Integrating the Healthcare Enterprise

IHE IT Infrastructure
Technical Framework Supplement

Cross-Community Document Reliable Interchange
(XCDR)

Trial Implementation

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Foreword

This is a supplement to the IHE IT Infrastructure Technical Framework V13.0. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on September 9, 2016 for trial implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the IT Infrastructure Technical Framework. Comments are invited and may be submitted at http://www.ihe.net/ITI_Public_Comments. This supplement describes changes to the existing technical framework documents.

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

Amend Section X.X by the following:

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

General information about IHE can be found at: http://www.ihe.net.

Information about the IHE IT Infrastructure domain can be found at: http://www.ihe.net/IHE_Domains.

Information about the structure of IHE Technical Frameworks and Supplements can be found at: http://www.ihe.net/IHE_Process and http://www.ihe.net/Profiles.

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

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Introduction to this Supplement

This supplement contains the Cross-Community Document Reliable Interchange Profile (XCDR) and a number of extensions to the existing Cross-Enterprise Document Reliable Interchange Profile (XDR) to support the combined use of XCDR and XDR.

125 XCDR introduces the capability to send documents from a source Community with sufficient information to direct the documents through gateways to a designated target Community.

The XCDR Profile:

- has similar deployment characteristics to the Cross-Community Access Profile (XCA) and is easily combined and deployed in an environment that is already using XCA.

130 • fully specifies the combined use with XDR, enabling an XDR Document Source and Document Recipient Actors in separate communities to become connected. The XDR Document Source receives acknowledgment only when the Document Recipient in a remote community has received the document. End-to-end acknowledgement is assured.

- Extends the deployment of a community organized around an XDS Document Registry
135 and Repository(s) by allowing both Document Source Actors within this XDS based community, and in different communities to act as a source of documents.

XCDR can be:

- used as a stand-alone Profile to enable an Initiating Gateway in a source Community to provide a set of documents to the Responding Gateway of a remote Community.

140 • used in conjunction with the XDR Profile to enable a Document Source in one Community to provide a set of document to a Document Recipient in a remote Community.

- used in conjunction with the XCA Profile to enable two way communication between Communities.

145 • used in conjunction with the XDW Profile to enable the exchange of Workflow Documents in cross-community environments.

This supplement includes two major parts that are interrelated.

1. The first part introduces the XCDR Profile

2. The second part extends the Cross-Enterprise Document Reliable Interchange Profile
150 (XDR) with one new option, enabling Document Sources to convey a target homeCommunityId.

Open Issues and Questions

1. None

5

Closed Issues

155 1. In XCA, the Initiating Gateway is responsible for Patient ID reconciliation before initiating the query or retrieve (i.e., the Initiating Gateway must query with the Patient ID as it is known in the responding community (w/ responding community's assigning authority)). This could be done using XCPD or some other method. How shall the Patient ID be reconciled in XCDR? Must it be the Patient ID as the patient is known in the target

160 community? Resolution: The transaction reflects that the sending side is required to send enough information so that the receiving side can associate the data with a local patient. How this is done will vary by deployment but is expected to include either a patient ID known to the receiver or enough demographics to support a match. Although XDR does not have any text regarding reconciliation of the patient, the approach taken here should

165 be considered for addition to XDR because it is flexible and minimal.

2. Is this profile necessary with its separate transaction or can the capabilities be put in place through a new option on XDR and chaining of combination of XDR actors? It was felt that creating a new Profile was a better approach because it follows the pattern used for XCA. This allows it to be easily combined and deployed in an environment that is

170 already using XCA.

3. How, if at all, should SubmissionSet.intendedRecipient be used for document routing? CLOSED: The need to specify SubmissionSet.intendedRecipient is to be optional and a recommendation only.

4. Should the document Recipient support the Document Replacement Option? CLOSED:
175 This is normal (expected) behavior in the XDR Document Recipient, and need not be made more explicit, nor specified differently in the XCDR Responding Gateway.

5. Should there be a Home Community Id Option on the XDR Document Recipient? CLOSED: This option should be only on the XDR Document Source. The Document Recipient will not have a Home Community Id Option, thus the design assumes that the

180 Document Recipient may or may not use Home Community Id, and if it uses it, it may be in a way that suits their implementation.

6. How shall BPPC and Privacy Enforcement be incorporated, if at all?
CLOSED: Enforcement follows the same approach as is used for XDS and XDR.

185 # General Introduction

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

Appendix B - Transaction Summary Definitions

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

Transaction	Definition
Cross-Gateway Document Provide [ITI-80]	This Transaction allows an Initiating Gateway in a Community to provide a set of Documents to the Responding Gateway of a remote Community

Glossary

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

195 None

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Volume 1

Add the following profile to IHE ITI Technical Framework Volume 1

215

40 Cross-Community Document Reliable Interchange (XCDR) Profile

The Cross-Community Document Reliable Interchange (XCDR) Profile provides the capability
to send a set of documents in a Cross-Community environment. The XCDR Profile specifies the
transaction to push documents from an Initiating Gateway of a source Community to the
220   Responding Gateway of a target Community.

The XCDR Profile:

- has similar deployment characteristics to the IHE Cross-Community Access (XCA)
  Profile and is easily combined and deployed in an environment that is already using
  XCA.

225   - fully specifies the combined use with the IHE Cross-Enterprise Document Reliable
  Interchange (XDR) Profile, enabling XDR Document Source and Document Recipient
  Actors in separate communities to become connected. End-to-end acknowledgement is
  assured. A Document Source receives acknowledgment only when the Document
  Recipient in a remote community has received the document.

230   - extends the deployment of a community organized around an XDS Document Registry
  and Repository(s) by allowing both Document Sources Actors within this XDS based
  community, and those in different communities to act as a source of documents.

XCDR supports the exchange of documents within a Cross-Community environment with Web-
Services as transport. The routing of the document set relies on an Initiating Gateway in the
235   source community and Responding Gateway(s) in one or more remote communities.

XCDR is document-format agnostic. Document content is described in IHE Document Content
Profiles; examples include XDS-MS, XD-LAB, XPHR, and XDS-SD.

XCDR uses metadata defined in ITI TF-3: 4 - Metadata used in IHE Document Sharing Profiles;
it defines no new metadata.

240   ## 40.1 XCDR Actors, Transactions, and Content Modules

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

Figure 40.1-1 shows the actors directly involved in the XCDR Profile and the relevant
245   transactions between them. If needed for context, other actors that may be indirectly involved
due to their participation in other related profiles are shown in dotted lines. Actors which have a
mandatory grouping are shown in conjoined boxes.

- An XDR Document Recipient may be grouped with the XCDR Initiating Gateway. See
ITI TF-1: 40.6.1.

250   - An XDS or XDR Document Source may be grouped with the XCDR Responding
Gateway. See ITI TF-1: 40.6.2 and 40.6.3.

- Other actors that may be indirectly involved due to their participation in XCA, XDS, PIX
or XUA are not shown.
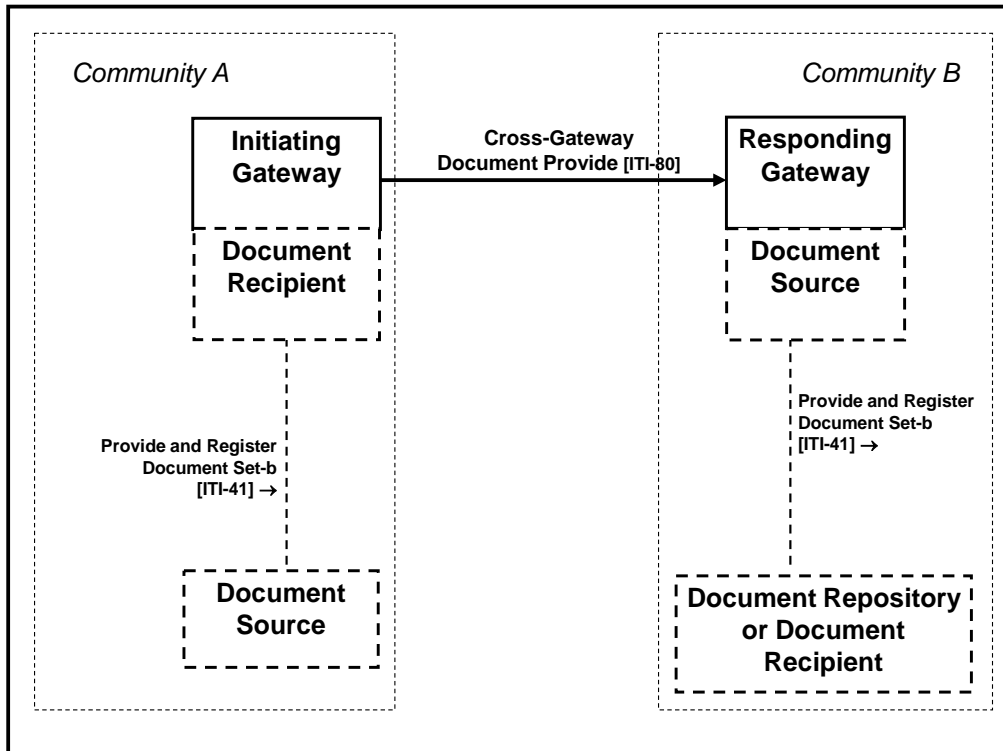
255   **Figure 40.1-1: XCDR Actor Diagram**

Table 40.1-1 lists the transactions for each actor directly involved in the XCDR Profile. To claim
compliance with this Profile, an actor shall support all required transactions (labeled "R") and
may support the optional transactions (labeled "O").

260

Table 40.1-1: XCDR Integration Profile - Actors and Transactions

Actors	Transactions	Optionality	Reference
Initiating Gateway	Cross-Gateway Document Provide [ITI-80]	R	ITI TF-2c: 3.80
Responding Gateway	Cross-Gateway Document Provide [ITI-80]	R	ITI TF-2c: 3.80

40.1.1 Actor Descriptions and Actor Profile Requirements

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

40.2 XCDR Actor Options

Options that may be selected for each actor in this profile, if any, are listed in Table 40.2-1. Dependencies between options when applicable are specified in notes.

Table 40.2-1: XCDR - Actors and Options

Actor	Options	Reference
Initiating Gateway	Basic Patient Privacy Enforcement	ITI TF-1: 40.2.1 ITI TF-2c: 3.80.4.1.3.1
Responding Gateway	Basic Patient Privacy Enforcement	ITI TF-1: 40.2.1 ITI TF-2c: 3.80.4.1.3.1

40.2.1 Basic Patient Privacy Enforcement

An Initiating Gateway shall be able to be configured with the Patient Privacy Policies, Patient Privacy Policy Identifiers (OIDs) and associated information necessary to understand and enforce the community Policy where the XCDR Initiating and Responding Gateways operate. See ITI TF-2c: 3.80.4.1.3.1.

40.3 XCDR Required Actor Groupings

An actor from this profile (Column 1) shall implement all of the required transactions and/or content modules in this profile in addition to all of the transactions required for the grouped actor (Column 2).

Section 40.5 describes some optional groupings that may be of interest for security considerations and Section 40.6 describes some optional groupings in other related profiles.

Table 40.3-1: XCDR - Required Actor Groupings

XCDR Actor	Actor to be grouped with	Reference	Content Bindings Reference
Initiating Gateway	ATNA Secure Node or Secure Application	ITI TF-1: 9	--
Responding Gateway	ATNA Secure Node or Secure Application	ITI TF-1: 9	--

40.4 XCDR Overview

The Cross-Community Document Reliable Interchange (XCDR) Profile provides the capability to store a set of documents in a Cross-Community environment.

40.4.1 Concepts

290   XCDR describes the exchange of a set of documents between healthcare providers or organizations. The scope of the XCDR Profile is to specify the transaction to push these documents from the Initiating Gateway of a source Community to the Responding Gateway of a target Community. The set of documents belongs to the same patient and contains metadata that allows the Responding Gateway to process the documents. The type of processing will vary by
295   community, for example, routing them on the basis of content in the metadata.

Figure 40.4.1-1 depicts a base example of the XDCR Use Case.

1. A document exists in Community A (source community)

2. The document is stored in Community B (target community)
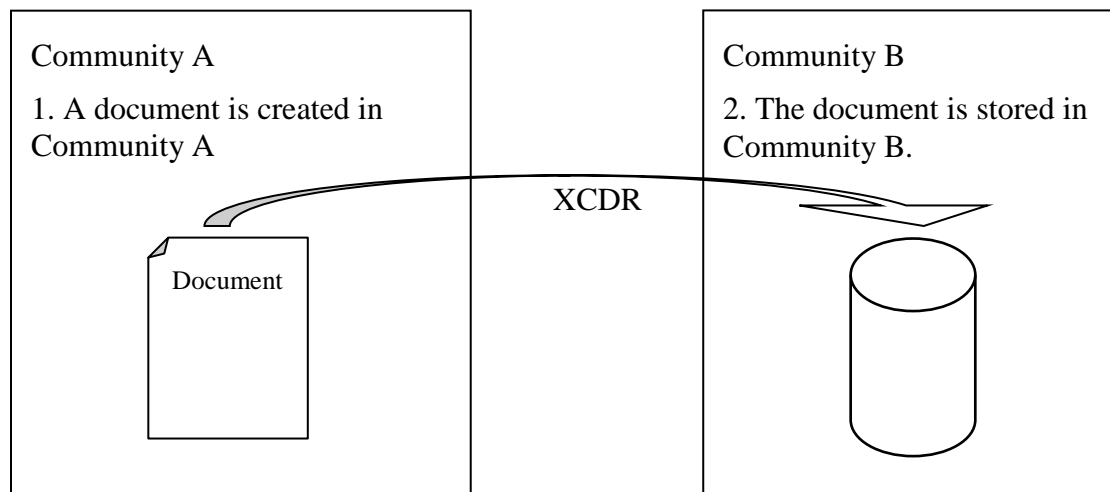
300

Figure 40.4.1-1: XCDR between a source and a target community

Figure 40.4.1-2 depicts an example of cross-community exchange, where XCDR is used in conjunction with XCA:

305   1. A document is created and stored within Community A

2. The document is discovered and pulled into Community B. This is typically supported by the query and retrieve transactions in the XCA Profile.

3. The document is updated within Community B and then pushed it back into Community A using the XCDR Profile.

310   4. The updated document now exists within Community A (as a new document, or as a replacement document).
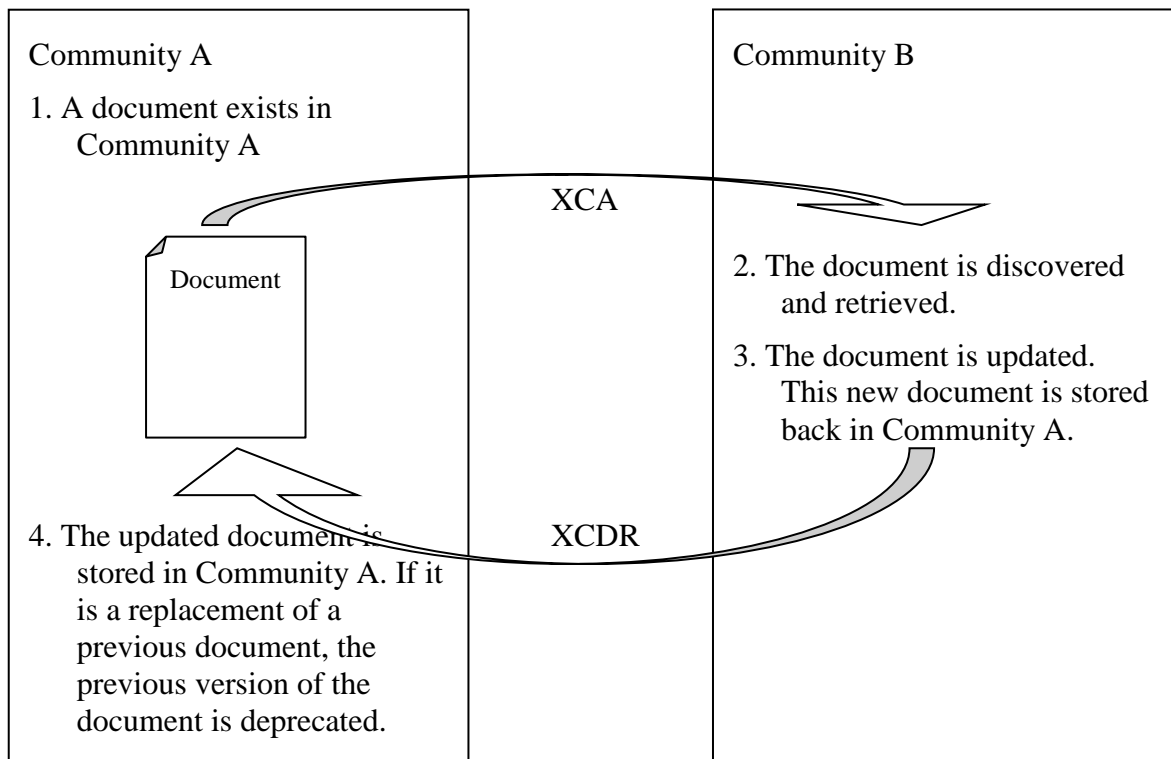
Figure 40.4.1-2: XCDR with XCA Example

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40.4.2 XCDR Use Cases

The XCDR Profile may be used on its own. It may also be combined with a number of other IHE Profiles to extend its application in configurations such as:

1. XCDR Source Community with XDR: The XDR Document Source is the source of a set
320   of documents and uses the XDR Profile to send these documents to an XDR Document Recipient grouped with the XCDR Initiating Gateway. The XCDR Initiating Gateway will forward the set of documents to an XCDR Responding Gateway serving a target community.

The above XDR Document Source may also be playing the role of an XDS Document
325   Source in an unrelated XDS Affinity Domain. This does not affect the above behavior.

2. XCDR Remote community with XDR: In the target Community, the Responding Gateway may be grouped with the XDR Document Source to be able to forward the document set to one or more XDR Document Recipients within the target Community.

3. XCDR Remote community with XDS: This use case uses XDR in a source community
330   and XDS in a target community. In a source community, an XDR Document Source uses the XDR Profile to send a set of document to an XDR Document Recipient grouped with

the XCDR Initiating Gateway of the source community. The set of documents is received by an XCDR Responding Gateway serving the remote community and grouped with an XDS Document Source that uses the document metadata to select the appropriate XDS Document Repository in the target community. Through use of its XCA Responding Gateway, the remote community may support access to the exchanged document by any other community with an XCA Initiating Gateway.

4. XCDR in Cross-Community XDW Workflow: XCDR may also be used to bridge Communities for a variety of workflows. (See ITI TF-1: E.11.4 – Two Deployment Models for XDW used in an XCA Environment).One of the environments where XCDR is used is the cross-enterprise workflow management across federated communities as specified by the IHE Cross-Enterprise Document Workflow (XDW) Profile. In particular, XCDR enables the update of one or more workflow documents. For example, when a workflow has been initiated in a remote non-XDS community and updates to the workflow need to be recorded in the community where the workflow was initiated.

40.4.2.1 XCDR Source Community with XDR

40.4.2.1.1 XCDR Source Community with XDR Use Case Description

Pre-conditions: A Document Source needs to send a set of documents to a remote community.

Post-conditions: Documents are under the control of the XCDR Responding Gateway and the Document Source receives the acknowledgement that the document set has been received in the remote community.

Actors:

- XDR Document Source with the Home Community ID Option
- XDR Document Recipient grouped with XCDR Initiating Gateway
- XCDR Responding Gateway

Process flow:

1. In the source Community, the XDR Document Source creates a set of documents.
2. In the source Community, the XDR Document Source sends the documents to an XDR Document Recipient grouped with the XCDR Initiating Gateway.
3. The Initiating Gateway uses the homeCommunityId to identify the target remote community and sends the document set to the XCDR Responding Gateway in that community. The Initiating Gateway awaits acknowledgement of the transaction from the Responding Gateway.
4. The XCDR Responding Gateway sends acknowledgement to the XCDR Initiating Gateway.
5. In the source community, the XCDR Initiating Gateway grouped with the XDR Document Recipient forwards the acknowledgement to the original XDR Document Source.

40.4.2.1.2 XCDR Source Community with XDR Process Flow
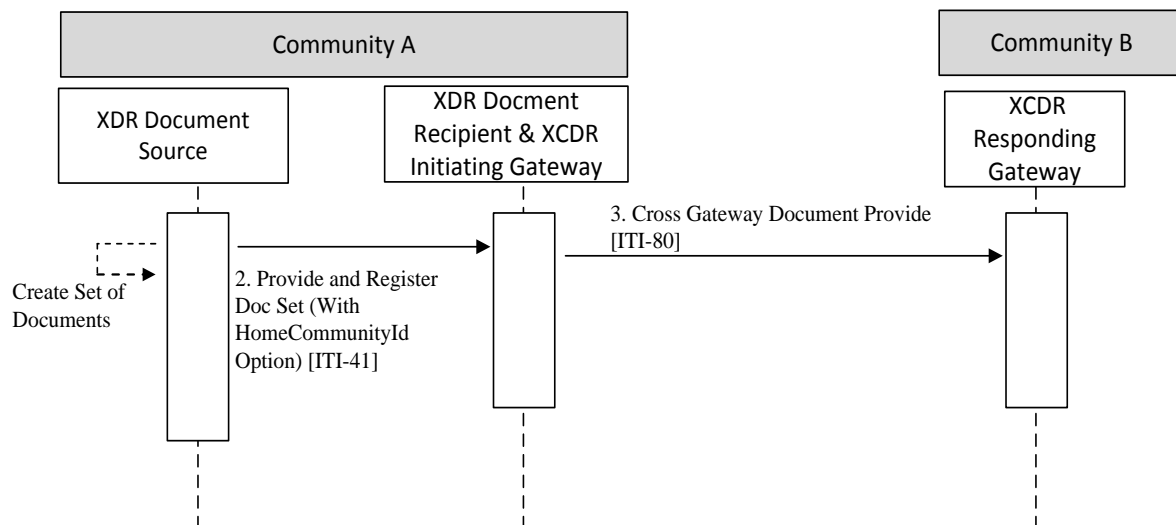
370

Figure 40.4.2.1.2-1: XCDR Source with XDR Process Diagram

40.4.2.2 XCDR Responding Community with XDR

40.4.2.2.1 XCDR Responding Community with XDR Use Case Description

375   Pre-conditions: A Source Community needs to send a set of documents to a Document Recipient
in a remote community

Post-conditions: Initiating Gateway receives the acknowledgement that the document set has
been received by the intended recipient (if specified) or the Document Recipient (if intended
recipient not specified)

380   Actors:

- XCDR Initiating Gateway

- XCDR Responding Gateway grouped with XDR Document Source

- XDR Document Recipient in remote community

Process flow:

385   1. In the source Community, an XCDR Initiating Gateway creates the set of documents.

2. The Initiating Gateway inserts the homeCommunityId of the remote Community and
sends the documents to an XCDR Responding Gateway grouped with an XDR Document
Source. The XCDR Initiating Gateway awaits acknowledgment of documents received in
the remote community.

390   3. The XCDR Responding Gateway, grouped with the XDR Document Source, forwards
        the document set to an XDR Document Recipient within the remote Community and
        receives acknowledgement.

       4. The Responding Gateway then acknowledges the XCDR Cross-Gateway Document
        Provide transaction to the XCDR Initiating Gateway.

395

40.4.2.2.2 XCDR Remote Community with XDR Process Flow
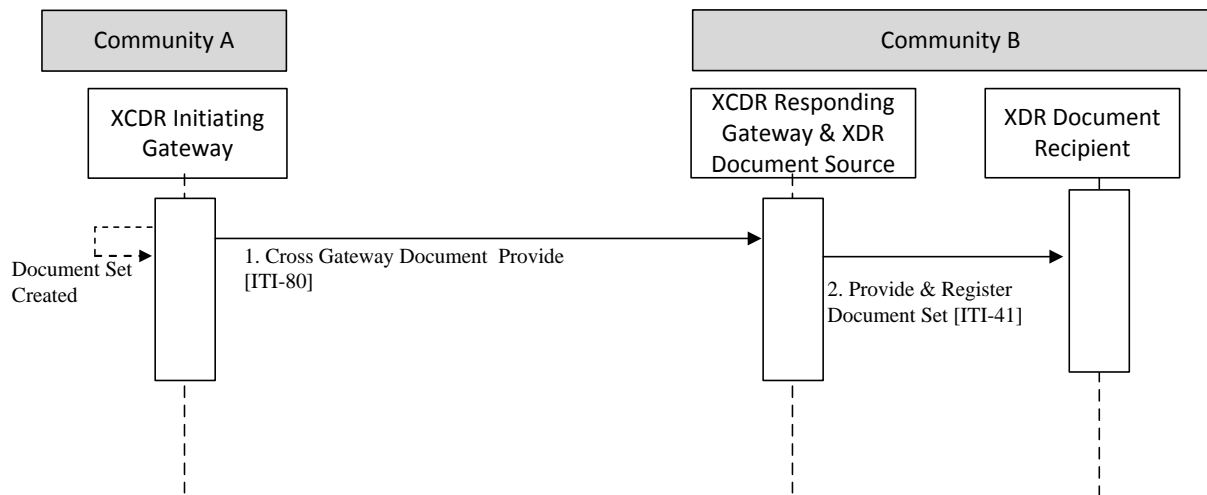
Figure 40.4.2.2.2-1: Remote Community with XDR Process Diagram

400   ### 40.4.2.3 XCDR Federated Communities with XCA

40.4.2.3.1 XCDR Federated Communities with XCA Use Case Description

Pre-conditions: A Document Source needs to send a set of documents to a remote community
which saves incoming documents into an XDS Document Repository and enables access to those
documents through XCA.

405   Post-conditions: Document Source receives the acknowledgement that the document set has been
received by the intended recipient(s) and the documents are available through XCA.

Community Roles:

- Community A: source Community

- Community B: remote Community

410   - Community C: Community that wishes to query and retrieve the document.

Actors:

- XDR Document Source in the source community (Community A) that wants to submit a document

415
- XDR Document Recipient grouped with an XCDR Initiating Gateway representing Community A

- XDS Document Source grouped with XCDR Responding Gateway in the remote community (Community B)

- XDS Registry/Repository to store the document within Community B

- XCA Responding Gateway implementing the XDS Affinity Domain Option in
420
Community B

- XDS Document Consumer in Community C wanting access to the source community's document

- XCA Initiating Gateway representing Community C

Process Flow:

425
1. In the source Community A, the XDR Document Source with the Home Community Id Option sends the document to an XDR Document Recipient grouped with the XCDR Initiating Gateway.

2. The XCDR Initiating Gateway uses the homeCommunityId to identify the target Community B and sends the documents to the XCDR Responding Gateway in that
430
community. The Initiating Gateway awaits acknowledgement of the transaction from the Responding Gateway.

3. The XCDR Responding Gateway in B, grouped with an XDS Document Source, stores the document set to an XDS Document Repository it selects within its Community(ies). The document set is registered by the XDS Document Registry. When the Provide and
435
Register transaction is acknowledged, the grouped XDS Document Source and XCDR Responding Gateway sends its acknowledgement back to the XCDR Initiating Gateway in source Community A.

4. A Document Consumer within another community (C) wishes to update the document and Queries the XCA Initiating Gateway for the location of the document.

440
5. The XCA Initiating Gateway in Community C queries the XCA Responding Gateway in Community B.

6. The XCA Responding Gateway queries the XDS Registry/Repository and responds.

7. The Document Consumer in Community C retrieves the document via the XCA Initiating Gateway.

445
8. The XCA Initiating Gateway retrieves the document from the XCA Responding Gateway.

9. The XCA Responding Gateway retrieves the document from the XDS Document
   Repository in Community B.

40.4.2.3.2 XCDR Federated Communities with XCA Process Flow
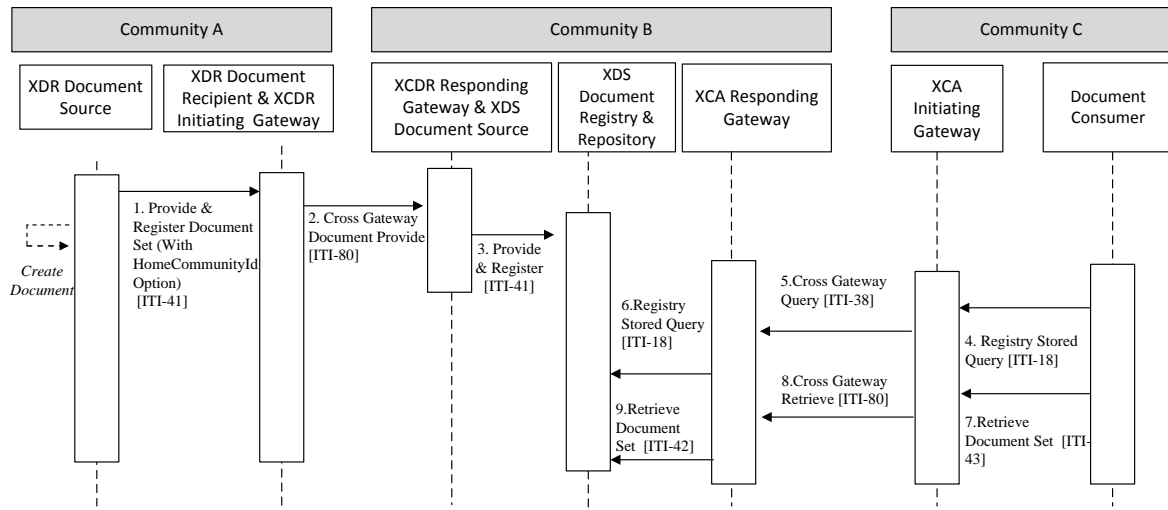
450

40.4.2.3.1-1 XCDR Federated Communities with XCA Process Flow Diagram

40.4.2.4 XCDR in Cross-Community XDW Workflow

40.4.2.4.1 XCDR Updating XDW Workflow Document Use Case Description

455 One of the environments where XCDR is recommended is the Cross-enterprise workflow
management as specified by the XDW Profile, but federated across communities using XCDR.
In particular, XCDR enables the update of one or more workflow documents, when such
workflows have been initiated in a remote XDS community and updates to the workflow need to
be recorded in the community where the workflow was initiated. (See IHE ITI TF-1: E.11.4 –
460 Two Deployment Models for XDW used in an XCA Environment).

Community Roles:

- Community A: XDS source Community

- Community B: remote Community

Pre-conditions: Document Consumer in a remote Community B needs to retrieve and update an
465 XDW Workflow Document

Post-conditions: Updated XDW Workflow Document resides in originating source Community
A

Process Flow:

1. The XDW Content Creator/Source creates a Workflow Document and stores it in its local
470 Document Repository in Community A.

2. An XDW Updater/Consumer in Community B queries for the Workflow Document.

3. The Community B's XCA Initiating Gateway forwards the query to the Community A's XCA Responding Gateway.

4. The XCA Responding Gateway grouped with a Document Consumer forwards the query
475 to the XDS Registry in Community A.

5. The XDW Content Updater/Consumer in Community B receives the response from the Responding Gateway and requests to retrieve the Workflow Document from Community A.

6. The Request is forwarded from Community B's Initiating Gateway to the Responding
480 Gateway in Community A.

7. XCA Responding Gateway grouped with a Document Consumer retrieves the document from its local Repository and returns it (via its XCA Responding Gateway) to the XDW Content Updater/Consumer in Community A (via its Initiating Gateway).

8. The XDW Updater/Consumer in Community B updates the Workflow Document.

485 9. The XDW Updater/Consumer then sends the document via XDR to its XCDR Initiating Gateway.

10. The XCDR Responding Gateway in Community A processes the Cross-Gateway Document Provide transaction.

11. The XCDR Responding Gateway grouped with an XDS Document Source updates
490 (RPLC) in Community A the document in the XDS Repository within Community A.

40.4.2.4.2 XCDR Updating XDW Workflow Document Process Flow
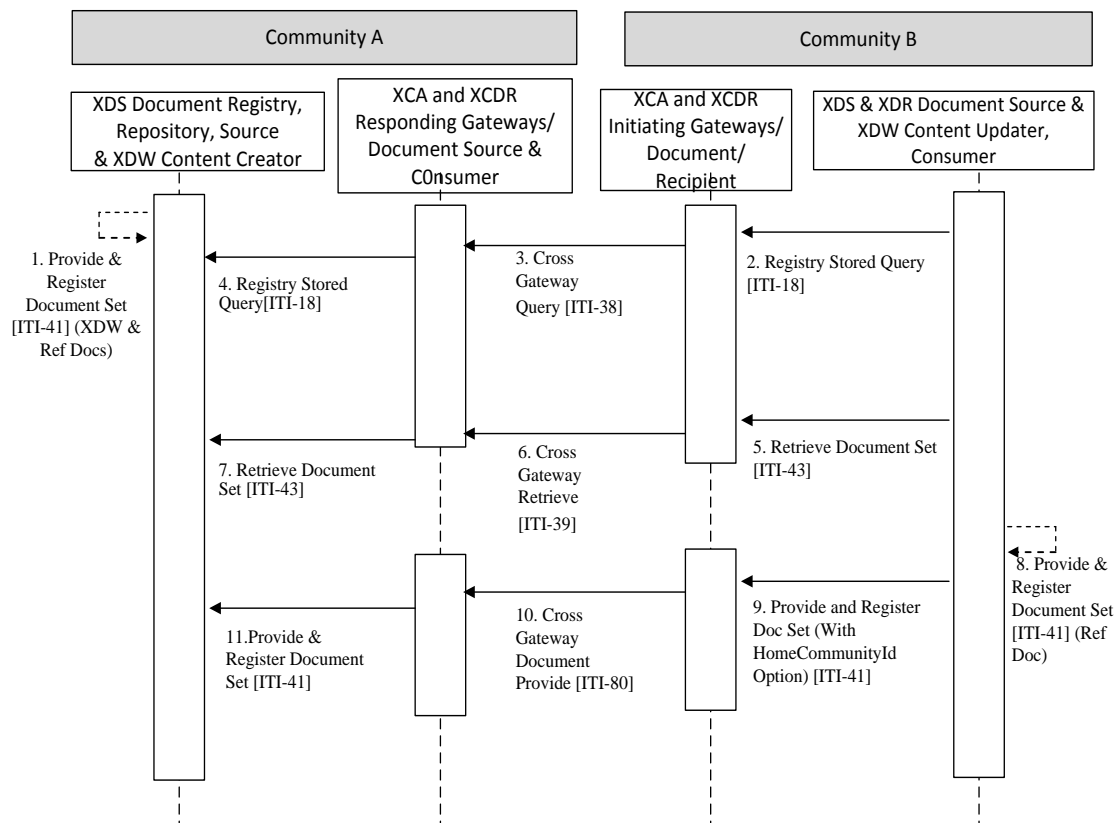
40.4.2.4.2-1 XCDR Updating XDW Workflow Document Process Flow

495 40.5 XCDR Security Considerations

The XCDR Profile assumes that the health organizations using Initiating Gateways and
Responding Gateways have an agreement defining when they can interchange Protected Health
Information (PHI). This may require an explicit patient consent (depending on policy and
regulation) and an agreement on how to manage potential inconsistencies between the security
500 policies. The main aspects that should be covered by this agreement are similar to XDS – See ITI
TF-2x: Appendix L. In the case of XCDR, the Gateway to Gateway communication is between
two independent security domains. This means there must be an agreement to cover all aspects of
security and privacy for exchanges. In addition, the following aspects should be covered:

- Manage patient identification in order to perform patient reconciliation correctly upon
505 import of documents into its community. The patient identification domain in the
  receiving community may not be the same as in the source community so the patient ID
  must be reconciled by either the sending or the receiving Actors.

- XCDR Initiating Gateway and Responding Gateway Actors shall be grouped with an
  ATNA Secure Node or Secure Application.

510 - The Initiating Gateway, based on its community and the cross-community policies, is expected to use the confidentialityCode in the document metadata with the list of values that identify the sensitivity classifications that apply to the associated document. The confidentiality codes for different communities may need mapping.

515 - The Initiating Gateway is expected to use Privacy Policy Identifiers (OIDs) and associated information necessary to understand and enforce the community and cross-community Policy where the XCDR Initiating and Responding Gateways operate.

- The Responding Gateway is expected to be configured with the Patient Privacy Policies, Patient Privacy Policy Identifiers (OIDs) and associated information necessary based on its community and the cross-community policies. The detail of how this is done is 520 product specific and not specified by IHE.

- Management of audit record tracking and exchange for operational, security management, regulatory purposes must be covered. Especially see Section A.11 within the IHE IT Infrastructure Technical Committee White Paper: Template for XDS Affinity Domain Deployment Planning.

525 40.6 XCDR Cross-Profile Considerations

The following are required rules that shall be implemented when the associated grouping is being implemented.

40.6.1 Grouping with the Initiating Gateway - XDR

The Initiating Gateway of the XCDR Profile may be grouped with the Document Recipient of 530 the XDR Profile (see Section 40.2.1).

When the Initiating Gateway is grouped with an XDR Document Recipient:

- If the Document Recipient/Initiating Gateway does not receive a homeCommunityId from the XDR Document Source in Provide and Register Document Set-b [ITI-41], the Document Recipient shall return an error.

535 - The Initiating Gateway shall use the homeCommunityId specified by the XDR Document Source to target the correct Responding Gateway. The Initiating Gateway shall copy the homeCommunityId value received from the XDR Document Source in [ITI-41] into the XCDR Cross-Gateway Document Provide [ITI-80] transaction it sends to the Responding Gateway. The Initiating Gateway shall copy the sourceId attribute from the 540 SubmissionSet received from Document Source in [ITI-41] into the sourceId attribute of the SubmissionSet it sends to the Responding Gateway in [ITI-80].

- The Document Recipient/Initiating Gateway that receives [ITI-41] shall send the acknowledgement to the XDR Document Source only after it receives the acknowledgement of the XDCR Cross Gateway Document Provide [ITI-80] from the 545 Responding Gateway.

40.6.2 Grouping with the Responding Gateway - XDS

When the Responding Gateway is grouped with an XDS Document Source:

- The Responding Gateway/Document Source shall copy the sourceId attribute from the
  SubmissionSet received from the Initiating Gateway in [ITI-80] into the sourceId
  550   attribute of the SubmissionSet in the Provide and Register Document Set-b [ITI-41]
  issued to a local Document Repository.

- The Responding Gateway/XDS Document Source chooses the local Document
  Repository on the basis of local routing rules, supplemented by the
  SubmissionSet.intendedRecipient metadata attribute (see ITI TF-3: 4.2.3.3.7), if
  555   applicable. The intendedRecipient may contain organization level information. In this
  case, a mapping table could be locally configured.

- The Responding Gateway/Document Source shall acknowledge the XDCR Cross
  Gateway Document Set Provide [ITI-80] received from the Initiating Gateway, only after
  it receives the acknowledgement of the XDS Provide and Register Document Set [ITI-41]
  560   from the local Document Repository.

40.6.3 Grouping with the Responding Gateway - XDR

When the Responding Gateway is grouped with an XDR Document Source:

- The Responding Gateway shall copy the sourceId attribute of the received SubmissionSet
  into the SourceId attribute of the SubmissionSet provided in the Provide and Register
  565   Document Set-b Transaction issued within the responding Community.

- XDR Document Recipient chooses the grouped actor XCDR Responding Gateway/XDR
  Document Source on the basis of local routing rules supplemented by the
  SubmissionSet.intendedRecipient metadata element (See ITI TF-3: 4.2.3.3.7), if
  applicable. The intendedRecipient may contain organization level information and may
  570   be handled with a locally configured mapping table. It may also contain personal level
  information but would require additional complexity in maintaining the routing table.

- XCDR Provide Document Set transaction request received by the Responding Gateway
  shall be acknowledged only when the XDR Provide and Register Document Set
  Transaction acknowledgement is received.

575

The following update applies to the Final Text ITI Technical Framework Volume 1: In IHE ITI TF-1: 15 - XDR Integration Profile

Update Section 15.2: XDR Integration Profile Option as follows:

15.2 XDR Integration Profile Options

580   Options that may be selected for this Integration Profile are listed in Table 15.2-1 along with the Actors to which they apply. Dependencies between options when applicable are specified in notes.

Table 15.2-1: XDR - Actors and Options

Actor	Options	Vol. & Section
Document Source	Basic Patient Privacy Enforcement	ITI-TF-2b: 3.41.4.1.3.1
	Transmit Home Community ID	**ITI TF-1: 15.2.4**
Metadata-Limited Document Source	Basic Patient Privacy Enforcement	ITI TF-2b: 3.41.4.1.3.1
Document Recipient	Basic Patient Privacy Enforcement	ITI-TF-2b: 3.41.4.1.3.1
	Accepts Limited Metadata	ITI TF-1: 15.2.3

585

Insert the following new Section into ITI TF-1, immediately following ITI TF-1: 15.2.3.

15.2.4 Transmit Home Community ID Option

When the Document Source supports the Transmit Home Community Id Option, it shall have the
590   ability to include in the Provide & Register Document Set-b [ITI-41] transaction a value for homeCommunityId. (See ITI TF-2b: 3.41.4.1.3.2).

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Update ITI-TF-2b, by creating a new Section 3.41.4.1.2.2 XDR Document Source Options:

595 **3.41.4.1.2.2 XDR Document Source Options**

The Document Source that supports the Transmit Home Community Id Option shall be able to populate both the homeCommunityId Slot and the addressing block in the SOAP header with a target homeCommunityId value that identifies the Community for which the document set is intended. If the metadata attribute "intendedRecipient" is coded, the homeCommunityId should
600 point to a Community that is able to understand the value within the intendedRecipient.

1. The homeCommunityId in the addressing block shall contain the value of the target homeCommunity in order to support content encryption, if needed. It shall be encoded within the Addressing Block as an ihe:homeCommunityBlock with the code "urn:ihe.net:iti:xdr:2014".

605 2. The homeCommunityId Slot within the SubmitObjectRequest element shall contain the value of the target homeCommunityId.

An example of the homeCommunityId Slot and the addressing block in the SOAP header is shown below:

```
610  <?xml version="1.0" encoding="UTF-8"?>
     <soapenv:Envelope xmlns:soapenv="http://www.w3.org/2003/05/soap-envelope"
     xmlns:wsa="http://www.w3.org/2005/08/addressing">
      <soapenv:Header>
      <wsa:To>http://localhost:4040/axis2/services/test11966a</wsa:To>
615   <wsa:MessageID>urn:uuid:76A2C3D9BCD3AECFF31217932910053</wsa:MessageID>
      <ihe:homeCommunityBlock xmlns:ihe="urn:ihe.net:iti:xdr:2014"
     xmlns:env="http://www.w3.org/2003/05/soap-envelope"
     env:role="urn:ihe.net:iti:xd:id" env:relay="true">
      <ihe:homeCommunityId>urn:oid:1.2.3.4.5.6.2333.23</ihe:homeCommunityId>
620   </ihe:homeCommunityBlock>
      <wsa:Action
     soapenv:mustUnderstand="1">urn:ihe:iti:2015:CrossCommunityDocumentProvide</ws
     a:Action>
      </soapenv:Header>
625   <soapenv:Body>
      <xdsb:ProvideAndRegisterDocumentSetRequest xmlns:xdsb="urn:ihe:iti:xds-
     b:2007" xmlns:rim="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0">
      <lcm:SubmitObjectsRequest xmlns:lcm="urn:oasis:names:tc:ebxml-
     regrep:xsd:lcm:3.0">
630   <rim:RequestSlotList>
      <rim:Slot name="homeCommunityId">
      <rim:ValueList>
      <rim:Value>urn:oid:1.2.3.4.5.6.2333.23</rim:Value>
```

```
      </rim:ValueList>
635   </rim:Slot>
      </rim:RequestSlotList>
      <ihe:homeCommunityBlock xmlns:ihe="urn:ihe.net:iti:xdr:2014"
xmlns:env="http://www.w3.org/2003/05/soap-envelope"
env:role="urn:ihe.net:iti:xd:id" env:relay="true">
640  <ihe:homeCommunityId>urn:oid:1.2.3.4.5.6.2333.23</ihe:homeCommunityId>
      </ihe:homeCommunityBlock>
      <rim:RegistryObjectList xmlns:rim="urn:oasis:names:tc:ebxml-
regrep:xsd:rim:3.0"></rim:RegistryObjectList>
      </lcm:SubmitObjectsRequest>
645   </xdsb:ProvideAndRegisterDocumentSetRequest>
      </soapenv:Body>
</soapenv:Envelope>
```

Update ITI-TF-2b Section 3.41.4.1.3.1 by adding the following to the existing section.

650

3.41.4.1.3.1 Document Recipient Expected Actions

In addition to the Expected Actions of all Content Receivers (described in the beginning of Section 3.41.4.1.3), a Document Recipient shall meet the following requirements.

A Document Recipient shall be able to interpret a submission without any context, such as
655   knowledge of a prior submission.

The Document Recipient may validate the presence of metadata attributes. If the Document Recipient declares the Accepts Limited Metadata Option and the limitedMetadata attribute is present, such validation shall not exceed the requirements in the column labeled "XDR MS" (XDR Metadata-Limited Document Source) of ITI TF-3: Table 4.3.1-3. Otherwise, such
660   validation shall not exceed the requirements in the column labeled "XDR DS" (XDR Document Source) of ITI TF-3: Table 4.3.1-3.

The homeCommunityId attribute may be used by the Document Recipient to further route the document set when the Document Recipient serves multiple Communities (e.g., is grouped with an XCDR Initiating Gateway).

665   The following shall not cause rejection of a submission:
…

Update ITI TF-2c, by adding a new Section 3.80:

670 ## 3.80 Cross-Gateway Document Provide [ITI-80]

3.80.1 Scope

The scope of this transaction is based on Provide and Register Document Set.b [ITI-41].

The differences between the [ITI-41] and the [ITI-80] transactions are:

- the Document Source in [ITI-41] is replaced by the Initiating Gateway in [ITI-80] and

675
- the Document Recipient in [ITI-41] is replaced by a Responding Gateway in [ITI-80]

- [ITI-41] has a Transmit Home Community Option. [ITI-80] does not have the option because the capabilities associated with that option are required.

3.80.2 Actor Roles

Actor:	Initiating Gateway
Role:	Sends documents and associated metadata to a Responding Gateway
Actor:	Responding Gateway
Role:	Receives a set of documents and, if required, forwards them to the intended recipient or a registry/repository in its local community.

3.80.3 Reference Standards

680 Implementers of this transaction shall comply with all requirements described in: ITI TF-2x: Appendix V: Web Services for IHE Transactions.

ebRIM	OASIS/ebXML Registry Information Model v3.0
ebRS	OASIS/ebXML Registry Services Specifications v3.0
ebMS	OASIS/ebXML Messaging Services Specifications v3.0

3.80.4 Interaction Diagrams
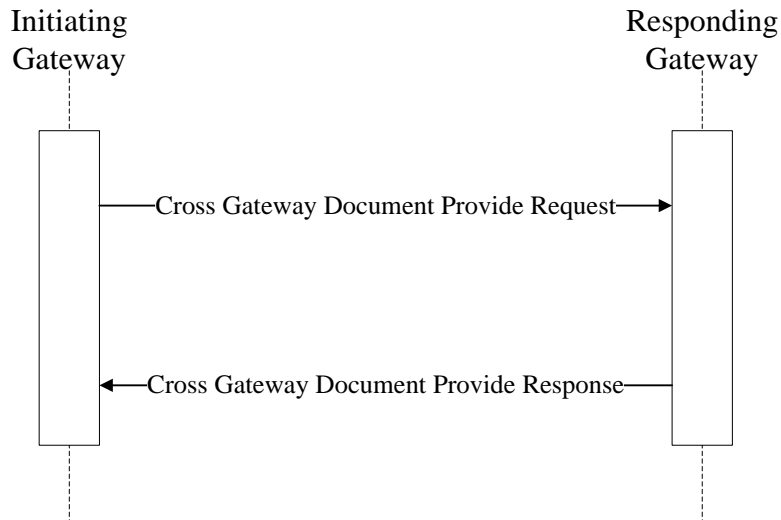
685

3.80.4.1 Cross-Gateway Document Provide Request

An Initiating Gateway sends documents and associated metadata to a Responding Gateway. The
Responding Gateway may then forward the documents to the intended recipient or repository.

3.80.4.1.1 Trigger Events

690   The Initiating Gateway wants to submit a set of zero or more documents to the Responding
Gateway of another community.

The Initiating Gateway shall provide enough information about the patient to ensure that the
Responding Gateway can process the documents. The definition of enough will vary by
deployment. In some cases this might be by providing a patient ID that is known by the
695   Responding Gateway. In other cases, it might include specification of enough demographics that
the Responding Gateway will be confident of the association of the submission to a local patient.
To accommodate the variety of policies that might apply, the Initiating Gateway shall be able to
be configured to provide in the metadata at least: (1) a patient ID known to the Responding
Gateway, and (2) demographics for the patient including first name, last name, birth date and
700   gender.

3.80.4.1.2 Message Semantics

Message semantics for the Cross-Gateway Document Provide adhere to the Message Semantics
for Provide and Register Document Set-b [ITI-41] in ITI TF-2b: 3.41.4.1.2.

The Cross Gateway Document Provide Request message shall include the metadata attributes as
705   defined in ITI TF-3: 4.3.1.2.1. Optionality for these attributes is the same as for XDR Document
Source (XDR DS) in ITI TF-3: Table 4.3.1.1-3.

3.80.4.1.3 Expected Actions

A Responding Gateway receives the metadata and the associated document(s). It shall be able to interpret the submission without any context (e.g., a prior submission). The Responding Gateway may validate the metadata as described in ITI TF-3: Table 4.3.1.1-3.

The Responding Gateway uses the patient ID and/or patient demographics in order to associate the submission to a local patient.

The Initiating Gateway may include Folders in metadata. If the Responding Gateway is not able to process the Folder-specific content, it shall return a PartialFolderContentNotProcessed warning that includes a textual description identifying that Folder Content was not processed. In this case, the Responding Gateway shall process the rest of the submission successfully.

In the case where the Initiating Gateway submits a replacement set of documents, if the Responding Gateway is not able to process the replacement semantics in the submission, it shall return a PartialReplaceContentNotProcessed warning that includes a textual description identifying that the replacement semantics were not processed. In this case, the Responding Gateway shall process the rest of the submission successfully. The document replacement semantics required for the Responding Gateway are consistent with those defined in ITI TF-3: 4.2.2.2.3, which requires that Responding Gateways shall:

1. persist documents and associated metadata

2. persist a replacement document if the replaced document is known, then deprecate the replaced document

3. if the replaced document does not exist at the Responding Gateways, the submission shall fail with an appropriate error (See ITI-TF-3: 4.2.4, Table 4.2.4.1-1)

If the Responding Gateway detects a failure, it shall return an error message to the Initiating Gateway thus terminating this transaction. The conditions of failure and possible error messages are the same as those for [ITI-41] in ITI TF-3: 4.2.4 Error Reporting.

3.80.4.1.3.1 Basic Patient Privacy Enforcement

If the Basic Patient Privacy Enforcement Option is implemented:

1. The Initiating Gateway shall populate the confidentialityCode in the document metadata with the list of values that identify the sensitivity classifications that apply to the associated document. The confidentiality codes for different documents in the same submission may be different for different Communities.

2. The Initiating Gateway shall be able to be configured with the Patient Privacy Policies, Patient Privacy Policy Identifiers (OIDs) and associated information necessary to understand and enforce the Policy in the community where the XCDR Initiating and Responding Gateways operate. The details of this are product-specific and not specified by IHE.

3. The Initiating Gateway may have business rule capabilities to determine the appropriate confidentiality codes for each document. The details of this are product-specific and not specified by IHE. However, the information about how confidentiality codes are assigned

must be part of the published in the community where the XCDR Initiating and Responding Gateways operate.

4. The Responding Gateway shall be able to be configured with the Patient Privacy Policies, Patient Privacy Policy Identifiers (OIDs) and associated information necessary to 750 understand and enforce the Policies in the community where the XCDR Initiating and Responding Gateways operate. The meanings of the codes on the media must be provided out of band, e.g., by telephone, fax, or email. The details of this are product-specific and not specified by IHE. If the documents are transferred internally within the organization or to other members of the Community served by the Responding Gateway, appropriate 755 internal confidentiality codes shall be applied.

3.80.4.2 Cross-Gateway Document Provide Response

The Responding Gateway shall send a Cross-Gateway Document Provide Response message when the processing of a Cross-Gateway Document Provide Request message is complete.

3.80.4.2.1 Trigger Events

760 The following events can trigger this message:

- Documents were successfully received and processed by the Responding Gateway

- Documents were not successfully received by the Responding Gateway

3.80.4.2.2 Message Semantics

The Cross-Gateway Document Provide Response message shall carry the status of the requested 765 operation and an error message if the requested operation failed. The conditions of failure and possible error messages are given in the ebRS standard and are the same as those for [ITI-41] in ITI TF-3: 4.2.4 Error Reporting.

3.80.4.2.3 Expected Actions

The Initiating Gateway now knows that the transaction succeeded/failed and can continue. The 770 document(s) received by the Responding Gateway shall be available for further processing according to the capabilities of the system. These capabilities are not specified by IHE except when the Initiating Gateway is grouped with an actor identified in ITI TF-1: 40.6.

3.80.5 Protocol Requirements

Implementers of this transaction shall comply with all requirements described in ITI TF-2x: 775 Appendix V: Web Services for IHE Transactions.

The Cross-Gateway Document Provide transaction shall use SOAP12 and MTOM with XOP encoding (labeled MTOM/XOP in this specification). See ITI TF-2x: Appendix V for details.

WSDL Namespace Definitions

ihe	urn:ihe:iti:xds-b:2007
rs	urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0

lcm	urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0
query	urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0

780

A full XML Schema Document for the XDS types is available online on the IHE FTP site, see
ITI TF-2x: Appendix W.

Responding Gateway: These are the requirements for the Cross-Gateway Document Provide
transaction presented in the order in which they would appear in the Responding Gateway
785 WSDL definition:

- The following types shall be imported (xsd:import) in the /definitions/types section:

  - namespace="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0", schema="rs.xsd"

  - namespace="urn:ihe:iti:xds-b:2007", schemaLocation="IHEXDS.xsd"

- The /definitions/message/part/@element attribute of the Cross-Gateway Document
790 Provide Request message shall be defined as
  "ihe:ProvideAndRegisterDocumentSetRequest"

- The /definitions/message/part/@element attribute of the Cross-Gateway Document
  Provide Response message shall be defined as "rs:RegistryResponse"

- Refer to Table 3.80.5-1 below for additional attribute requirements

795 These are the requirements that affect the wire format of the SOAP message. The other WSDL
properties are only used within the WSDL definition and do not affect interoperability. Full
sample request and response messages are in ITI TF-2c: 3.80.5.1 Sample SOAP Messages. For
informative WSDL for the Responding Gateway see ITI TF-2x: Appendix W. The
<ihe:ProvideAndRegisterDocumentSetRequest /> element is defined as:

800 - One <lcm:SubmitObjectsRequest/> element that contains the submission set metadata

- Zero or more <ihe:Document/> elements that contain document content being submitted
  to the Responding Gateway. The <ihe:Document/> element also includes the document
  id attribute (ihe:Document/@id) of type xsd:anyURI to match the document
  ExtrinsicObject id in the metadata and providing the necessary linkage

805 The use of MTOM/XOP is governed by the following rules:

- The Responding Gateway shall accept documents in a Cross Gateway Document Provide
  transaction in MTOM/XOP format. The response message shall use MTOM/XOP format.

- The Initiating Gateway shall generate Cross Gateway Document Provide transactions in
  MTOM/XOP format. It shall accept the response message in MTOM/XOP format.

810

Table 3.80.5-1: Additional Attribute Requirements

Attribute	Value
/definitions/portType/operation @name	DocumentRepository_ CrossGatewayDocumentProvide

/definitions/portType/operation/input/@wsaw:Action	urn:ihe:iti:2015:CrossGatewayDocumentProvide
/definitions/portType/operation/output/@wsaw:Action	urn:ihe:iti:2015:CrossGatewayDocumentProvideResponse
/definitions/binding/operation/wsoap12:operation/@soapActionRequired /definitions/binding/operation/soap12:operation/@soapAction	falseurn:ihe:iti:2015:CrossGatewayDocumentProvide

3.80.5.1 Sample SOAP Messages

The samples in the following two sections show a typical SOAP request and its relative SOAP
815 response. The sample messages also show the WS-Addressing headers <Action/>, MessageID/>,
<ReplyTo/>...; these WS-Addressing headers are populated according to the ITI TF-2x:
Appendix V: Web Services for IHE Transactions. The body of the SOAP message is omitted for
brevity; in a real scenario the empty element will be populated with the appropriate metadata.

Samples presented in this section are also available online on the IHE FTP site, see ITI TF-2x:
820 Appendix W.

3.80.5.1.1 Sample Cross Gateway Document Provide SOAP Request

3.80.5.1.1.1 Synchronous Web Services Exchange

```
POST /axis2/services/repository HTTP/1.1
Content-Type: multipart/related;
825 boundary=MIMEBoundaryurn_uuid_76A2C3D9BCD3AECFF31217932910180;
type="application/xop+xml";
start="<0.urn:uuid76A2C3D9BCD3AECFF31217932910181@apache.org>"; start-
info="application/soap+xml";
action="urn:ihe:iti:2015:CrossCommunityDocumentProvide"
830 User-Agent: Axis2
Host: localhost:4040
Content-Length: 4567


--MIMEBoundaryurn_uuid_76A2C3D9BCD3AECFF31217932910180
835 Content-Type: application/xop+xml; charset=UTF-8; type="application/soap+xml"
Content-Transfer-Encoding: binary
Content-ID: <0.urn:uuid:76A2C3D9BCD3AECFF31217932910181@apache.org>

<?xml version="1.0" encoding="UTF-8"?>
840 <soapenv:Envelope xmlns:soapenv="http://www.w3.org/2003/05/soap-envelope"
xmlns:wsa="http://www.w3.org/2005/08/addressing">
 <soapenv:Header>
 <wsa:To>http://localhost:4040/axis2/services/test11966a</wsa:To>
 <wsa:MessageID>urn:uuid:76A2C3D9BCD3AECFF31217932910053</wsa:MessageID>
845 <ihe:homeCommunityBlock xmlns:ihe="urn:ihe.net:iti:xdr:2014"
xmlns:env="http://www.w3.org/2003/05/soap-envelope"
env:role="urn:ihe.net:iti:xd:id" env:relay="true">
 <ihe:homeCommunityId>urn:oid:1.2.3.4.5.6.2333.23</ihe:homeCommunityId>
```

```
           </ihe:homeCommunityBlock>
850        <wsa:Action
      soapenv:mustUnderstand="1">urn:ihe:iti:2015:CrossCommunityDocumentProvide
      </wsa:Action>
           </soapenv:Header>
           <soapenv:Body>
855        <xdsb:ProvideAndRegisterDocumentSetRequest xmlns:xdsb="urn:ihe:iti:xds-
      b:2007">
           <lcm:SubmitObjectsRequest xmlns:lcm="urn:oasis:names:tc:ebxml-
      regrep:xsd:lcm:3.0">
           <rim:RequestSlotList xmlns:rim="urn:oasis:names:tc:ebxml-
860   regrep:xsd:rim:3.0">
           <rim:Slot name="homeCommunityId">
           <rim:ValueList>
           <rim:Value>urn:oid:1.2.3.4.5.6.2333.23</rim:Value>
           </rim:ValueList>
865        </rim:Slot>
           </rim:RequestSlotList>
           <rim:RegistryObjectList xmlns:rim="urn:oasis:names:tc:ebxml-
      regrep:xsd:rim:3.0">
           <!-- Registry Metadata goes here -->
870        </rim:RegistryObjectList>
           </lcm:SubmitObjectsRequest>
           <xdsb:Document id="Document01">
           <xop:Include xmlns:xop="http://www.w3.org/2004/08/xop/include"
      href="cid:1.urn:uuid:76A2C3D9BCD3AECFF3121793290229@apache.org"/>
875        </xdsb:Document>
           </xdsb:ProvideAndRegisterDocumentSetRequest>
           </soapenv:Body>
      </soapenv:Envelope>

880   --MIMEBoundaryurn_uuid_76A2C3D9BCD3AECFF31217932910180
      Content-Type: text/plain
      Content-Transfer-Encoding: binary
      Content-ID: <1.urn:uuid:76A2C3D9BCD3AECFF31217932910229@apache.org>

885   Ceci est mon Document.
      Il est très bien!


      --MIMEBoundaryurn_uuid_76A2C3D9BCD3AECFF31217932910180--
```

3.80.5.1.1.2 Asynchronous Web Services Exchange

```
890   <?xml version="1.0" encoding="UTF-8"?>
      <s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
      xmlns:a="http://www.w3.org/2005/08/addressing">
       <s:Header>
       <a:Action
895   s:mustUnderstand="1">urn:ihe:iti:2015:CrossGatewayDocumentProvide</a:Action>
       <a:MessageID>urn:uuid:6d296e90-e5dc-43d0-b455-7c1f3eb35d83</a:MessageID>
       <a:ReplyTo>
```

```
                <a:Address>http://192.168.2.4:9080/XdsService/DocumentSourceReceiver.svc</a:A
900    ddress>
                <ihe:homeCommunityBlock xmlns:ihe="urn:ihe.net:iti:xdr:2014"
          xmlns:env="http://www.w3.org/2003/05/soap-envelope"
          env:role="urn:ihe.net:iti:xd:id" env:relay="true">
                <ihe:homeCommunityId>urn:oid:1.2.3.4.5.6.2333.23</ihe:homeCommunityId>
905    </ihe:homeCommunityBlock>
            </a:ReplyTo>
            <a:To
          s:mustUnderstand="1">http://localhost:2647/XdsService/DocumentRepositoryRecei
          ver.svc</a:To>
910    </s:Header>
            <s:Body>
            <ProvideAndRegisterDocumentSetRequest xmlns="urn:ihe:iti:xds-b:2007"
          xmlns:lcm="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
          xmlns:rim="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
915    xmlns:rs="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0">
                <lcm:SubmitObjectsRequest>
            <!--Rest of SubmitObjectsRequest message goes here -->
                </lcm:SubmitObjectsRequest>
                <Document
920    id="Document01">UjBsR09EbGhjZ0dTQUxNQUFBUUNBRU1tQ1p0dU1GUXhhEUzhi</Document>
            </ProvideAndRegisterDocumentSetRequest>
            </s:Body>
        </s:Envelope>
```

3.80.5.1.2 Sample Cross Gateway Document Provide SOAP Response

925 #### 3.80.5.1.2.1 Synchronous Web Services Exchange

```
        <?xml version="1.0" encoding="UTF-8"?>
        <s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
        xmlns:a="http://www.w3.org/2005/08/addressing">
            <s:Header>
930    <a:Action
        s:mustUnderstand="1">urn:ihe:iti:2007:CrossGatewayDocumentProvideResponse</a:
        Action>
            <a:RelatesTo>urn:uuid:6d296e90-e5dc-43d0-b455-7c1f3eb35d83</a:RelatesTo>
            </s:Header>
935    <s:Body>
            <rs:RegistryResponse xmlns:rs="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
        status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success"/>
            </s:Body>
        </s:Envelope>
```

940 #### 3.80.5.1.2.2 Asynchronous Web Services Exchange

```
        <?xml version="1.0" encoding="UTF-8"?>
        <s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
        xmlns:a="http://www.w3.org/2005/08/addressing">
            <s:Header>
```

```
945    <a:Action
s:mustUnderstand="1">urn:ihe:iti:2007:CrossGatewayDocumentProvideResponse</a:
Action>
    <a:MessageID>urn:uuid:D6C21225-8E7B-454E-9750-21622C099DB</a:MessageID>
    <a:RelatesTo>urn:uuid:6d296e90-e5dc-43d0-b455-7c1f3eb35d83</a:RelatesTo>
950    <a:To
s:mustUnderstand="1">http://localhost:2647/XdsService/DocumentSourceReceiver.
svc</a:To>
    </s:Header>
    <s:Body>
955    <rs:RegistryResponse xmlns:rs="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success"/>
    </s:Body>
</s:Envelope>
```

3.80.6 Security Considerations

960 This transaction assumes that the communities that are using Initiating Getaways and
Responding Gateways have an agreement defining when they can interchange PHI.

3.80.7 Audit Record Considerations

The Cross Community Document Provide Transaction is either a PHI-Import event or a PHI-
Export event, depending on actor, as defined in ITI TF-2a: Table 3.20.4.1.1.1-1, with the
965 following exceptions.

These audit messages are identical to [ITI-41] with the exception of the EventTypeCode and the
inclusion of homeCommunityId.

3.80.7.1 Initiating Gateway audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentific ation	EventID	M	EV(110106, DCM, "Export")
	EventActionCode	M	"R" (Read)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("ITI-80", "IHE Transactions", "CrossGatewayDocumentProvide")
Source (Document Source) (1)			
Human Requestor (0..n)			
Destination (Document Repository) (1)			
Audit Source (Document Source) (1)			
Patient (1)			
SubmissionSet (1)			

Where:

Source AuditMessage/ ActiveParticipant	UserID	M	If Asynchronous Web Services Exchange is being used, the content of the <wsa:ReplyTo/> element. Otherwise, not specialized.
	AlternativeUserID	M	the process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	*U*	*not specialized*
	RoleIDCode	M	EV(110153, DCM, "Source")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

970

Human Requestor (if known) AuditMessage/ ActiveParticipant	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*U*	*not specialized*
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

Destination AuditMessage/ ActiveParticipant	UserID	M	SOAP endpoint URI.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"false"
	RoleIDCode	M	EV(110152, DCM, "Destination")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address
	HomeCommunityID	M	The homeCommunityId of the destination intended recipient

Audit	*AuditSourceID*	*U*	*not specialized*

Source	AuditEnterpriseSiteID	U	not specialized
AuditMessage/ AuditSourceIdentification	AuditSourceTypeCode	U	not specialized

Patient	ParticipantObjectTypeCode	M	"1" (Person)
(AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	U	not specialized
	ParticipantObjectIDTypeCode	M	not specialized
	ParticipantObjectSensitivity	U	not specialized
	ParticipantObjectID	M	The patient ID in HL7®[1] CX format.
	ParticipantObjectName	U	not specialized
	ParticipantObjectQuery	U	not specialized
	ParticipantObjectDetail	U	not specialized

Submission Set	ParticipantObjectTypeCode	M	"2" (System)
(AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	U	not specialized
	ParticipantObjectIDTypeCode	M	EV("urn:uuid:a54d6aa5-d40d-43f9-88c5-b4633d873bdd", "IHE XDS Metadata", "submission set classificationNode")
	ParticipantObjectSensitivity	U	not specialized
	ParticipantObjectID	M	The submissionSet unique ID
	ParticipantObjectName	U	not specialized
	ParticipantObjectQuery	U	not specialized
	ParticipantObjectDetail	U	not specialized

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

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3.80.7.2 Responding Gateway audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	EventID	M	EV(110107, DCM, "Import")
	EventActionCode	M	"C" (Create)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("ITI-80", "IHE Transactions", "CrossGatewayDocumentProvide")
Source (Document Source) (1)			
Destination (Document Repository or Document Recipient) (1)			
Audit Source (Document Repository or Document Recipient) (1)			
Patient (1)			
SubmissionSet (1)			

Where:

	Field Name	Opt	Value Constraints
Source AuditMessage/ ActiveParticipant	UserID	M	If Asynchronous Web Services Exchange is being used, the content of the <wsa:ReplyTo/> element. Otherwise, not specialized.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*U*	*not specialized*
	RoleIDCode	M	EV(110153, DCM, "Source")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

	Field Name	Opt	Value Constraints
Destination AuditMessage/ ActiveParticipant	UserID	M	SOAP endpoint URI
	AlternativeUserID	M	the process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"false"
	RoleIDCode	M	EV(110152, DCM, "Destination")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

	HomeCommunityID	M	The homeCommunityId of the destination intended recipient

Audit Source AuditMessage/AuditSourceIdentification	*AuditSourceID*	*U*	*not specialized*
	AuditEnterpriseSiteId	*U*	*not specialized*
	AuditSourceTypeCode	*U*	*not specialized*

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Patient (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	*not specialized*
	ParticipantObjectSensitivity	*U*	*not specialized*
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	ParticipantObjectQuery	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

Submission Set (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV("urn:uuid:a54d6aa5-d40d-43f9-88c5-b4633d873bdd", "IHE XDS Metadata", "submission set classificationNode")
	ParticipantObjectSensitivity	*U*	*not specialized*
	ParticipantObjectID	M	The submissionSet unique ID
	ParticipantObjectName	*U*	*not specialized*
	ParticipantObjectQuery	*U*	*not specialized*

	ParticipantObjectDetail	*U*	*not specialized*