Integrating the Healthcare Enterprise

IHE

5 # IHE Quality, Research and Public Health (QRPH)
Technical Framework

10 # Volume 2
IHE QRPH TF-2
Transactions

15

20 **Revision 2.0 – Final Text**

July 5, 2019

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1 Introduction

This document, Volume 2 of the IHE Quality, Research and Public Health (QRPH) Technical Framework, defines transactions used in IHE Quality, Research and Public Health profiles.

1.1 Introduction to IHE

Integrating the Healthcare Enterprise (IHE) is an international initiative to promote the use of standards to achieve interoperability among health information technology (HIT) systems and effective use of electronic health records (EHRs). IHE provides a forum for care providers, HIT experts and other stakeholders in several clinical and operational domains to reach consensus on standards-based solutions to critical interoperability issues.

The primary output of IHE is system implementation guides, called IHE Profiles. IHE publishes each profile through a well-defined process of public review and trial implementation and gathers profiles that have reached final text status into an IHE Technical Framework, of which this volume is a part.

For more general information regarding IHE, refer to www.ihe.net. It is strongly recommended that, prior to reading this volume, the reader familiarizes themselves with the concepts defined in the *IHE Technical Frameworks General Introduction*.

1.2 Intended Audience

The intended audience of IHE Technical Frameworks Volume 2 is:

- IT departments of healthcare institutions
- Technical staff of vendors participating in the IHE initiative
- Experts involved in standards development

1.3 Overview of Technical Framework Volume 2

Volume 2 is comprised of several distinct sections:

- Section 1 provides background and reference material.
- Section 2 presents the conventions used in this volume to define the transactions.
- Section 3 defines Quality, Research and Public Health transactions in detail, specifying the roles for each actor, the standards employed, the information exchanged, and in some cases, implementation options for the transaction.

The appendices in Volume 2 provide clarification of technical details of the IHE data model and transactions. A glossary of terms and acronyms used in the IHE Technical Framework, including those from relevant standards, is provided in Appendix D to the *IHE Technical Frameworks General Introduction*. Due to the length of the document, some domains may divide Volume 2 into smaller volumes labeled 2a, 2b, etc. In this case, the Volume 2 appendices are gathered in

185 Volume 2x. Code and message samples may also be stored on the IHE ftp server at
ftp://ftp.ihe.net/TF_Implementation_Material. In this case, explicit links to the ftp server will be
provided in the transaction text.

1.4 Comment Process

IHE International welcomes comments on this document and the IHE initiative. Comments on
190 the IHE initiative can be submitted by sending an email to the co-chairs and secretary of the
Quality, Research and Public Health domain committees at qrph@ihe.net. Comments on this
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230 disclosure process including links to forms for making disclosures is available at http://www.ihe.net/Patent_Disclosure_Process. Please address questions about the patent disclosure process to the secretary of the IHE International Board: secretary@ihe.net.

1.8 History of Document Changes

This section provides a brief summary of changes and additions to this document.

235

Date	Document Revision	Change Summary
2011-09-02	0.1	Trial Implementation Version
2018-10-19	1.0	Initial Final Text version including CRD and DSC Profiles
2019-07-05	2.0	Added the NANI Profile

2 Conventions

This document has adopted the following conventions for representing the framework concepts and specifying how the standards upon which the IHE Technical Framework is based shall be applied.

2.1 Transaction Modeling and Profiling Conventions

In order to maintain consistent documentation methods, modeling methods for IHE transactions and profiling conventions for frequently used standards are maintained as Appendix E to the *IHE Technical Frameworks General Introduction*. Methods described include the Unified Modeling Language (UML) and standards conventions include DICOM[®2], HL7 v2.x, HL7 Clinical Document Architecture (CDA[®3]) Documents, etc. These conventions are critical to understanding this volume and should be reviewed prior to reading this text.

2.2 Additional Standards Profiling Conventions

This section defines profiling conventions for standards which are not described in the *IHE Technical Frameworks General Introduction*.

Not Applicable.

2.3 Use of Coded Entities and Coding Schemes

Where applicable, coding schemes required by the DICOM, HL7, LOINC, and SNOMED standards are used in IHE Profiles. In the cases where such resources are not explicitly identified by standards, implementations may utilize any resource (including proprietary or local) provided any licensing/copyright requirements are satisfied.

IHE does produce and maintain certain terminology. OIDs and URNs have been assigned for specific uses. The IHE process for managing OIDs and URNs is described at http://wiki.ihe.net/index.php/OID_Registration.

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[2] DICOM is the registered trademark of the National Electrical Manufacturers Association for its standards publications relating to digital communications of medical information.

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

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3 IHE Transactions

This section defines each IHE Quality, Research and Public Health transaction in detail, specifying the standards used and the information transferred.

3.1 Reserved [QRPH-1]

3.2 Reserved [QRPH-2]

3.3 Reserved [QRPH-3]

3.4 Reserved [QRPH-4]

3.5 Reserved [QRPH-5]

3.6 Reserved [QRPH-6]

3.7 Reserved [QRPH-7]

3.8 Reserved [QRPH-8]

3.9 Reserved [QRPH-9]

3.10 Reserved for Retrieve Protocol Def (Retired) [QRPH-10]

3.11 Reserved for Enter Patient Request (Retired) [QRPH-11]

3.12 Reserved for Patient Screening Visits Scheduled (Retired) [QRPH-12]

3.13 Reserved for Record Patient Screening Visit (Retired) [QRPH-13]

3.14 Reserved for Enroll Patient Request (Retired) [QRPH-14]

3.15 Reserved for Patient Study Visits Scheduled (Retired) [QRPH-15]

3.16 Reserved for Record Patient Study Visit (Retired) [QRPH-16]

3.17 Reserved for Amend Protocol Def (Retired) [QRPH-17]

3.18 Reserved for Alert Protocol State (Retired) [QRPH-18]

3.19 Reserved for Archive Data [QRPH-19]

3.20 Reserved for Retrieve Process Definitions [QRPH-20]

285 ## 3.21 Reserved for Subscribe [QRPH-21]

3.22 Reserved for Publish Process Definitions [QRPH-22]

3.23 Reserved for Initiate Activity (Retired) [QRPH-23]

3.24 Retired [QRPH-24]

3.25 Reserved for Initiate Process [QRPH-25]

290 ## 3.26 Reserved for Retrieve Activities [QRPH-26]

3.27 Reserved for Update Activity [QRPH-27]

3.28 Reserved for Send Process State Alert [QRPH-28]

3.29 Reserved for Request Medical Knowledge [QRPH-29]

3.30 Reserved for Send Distribution Message [QRPH-30]

295 ## 3.31 Reserved for Send Export Document [QRPH-31]

3.32 Reserved for Return Redacted Document [QRPH-32]

3.33 Reserved for Retrieve Extraction Specification [QRPH-33]

3.34 NANI Feed [QRPH-34]

This section corresponds to transaction [QRPH-34] of the IHE QRPH Technical Framework.
300 Transaction [QRPH-34] is used by the Information Source and Information Recipient Actors to
share birth event notification information.

3.34.1 Scope

This transaction communicates event information, including corroborating demographic data,
after a newborn is admitted or discharged.

3.34.2 Actor Roles
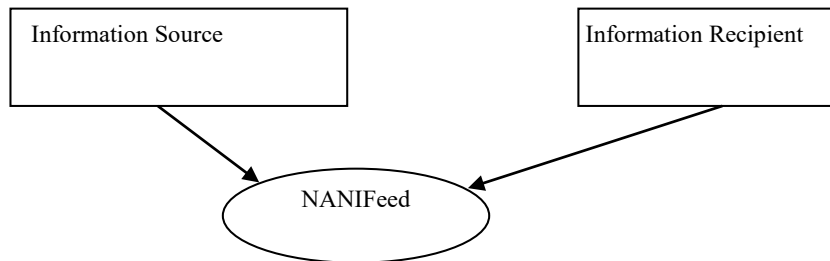
Actor: Information Source

Role: Provides notification of an admission or discharge of a patient or person known to the Information Source. The event message includes information about the patient needed by the Information Resource.

Actor: Information Recipient

Role: Receives event notification information from the Information Source, applies matching and filtering rules to determine which content to accept and which content to reject. It receives or rejects event notification information based on the content matching and filtering rules.

(Note: definition of the matching and filtering rules are outside the scope of this technical specification.)

3.34.3 Referenced Standards

HL7 Version 2.3.1

This standard is publicly available on the HL7.org website. Specifications for the admit/visit notification (A01) event message is in Chapter 3.2.1. Specifications for the discharge/end visit event message (A03) is in Chapter 3.2.3.

3.34.4 Messages
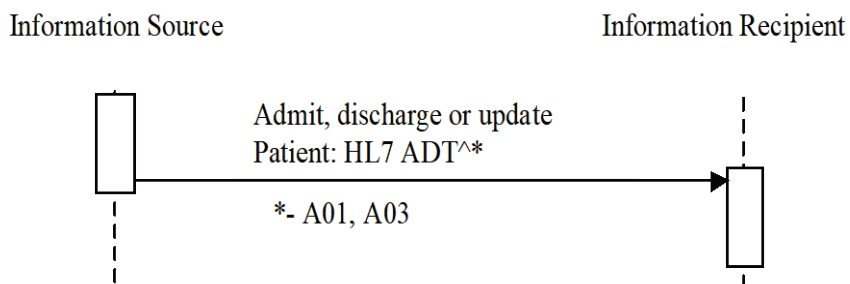
Figure 3.34.4-1: NANIFeed Sequence

3.34.4.1 NANIFeed

The NANIFeed transaction describes the content needed to notify another system of a newborn admission or discharge event. An event notification is used by the receiving system as a workflow triggering event.

3.34.4.1.1 Trigger Events

To provide an event notification for any of the following events, the Information Source will initiate a NANIFeed message for the corresponding event:

A01 – Admission of a patient

A03 – Discharge of a patient

The Information Source SHALL generate the message whenever a Newborn is admitted at birth or discharged from a birth encounter. Definition of Newborn admission follows jurisdictionally defined guidelines, for example, a "birth admit event" may be defined as an admission within 72 hours of the time of birth. It is often expressed as a relationship between the date and time of birth and the date and time of the admission.

Support for the Admission event is required. Support for the additional event types MAY be used to support workflow trigger requirements of the Information Recipient.

3.34.4.1.2 Message Semantics

The NANIFeed transaction is defined in the subsequent sections.

Message segments and their optionality are defined below and their detailed descriptions are provided in the subsections that follow. Segments that are optional in the base HL7 ADT message standard and not utilized in the NANIFeed transaction are not shown in the tables below.

In tables below, segments where the optionality is further constrained for the NANIFeed transaction are shown using the R2 and R+ conventions defined in IHE ITI TF-2x: Appendix C and C.1, i.e.,

> R2 - This is an IHE extension. If the sending application has data for the field, it is required to populate the field. If the value is not known, the field may not be sent.

> R+ - This is an IHE extension. This is a field that IHE requires, that was listed as optional within the HL7 standard.

Table 3.34.4.1.2-1: ADT^A01 and ADT^A03 Patient Administration Messages

ADT	Patient Administration Message	Optionality	Chapter in HL7 2.3.1
MSH	Message Header	R	3
EVN	Event Type	R	3
PID	Patient Identification	R	3

ADT	Patient Administration Message	Optionality	Chapter in HL7 2.3.1
NK1	Next of Kin / Associated Parties	R2	3
PV1	Patient Visit	R	3

3.34.4.1.2.1 MSH Segment

The MSH segment shall be constructed as defined in ITI TF-2x: C.2.2 "Message Control".

(MSH-9) Field *MSH-9 Message Type* shall have at least two components. The first component shall have a value of **ADT**; the second component shall be **A01 or A03** as appropriate. The third component is optional; however, if present, it shall have the following value for each corresponding message type:

ADT_A01 for A01 message type

ADT_A03 for A03 message type

3.34.4.1.2.2 EVN Segment

The EVN segment shall be constructed by the Information Source as defined in ITI TF-2x: C.2.4 "Common Segment Definitions".

Two date/time fields are specified in the EVN segments:

(EVN-2) Recorded Date/Time (R) – the time the admission (birth) (A01) or discharge (A03) was recorded.

(EVN-6) Event Occurred (R2) – the actual time of admission (A01), or the actual time of the discharge (A03).

3.34.4.1.2.3 PID Segment

The PID segment shall be constructed by the Information Source as defined in HL7 V2.3.1 Chapter 3.3.

When sending ADT message A01 or A03, the Information Source shall populate appropriate values in the fields as listed in Table 3.34.4.1.2.3-1.

Table 3.34.4.1.2.3-1: IHE Profile - PID segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
3	250[Note2]	CX	R		00106	Patient Identifier List
5	250[Note2]	XPN	R		00108	Patient Name
6	250[Note2]	XPN	R2		00109	Mother's Maiden Name
7	26	TS	R+		00110	Date/Time of Birth
8	1	IS	R+	0001	00111	Administrative Sex
11	250[Note2]	XAD	R2		00114	Patient Address

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
13	250[Note2]	XTN	R2		00116	Phone Number - Home
21	250[Note2]	CX	R2		00124	Mother's Identifier
23	250[Note2]	ST	O		00126	Birth Place
24	1	ID	R2	0136	00127	Multiple Birth Indicator
25	2	NM	R2		00128	Birth Order
29	26	TS	R2		00740	Patient Death Date and Time
30	1	ID	R2	0136	00741	Patient Death Indicator

380
Note 1: This table identifies the attributes required to be handled by the Information Recipient. It is likely that not all attributes marked as O or R2 will be sent in some environments by the Information Source.

Note 2: The Data Type and field length of many attributes in this table differ from the requirements stated in HL7 2.3.1. The Information Recipient is required to support these extended lengths to cope with the information it needs to complete identifier cross-referencing logic. The Information Source may or may not send values of the full length listed in this table.

385

(PID-3) The Information Source shall provide the patient identifier in the ID component (first component) of the PID-3 field (PID-3.1). The Information Source shall use component PID-3.4 to convey the assigning authority (Patient Identification Domain) of the patient identifier. Either the first subcomponent (namespace ID) or the second and third subcomponents (universal ID and
390 universal ID type) shall be populated. If all three subcomponents are populated, the first subcomponent shall reference the same entity as is referenced by the second and third components.

(PID-7) Shall be accurate to at least the day (YYYYMMDD).

(PID-23) Birth Place may be included if relevant for the use case or Realm. Realm-specific
395 implementation guidance may require a specific value set for the allowable concepts to be populated in this string.

3.34.4.1.2.4 PV1 Segment

The PV1 segment shall be constructed by the Information Source as defined in HL7 V2.3.1 Chapter 3.3 for A01 and A03.

400 The NANIFeed message is required to include the following attributes within the PV1 segment beyond what is specified in the HL7 standard:

Table 3.34.4.1.2.4-1: A01 – PV1 segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
2	1	IS	R			Patient Class
4	2	IS	R2	0007		Admission Type
7	250[Note2]	XCN	R2			Attending Doctor
19	250[Note2]	CX	R+			Visit Number

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
42	80	PL	R2			Pending Location
44	26	TS	R+			Admission Date and Time

Note 1: This table identifies the attributes required to be handled by the Information Recipient. It is likely that not all attributes marked as O or R2 will be sent in some environments by the Information Source.

405 Note 2: The Data Type and field length of many attributes in this table differ from the requirements stated in HL7 2.3.1. The Information Recipient is required to support these extended lengths to cope with the information it needs to complete identifier cross-referencing logic. The Information Source may or may not send values of the full length listed in this table.

Table 3.34.4.1.2.4-2: A03 – PV1 segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
2	1	IS	R			Patient Class
4	2	IS	R2	0007		Admission Type
7	250[Note2]		R2			Attending Doctor
19	250[Note2]	CX	R+			Visit Number
42	80	PL	R2			Pending Location
44	26	TS	R2			Admission Date and Time
45	26	TS	R+			Discharge Date and Time

410 Note 1: This table identifies the attributes required to be handled by the Information Recipient. It is likely that not all attributes marked as O or R2 will be sent in some environments by the Information Source.

Note 2: The Data Type and field length of many attributes in this table differ from the requirements stated in HL7 2.3.1. The Information Recipient is required to support these extended lengths to cope with the information it needs to complete identifier cross-referencing logic. The Information Source may or may not send values of the full length listed in this
415 table.

(PV1-4) The Admission Type SHALL be valued with "N" to indicate a newborn

(PV1-19) The Visit Number SHALL be used to identify the encounter within which services were delivered. For tracking Newborn hearing screening results, process quality measures
420 consider if hearing screening was performed before discharge from the Newborn's birth encounter.

(PV1-42) The Pending Location, if known, SHALL be populated. In an A01 message, it may indicate if the newborn is going to be sent to the NICU. In an A03 message, it may indicate if the baby is going home or to another hospital.

425 (PV1-44) The Admission Date/Time SHALL be valued with the date and time of admission in an A01 message.

(PV1-45) The Discharge Date/Time SHALL be valued with the date and time of discharge in an A03 message.

3.34.4.1.2.5 NK1 Segment

430 The NK1 segment shall be constructed by the Information Source as defined in HL7 V2.3.1
Chapter 3.3.

The NK1 segment contains information about the patient's other related parties. Any associated
parties may be identified. Utilizing NK1-1-set ID, multiple NK1 segments can be sent to patient
accounts. If a person or organization fulfills multiple contact roles, for example, a person is an
435 emergency contact and a next of kin, it is recommended to send a NK1 segment for each contact
role (field 7).

Admission Information Source SHALL populate NK1 segment when next of kin information is
available. Newborn Admission Notification Manager SHALL have the ability to accept and
process this segment.

440 This message SHALL send all available relationships in NK1 segments.

When sending A01 and A03 messages the Admission Information Source shall populate
appropriate values in the fields as listed in Table 3.34.4.1.2.5-1:

Table 3.34.4.1.2.5-1: IHE Profile – NK1 segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R		190	Set ID - NK1
2	48	XPN	R2		191	Name
3	60	CE	R2	63	192	Relationship
4	106	XAD	R2		193	Address
5	40	XTN	R2		194	Phone Number
7	60	CE	O	131	196	Contact Role
15	1	IS	O	1	111	Sex
16	26	TS	R2		110	Date/Time of Birth
33	32	CX	R2		751	Next of Kin/Associated Party's Identifiers

445 Note 1: This table identifies the attributes required to be handled by the Information Recipient. It is likely that not all attributes
marked as O or R2 will be sent in some environments by the Information Source.

(NK1-3) At least one repetition of NK1 segment SHOULD have a value of "MTH" in the field
NK1-3.1. Other subfields in NK1-3 field are optional.

(NK1-33) If mother's identifier is populated in NK1-33, it SHALL be same as indicated in PID-
450 21.

3.34.4.1.3 Expected Actions – Information Recipient

The Information Recipient SHALL be able to accept and process the message. The method of
processing is application specific and not defined by IHE.

Information Receiver SHALL be capable of filtering the A01 and A03 messages to identify
455 when it is associated with birth encounter admission and discharge. The Information Receiver
when acknowledging the message SHALL indicate when a message received does not match the
filtering for birth encounters.

Each message SHALL be acknowledged by the HL7 ACK message sent by the receiver of ADT
messages to the sender. See ITI TF-2x: C.2.3, "Acknowledgement Modes", for definition and
460 discussion of the ACK message.

- If the value in MSA-1 Acknowledgment Code is CA (Commit Accept), the Information
  Source system SHOULD interpret this to mean the uniquely identified message has been
  received and that it must not automatically resend the same message.

- If the value in MSA-1 Acknowledgment Code is CE (Commit Error), the Information
465 Source system should examine the warning(s) reported in the ERR segment and take
  steps to correct them.

- If the value in MSA 1 Acknowledgment Code is CR (Commit Reject), the Information
  Source should examine the cause(s) reported in the ERR segment and take steps to
  correct them. If the appropriate action is to retransmit the contents, the Information
470 Source SHALL use a new Message Control ID for the message it resends.

3.34.4.1.3.1 Required Information Recipient Configuration

The following items are expected to be parameters that are configurable on the Information
Recipient. For each communication connection between an Information Source and Information
Recipient:

475 Identifier of the Domain. This identifier shall specify all 3 components of the HL7 assigning
authority (including the namespace ID and/or both the universal ID and universal ID type
subcomponents) of the PID-3 field for the identification of the domain.

Identifier of the Information Source for the domain. This is expected to be the MSH-3 Sending
Application and the corresponding MSH-4 Sending Facility fields in the HL7 ADT message.
480 (Alternative identification schemes might include IP address of the Information Source (or Node
Authentication if the Audit Trail and Node Authentication Integration Profile is used).

3.35 Reserved for NANI Publish (Retired) [QRPH-35]

3.36 Archive Source Documents [QRPH-36]

This section corresponds to transaction [QRPH-36] of the IHE QRPH Technical Framework.
485 Transaction [QRPH-36] is used by the Form Filler and Form Archiver Actors.

3.36.1 Scope

This transaction involves a Form Filler archiving content to a Form Archiver. The content of this
transaction is similar to that of Retrieve Form [ITI-34].

3.36.2 Actor Roles
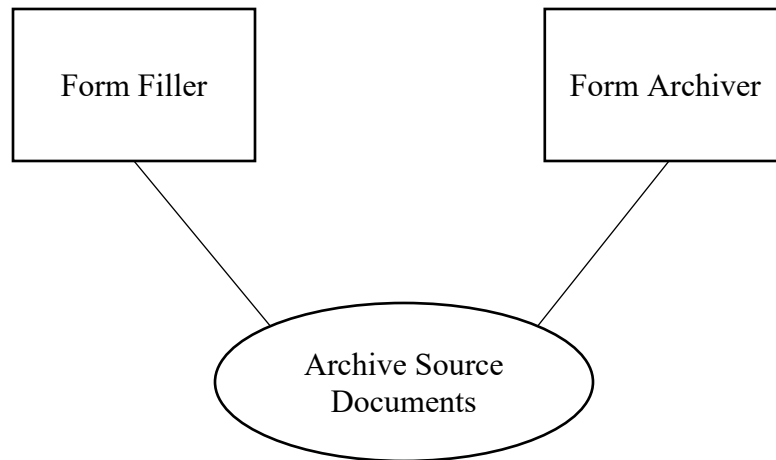
490

Actor: Form Filler

Role: A forms display and editing system capable of allowing form fields to be completed. This system has information that will be used to complete a form and needs to save a current copy of that information to the Archiver.

495

Actor: Form Archiver

Role: A system that receives submitted content for archival purposes.

3.36.3 Referenced Standards

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

500

IETF RFC1738, Uniform Resource Locators (URL), December 1994, http://www.faqs.org/rfcs/rfc1738.html

IETF RFC2616 HyperText Transfer Protocol HTTP/1.1

Extensible Markup Language (XML) 1.0 (Second Edition). W3C Recommendation 6 October 2000. http://www.w3.org/TR/REC-xml.

505

3.36.4 Messages
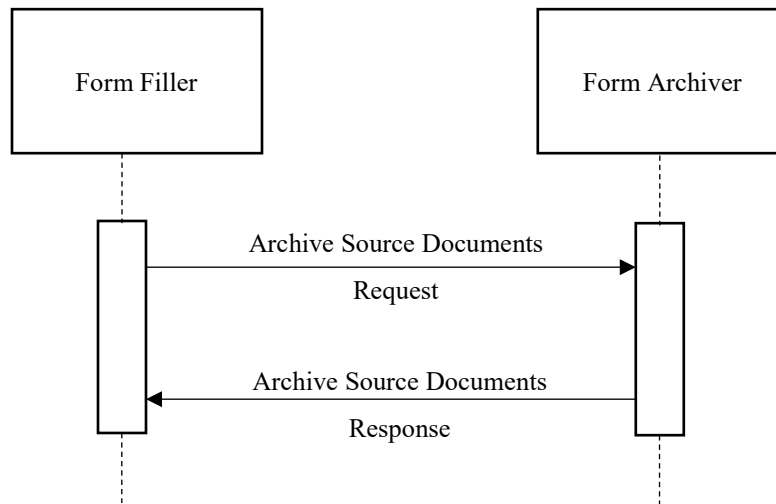
3.36.4.1 Archive Source Documents Request

Archive Source Documents involves a Form Filler archiving some content to a Form Archiver.

3.36.4.1.1 Trigger Events

The Form Filler possesses some documents which it wants to archive.

3.36.4.1.2 Message Semantics

The Form Filler SHALL transmit both the prepopData and the workflowData as defined in ITI TF-2b: 3.34 Retrieve Form [ITI-34].

The Form Filler and Form Archiver SHOULD comply with all requirements described in ITI TF-2x: Appendix V: Web Services for IHE Transactions when applicable.

The following parameters are specified for this transaction.

Parameter Name	REQ	Description	Value
archiveContent	R	XML containing both prepopData and workflowData that is being used to complete a form in the related [ITI-34] transaction.	Any XML further defined by a content profile.

3.36.4.1.3   Expected Actions

The Form Archiver SHALL parse the Archive Source Documents Request and SHALL return
either a responseCode value of "OK" to indicate success, or a SOAP Fault.

525   The Form Archiver SHALL use the SOAP Faults defined in Table 3.36.4.1.3-1 when
appropriate.

Table 3.36.4.1.3-1: SOAP Faults

Description of error	Code	Reason Text
There is missing information, such as no formID	Sender	Required Information Missing

An example of a SOAP Fault is:

530
```
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope"
       xmlns:xml="http://www.w3.org/XML/1998/namespace">
<env:Body>
  <env:Fault>
    <env:Code>
      <env:Value>env:Sender</env:Value>
    </env:Code>
    <env:Reason>
      <env:Text xml:lang="en">Required Information Missing</env:Text>
    </env:Reason>
  </env:Fault>
</env:Body>
</env:Envelope>
```

535

540

3.36.4.1.4   Security Considerations

545   The Archive Source Documents is a PHI-Export event, as defined in ITI TF-2a: Table
3.20.4.1.1.1-1.

3.36.4.2   Archive Source Documents Response

Archive Source Documents Response involves a Form Archiver responding to an Archive
Source Documents Request from a Form Filler.

550   ### 3.36.4.2.1   Trigger Events

This message is triggered by a Form Archiver responding to an Archive Source Documents
request.

3.36.4.2.2   Message Semantics

If the Archive Source Documents Request was received by and will be processed by the Form
Archiver, the Form Archiver SHALL respond with a SOAP responseCode of OK in the Archive
Source Documents Response.

If the Archive Source Documents Request was received by but will not be processed by the Form
Archiver, the Form Archiver SHALL respond with a SOAP Fault in the Archive Source
Documents Response.

3.36.4.2.3   Expected Actions

Form Fillers SHALL be capable of accepting well-formed SOAP faults.

- http://schemas.xmlsoap.org/wsdl/soap12/

The Form Filler SHOULD be capable of stopping the workflow upon receipt of a SOAP Fault
indicating missing data from this transaction.

3.36.4.2.4   Security Considerations

No Patient Health Information is transferred as part of the Archive Source Documents Response
transaction. HTTPS SHOULD be used as a method to secure the connection.

3.36.5 Protocol Requirements

The Archive Source Documents request and response shall be transmitted using Synchronous
Web Services Exchange, according to the requirements specified in ITI TF-2x: Appendix V.

The Archive Source Documents transaction shall use SOAP 12.

WSDL Namespace Definitions

ihei	urn:ihe:qrph:crd:2012
soap12	http://schemas.xmlsoap.org/wsdl/soap12/
wsaw	http://www.w3.org/2005/08/addressing
xsd	http://www.w3.org/2001/XMLSchema

These are the requirements for the Archive Source Documents transaction presented in the order
in which they would appear in the WSDL definition:

- The following types shall be imported (xds:import) in the /definitions/types section:
  - Namespace="urn:ihe:qrph:crd:2012", schema="CRD.xsd"
- The /definitions/message/part/@element attribute of the Archive Source Documents
  Request message shall be defined as: "ihe:ArchiveSourceDocumentsRequest"

_____

580   •   The /definitions/message/part/@element attribute of the Archive Source Documents
Response message shall be defined as: "ihe:ArchiveSourceDocumentsResponse"

•   The /definitions/portType/operation/input/@wsaw:Action attribute for the Archive
Source Documents Request message shall be defined as
"urn:ihe:qrph:2012:ArchiveSourceDocuments"

585   •   The /definitions/portType/operation/output/@wsaw:Action attribute for the Archive
Source Documents Response message shall be defined as:
"urn:ihe:qrph:2012:ArchiveSourceDocumentsResponse"

•   The /definitions/binding/operation/soap12:operation/@soapAction attribute shall be
defined as "urn:ihe:qrph:2012:ArchiveSourceDocuments"

590   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. Sample
informative request and response messages are below in 3.36.5.1.1 and 3.36.5.1.2 respectively.

3.36.5.1   Sample SOAP Messages

The samples in the following two sections show a typical SOAP request and its relative SOAP
595   response. The sample messages also show the WS-Addressing headers <Action/>,

<MessageID/>, .; these WS-Addressing headers are populated according to the

ITI TF-2x: Appendix V: Web Services for IHE Transactions. Some of the body of the SOAP
message is omitted for brevity.

3.36.5.1.1   Sample Archive Source Documents SOAP Request

600

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
          <wsa:To>http://localhost:4040/axis2/services/someservice</wsa:To>
      <wsa:MessageID>urn:uuid:76A2C3D9BCD3AECFF31217932910053</wsa:MessageID>
      <wsa:Action soap:mustUnderstand="1">urn:ihe:qrphi:
2012:RetrieveForm</wsa:Action>
  </soap:Header>
  <soap:Body>
      <ArchiveSourceDocumentsRequest xmlns="urn:ihe:qrph:crd:2012">
              <archiveContent>
      </ArchiveSourceDocumentsRequest >
  </soap:Body>
</soap:Envelope>
```

_____

3.36.5.1.2   Sample Archive Source Documents SOAP Response

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Header>
          <wsa:To>http://localhost:4040/axis2/services/someservice</wsa:To>

<wsa:MessageID>urn:uuid:76A2C3D9BCD3AECFF31217932910053</wsa:MessageID>
          <wsa:Action soap:mustUnderstand="1">urn:ihe:qrph:
2012:ArchiveSourceDocumentsResponse</wsa:Action>
  </soap:Header>
  <soap:Body>
      <ArchiveSourceDocumentsResponse xmlns="urn:ihe:qrph:crd:2012">
          <responseCode>OK</responseCode>
      </ArchiveSourceDocumentsResponse>
  </soap:Body>
</soap:Envelope>
```

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3.37 Reserved for BFDR Feed [QRPH-37]

3.38 Reserved for VRDR Feed [QRPH-38]

3.39 Reserved for HW Feed [QRPH-39]

3.40 Reserved for Retrieve Research Study List [QRPH-40]

3.41 Reserved for Research Information Subscribe [QRPH-41]

3.42 Reserved for Research Information Notify [QRPH-42]

3.43 Reserved for Retrieve Data Element List [QRPH-43]

3.44 Reserved for Retrieve Metadata [QRPH-44]

3.45 Reserved for Communicate Hearing Screening Data [QRPH-45]

3.46 Reserved for BFDR Query [QRPH-46]

3.47 Reserved for VRDR Query [QRPH-47]

3.48 Reserved for Mobile Retrieve Form [QRPH-48]

3.49 Reserved for Mobile Retrieve Capability [QRPH-49]

3.50 Reserved for Mobile Authorize Form [QRPH-50]

650   ## 3.51 Reserved for Mobile Retrieve Access Token [QRPH-51]

3.52 Reserved for Mobile Populate Form [QRPH-52]

3.53 Reserved for ADX POST Content [QRPH-53]

3.54 Reserved for ADX POST Response [QRPH-54]

Appendices

655

Appendix A – QRPH Audit Record Considerations

Many profiles defined by the IHE Quality, Research and Public Health domain share and reuse
transactions defined in the QRPH domain and other domains (e.g., ITI). This appendix defines
660 audit record content and requirements when an actor in a QRPH profile implements the ATNA
Profile and sends audit record events.

A.1 Retrieve Form [ITI-34] audit messages

The Retrieve Form transaction MAY be a PHI-Export event as defined in ITI TF-2a: Table
3.20.4.1.1.1-1. Actors that audit this transaction SHALL create audit data in conformance with
665 DICOM "Data Export"/"Data Import", with the following exceptions.

A.1.1 Form Filler audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	EventID	M	EV(110106, DCM, "Export")
	EventActionCode	M	"R" (Read)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("ITI-34", "IHE Transactions", "Retrieve Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Manager or Form Processor) (1)			
Audit Source (Form Filler) (1)			
Subject (1)			
prepopData (1)			

Where:

Source AuditMessage/ ActiveParticipant	UserID	M	Host system name
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	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

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	M	"true"
	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

670

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

Subject (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

prepopData (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Document ID")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The prepopData Document unique ID
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

A.1.2 Form Manager 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-34", "IHE Transactions", "Retrieve Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Manager) (1)			
Audit Source (Form Manager) (1)			
Subject (1)			
prepopData (1)			

675   Where:

	Field Name	Opt	Value Constraints
Source AuditMessage/ ActiveParticipant	UserID	M	Host system name
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"false"
	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
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	M	"true"
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

Destination	UserID	M	SOAP endpoint URI
AuditMessage/ ActiveParticipant	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

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

Subject	ParticipantObjectTypeCode	M	"1" (Person)
(AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	U	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	U	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	U	*not specialized*
	PARTICIPANTOBJECTQUERY	U	*not specialized*
	ParticipantObjectDetail	U	*not specialized*

680

prepopData	ParticipantObjectTypeCode	M	"2" (System)
(AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	U	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Document ID")
	ParticipantObjectSensitivity	U	*not specialized*
	PARTICIPANTOBJECTID	M	The prepopData Document unique ID
	ParticipantObjectName	U	*not specialized*
	PARTICIPANTOBJECTQUERY	U	*not specialized*
	ParticipantObjectDetail	U	*not specialized*

A.1.3 Form Processor 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-34", "IHE Transactions", "Retrieve Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Processor) (1)			
Audit Source (Form Processor) (1)			
Subject (1)			
prepopData (1)			

Where:

	Field Name	Opt	Value Constraints
Source AuditMessage/ ActiveParticipant	UserID	M	Host system name
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"false"
	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

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	Field Name	Opt	Value Constraints
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	M	"true"
	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	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,

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

Subject (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

prepopData (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Document ID")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The prepopData Document unique ID
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

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A.2 Submit Form [ITI-35] audit messages

The Submit Form transaction MAY be a PHI-Export event as defined in ITI TF-2a: Table 3.20. 4.1.1.1-1. Actors that audit this transaction SHALL create audit data in conformance with DICOM "Data Export"/"Data Import", with the following exceptions.

A.2.1 Form Filler audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentificat ion	EventID	M	EV(110106, DCM, "Export")
	EventActionCode	M	"R" (Read)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("ITI-35", "IHE Transactions", "Submit Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Receiver or Form Processor) (1)			
Audit Source (Form Filler) (1)			
Subject (1)			
FormData (1)			

Where:

Source AuditMessage/ ActiveParticipan t	UserID	M	Host system name
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	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

Human Requestor (if known) AuditMessage/ ActiveParticipan t	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	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

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

Subject (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

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FormData (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Form ID")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	A form identifier
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

A.2.2 Form Receiver audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentificat ion	EventID	M	EV(110107, DCM, "Import")
	EventActionCode	M	"C" (Create)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("ITI-35", "IHE Transactions", "Submit Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Receiver) (1)			
Audit Source (Form Receiver) (1)			
Subject (1)			
FormData (1)			

Where:

	Field Name	Opt	Value Constraints
Source AuditMessage/ ActiveParticipan t	UserID	M	Host system name
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"false"
	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
Human Requestor (if known) AuditMessage/ ActiveParticipan t	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

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	Field Name	Opt	Value Constraints
Destination AuditMessage/ ActiveParticipan t	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

Audit Source	AuditSourceID	U	not specialized
AuditMessage/ AuditSourceIden tification	AuditEnterpriseSiteID	U	not specialized
	AuditSourceTypeCode	U	not specialized

Subject	ParticipantObjectTypeCode	M	"1" (Person)
(AuditMessage/ ParticipantObjec tIdentification)	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	U	not specialized
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	U	not specialized
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	U	not specialized
	PARTICIPANTOBJECTQUERY	U	not specialized
	ParticipantObjectDetail	U	not specialized

Form Data	ParticipantObjectTypeCode	M	"2" (System)
(AuditMessage/ ParticipantObjec tIdentification)	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	U	not specialized
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Form ID")
	ParticipantObjectSensitivity	U	not specialized
	PARTICIPANTOBJECTID	M	An identifier for the form
	ParticipantObjectName	U	not specialized
	PARTICIPANTOBJECTQUERY	U	not specialized
	ParticipantObjectDetail	U	not specialized

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A.2.1 Form Processor audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentificat ion	EventID	M	EV(110107, DCM, "Import")
	EventActionCode	M	"C" (Create)
	EventDateTime	M	not specialized
	EventOutcomeIndicator	M	not specialized
	EventTypeCode	M	EV("ITI-35", "IHE Transactions", "Submit Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Processor) (1)			
Audit Source (Form Processor) (1)			
Subject (1)			
FormData (1)			

Where:

Source AuditMessage/ ActiveParticipant	UserID	M	Host system name
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"false"
	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

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	M	"true"
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

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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

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

Subject (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

Form Data	ParticipantObjectTypeCode	M	"2" (System)
(AuditMessage/ ParticipantObjec tIdentification)	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Form ID")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	An identifier for the form
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

725 A.3 Archive Form [ITI-36] audit messages

The Archive Form transaction MAY be a PHI-Export event as defined in ITI TF-2a: Table 3.20.
4.1.1.1-1. Actors that audit this transaction SHALL create audit data in conformance with
DICOM "Data Export"/"Data Import", with the following exceptions:

A.3.1 Form Filler audit message:

	Field Name	**Opt**	**Value Constraints**
Event	EventID	M	EV(110106, DCM, "Export")
AuditMessage/ EventIdentificat ion	EventActionCode	M	"R" (Read)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("ITI-36", "IHE Transactions", "Archive Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Archiver) (1)			
Audit Source (Form Filler) (1)			
Subject (1)			
FormData (1)			

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Source	UserID	M	Host system name
AuditMessage/ ActiveParticipant	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	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

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	M	"true"
	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

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

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Subject (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

FormData (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Form ID")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	A form identifier
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

A.3.2 Form Archiver audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentificat ion	EventID	M	EV(110106, DCM, "Import")
	EventActionCode	M	"R" (Read)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("ITI-36", "IHE Transactions", "Archive Form")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Archiver) (1)			
Audit Source (Form Archiver) (1)			
Subject (1)			
FormData (1)			

Where:

	Field Name	Opt	Value Constraints
Source AuditMessage/ ActiveParticipan t	UserID	M	Host system name
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	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

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	Field Name	Opt	Value Constraints
Human Requestor (if known) AuditMessage/ ActiveParticipan t	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

	Field Name	Opt	Value Constraints
Destination AuditMessage/ ActiveParticipan t	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

Audit Source AuditMessage/ AuditSourceIdentifi cation	*AuditSourceID*	*U*	*not specialized*
	AuditEnterpriseSiteID	*U*	*not specialized*
	AuditSourceTypeCode	*U*	*not specialized*

Subject (AuditMessage/ ParticipantObjec tIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

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FormData (AuditMessage/ ParticipantObjec tIdentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Form ID")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	A form identifier
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUERY	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

A.4 Archive Source Documents [QRPH-36] audit messages

The Retrieve Form transaction MAY be a PHI-Export event as defined in ITI TF-2a: Table 3.20.4.1.1.1-1. Actors that audit this transaction SHALL create audit data in conformance with
750 DICOM "Data Export"/"Data Import", with the following exceptions.

A.4.1 Form Filler audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentificat ion	EventID	M	EV(110106, DCM, "Export")
	EventActionCode	M	"R" (Read)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("QRPH-36", "IHE Transactions", "Archive Source Documents")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Archiver) (1)			

Audit Source (Form Filler) (1)
Subject (1)
prepopData (1)

Where:

Source AuditMessage/ ActiveParticipant	UserID	M	Host system name
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	M	"true"
	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

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	M	"true"
	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

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

Subject (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*

	PARTICIPANTOBJECTQUERY	U	*not specialized*
	ParticipantObjectDetail	U	*not specialized*

prepopData (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	U	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Document ID")
	ParticipantObjectSensitivity	U	*not specialized*
	PARTICIPANTOBJECTID	M	The prepopData Document unique ID
	ParticipantObjectName	U	*not specialized*
	PARTICIPANTOBJECTQUERY	U	*not specialized*
	ParticipantObjectDetail	U	*not specialized*

A.4.2 Form Archiver 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("QRPH-36", "IHE Transactions", "Archive Source Documents")
Source (Form Filler) (1)			
Human Requestor (0..n)			
Destination (Form Archiver) (1)			
Audit Source (Form Archiver) (1)			
Subject (1)			
prepopData (1)			

760   Where:

	UserID	M	Host system name
Source AuditMessage/ ActiveParticipant	*AlternativeUserID*	U	*not specialized*
	UserName	U	*not specialized*
	UserIsRequestor	M	"false"
	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

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	M	"true"
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

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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

Audit Source AuditMessage/ AuditSourceIdentific ation	*AuditSourceID*	*U*	*not specialized*
	AuditEnterpriseSiteID	*U*	*not specialized*
	AuditSourceTypeCode	*U*	*not specialized*

Subject (AuditMessage/ ParticipantObjectI dentification)	ParticipantObjectTypeCode	M	"1" (Person)
	ParticipantObjectTypeCodeRole	M	"1" (Patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Subject Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The subject ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	PARTICIPANTOBJECTQUER Y	*U*	*not specialized*
	ParticipantObjectDetail	*U*	*not specialized*

prepopData (AuditMessage/ ParticipantObjectI dentification)	ParticipantObjectTypeCode	M	"2" (System)
	ParticipantObjectTypeCodeRole	M	"20" (job)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV2, RFC-3881, "Document ID")
	ParticipantObjectSensitivity	*U*	*not specialized*
	PARTICIPANTOBJECTID	M	The prepopData Document unique ID
	ParticipantObjectName	*U*	*not specialized*

	PARTICIPANTOBJECTQUERY	U	*not specialized*
	ParticipantObjectDetail	U	*not specialized*

A.5 NANI Feed [QRPH-34] audit messages

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The NANIFeed transaction, including admission (A01) and discharge (A03) events are audited as a "Patient-record-event" events, as defined in ITI TF-2b: Table 3.20.4.1.1.1-1.

A.5.1 Information Source Actor audit message:

	Field Name	**Opt**	**Value Constraints**
Event AuditMessage/ EventIdentification	EventID	M	EV(110110, DCM, "Patient Record")
	EventActionCode	M	"C" (create) for A01 "U" (update) for A03
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("QRPH-34", "IHE Transactions", "NANIFeed")
Source (Information Source Actor) (1)			
Human Requestor (0..n)			
Destination (Information Recipient Actor) (1)			
Audit Source (Information Source Actor) (1)			
Patient (1)			

Where:

	Field		
Source AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Source, facility and sending application from the HL7 message; concatenated together, separated by the | character.
	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.

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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	The identity of the Information Recipient, facility and receiving application from the HL7 message; concatenated together, separated by the | character.
	AlternativeUserID	*M*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*U*	*not specialized*
	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.

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

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	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

780 ## A.5.2 Information Recipient audit message:

	Field Name	**Opt**	**Value Constraints**
Event AuditMessage/ EventIdentification	EventID	M	EV(110110, DCM, "Patient Record")
	EventActionCode	M	"C" (create) for A01 "U" (update) for A03
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("QRPH-34", "IHE Transactions", "NANIFeed")
Source (Information Source Actor) (1)			
Destination (Information Recipient Actor) (1)			
Audit Source (Information Recipient Actor) (1)			
Patient(1)			

Where:

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Source AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Source, facility and sending application from the HL7 message; concatenated together, separated by the | character.
	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.

Destination AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Recipient, facility and receiving application from the HL7 message; concatenated together, separated by the | character.
	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(110152, DCM, "Destination")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address.

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

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	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

790 # Glossary

The IHE Glossary, an appendix to the *IHE Technical Frameworks General Introduction*, can be found here.