Option (See Note 1) Section Import Option (See Note 1) Discrete Data Import Option (See Note 1) | PCC TF-2: 3.0.1  PCC TF-2: 3.0.2 PCC TF-2: 3.0.3 PCC TF-2: 3.0.4 |
| Content Creator | No options defined |  |

Note 1: The Actor shall support at least one of these options.

X.5 Groupings

*<This section specifies Actors from other profiles, possibly in other domains, that this profile shall, may or should be grouped with; including any additional requirements placed upon them when grouped with actors of this profile (and vice versa).>*

**Content Bindings for XDS.b, XDM, and XDR**

It is expected that the transfers of care will occur in an environment where the physician offices and hospitals have a coordinated infrastructure that serves the information sharing needs of this community of care. Several mechanisms are supported by IHE profiles:

* A Medical Document Summary is defined by the IHE Cross Enterprise Document Medical Document Summaries (XDS-MS) Integration profile.
* A registry/repository-based infrastructure is defined by the IHE Cross Enterprise Document Sharing (XDS.b) and other IHE Integration Profiles such as patient identification (PIX & 5 PDQ) and notification of availability of documents (NAV).
* A media-based infrastructure is defined by the IHE Cross Enterprise Document Media Interchange (XDM) profile.
* A reliable messaging-based infrastructure is defined by the IHE Cross Enterprise Document Reliable Interchange (XDR) profile.
* All of these infrastructures support Security and privacy through the use of the Consistent Time (CT) and Audit Trail and Node Authentication (ATNA) profiles.
* Cross Enterprise Document Sharing, Media Interchange and Reliable Messages
* Actors from the ITI XDS.b, XDM and XDR profiles embody the Content Creator and Content Consumer sharing function of this profile. A Content Creator or Content Consumer must be grouped with appropriate actors from the XDS.b, XDM or XDR profiles, and the metadata sent in the document sharing or interchange messages has specific relationships to the content of the clinical document described in the content profile.

**Notification of Document Availability (NAV)**

A Document Source should provide the capability to issue a Send Notification Transaction per the ITI Notification of Document Availability (NAV) Integration Profile in order to notify one or more Document Consumer(s) of the availability of one or more documents for retrieval. One of the Acknowledgement Request options may be used to request from a Document Consumer that an acknowledgement should be returned when it has received and processed the notification. A Document Consumer should provide the capability to receive a Receive Notification Transaction per the NAV Integration Profile in order to be notified by Document Sources of the availability of one or more documents for retrieval. The Send Acknowledgement option may be used to issue a Send Acknowledgement to a Document Source that the notification was received and processed.

**Document Digital Signature (DSG)**

When a Content Creator Actor needs to digitally sign a document in a submission set, it may support the Digital Signature (DSG) Content Profile as a Document Source. When a Content Consumer Actor needs to verify a Digital Signature, it may retrieve the digital signature document and may perform the verification against the signed document content.

X.6 Security Considerations

*<Description of the Profile specific security considerations. This should include the outcomes of a risk assessment. This likely will include profile groupings, and residual risks that need to be assigned to the product design, system administration, or policy.>*

This profile assumes that a minimum security and privacy environment has been established across all participants. There must exist security policies regarding the use of training, agreements, risk management, business continuity and network security that need to be already in place prior to the implementation of the Postpartum Care Summary.

X.7 Requirements of Actors

*<Specific requirements for each Actor defined within this profile. The intent of this section is to summarize any requirements that have been laid out in previous sections. This section is used to figure out what is tested.>*

This section describes the specific requirements for each Actor defined within this profile.

Specific details can be found in Volume 1 and Volume 2 of the technical framework.

**X.7.1 Content Creator**

1. A Content Creator shall be able to create a Medical Document Summary (XDS-MS) according to the specifications for that content profile found in PCC TF-2.

2. A Content Creator shall be grouped with the Time Client Actor, and shall synchronize its clock with a Time Server.

3. A Content Creator shall be grouped with the Secure Node or Secure Application Actor of the ATNA profile.

4. All activity initiated by the application implementing the Content Creator shall generate the appropriate audit trail messages as specified by the ATNA Profile. The bare minimum requirements of a Content Creator are that it be able to log creation and export of clinical content.

5. A Content Creator shall use secure communications for any document exchanges, according to the specifications of the ATNA profile.

**C.7.1 Content Consumer**

1. A Content Consumer shall be able to consume a Medical Document Summary (XDS-MS) document.

2. A Content Consumer shall implement the View Option or Discrete Data import option, or both.

3. A Content Consumer that implements the Document Import or Section Import Option shall implement the View Option as well.

4. A Content Consumer that implements the View option shall be able to:

a. Demonstrate rendering of the document for display.

b. Print the document.

c. Display the document with its original style sheet.

d. Support traversal of any links contained within the document.

5. A Content Consumer that implements the Document Import Option shall:

a. Store the document.

b. Demonstrate the ability to access the document again from local storage.

6. A Content Consumer that implements the Section Import Option shall offer a means to import one or more document sections into the patient record as free text.

7. A Content Consumer that implements the Discrete Data Import Option shall offer a means to import structured data from one or more sections of the document.

8. A Content Consumer Actor shall be grouped with the Time Client Actor, and shall synchronize its clock with a Time Server.

9. All activity initiated by the application implementing the Content Consumer shall generate the appropriate audit trail messages as specified by the ATNA Profile. The bare minimum requirements of a Content Consumer are that it be able to log views or imports of clinical content.

10. A Content Consumer shall log events for any views of stored clinical content.

11. A Content Consumer shall use secure communications for any document exchanges, according to the specifications of the ATNA profile.

X.8 Content Modules

*<This section defines which document content module(s) shall be used. Not all profiles will have content in this section. Tables should be used to show data element mappings between different standards. See below for an example from the Antepartum Summary profile mapping ACOG data elements to PCC section templates.>*

|  |  |
| --- | --- |
| XDS-MS |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

X.9 Process Flow

*<Description of the process flow(s) and sequence diagram(s) covered by this profile in order to satisfy the use cases. This often will include a brief description of the use cases as well. If there are detailed behavioral rules that apply to a specific process flow or multiple process flows or descriptions then an appendix may be added as needed>*



Figure X.9-1. Basic Process Flow in <Profile Name> Profile

<Appendix A> Actor Summary Definitions

*<add any actor definitions for new actors defined specifically for this profile>*

<Appendix B> Transaction Summary Definitions

*<add any transaction definitions for new transactions defined specifically for this profile>*

B. Postpartum Visit Summary (PVS)

X.1 Purpose and Scope

*<This section focuses on purpose and scope by starting with a clear statement of the problem being addressed. It expands on this with statements of specific inclusions and exclusions of scope, value statements to represent why this problem is being solved and diagrams (if applicable) to represent the problem being addressed (and not the solution to the problem).>*

The normal workflow for pregnancy care includes antepartum care performed in the office (covered by the APS & APR Profiles), delivery and subsequent care in the birthing facility and discharge from the birthing facility (covered by the LDR Profile) and finally, postpartum care. The Postpartum Visit Summary (PVS) addresses care provided at the postpartum visit to the care provider’s office at approximately 6 weeks after birth and concludes the pregnancy record.

There is a need to ensure adequate follow-up care for women who have given birth and to maintain the educational activities traditionally begun during postpartum hospitalization. Further, it is important that any interim care received from other providers be reviewed and assimilated into the pregnancy record. Finally, the postpartum visit documents the ongoing assessment of the physical and psycho-social status of the new mother.

Services performed at the postpartum visit include an interval history and physical, laboratory studies, education and counseling. Information from labor and delivery should be available to inform the postpartum visit, and would include information regarding the newborn.

The information collected at postpartum visits is important to the continuation of care for the mother and often for the newborn. The information contained in the Postpartum Visit Summary would be exchanged with other women's health care providers, the pediatrician and/or other medical specialists. This information may also be incorporated into a patient's PHR.

X.2 Use Cases

*<One or more use cases in the form of user stories that this profile addresses.>*

**Case 1.**

Kay Sera sees Dr. Jean Poole, her obstetrician for a follow up visit after delivery. The patient reports extreme feelings of happiness and sadness. The patient is examined and then is referred for psychiatric care to Dr. Anna Liszt. The PVS is shared with Dr. Liszt or other care provider to whom the patient is referred. Dr. Liszt and Dr. Poole both utilize an EHR that participates with an HIE.

**Case 2.**

Dot Matrix sees Dr. Jean Poole, her obstetrician at six weeks postpartum for a follow up visit after an uncomplicated delivery with a normal outcome. Dot complains of flu-like symptoms, breast tenderness and pain especially when nursing. She is concerned because her new baby has not been feeding well and has been colicky for 2 weeks. Dr. Poole prescribes an antibiotic for Dot for treatment of mastitis and refers her to a lactation counselor. Information from the visit is also sent to the baby's pediatrician. Dr. Poole and the pediatrician's office both utilize an EHR that participates with an HIE.

The typical workflow for PVS scenarios one and two is as follows:

1. Demographic information is verified or updated.
2. Maternal discharge information is accessed.
3. Postpartum History and Physical is performed.
4. Laboratory studies, prescriptions, etc. ordered.
5. Information is captured in the Postpartum Visit Summary.
6. Information shared with consulting providers

X.3 Actors/Transactions

*<Actors are roles that are played by a system. A system may have multiple actors. This section shall contain Actor/Transaction diagrams and an Actor/Transaction table. See below for general guidelines for Actors/Transactions>*

Figure X.3-1 shows the actors directly involved in the <Profile Name> Integration Profile and the relevant transactions between them. Other actors that may be indirectly involved due to their participation in <other related profiles>, etc. are not necessarily shown.



Figure X.3-1. <Profile Name> Actor Diagram

Table X.3-1 lists the transactions for each actor directly involved in the <Profile Name> Profile. In order to claim support of this Integration Profile, an implementation must perform the required transactions (labeled “R”). Transactions labeled “O” are optional. A complete list of options defined by this Profile and that implementations may choose to support is listed in Volume I, Section X.4.

Table X.3-1. <Profile Name> Integration Profile - Actors and Transactions

|  |  |  |  |
| --- | --- | --- | --- |
| Actors | Transactions | Optionality | Section in Vol. 2 |
| Actor A | Transaction\_1 | R | Z.1 |
| Transaction\_2 | R | Z.2 |
| Actor F | Transaction\_1 | R | Z.1 |
| Transaction\_2 | R | Z.2 |
| Actor D/ Actor E | Transaction\_1 | R | Z.1 |
| Transaction\_2 | R | Z.2 |
| Transaction\_3 | R | Z.3 |
| Transaction\_4 | R | Z.4 |
| Actor B (Actor C) | Transaction\_3 | R | Z.3 |
| Transaction\_4 | R | Z.4 |

Note: This is a note

*<Actors and Transactions are usually the same across PCC Content Profiles, below is an example of what should be used for these types of profiles. In future work these may be moved into a yet to be created PCC Technical Framework Volume 0.>*

There are two actors in this profile, the Content Creator and the Content Consumer. Content is created by a Content Creator and is to be consumed by a Content Consumer. The sharing or transmission of content from one actor to the other is addressed by the appropriate use of IHE profiles described below, and is out of scope of this profile. A Document Source or a Portable Media Creator may embody the Content Creator Actor. A Document Consumer, a Document Recipient or a Portable Media Importer may embody the Content Consumer Actor. The sharing or transmission of content or updates from one actor to the other is addressed by the use of appropriate IHE profiles described in the section on Content Bindings with XDS, XDM and XDR. in PCC TF\_2:4.1



**Figure X.3-1 Actor Diagram**

X.4 Options

*<This section contains a table describing the additional capabilities available for this profile and references to all sections that state requirements for compliance to the Option. Options in a Profile are synonymous with options on an automobile in that the purchaser of the automobile may choose the sunroof and upgraded stereo options, but is not required to do so in order to purchase and use the automobile. In another example the purchaser may have the option of an automatic transmission or a manual transmission. In this case the purchaser must choose one option or the other as a car cannot be driven without a transmission.>*

Options that may be selected for this Profile are listed in the table X.4-1 along with the Actors to which they apply. Dependencies between options when applicable are specified in notes.

Table X.4-1 <Profile Name> - Actors and Options

| Actor | Options | Vol & Section |
| --- | --- | --- |
| Actor A | *No options defined* | - - |
| Actor F | *No options defined* | - - |
| Actor D/ Actor E | *No options defined* | - - |
| *No options defined* | - - |
| Actor B (Actor C) | *No options defined* | - - |
| *No options defined* | - - |

*<Options are usually the same across PCC Content Profiles, below is an example of what should be used for these types of profiles. In future work these may be moved into a yet to be created PCC Technical Framework Volume 0.>*

|  |  |  |
| --- | --- | --- |
| Actor | Option | Section |
| Content Consumer | View Option (See Note 1)  Document Import Option (See Note 1) Section Import Option (See Note 1) Discrete Data Import Option (See Note 1) | PCC TF-2: 3.0.1  PCC TF-2: 3.0.2 PCC TF-2: 3.0.3 PCC TF-2: 3.0.4 |
| Content Creator | No options defined |  |

Note 1: The Actor shall support at least one of these options.

X.5 Groupings

## *<This section specifies Actors from other profiles, possibly in other domains, that this profile shall, may or should be grouped with; including any additional requirements placed upon them when grouped with actors of this profile (and vice versa).>*

### Labor and Delivery Summary

Information such as labor and delivery type, anesthesia used, complications, etc. will come from the Labor and Delivery summary, when completed.

### Maternal Discharge Summary

Information such as medications, immunizations given, feeding method, etc will come from the Maternal Discharge Summary, when completed.

### Newborn Discharge Summary

Information including name and sex of the baby, birth weight, disposition of the baby and complications of birth, etc., will come from the Newborn Discharge Summary when completed.

### Content Bindings for XDS.b, XDM, and XDR

### It is expected that the transfers of care will occur in an environment where the physician offices and hospitals have a coordinated infrastructure that serves the information sharing needs of this community of care. Several mechanisms are supported by IHE profiles:

### A registry/repository-based infrastructure is defined by the IHE Cross Enterprise Document Sharing (XDS.b) and other IHE Integration Profiles such as patient identification (PIX & 5 PDQ) and notification of availability of documents (NAV).

### A media-based infrastructure is defined by the IHE Cross Enterprise Document Media Interchange (XDM) profile.

### A reliable messaging-based infrastructure is defined by the IHE Cross Enterprise Document Reliable Interchange (XDR) profile.

### All of these infrastructures support Security and privacy through the use of the Consistent Time (CT) and Audit Trail and Node Authentication (ATNA) profiles.

### Cross Enterprise Document Sharing, Media Interchange and Reliable Messages

### Actors from the ITI XDS.b, XDM and XDR profiles embody the Content Creator and Content Consumer sharing function of this profile. A Content Creator or Content Consumer must be grouped with appropriate actors from the XDS.b, XDM or XDR profiles, and the metadata sent in the document sharing or interchange messages has specific relationships to the content of the clinical document described in the content profile.

### Notification of Document Availability (NAV)

A Document Source should provide the capability to issue a Send Notification Transaction per the ITI Notification of Document Availability (NAV) Integration Profile in order to notify one or more Document Consumer(s) of the availability of one or more documents for retrieval. One of the Acknowledgement Request options may be used to request from a Document Consumer that an acknowledgement should be returned when it has received and processed the notification. A Document Consumer should provide the capability to receive a Receive Notification Transaction per the NAV Integration Profile in order to be notified by Document Sources of the availability of one or more documents for retrieval. The Send Acknowledgement option may be used to issue a Send Acknowledgement to a Document Source that the notification was received and processed.

### Document Digital Signature (DSG)

When a Content Creator Actor needs to digitally sign a document in a submission set, it may support the Digital Signature (DSG) Content Profile as a Document Source. When a Content Consumer Actor needs to verify a Digital Signature, it may retrieve the digital signature document and may perform the verification against the signed document content.

X.6 Security Considerations

*<Description of the Profile specific security considerations. This should include the outcomes of a risk assessment. This likely will include profile groupings, and residual risks that need to be assigned to the product design, system administration, or policy.>*

X.7 Requirements of Actors

*<Specific requirements for each Actor defined within this profile. The intent of this section is to summarize any requirements that have been laid out in previous sections. This section is used to figure out what is tested.>*

This section describes the specific requirements for each Actor defined within this profile.

Specific details can be found in Volume 1 and Volume 2 of the technical framework.

**X.7.1 Content Creator**

1. A Content Creator shall be able to create a PPVS Document according to the specifications for that content profile found in PCC TF-2.

2. A Content Creator shall be grouped with the Time Client Actor, and shall synchronize its clock with a Time Server.

3. A Content Creator shall be grouped with the Secure Node or Secure Application Actor of the ATNA profile.

4. All activity initiated by the application implementing the Content Creator shall generate the appropriate audit trail messages as specified by the ATNA Profile. The bare minimum requirements of a Content Creator are that it be able to log creation and export of clinical content.

5. A Content Creator shall use secure communications for any document exchanges, according to the specifications of the ATNA profile.

**C.7.1 Content Consumer**

1. A Content Consumer shall be able to consume a PPVS document.

2. A Content Consumer shall implement the View Option or Discrete Data import option, or both.

3. A Content Consumer that implements the Document Import or Section Import Option shall implement the View Option as well.

4. A Content Consumer that implements the View option shall be able to:

a. Demonstrate rendering of the document for display.

b. Print the document.

c. Display the document with its original style sheet.

d. Support traversal of any links contained within the document.

5. A Content Consumer that implements the Document Import Option shall:

a. Store the document.

b. Demonstrate the ability to access the document again from local storage.

6. A Content Consumer that implements the Section Import Option shall offer a means to import one or more document sections into the patient record as free text.

7. A Content Consumer that implements the Discrete Data Import Option shall offer a means to import structured data from one or more sections of the document.

8. A Content Consumer Actor shall be grouped with the Time Client Actor, and shall synchronize its clock with a Time Server.

9. All activity initiated by the application implementing the Content Consumer shall generate the appropriate audit trail messages as specified by the ATNA Profile. The bare minimum requirements of a Content Consumer are that it be able to log views or imports of clinical content.

10. A Content Consumer shall log events for any views of stored clinical content.

11. A Content Consumer shall use secure communications for any document exchanges, according to the specifications of the ATNA profile.

X.8 Content Modules

*<This section defines which document content module(s) shall be used. Not all profiles will have content in this section. Tables should be used to show data element mappings between different standards. See below for an example from the Antepartum Summary profile mapping ACOG data elements to PCC section templates.>*

|  |  |
| --- | --- |
| ACOG Postpartum Record Datum | CDA Section |
| Allergies | Allergies and Other Adverse Reactions |
| History & Physical | Physical Exams |
| Problems | Problems |
| Interval Care Recommended | Plan of Care |
| Medication/Contraception | Active Medications |
| Delivery Information |  |
| Neonatal Information |  |
| Laboratory studies |  |
| Maternal Discharge Information |  |

X.9 Process Flow

*<Description of the process flow(s) and sequence diagram(s) covered by this profile in order to satisfy the use cases. This often will include a brief description of the use cases as well. If there are detailed behavioral rules that apply to a specific process flow or multiple process flows or descriptions then an appendix may be added as needed>*



Figure X.9-1. Basic Process Flow in <Profile Name> Profile

<Appendix A> Actor Summary Definitions

*<add any actor definitions for new actors defined specifically for this profile>*

<Appendix B> Transaction Summary Definitions

*<add any transaction definitions for new transactions defined specifically for this profile>*

Glossary

Add the following terms to the Glossary:

*<any glossary additions associated with the profile draft go here>*

Anesthesia

Loss of the ability to feel pain, caused by administration of a drug or other medical intervention.

APS

Antepartum Summary content profile.

APR

Antepartum Record content profile.

Arrest disorder

Arrest of dilation: Condition in which there is no progress in cervical dilation for more than 2 hours.

Arrest of descent: Condition in which the fetal head does not descend for more than 1 hour in primip woman and more than 0.5 hours in multiparous woman.

ATNA

Audit Trail and Node Authentication. IT Infrastructure profile, described in ITI TF-1:9, and published in version 6.0 of the ITI Technical Framework.

Circumcision

Removal of the foreskin covering the tip of the penis, often done before a male baby leaves the hospital.

Contraception (birth control)

A process that prevents pregnancy by interfering with the normal process of ovulation, fertilization, and implantation. There are different kinds of birth control that act at different points in the process.

Delivery

Expulsion or extraction of the infant, placenta and membranes at birth.

Vaginal Delivery- The process of birth through the birth canal.

Cesarean Delivery- Surgery done to deliver a baby through an incision in the mother's abdomen.

DSG

Document Digital Signature. IT Infrastructure profile, described in ITI TF-3:4, and published as a supplement for trial implementation.

Essure

A method of fallopian tube occlusion utilizing a coiled spring device that is inserted in through the uterine cavity and into the tubal openings using a hesteroscope.

Hematocrit (HCT)

The volume percentage of erythrocytes in whole blood.

Hemoglobin (HGB)

Protein in red blood cells that carries oxygen; HGB measured by blood test.

Incision

A cut into a body tissue or organ, especially one made during surgery or the scar resulting from such a cut.

Irving Tubal Ligation

A surgical method of fallopian tube occlusion that excises a small portion of Fallopian tubes and then embeds the end of the cut fallopian tube below the serosa, or peritoneal, surface of the uterus.

LDHP

Labor and Delivery Admission History and Physical content profile.

LDR

Labor and Delivery Record content profile.

LDS

Labor and Delivery Summary content profile.

Macrosomia

Unusually large body, with birth weight in excess of the 90th percentile on the growth curve.

Malpresentation

Abnormal position of fetal presentation making during birth. Natural delivery becomes difficult or impossible.

Mastitis

Inflammation or infection of the breast.

MDS

Maternal Discharge Summary content profile.

Modified Pomeroy Tubal Sterilization

A surgical method of fallopian tube occlusion that excises small loop of Fallopian tube that has been tied firmly.

NAV

Notification of Document Availability. IT Infrastructure profile, described in ITI TF-1:12, and published as a supplement for trial implementation.

Neonatal

Pertaining to a newborn child < 28 days of age or 44 weeks post-conceptual age.

Obstetrician

A physician whose practice of medicine focuses on the care of women during pregnancy, through childbirth, and immediately following delivery. Often informally known as ob-gyn (obstetrician-gynecologist).

Parkland Tubal ligation

A surgical method of fallopian tube occlusion that excises small portion of Fallopian tubes after liagtion proximally and distally.

Pediatrician

A specialist in pediatrics. Pediatrics is the branch of medicine that deals with the development and care of infants and children and the treatment of their diseases.

PDQ

Patient Demographics Query. IT Infrastructure profile, described in ITI TF-1:8, and published in version 6.0 of the ITI Technical Framework.

Protraction Disorder

Primary dysfunctional labor.

PIX

Patient Identifier Cross-referencing. IT Infrastructure profile, described in ITI TF-1:5, and published in version 6.0 of the ITI Technical Framework.

Postpartum

Of or occuring in the period after childbirth

Tubal Sterilization

To make sterile by ligation of the fallopian tubes.

Uchida Tubal Ligation

A surgical method of fallopian tube occlusion that excises small portion of Fallopian tubes then embeds the end of the cut fallopian tube below the mesosalpinx resulting in female sterilization

XDM

Cross-Enterprise Document Media Interchange. IT Infrastructure profile, described in ITI TF-1:16, and published in version 6.0 of the ITI Technical Framework.

XDR

Cross Enterprise Document Reliable Interchange. IT Infrastructure profile, described in ITI TF-1:15, and published as a supplement for trial implementation.

XDS

Cross-Enterprise Document Sharing. IT Infrastructure profile, described in ITI TF-1:10, and published in version 6.0 of the ITI Technical Framework.