

Integrating the Healthcare Enterprise



5

**IHE Technical Frameworks  
General Introduction**

10

**Appendix B:  
IHE Transaction Descriptions**

15

20

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25

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## **IHE Transactions**

30 The following pages describe transactions from Final Text and Trial Implementation IHE Profiles. New transactions from Public Comment Profiles are added once the profile is published for Trial Implementation.

Transaction	Name	Transaction Description
ARTI-01	Basic Static Beam Storage	In the Basic Static Beam Storage transaction, a Static Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static, non-MLC treatment beams.
ARTI-02	Basic Static Beam Retrieval	In the Basic Static Beam Retrieval transaction, a Static Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static, non-MLC treatment beams.
ARTI-03	Basic Static MLC Beam Storage	In the Basic Static MLC Beam Storage transaction, a Static MLC Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static, MLC treatment beams.
ARTI-04	Basic Static MLC Beam Retrieval	In the Basic Static MLC Beam Retrieval transaction, a Static MLC Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static, MLC treatment beams.
ARTI-05	Arc Beam Storage	In the Arc Beam Storage transaction, an Arc Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only non-MLC arc treatment beams.
ARTI-06	Arc Beam Retrieval	In the Arc Beam Retrieval transaction, an Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only non-MLC arc treatment beams.
ARTI-07	MLC Arc Beam Storage	In the MLC Arc Beam Storage transaction, an MLC Arc Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only MLC arc treatment beams.
ARTI-08	MLC Arc Beam Retrieval	In the MLC Arc Beam Retrieval transaction, an MLC Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only MLC arc treatment beams.
ARTI-09	Conformal Arc Beam Storage	In the Conformal Arc Beam Storage transaction, a Conformal Arc Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only conformal arc treatment beams.
ARTI-10	Conformal Arc Beam Retrieval	In the Conformal Arc Beam Retrieval transaction, a Conformal Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only conformal arc treatment beams.
ARTI-11	Hard Wedge Beam Storage	In the Hard Wedge Beam Storage transaction, a Hard Wedge Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static treatment beams using physical wedges.
ARTI-12	Hard Wedge Beam Retrieval	In the Hard Wedge Beam Retrieval transaction, a Hard Wedge Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static treatment beams using physical wedges.
ARTI-13	Virtual Wedge Beam Storage	In the Virtual Wedge Beam Storage transaction, a Virtual Wedge Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static treatment beams using virtual wedges.
ARTI-14	Virtual Wedge Beam Retrieval	In the Virtual Wedge Beam Retrieval transaction, a Virtual Wedge Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static treatment beams using virtual wedges.
ARTI-15	Motorized Wedge Beam Storage	In the Motorized Wedge Beam Storage transaction, a Motorized Wedge Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static treatment beams using motorized wedges.
ARTI-16	Motorized Wedge Beam Retrieval	In the Motorized Wedge Beam Retrieval transaction, a Motorized Wedge Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static treatment beams using motorized wedges.

Transaction	Name	Transaction Description
ARTI-17	Static Electron Beam Storage	In the Static Electron Beam Storage transaction, a Static Electron Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static electron treatment beams.
ARTI-18	Static Electron Beam Retrieval	In the Static Electron Beam Retrieval transaction, a Static Electron Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static electron treatment beams.
ARTI-19	Step & Shoot Beam Storage	In the Step & Shoot Beam Storage transaction, a Step & Shoot Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only step & shoot IMRT treatment beams.
ARTI-20	Step & Shoot Beam Retrieval	In the Step & Shoot Beam Retrieval transaction, a Step & Shoot Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only step & shoot IMRT treatment beams.
ARTI-21	Sliding Window Beam Storage	In the Sliding Window Beam Storage transaction, a Sliding Window Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only sliding window IMRT treatment beams.
ARTI-22	Sliding Window Beam Retrieval	In the Sliding Window Beam Retrieval transaction, a Sliding Window Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only sliding window IMRT treatment beams.
ARTI-23	IMAT/VMAT Beam Storage	In the IMAT/VMAT Beam Storage transaction, a IMAT/VMAT Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only IMAT/VMAT IMRT treatment beams.
ARTI-24	IMAT/VMAT Beam Retrieval	In the IMAT/VMAT Beam Retrieval transaction, a IMAT/VMAT Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only IMAT/VMAT IMRT treatment beams.
ARTI-25	Stereotactic Beam Storage	In the Stereotactic Beam Storage transaction, a Stereotactic Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static stereotactic treatment beams.
ARTI-26	Stereotactic Beam Retrieval	In the Stereotactic Beam Retrieval transaction, a Stereotactic Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static stereotactic treatment beams.
ARTI-27	Stereotactic Arc Beam Storage	In the Stereotactic Arc Beam Storage transaction, a Stereotactic Arc Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only stereotactic arc treatment beams.
ARTI-28	Stereotactic Arc Beam Retrieval	In the Stereotactic Arc Beam Retrieval transaction, a Stereotactic Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only stereotactic arc treatment beams.
CARD-1	Modality Procedure Step In Progress	An Acquisition Modality notifies the Performed Procedure Step Manager of the start of a new Procedure Step and the PPS Manager informs the Department System Scheduler/Order Filler and Image Manager. [CARD-1, derived from RAD-6]
CARD-2	Modality Images/Evidence Stored	An Acquisition Modality sends acquired or generated images, waveforms, or other evidence documents to the Image Archive. [CARD-2, derived from RAD-8 and RAD-43]

Transaction	Name	Transaction Description
CARD-3	Storage Commitment	A requestor (Acquisition Modality) requests that the Image Manager confirm ownership for the specified DICOM objects (images, waveforms, evidence documents, or any combination thereof) that the requestor stored in the Image Archive, thus allowing the sender to delete those objects now owned by the Image Manager. [CARD-3, derived from RAD-10]
CARD-4	Retrieve Images/Evidence	An Image Display requests and retrieves a particular image or set of images or other evidence from the Image Archive. [CARD-4, derived from RAD-16 and RAD-44]
CARD-5	Retrieve ECG List	A Display queries an Information Source for a list of entries representing ECG documents by patient and time period. [CARD-5, derived from ITI-11]
CARD-6	Retrieve ECG Document for Display	A Display queries an Information Source for a specific ECG document by document id. [CARD-6, derived from ITI-12]
CARD-7	Encapsulated Report Submission	A Report Creator sends a preliminary, final, or corrected clinical report to the Report Manager, or a Report Manager sends a preliminary, final, or corrected clinical report to the Enterprise Report Repository.
CARD-8	Report Reference Submission	A Report Manager sends a reference to a report to the Enterprise Report Repository for storage.
CARD-9	Encapsulated Report Storage	A Report Manager sends a preliminary, final, or corrected clinical report to the Report Repository.
CARD-10	Encapsulated Report Query	A Report Reader requests a list of clinical reports known by the Report Repository matching a set of selection criteria.
CARD-11	Encapsulated Report Retrieve	A Report Reader requests and retrieves a clinical report from the Report Repository.
CARD-12	Query Enhanced Modality Worklist	Query Enhanced Modality Worklist is an “enhanced” version of the “Query Modality Worklist” transaction supporting the additional matching keys for Admission ID and Scheduled Procedure Step Location.
CARD-13	Query Cardiology Images/Evidence	Query Cardiology Images/Evidence – An enhanced version of the “Query Images” and “Query Evidence Documents” queries that requires the “Performed Protocol Code Sequence” to be returned so resting ECGs can be distinguished from other ECG tests, like stress, and Holter.
CARD-14	Notify Study Access	In the Notify Study Access Transaction, the Image Manager/Image Archive provides a study identifier to the Report Manager. The Report Manager can incorporate that ID into a hyperlink to an initial web page that allows navigation and display of the images in the exam.
CARD-15	Invoke Image Display Service	In the Invoke Image Display Service, the Image Manager/Image Archive provides a web interface to access stored DICOM images and evidence.
CARD-16	Outpatient Patient Update	In the Outpatient Update Transaction, the EHR-S provides updated patient demographics to the DSS/OF. The DSS/OF can apply those demographics to Requested Procedures based on orders previously received from the EHR-S, and forwards the update to the Image Manager. This transaction is identical to Patient Update [RAD-12] (see RAD-TF 2: 4.12), with the ADT actor replaced by the EHR-S, and limited to a subset of the trigger events specified in RAD-12.
ENDO-1	Order Endoscopy	The transaction that places the Endoscopy order.
ENDO-2	Deprecated	Deprecated
ENDO-3	Notify Observation Report	The transaction that provides endoscopy observation report.
ENDO-4	Notify Endoscopy Execution Information	The transaction that provides endoscopy execution information.

Transaction	Name	Transaction Description
ENDO-5	Fill Endoscopy Order	The transaction that fills the endoscopy order.
ENDO-6	Notify Endoscopy Status	The transaction that provides the endoscopy status.
ENDO-7	Query Modality Worklist	The transaction that queries and retrieves the modality worklist.
ENDO-8	Modality Procedure Step In Progress	The transaction that informs the start of the endoscopy procedure.
ENDO-9	Modality Procedure Step Completed	The transaction that informs the end of the endoscopy procedure.
ENDO-10	Modality Images/Videos Stored	The transaction that stores the images/videos acquired during the endoscopy Procedure.
EYECARE-1	Query Modality Worklist	Based on a query entered at the Acquisition Modality, a modality worklist is generated listing all the items that satisfy the query. This list of Scheduled Procedure Steps with selected demographic information is returned to the Acquisition Modality [EYECARE-1, derived from RAD-5].
EYECARE-2	Modality Images/Evidence Stored	An Acquisition Modality sends acquired or generated images, waveforms, or other evidence documents to the Image Archive. [EYECARE- 2, derived from RAD-8]
EYECARE-3	Retrieve Images and Measurements	An Image Display requests and retrieves a particular image or set of images from the Image Archive. [EYECARE-3, derived from RAD-16]
EYECARE-4	Query Evidence Documents	A user of Evidence Documents (i.e. Image Display, Evidence Creators, etc.) queries the Image Archive for a list of entries representing Evidence Documents. [EYECARE-4, derived from RAD-44]
EYECARE-5	Query Images, Measurements and Encapsulated Documents	An Image Display queries the Image Archive for a list of entries representing images by patient, study, series, or instance. [EYECARE-5, derived from RAD-14]
EYECARE-6	Modality Procedure Step Completed/Discontinued	An Acquisition Modality notifies the Performed Procedure Step Manager of the completion of a Procedure Step and the PPS Manager informs the Department System Scheduler/Order Filler and Image Manager. [EYECARE-6, derived from RAD-7]
EYECARE-7	Displayable Report Storage	Transaction EYECARE-7 is used by the Report Creator and Report Repository Actors. In the Report Storage transaction, the Report Creator transmits a DICOM Encapsulated Document object to the Report Repository.
EYECARE-8	Query Displayable Report	Transaction [EYECARE-8] is used by the Report Reader and Report Repository Actors. In the Query Displayable Reports Transaction, the Report Reader queries the Report Repository for draft or final DICOM Encapsulated document.
EYECARE-9	Retrieve Displayable Reports	Transaction [EYECARE-9] is used by the Report Reader and Report Repository Actors. In the Retrieve Displayable Reports Transaction, the requested DICOM Encapsulated documents are transferred from the Report Repository to the Report Reader for viewing.
EYECARE-10	Instructions for Performing a Procedure- Placer Order Management	This transaction is based upon Placer Order Management [RAD-2] (see RAD TF: 2 4.2), with the extension to transmit health care provider instructions to the technician prior to performing a procedure.
EYECARE-11	Instructions for Performing a Procedure- Filler Order Management	This transaction is based upon Filler Order Management [RAD-3] (see RAD TF-2 4.3), with the extension to transmit health care provider instructions to the technician prior to performing a procedure.

Transaction	Name	Transaction Description
EYECARE-12	Appointment Request	The Appointment Requester requests a patient appointment with varying specificity of detail as to date range and purpose of the visit. The Appointment Scheduler receives and acknowledges the request, then either fills the request, returning the appointment, or denies the request.
EYECARE-13	Appointment Notification	The Appointment Scheduler sends information to the Appointment Requester for any change to the schedule, including appointments added, updated or cancelled.
EYECARE-14	Schedule Query	The Appointment Requester queries the Appointment Scheduler for a schedule based on specified parameters. The Appointment Scheduler returns the result of the query and the Appointment Requester displays the returned schedule.
EYECARE-15	Eye Care Patient Registration	The Patient Registration Source Actor registers and/or updates patient information and forwards this data to other information systems [EYECARE-15].
EYECARE-16	Appointment Scheduling Management	The Appointment Scheduler Actor generates new patient appointments and manages the appointment updates, status changes, etc. This information is forwarded to other information systems [EYECARE-16].
EYECARE-17	Eye Care Charge Posted	The Eye Care Charge Posted Transaction specifies a message from the Department System Scheduler/Order Filler to the Charge Processor. This HL7 Detailed Financial Transaction message contains procedure data typically needed to generate a claim.
EYECARE-18	Modality Images/Evidence Key Objects Stored	Requires acquisitions systems to select and send key image/measurement objects to a storage/display system (i.e., not an image archive). Also enables Image Manager/Image Archive actors to send selected key images/measurements.
EYECARE-19	Patient Demographics Update	Enables systems to update patient demographic information within an ambulatory (i.e., outpatient, such as a small eye care clinic) or an in-patient setting.
EYECARE-20	Merge Patient	Enables systems to merge Patient IDs for a patient that was incorrectly filed under two different identifiers.
EYECARE-21	Procedure Scheduled	A HL7 OMG V2.5.1 message from the DSS/Order Filler to notify the Image Manager/Image Archive that a procedure has been scheduled.
EYECARE-22	Procedure Status Update	A HL7 OMG V2.5.1 message from the Image Manager/Image Archive to convey an order status update (such as completed and images available). It updates the order created from the Procedure Scheduled [EYECARE-21] transaction.
EYECARE-23	Transfer Refractive Measurement (No Pat ID)	The transfer of eye care refractive measurement information based upon one or more JOIA specification data classifications. The data stream does NOT include a valid Patient ID, therefore, the Refractive Measurement Consumer is required to establish the context of the Patient before receiving the data stream from the Refractive Measurement Source. It uses the context to provide the correct patient information when importing the measurement(s) into its database.
EYECARE-24	Transfer Refractive Measurement (Valid Pat ID)	The transfer of eye care refractive measurement information based upon one or more JOIA specification data classifications. The data stream is required to include a valid Patient ID, therefore, the Refractive Measurement Consumer uses the Patient ID to identify the patient and to provide the correct patient information when importing the measurement(s) into its database.

Transaction	Name	Transaction Description
EYECARE-25	Query Patient List	This transaction provides the ability to obtain a list of patients (with associated patient demographics) that have arrived at the organization (e.g., checked into an eye care clinic). It is intended for acquisition devices (such as eye care refractive instruments, etc.) that are used for patient examinations, but are not based upon orders.
ITI-1	Maintain Time	NTP transactions used to maintain time synchronization.
ITI-2	Get User Authentication	The Client Authentication Agent requests user authentication from the Kerberos Authentication Server. When the user is authenticated, the Kerberos Authentication Server returns a Ticket Granting Ticket (TGT) to optimize future activity.
ITI-3	Get Service Ticket	Obtain a ticket using Kerberos protocol for use with a service. Service identity option is specific for each protocol. For example HOST for HTTP.
ITI-4	Kerberized Communication	The Kerberized Communication transaction is an aspect of the connection between a local client and a remote server.
ITI-5	Join Context	Allows a Context Participant Actor to locate and establish communication with the Context Manager Actor.
ITI-6	Change Context	Includes all messages required to initiate and finalize a context change transaction: -Initiation of a context change request from the instigating participant actor. -Delivery of survey results to instigating actor and display of associated replies. -Communication of context change decision to the Context Manager Actor
ITI-7	Leave Context	Allows Context Participant Actor to notify the Context manager Actor that it is breaking off communication.
ITI-8	Patient Identity Feed	Allows a Patient Identity Source Actor to notify a Patient Identity Cross-Referencing Actor of all events related to patient identification (creation, update, merge, etc.).
ITI-9	PIX Query	This transaction allows a Patient Identity Consumer to find out the identification of a patient in different Patient Identification Domains by using the services of a Patient Identity Cross-reference Manager Actor.
ITI-10	Pix Update Notification	Allows a Patient Identity Consumer to be notified by the Patient Identity Cross-reference Manager Actor of changes to the identification of a patient in Patient Identification Domains the Consumer is interested in.
ITI-11	Retrieve Specific Information for Display	A request issued by a display system for specific information related to a patient returned in a ready for presentation information format.
ITI-12	Retrieve Document for Display	A display system requests an instance of a uniquely identified persistent document under custodianship by an information source and returns its content ready for presentation.
ITI-13	Follow Context	Accounts for all messages required to propagate a context change to a responding participant actor: -Survey of all other Context Participant Actors by the Context Manager Actor and display by the instigating Participant Actor of any associated replies. -Notification of context change result from the Context manager Actor to the Context Participant Actors. - Retrieval of the context data by the Context Participant Actors



Transaction	Name	Transaction Description
ITI-14	Register Document Set	<p>A Document Repository Actor initiates the Register Document Set transaction. This transaction allows a Document Repository Actor to register one or more documents with a Document Registry, by supplying metadata about each document to be registered. This document metadata will be used to create an XDS Document Entry in the registry. The Document Registry Actor ensures that document metadata is valid before allowing documents to be registered. If one or more documents fail the metadata validation, the Register Document Set transaction fails as a whole.</p> <p>To support composite documents, an XDS Document may be a multipart document. The Document Repository must handle multipart data sets as an opaque entity. The Document Repository does not need to analyze or process its multi-part structure nor the content of any parts in the context of the XDS Integration Profile.</p>
ITI-15	Provide and Register Document Set	<p>A Document Source Actor initiates the Provide and Register Document Set Transaction. For each document in the submitted set, the Document Source Actor provides both the documents as an opaque octet stream and the corresponding metadata to the Document Repository. The Document Repository is responsible to persistently store these documents, and to register them in the Document Registry using the Register Documents transaction by forwarding the document metadata received from the Document Source Actor.</p>
ITI-16	Query Registry	<p>The Query Registry transaction is issued by the Document Consumer Actor on behalf of a care provider (EHR-CR) to a Document Registry. The Document Registry Actor searches the registry to locate documents that meet the provider's specified query criteria. It will return a list of document entries that contain metadata found to meet the specified criteria including the locations and identifier of each corresponding document in one or more Document Repositories.</p>
ITI-17	Retrieve Document	<p>A Document Consumer Actor initiates the Retrieve Document transaction. The Document Repository will return the document that was specified by the Document Consumer.</p> <p>To support composite documents, an XDS Document may be a multipart document. In this case, the Document Consumer must take appropriate actions to make the multipart content accessible to the user.</p>
ITI-18	Stored Query	<p>The Query Registry transaction is issued by the Document Consumer Actor on behalf of a care provider (EHR-CR) to a Document Registry. The Document Registry Actor searches the registry to locate documents that meet the provider's specified query criteria. It will return a list of document entries that contain metadata found to meet the specified criteria including the locations and identifier of each corresponding document in one or more Document Repositories. The stored query uses parameters and not direct SQL.</p>
ITI-19	Authenticate Node	<p>This transaction is embedded within all network communications activity. All DICOM, HL7, and HTML connections shall comply with the IHE specification for bi-directional authentication and authorization of communications of Protected Healthcare Information (PHI). IHE does not specify how other protocols that transfer PHI shall perform bi-directional authentication and authorization, but requires that other protocols perform such authentication and authorization.</p>

Transaction	Name	Transaction Description
ITI-20	Record Audit Event	The delivery of an audit event description from any secure node to the Audit Repository.
ITI-21	Patient Demographic Query	Look up and return patient demographic information in a single patient demographics source, based upon matches with full or partial demographic information entered by the user.
ITI-22	Patient Demographic Visit Query	Look up and return patient demographic and visit information in a single patient demographics source, based upon matches with full or partial demographic/visit information entered by the user.
ITI-23	Find Personnel White Pages	This transaction will find the LDAP Directory by querying the DNS.
ITI-24	Query Personnel White Pages	This transaction provides for read-only access to the Personnel White Pages directory.
ITI-25	Send Notification	This transaction provides for sending of document availability notices in an XDS Affinity Domain.
ITI-26	Receive Notifications	This transaction provides for receipt of document availability notices in an XDS Affinity Domain.
ITI-27	Send Acknowledgement	This transaction provides for sending of acknowledgements to document availability notices in an XDS Affinity Domain.
ITI-28	Receive Acknowledgement	This transaction provides for receipt of acknowledgements of document availability notices in an XDS Affinity Domain.
ITI-29	Assert X-User Identity	This transaction will generate a Cross-Enterprise Authentication Assertion and pass it to a relying service.
ITI-30	Patient Identity Management	The Patient Demographics Supplier registers or updates a patient and forwards the demographic information (i.e. all information directly related to the patient, such as ID, address, next of kin, to other systems implementing Patient Demographics Consumer.
ITI-31	Patient Encounter Management	The Patient Encounter Source registers or updates an encounter (inpatient, outpatient, pre-admit...) and forwards the information to other systems implementing Patient Encounter Consumer. This information will include the patients location and care providers for a particular (usually current) encounter.
ITI-32	Distribute Document Set on Media	The Portable Media Creator sends information to media reading actors by means of Interchange Media where it stores the information.
ITI-33	Send Document Set (Unused)	Unused
ITI-34	Retrieve Form	This transaction involves a Form Filler requesting a form from a Form Manager or Form Processor. The Form Filler has a formID, and possibly additional workflow information, obtained by a means that is outside the scope of this transaction.
ITI-35	Submit Form	This transaction involves a Form Filler submitting a form to a Form Receiver or Form Processor.
ITI-36	Archive Form	This transaction involves a Form Filler submitting form instance data to a Form Archiver.
ITI-37	Retrieve Clarifications	This transaction involves a Form Filler requesting a set of clarifications from a Form Manager or Form Processor. A Form Filler supporting the Retrieve Clarifications Option shall perform this request periodically, based upon a duration defined by or agreed upon with the Form Manager / Form Receiver or Form Processor.
ITI-38	Cross Gateway Query	The scope of the Cross Gateway Query transaction is based on the Registry Stored Query [ITI-18] transaction. The same set of stored queries is required to be supported and the options controlling what kind of data is returned are the same.

Transaction	Name	Transaction Description
ITI-39	Cross Gateway Retrieve	The scope of the Cross Gateway Retrieve transaction is semantically the same as the Retrieve Document Set transaction [ITI-43].
ITI-40	Provide X-User Assertion	Transaction ITI-40 is used by the X-Service User to pass a claimed identity assertion to the XService Provider. The X-Service User and X-Service Provider use the X-Assertion Provider as the third party issuer of the claimed identity assertion.
ITI-41	Provide and Register Document Set-b	Provide and Register Document Set-b is used to transmit a set of documents and associated metadata. The documents and metadata might be stored for later retrieval or processed in some other way depending on the actor and workflow using the transaction.
ITI-42	Register Document Set-b	Register Document Set-b is used to register a set of document-associated metadata. The Register Document Set-b transaction passes a Document Submission Request (see ITI TF-3:4.2.1.5) from a Content Sender to a Content Receiver.
ITI-43	Retrieve Document Set	This transaction is used by the Document Consumer to retrieve a set of documents from the Document Repository, On-Demand Document Source, or Initiating Gateway. The Document Consumer has already obtained the XSDDocumentEntry uniqueId and the Document Repository repositoryUniqueid from the Document Registry/Initiating Gateway by means of the Registry Stored Query transaction.
ITI-44	Patient Identity Feed HL7 V3	Transaction ITI-44 is used by the Patient Identity Source, Patient Identifier Cross-reference Manager and Document Registry Actors. The scope is identical to ITI-8, patient Identity Feed.
ITI-45	PIXV3 Query	Transaction ITI-45 is used by the Patient Identifier Cross-reference Consumer and Patient Identifier Cross-reference Manager Actors. The scope is identical to ITI-9, PIX Query Scope.
ITI-46	PIXV3 Update Notification	Transaction ITI-46 is used by the Patient Identifier Cross-reference Consumer and Patient Identifier Cross-reference Manager Actors. The scope is identical to the scope of transaction ITI-10, PIX Update Notification.
ITI-47	Patient Demographics Query HL7 V3	Transaction ITI-47 is used by the Patient Demographics Consumer and Patient Demographics Supplier Actors. The scope is identical to ITI-21, Patient Demographic Query.
ITI-48	Retrieve Value Set	This transaction is used by the Value Set Consumer to retrieve a Resolved Value Set from the Value Set Repository. The Value Set Consumer has previously obtained the Resolved Value Set OID by means outside of the scope of this transaction. Appendix B of the IHE ITI Technical Framework Volume 2 has further information about obtaining and managing OIDs which are used as the Value Set Unique ID.
ITI-49	Convey Printed Referral Request	This transaction has been retired in favor of use of the Cross-Enterprise Document Workflow (XDW) Profile.
ITI-50	Request Referral	This transaction has been retired in favor of use of the Cross-Enterprise Document Workflow (XDW) Profile.
ITI-51	Multi-Patient Query	The Multi-Patient Stored Query supports a variety of queries for multiple patients. It is based on the Registry Stored Query [ITI-18] transaction. The main difference is the set of queries, which is specified in this transaction.
ITI-52	Document Metadata Subscribe	This transaction involves a request by the Document Metadata Subscriber to the Document Metadata Notification Broker to start a subscription using a particular set of filters, or to cancel an existing subscription.

Transaction	Name	Transaction Description
ITI-53	Document Metadata Notify	This transaction delivers a notification from the Document Metadata Notification Broker to the Document Metadata Notification Recipient about an event which matches an existing subscription.
ITI-54	Document Metadata Publish	This transaction delivers information from the Document Metadata Publisher to the Document Metadata Notification Broker about an event which may have a subscription. The WS Brokered Notification Publisher Registration requirements are out of scope for this transaction.
ITI-55	Cross Gateway Patient Discovery	The Cross Gateway Patient Discovery transaction supports the ability for Initiating Gateways and Responding Gateways to discover mutually known patients. This transaction assumes an environment where patient data is well described and high quality demographic data is available.
ITI-56	Patient Location Query	The Patient Location Query supports the ability for an Initiating Gateway to query the Responding Gateway for a list of communities which may have relevant health data about particular patients. This transaction can be used synchronously and asynchronously.
ITI-57	Update Document Set	The Update Document Set transaction passes a collection of metadata updates from the Document Administrator actor to the Document Registry or Document Recipient actor.
ITI-58	Provider Information Query	This transaction supports the ability to lookup information about healthcare providers from a healthcare provider directory on the following: Individual Providers – A person who provides healthcare services, such as a physician, nurse, or pharmacist. Organizational Providers – Organizations that provide or support healthcare services, such as hospitals, Healthcare Information Exchanges (HIEs), Managed Care, Integrated Delivery Networks (IDNs), and Associations. Relationship between providers.
ITI-59	Provider Information Feed	The Provider Information Feed specifies one or more of the following actions: An “Add” to add new provider entries; A “Delete” to delete any existing provider entries; An “Update” to modify or update any existing provider entries.
ITI-60	Retrieve Multiple Value Sets	The Value Set Consumer retrieves multiple value sets from the Value Set Repository. These retrieved value sets have metadata that matches retrieval selection criteria. The retrieved sets provide the full metadata describing the value set, and an expanded value set representation for that value set.
ITI-61	Register On-Demand Document Entry	The Register On-Demand Document Entry transaction is used by the On-Demand Document Source to register one or more On-Demand Document Entries in the Document Registry.
ITI-62	Remove Metadata	The Remove Metadata transaction is used by the Document Administrator to request removal of one or more metadata objects from a Document Registry.
ITI-63	Cross Gateway Fetch	This transaction is used to fetch a document or a set of documents that match a given set of metadata attribute values.
ITI-64	Notify XAP-PID Link Change	This transaction informs the recipient that there has been a change to the link between a “local patient ID” and its corresponding XAD-PID. It should not be confused with the similar link/unlink events documented in transaction ITI-30 (Patient Identity Management) which is used by patient demographic suppliers to notify other interested systems about changes to its own local patient identity records. The transaction can be used in any setting where it is appropriate to have XAD-PID link changes processed as a single event, rather than require individual metadata updates to each object.

Transaction	Name	Transaction Description
ITI-65	Provide Document Bundle	This transaction is used to publish a new document entry and the document.
ITI-66	Find Document Manifests	The Find Document Manifests transaction is used to find Document Manifests that satisfy a number of parameters, and is equivalent to ITI-18 (Registry Stored Query), FindSubmissionSets query from the XDS stored query catalog from [ITI-18] . The result of the query is a bundle of Document Manifest Resources which reference one or more Document Reference Resources containing document metadata.
ITI-67	Find Document References	The Find Document References transaction is used to find Document References that satisfy parameters, and is equivalent to Registry Stored Query [ITI-18]), FindDocuments and FindDocumentsByReferenceId query from [ITI-18].
ITI-68	Retrieve Document	The Retrieve Document transaction is used by the Document Consumer to retrieve a document from the Document Responder.
ITI-69	Create Destroy Pull Point	This transaction is used to create a pull point resource. This resource is used for the creation of subscriptions and for the pulling of the notifications stored. This transaction is also used to destroy the pull point resource when it is no longer needed.
ITI-70	Pull Notification	This transaction is used to retrieve pending notifications.
ITI-71	Get Authorization Token	A transaction that is used to request and obtain an authorization token for use in authorized transactions.
ITI-72	Incorporate Authorization Token	Add an authorization token to a transaction.
ITI-73	Find Matching Services	The Find Matching Services transaction is used to express queries against the CSD schema. This schema is found in ITI TF-2x: Appendix W. The query against the CSD schema may be expressed as an invocation of a stored query or (optionally) as a well-formed ad hoc XQuery. The query is submitted by the Service Finder to the Care Services InfoManager by constructing an XML document expressing the query and executing an HTTP POST transaction. The Care Services InfoManager executes the query and returns the results in a response document.
ITI-74	Query for Updated Services	The Query for Updated Services transaction is used to obtain the CDS directory records that have been updated since the refresh timestamp provided in the query.
ITI-75	Care Services Free Busy Query	The Query for FreeBusy [ITI-75] transaction is used by a Service Finder that supports the FreeBusy option to express a well-formed FreeBusy REPORT query to a CalDAV conformant Service Availability actor adherent to the IETF RFC 4791 specification.
ITI-76	Patient Location Tracking Feed	Used to update patient location.
ITI-77	Patient Location Tracking Query	Used to query for the current patient location
ITI-78	Mobile Patient Demographics Query	Performs a query against a patient demographics supplier using HTTP, REST, and JSON/XML message encoding.
ITI-79	Authorization Decisions Query	Transaction used by the service provider (Authorization Decisions Verifier) to request valid authorization decisions granted for the Requester Entity to disclose specific documents.
ITI-80	Cross-Gateway Document Provide	This transaction allows an Initiating Gateway in a Community to provide a set of Documents to the Responding Gateway of a remote Community.
ITI-81	Retrieve ATNA Audit Event	Retrieve Audit Messages. Search ATNA audit messages based upon queries using ATNA audit message content.

Transaction	Name	Transaction Description
ITI-82	Retrieve Syslog Event	Retrieve Syslog Messages. Search syslog messages based upon using the syslog metadata.
ITI-83	Mobile Patient Identifier Cross-Reference Query	Performs a query against a patient identifier cross-reference manager using HTTP, REST, and JSON/XML message encoding.
ITI-84	Mobile Report Alert	This transaction is used by the Alert Reporter to report alerts to the Alert Aggregator. The Alert Reporter sends alerts to the Alert Aggregator actor in an unsolicited manner.
ITI-85	Query for Alert Status	This transaction is used by the Alert Reporter to query an Alert Aggregator for alert status information as communicated to an Alert Aggregator for a particular alert.
ITI-86	Remove Documents	The Remove Documents transaction is used by the Document Administrator to request the removal of documents from a Document Repository.
ITI-87	Submit File	This transaction allows a File Source to publish a file and related metadata, or to update an existing file.
ITI-88	Search File	This transaction allows a File Consumer to query for a file metadata that meets certain criteria
ITI-89	Update DocumentReference	This transaction allows a File Source to update file metadata.
ITI-90	Find Matching Care Services	The Find Matching Care Services transaction is used to query for practitioners, locations, organizations, and healthcare services resources as well as links between these resources. The Find Matching Care Services transaction is initiated by the Care Services Selective Consumer against the Care Services Selective Supplier.
ITI-91	Request Care Services Updates	The Request Care Services Updates is used to obtain practitioners, locations, organizations, and healthcare services resources that have been inserted or updated since the specified timestamp. The Request Care Services Updates is initiated by the Care Services Update Consumer against the Care Services Update Supplier.
LAB-1	Placer Order Management	This transaction contains all the messages required between the Order Placer and the Order Filler for the management of the life cycle of the order. Its main goal is to keep a consistent vision of the order, (content and status), between the two actors.
LAB-2	Filler Order Management	This transaction contains all the messages required between the Order Filler and the Order Placer for the notification of a new filler order, as well as the creation of the placer order that reflects it. Its main goal is to ensure that each filler order will be represented by a placer order, and will have both a filler order number and a placer order number.
LAB-3	Order Results Management	This transaction carries changes of the observation results and order status from Order Filler to Order Result Tracker i.e. corrections, cancellations.
LAB-4	Work Order Management	This transaction contain all the messages required between Order Filler and Automation Manager for the execution of a work order containing a subset of tests of the filler order. The main goal of this transaction is to distribute the work to the Automation Manager, and to keep this actor informed of all patient and order updates. This transaction will be based on a push mechanism, the query mechanism never being used in this transaction.
LAB-5	Test Results Management	This transaction carries the technically validated test results from the Automation Manager to the Order Filler.

Transaction	Name	Transaction Description
LAB-21	Specimen Work Order Step Download	This transaction contains the messages used to download a Work Order Step (WOS) from the Automation Manager to the Analyzer or Pre/Post-processor, according to a "push method". It includes "cnew WOS", "update WOS", "cancel WOS" and the related applicative acknowledgements. This transaction is used with Analyzers and Pre/Post-processor which work in download mode.
LAB-22	Specimen Work Order Step Query	This transaction contains the message used by the Analyzer or Pre/Post-processor to query the Automation Manager with one or more specimen (or location) identifiers, and the reply message from the Automation Manager delivering one or more WOS dedicated to each of these specimen. This transaction implements the "pull method" for requesting WOS.
LAB-23	Specimen Work Order Step Status Change	This transaction contains the messages used by the Analyzer to report the status of an AWOS (such as "specimen arrived", "first run failed", "second run started", "AWOS complete" ...) and to send the tests results when the AWOS is complete. It also includes the related applicative acknowledgements from the Automation Manager.
LAB-26	Specimen Work Order Step Status Change	This transaction contains the messages used by the Pre or Post-Processor to report all the status changes of the SWOS, and the related applicative acknowledgements. Status changes include: "specimen arrived", "SWOS complete", "SWOS failed".
LAB-27	Query for AWOS	This transaction contains the message used by the Analyzer to query the Analyzer Manager for one specimen (or location). The Analyzer Manager will follow the exchange with a LAB-28 that delivers one or more AWOS dedicated to the specimen or indicates there is no work to perform. This transaction implements the "pull method" for requesting AWOS, which is the default behavior.
LAB-28	AWOS Broadcast	This transaction contains the messages used to broadcast an Analytical Work Order Step (AWOS) from the Analyzer Manager to the Analyzer, according to a "push method". It includes "new AWOS", "cancel AWOS" and the related applicative acknowledgements.
LAB-29	AWOS Status Change	This transaction contains the messages used by the Analyzer to send the tests results when the AWOS is complete. It also includes the related applicative acknowledgements from the Analyzer Manager.
LAB-30	Initiate POCT on a Patient Specimen	A POCRG sends to the POCDM a message containing: its own ID, the care unit ID, the ordering provider ID, the operator ID, the patient/visit ID (or QC ID) and other information related to the test to start. The POCDM identifies the operator, and checks the patient identification. It then sends the answer back to the POCRG. The answer may be positive and carry the patient's identity, or negative and carry the reject reason.
LAB-31	Produced Observation Set	The POCRG sends an observation set to the POCDM. The POCDM checks the content of this observation set, stores it and acknowledges it to the POCRG.
LAB-32	Accepted Observation Set	The POCRG sends an observation set to the POCDM. The POCDM checks the content of this observation set, stores it and acknowledges it to the POCRG.
LAB-35	Sub-Order Management	This transaction provides the message flow placing Suborders from Requester to Subcontractor and the message flow acknowledging specimen arrival from Subcontractor to Requester.
LAB-36	Sub-Order Result Delivery	This transaction provides the results message flow from Subcontractor to Requester.

Transaction	Name	Transaction Description
LAB-51	Laboratory Code Set Management	Code set distribution (battery, test, observation).
LAB-61	Label Delivery Request	This transaction is used by the Label Information Provider to send label delivery instructions to the Label Broker.
LAB-62	Query for Label Delivery Instruction	This transaction is used by the Label Broker to query the specimen container labeling instructions from the Label Information Provider.
LAB-63	Labels and Containers Delivered	This transaction is used by the Label Broker to notify the effective labeled containers production to the Label Information Provider.
MMRO-3	Registered Structure Set Storage	In the Registered Structure Set Storage Transaction, the Registered Contourer stores a Structure Set on an Archive to make it available.
MMRO-4	Registered Structure Set Retrieval	In the Registered Structure Set Retrieval Transaction, the Archive stores a Structure Set on a Registered Contourer, Registered Display or Registered Dose Display.
MMRO-5	Registered Dose Retrieval	In the Registered Dose Retrieval Transaction, the requested RT Dose is transferred from the Archive to the Registered Dose Display.
MMRO-II-1	Spatial Registration Storage	In the Spatial Registration Storage transaction, the Registrator stores one or more Spatial Registration instances to the Archive. Spatial registration objects define how the pixel coordinates of one image data set are transformed to another coordinate system (for example to a coordinate system defined by another image data set thus allowing each dataset to be spatially aligned). A list of the images used in each Frame of Reference to determine the spatial registration shall be stored in the Spatial Registration instance.
MMRO-II-2	Spatial Registration Retrieval	A Registered Display, Registered Dose Display or Registered Contourer receives from an Archive one or more Spatial Registration objects carrying the transformation information to be applied to two image data sets intended for further processing or registered display. Each application receiving a Spatial Registration instance shall compare the image set to be used / displayed to the list of images for each Frame of Reference and warn the user if additional images are to be displayed for which the spatial registration may not be defined.
MMRO-III-1	Spatial Registration-III Storage	In the Spatial Registration-III Storage transaction, the Registrator sends one or more Spatial Registration instances to the Archive. Spatial registration objects define how the pixel coordinates of one image data set are transformed to another coordinate system (for example to a coordinate system defined by another image data set thus allowing each dataset to be spatially aligned).
MMRO-III-2	Spatial Registration-III Retrieval	A Registered Contourer, Registered Display or Registered Dose Display receives from an Archive one or more Spatial Registration objects carrying the transformation information to be applied to two image data sets intended for further processing or fused display. A Registrator may (optional transaction) receive from an Archive one or more Spatial Registration objects.
PAT-1	Placer Order Management	This transaction contains all the messages required between the Order Placer and the Order Filler for the management of the life cycle of the order. Its main goal is to keep a consistent vision of the order, (content and status), between the two actors.
PAT-2	Filler Order Management	This transaction contains all the messages required between the Order Filler and the Order Placer for the notification of a new filler order, as well as the creation of the placer order that reflects it. Its main goal is to ensure that each filler order will be represented by a placer order, and will have both a filler order number and a placer order number.



Transaction	Name	Transaction Description
PAT-3	Order Results Management	This transaction carries the results of an Order, as well as status changes, modifications, cancellations of these results, from the Order Filler to the Order Result Tracker.
PAT-4	Procedure Scheduled and Update	The Department System Scheduler/Order Filler sends the Image Manager and Report Manager scheduled procedure information or procedure update.
PAT-5	Query Modality Worklist	Based on a query entered at the Acquisition Modality, a modality worklist is generated listing all the items that satisfy the query. This list of Scheduled Procedure Steps with selected demographic information and information about specimen is returned to the Acquisition Modality.
PAT-6	Modality Procedure Status Notification	It is essentially based on similar transactions RAD-6 and RAD-7 designed for Radiology. The main difference is that the image acquisition is less complex in anatomic pathology than the one in the radiology scenario.
PAT-10	Public Health Reporting	Public Health Reporting
PCC-1	Document Sharing	PCC-1 describes common functional requirements for content exchange.
PCC-2	Query Existing Data	Request information about recent patient information, used to obtain vital signs measurements, problems and allergies, diagnostic results, medications, immunizations, or procedures or visits relevant for a patient. The query may request information about some or all of the above topics, or may request information on a specific topic, or one entered for a specific encounter or date range.
PCC-7	Guideline Notification	Transaction PCC-7 is used by the Guideline Manager and Care Manager Actors.
PCC-8	Request Guideline Data	Transaction PCC-8 is used by the Care Manager and/or Clinical Data Source Actors to request Guideline Data from a Guideline Manager Actor. Transaction PCC-8 is similar in structure to Transaction PCC-1. The difference between PCC-8 and PCC-1 is that where PCC-1 requests clinical information matching the query parameters for a specific patient, the PCC-8 transaction requests a specific care record activating a clinical guideline identified in the query parameters.
PCC-9	Care Management Data Query	Transaction PCC-9 is used by the Care Manager and Clinical Data Repository Actors. Transaction PCC-9 is a variation of the pattern used in transaction PCC-1 of the PCC Technical Framework.
PCC-10	V3 Care Management Update	Transaction PCC-10 is used by the Care Manager and Clinical Data Repository Actors.
PCC-11	V2 Care Management Update	Transaction PCC-11 is used by the Care Manager and Clinical Data Repository Actors.
PCC-12	Request for Clinical Guidance	This transaction is used by the Care Manager and Decision Support Service actors found in the RCG profile.
PCC-13	Query Clinical Knowledge	This transaction returns a list of references to clinical knowledge resources relevant to the requested clinical knowledge. This may occur when a user attempts to lookup information relevant to a particular term or collection of terms found on a patient's chart, such as a problem, medication, allergy, laboratory result, et cetera. To support access to a wide variety of information sources, information is returned as an Atom feed listing links to relevant resources.

Transaction	Name	Transaction Description
PCC-14	Retrieve Clinical Knowledge	This transaction is used by the Clinical Knowledge Requester to retrieve a document from the Clinical Knowledge Resource Repository. The Clinical Knowledge Requester has already obtained the URI information from the Clinical Knowledge Directory by means of the Query Clinical Knowledge transaction.
PCC-15	Communicate PCHA Data Transaction	These transactions contain the discrete data from the remote Personal Health Device, such as device identification data, data related to the settings and calibration of the device, and the sensor data itself over at least one of several transport options. The transaction supports five transport options. To qualify as PCHA data certain time stamping requirements must be met; e.g., all stored data must be time stamped and any device containing timestamps in the measurements must expose its sense of current time and its time synchronization (if any).
PCC-16	Share List	This transaction uses the FHIR® List resource query capability to query for and retrieve clinical content lists in FHIR® List resource format. When this is used with the RECON Profile then there are additional constraints on the List resource. First seen in RECON Supplement published for TI, August 2015
PCC-17	Translate Code	This transaction is used to translate a code from one coding system to another.
PCC-18	Retrieve Code Mappings	This transaction is used to retrieve the table used to perform code mapping.
PCC-19	Evaluate Order	Evaluates an order against guidelines and/or policies to determine its appropriateness in a given context.
PCC-20	Invoke Questionnaire	Displays the CDS questionnaire using HTML web pages and returns the result invoker.
PCC-21	Communicate PCD Data-hData	This transaction contains the PCD-01 message generated from sensor data using RESTful hData transports.
PCC-22	Communicate PCD Data-SOAP	This transaction contains the PCD-01 message generated from sensor data using Web Services.
PCC-23	Admission Notification	The Admission notification transaction notifies actors about admission of a patient to a bed.
PCC-24	Admission Order	The Admission Order transaction notifies actors about the intention to admit a patient to a bed.
PCC-25	Patient Movement	The Patient Movement transaction communicates information about movement of a patient from one location to another.
PCC-26	Submit and assign HT Management	The Submit and assign HT Management transaction starts a Heart Team process. It submits a new Workflow Document in order to provide the HT Request document to the HT Manager and/or to assign HT management to the HT Manager.
PCC-27	Accept/Reject HT Activity	This transaction allows a HT Manager or HT participant to accept or reject the assignment respectively to manage the Heart Team or to be involved in the Heart Team.
PCC-28	Assign HT Participation	The Assign HT Participation transaction updates the Workflow Document in order to assign HT participation to each HT Participant. The identification of which group of HT Participants to be involved in Heart Team is out of scope for this specification and should be locally defined by domain policies.
PCC-29	Add Request of more clinical information	The Add Request of more clinical information transaction updates and submits an updated Workflow Document, in order to allow each HT Participant to request that HT Requester provides more clinical information.

Transaction	Name	Transaction Description
PCC-30	Add more clinical information	The Add more clinical information transaction updates and submits an updated Workflow Document which provides clinical information requested by one or more PCC-29 transactions.
PCC-31	Complete individual preparation	The Complete individual preparation transaction updates and submits an updated Workflow Document, in order to inform Heart Team that HT Participant has concluded the preliminary phase (Involvement task and Preparation task). In this transaction the HT Participant may provide Individual evaluation report to support the Heart Team.
PCC-32	Plan HT Discussion	The Plan HT Discussion transaction updates Workflow Document in order to schedule the team's communication among members of Heart Team.
PCC-33	Complete HT	The Complete Heart Team transaction updates and submits an updated Workflow Document, in order for the HT Manager to provide the Final Report in response to the HT Request
PCC-34	Finalization	The Finalization transaction updates and submits an updated Workflow Document needed to finalize the HT Request. The Final Report provides information that was requested to support clinical care.
PCC-35	Cancel HT	This transaction cancels an ongoing Heart Team process.
PCC-36	Cancel HT assignment	This transaction revokes the assignment of a HT Lead task if the sender is the HT Requester or HT Involvement tasks if the sender is HT Manager.
PCC-37	Update Care Plan	Update an existing or create a new Care Plan
PCC-38	Retrieve Care Plan	Retrieve a Care Plan
PCC-39	Subscribe to Care Plan Updates	Subscribe to receive updated Care Plans for specific patients.
PCC-40	Provide Care Plan	Provide updated Care Plans to subscribers.
PCC-41	Search for Care Plan	Used to find a care plan.
PCC-42	Communicate FHIR Data-hData	
PCC-43	Share FHIR Resources	
PCC-44	Mobile Query Existing Data	The Mobile Query Existing Data transaction is used to query for clinical fine grained data elements that satisfy a set of parameters by using the FHIR framework. The result of the query is a FHIR Bundle containing FHIR clinical data Resources that match the query parameters. The QEDm Profile assumes that categories and codes referenced by these FHIR Resources need to be defined at the time of deployment. The specification of these FHIR Resources make recommendations on categories and codes that should be considered.
PCC-45	Update Care Team	This transaction is used to update or to create a CareTeam resource. A CareTeam resource is submitted to a Care Team Service where the update or creation is handled.
PCC-46	Search for Care Team	This transaction is used to find a CareTeam resource. The Care Team Contributor searches for a CareTeam resource of interest. A CareTeam resource located by search may then be retrieved for viewing or updating.
PCC-47	Retrieve Care Team	This transaction is used to retrieve a specific CareTeam resource using a known FHIR CareTeam resource id.

Transaction	Name	Transaction Description
PCC-48	Subscribe to Care Team Updates	This transaction is used to subscribe to updates made to a CareTeam resource. As noted in PCC Section X.1.1.2, the Care Team Service SHALL support RESTful delete of the subscription, as well as the following messages for creating and updating a Subscription. See: <a href="http://hl7.org/fhir/subscription.html">http://hl7.org/fhir/subscription.html</a>
PCC-49	Provide Care Team	This transaction is used to provide an updated CareTeam resource to a Care Team Contributor that has subscribed to updates.
PCC-50	Register Medical Device	This transaction is intended to record information about a device identity (e.g., UDI) and associate it with a patient from data acquired directly at the point-of-care and report it to the enterprise system. This transaction relies on patient and device identity information scanned/entered at the point-of-care by the front-line clinicians.
PCC-51	Search Medical Device	This transaction is intended to provide a synchronous query mechanism.
PCC-52	Start Point-of-Care Device Procedure	This transaction is intended to record information about the start of a new device-related procedure. This transaction relies on patient and device identity information scanned/entered at the point-of-care by the front-line clinicians. It also allows clinicians to record information about the type of procedure in which the device was use or implanted.
PCC-53	Complete Point-of-Care Device Procedure	This transaction is intended to record information about the completion of a new device-related procedure. This transaction relies on patient and device identity information scanned/entered at the point-of-care by the front-line clinicians. It also allows clinicians to record information about the type of procedure in which the device was used or implanted.
PCC-54	Search Point-of-Care Device Procedure	This transaction is used to query information about procedures performed at the point-of-care and reported from the point-of-care.
PCC-55	Referral Request	This transaction is used to initiate the referral workflow by providing the referral workflow information and the relevant clinical information known to the Referral Initiator.
PCC-56	Referral Decline	This transaction is used to convey the inability of the Referral Recipient to provide the requested service after the Referral Recipient had already accepted the request.
PCC-57	Referral Outcome	This transaction is used to convey the outcome of the referral, and that completes the referral process. This transaction contains both the indication that the referral is complete, and the final clinical information provided by the Referral Recipient.
PCC-58	Referral Cancellation	This transaction is used to request a cancelation of the referral. It is directed from the Referral Initiator to the Referral Recipient.
PCC-59	Interim Consultation Note	This transaction is used to convey intermittent or preliminary findings as a result of the consultation requested by the Referral Request. The referral is still considered in process, until the Referral Outcome [PCC-57] is successfully sent.
PCC-60	Appointment Notification	This transaction is used to inform the Referral Initiator about a scheduled appointment with the Referral Recipient as part of the fulfillment of the Referral Request. The referral is still considered in progress, until the Referral Outcome transaction [PCC-57] is successfully sent.
PCC-61	No-show Notification	This transaction is used to inform the Referral Initiator that the patient did not show up for an appointment with the Referral Recipient as part of the fulfillment of the Referral Request.
PCC-62	Query for Transport Data	Queries for transport data and patient information elements using a query/response.

Transaction	Name	Transaction Description
PCD-1	Communicate PCD Data	Transmit PCD data to enterprise clients from a Device Observation Reporter or Observation Filter and Receive PCD data by a Device Observation Consumer.
PCD-2	Subscribe to PCD Data	Defines predicate for communication of PCD data from Device Observation Filter (DOF) to a Device Observation Consumer (DOC).
PCD-3	Communicate Infusion Order	This transaction contains the information from the Infusion Order Placer, such as caregiver, patient, and pump identification, medication, volume, and rate, for the infusion being programmed.
PCD-4	Report Alarm	This transaction is used by the Alert Reporter to report both unsolicited and subscribed alerts to the Alert Manager
PCD-5	Report Alarm Status	This transaction is used by Alert Management to report one or more dissemination status updates to the Alert Reporter.
PCD-6	Disseminate Alarm	This transaction is used by Alarm Management to disseminate the alarm to the Alarm Communicator.
PCD-7	Report Dissemination Alarm Status	This transaction is used by Alarm Communication to report one or more dissemination status updates to Alarm Management.
PCD-8	(Reserved)	
PCD-9	Communicate IDC Observation	Communicate IDC Observation
PCD-10	Communicate Infusion Event Data	Communicates significant clinical and technical events from a Patient Care Device such as infusion pump to an information system which may present it to a clinical user, acts on it in some way or records it.
PCD-11	Reserved	Communicates Alarms, Alarm Status to Alarm Archiver.
PCD-12	Retrospective Data Query	The PCD-12 transaction is used to communicate Retrospective Data Query parameters from a Retrospective Data Consumer (RDC) to a Retrospective Data Responder (RDR). A PCD-12 message is initiated by the RDQ Consumer through a message interface to repositories containing retrospective device data.
PCD-13	Retrospective Query Response	The Retrospective Data Response will represent the best efforts of the responder to fulfill the query.
PCD-14	(Reserved)	Reserved
PCD-15	Device Management Information Observation (DMIO)	Contains observations of device identification (unique identification, versions for software, firmware, hardware) and status (power, power source, battery, self-test, etc.). This transaction might not commonly contain patient associated information and would likely be destined for a CMMS and not for an EMR for EHR storage.
PCD-16	Report Location Observation (RLO)	If the location observation information is sourced from an external to device tag and reporting system, then the device to which it is attached has the potential of being unaware of its presence and would likely not contain device associated patient information. Then, the observation will be sourced by the LS and not the medical device. This transactions contains an observation of the location of a device or person or information about the Location Services tag, such as environmental (temperature, humidity, gases, etc.) or operator interactions (buttons, pulls, accelerometers, etc.).
PCD-17	Assert Device-Patient Association	
PCD-18	Assert Device-Patient Disassociation	
PCD-19	Query Device-Patient Associations	
PCD-20	Register Device	

Transaction	Name	Transaction Description
PHARM-1	Query Pharmacy Documents	This transaction defines how a querying actor has to query the Community Pharmacy Manager for prescriptions (PRE) and their related documents. Related documents are Pharmaceutical Advice (PADV) and Dispense (DIS) documents.
PHARM-2	Query Administration Requests	Request for individual administration actions to be performed.
PHARM-3	Report Administration Results	Report on the outcome of each single administration event.
PHARM-4	Request decoded barcode content	The Barcode reader / consumer has scanned the barcode and sends the encoded barcode sequence to the Barcode Processor requesting the decoded barcode information. The barcode processor sends the decoded barcode information as a response to the Barcode reader / consumer as structured information (e.g., GTIN=8712345670012, batch number = 12345, expiry date = 2020-11-12.)
PHARM-H1	Prescription Order	Transaction PHARM-H1 is used by the Prescription Placer and Pharmaceutical Adviser Actors.
PHARM-H2	Validated Order	Transaction PHARM-H2 is used by the Pharmaceutical Adviser and Prescription Placer and Medication Dispenser Actors.
PHARM-H3	Medication Preparation Report	Transaction PHARM-H3 is used by the Medication Dispenser and Medication Administration Informer and Prescription Placer and Pharmaceutical Adviser Actors.
PHARM-H4	Administration Report	Transaction PHARM-H4 is used by the Medication Administration Informer, Prescription Placer, Medication Dispenser and Pharmaceutical Adviser Actors.
PHARM-H5	Advance Prescription Notification	Transaction PHARM-H5 is used for the Prescription Placer to notify the Medication Dispenser and Administration Informer or a prescription order, to allow for preparation in advance.
PHARM-H6	Validated Order Confirmation	Transaction PHARM-H6 is used for the Pharmaceutical Adviser to notify the Medication Administration Informer that the prescription order is validated, to allow for administration preparation.
QPPH-1	Reserved	Reserved
QPPH-2	Reserved	Reserved
QPPH-3	Reserved	Reserved
QPPH-4	Reserved	Reserved
QPPH-5	Reserved	Reserved
QPPH-6	Reserved	Reserved
QPPH-7	Reserved	Reserved
QPPH-8	Reserved	Reserved
QPPH-9	Reserved	Reserved
QPPH-10	RetrieveProtocolDef - Retired	Retired
QPPH-11	EnterPatientRequest - Retired	Retired
QPPH-12	PatientScreeningVisitsScheduled - Retired	Retired
QPPH-13	RecordPatientScreeningVisit - Retired	Retired
QPPH-14	EnrollPatientRequest - Retired	Retired
QPPH-15	PatientStudyVisitsScheduled - Retired	Retired
QPPH-16	RecordPatientStudyVisit - Retired	Retired

Transaction	Name	Transaction Description
QPPH-17	AmendProtocolDef - Retired	Retired
QPPH-18	AlertProtocolState - Retired	Retired
QPPH-19	Archive Data	
QRPH-20	Retrieve Process Definitions	RetrieveProcessDefinitions enables access to one or more process definitions specified by an identifier or other query criteria. This transaction is implemented by the ProcessDefinitionManager and used by both the: ProcessActivityExecutor – to examine processes it may be interested in becoming an active participant and, ProcessStateManager – to deploy processes it wishes to manage.
QRPH-21	Subscribe	Subscribe allows either a ProcessStateManager or ProcessActivityExecutor to optionally establish a subscription to new or amended process definitions of matching interest, as they become available from a ProcessDefinitionManager.
QRPH-22	Publish Process Definitions	This transaction involves a Process Definition Manager publishing process definitions to a Process Activity Executor or Process State Manager.
QRPH-23	Initiate Activity	InitiateActivity allows the ProcessActivityExecutor to be in control of the lifecycle of activities it performs, e.g., an EHR may want to use it's own task processor and interfaces to create and manage the activities it needs to perform as part of a process managed by the ProcessStateManager.
QRPH-24	Receive Process State Alert	ReceiveProcessStateAlert provides either the ProcessStateManager or ProcessActivityExecutor the ability to notify each other of unscheduled events that effect the state of the process, e.g., an EHR patient withdrawing from a clinical trial or, a study being placed on hold.
QRPH-25	Initiate Process	InitiateProcess enables a ProcessActivityExecutor to initiate a new process to be managed by a ProcessStateManager, e.g., an EHR entering a new patient candidate in a clinical trial being managed by a research sponsor.
QRPH-26	Retrieve Activities	RetrieveActivities enables a ProcessActivityExecutor to retrieve the current set of activities it needs to execute as part of a process managed by a ProcessStateManager.
QRPH-27	Update Activity	Update Activity allows a ProcessActivityExecutor to provide an update on activity's state or data to a ProcessStateManager for a process it is a participant in.
QRPH-28	Send Process State Alert	SendProcessStateAlert provides either the ProcessStateManager or ProcessActivityExecutor the ability to notify each other of events that effect the state of the process, e.g., an EHR patient withdrawing from a clinical trial or, a study being placed on hold.
QRPH-29	Request Medical Knowledge	The Retrieve Medical Knowledge Transaction specifies the query and receipt of medial knowledge from an authoritative source (e.g. Public Health Authority). This medical knowledge is not patient specific, though the retrieval query for the knowledge may contain patient-specific content.
QRPH-30	Send Distribution Message	The Send Distribution Message Transaction supports the distribution of content from an authoritative source (e.g. Public Health Authority. This may be leveraged for emergency distribution messages and for informative health status for a monitored population (e.g. hearing screening conformance status.)
QRPH-31	SendExportDocument	Sends a document that needs to be redacted. The document sent includes an identifier for the Extraction Specification to be applied.

Transaction	Name	Transaction Description
QRPH-32	ReturnRedactedDocument	This transaction returns a redacted document. It also includes the ID of the original document and the ID of the extraction specification used to create the redacted document.
QRPH-33	RetrieveExtractionSpecification	This transaction is a query and response. The ID of an Extraction Specification is sent to the Extraction Specification Manager and the Extraction Specification Manager returns the corresponding Extraction Specification document.
QRPH-34	NANIFeed	This transaction communicates event information, including corroborating demographic data, after a newborn is admitted or discharged.
QRPH-35	NANIPublish	This transaction constrains and extends the Patient Identity Feed [ITI-8] transaction from IHE IT Infrastructure Technical Framework and is used by Admission Information Source actor to send content to Newborn Admission Notification Manager.
QRPH-36	ArchiveSourceDocuments	This transaction involves a Form Filler archiving content to a Form Archiver, before issuing a Retrieve Form request to a Form Manager. The content of this transaction is similar to that of Retrieve Form, ITI-34.
QRPH-37	BFDRFeed	This transaction is used to communicate clinician-sourced birth and fetal death information from the Information Source to the Information Recipient. This transaction may alternatively be initiated by a Form Receiver Message Exporter and communicated to the Information Recipient. This transaction uses the Health Level Seven International (HL7) Version 2.5.1 Implementation Guide (IG): Reporting Birth and Fetal Death information From the EHR to Vital Records Draft Standard for Trial Use (DSTU).
QRPH-38	VRDRFeed	This transaction is used to communicate clinician-sourced death information from the Information Source to the Information Recipient. This transaction may alternatively be initiated by a Form Receiver Message Exporter and communicated to the Information Recipient. This transaction uses the Health Level Seven International (HL7) Version 2.5.1 Implementation Guide (IG): Vital Records Death Reporting Draft Standard for Trial Use (DSTU) US Realm.
QRPH-39	HWFeed	This transaction is used to communicate healthy weight surveillance information from the Healthy Weight Information Source to the Healthy Weight Information Recipient. This transaction may alternatively be initiated by a Form Receiver Message Exporter and communicated to the Healthy Weight Information Recipient. This transaction uses the HL7 Version 2.5.1 Implementation Guide: Height and Weight Report, Release 1 (US Realm) to communicate this content. The transaction payload is limited to those attributes defined by this implementation guide and does not include the plan and risk assessment content.
QRPH-40	Retrieve Research Study List	This transaction is used by the Research Information Consumer to fetch a patient context specific list of applicable research studies from the Research Information Source. The patient context is determined by processes outside the scope of this transaction.
QRPH-41	Research Information Subscribe	Transaction QRPH-41 is used by the Research Information Consumer and the Research Information Source actors. The transaction uses the Publish/Subscribe Infrastructure as described in IHE ITI TF-3: 4.4. The Research Information Source represents a combined Publisher/Notification Broker and the Research Information Consumer represents a Combined Subscriber/Notification recipient, as described in IHE ITI TF-3: 4.4.1.4.



Transaction	Name	Transaction Description
QRPH-42	Research Information Notify	Transaction QRPH-42 is used by the Research Information Consumer and the Research Information Source actors. The transaction uses the Publish/Subscribe Infrastructure as described in IHE ITI TF-3: 4.4. The Research Information Source represents a combined Publisher/Notification Broker and the Research Information Consumer represents a Combined Subscriber/Notification recipient, as described in IHE ITI TF-3: 4.4.1.4.
QRPH-43	Retrieve Data Element List	This transaction is used by the Metadata Consumer to retrieve a list of Data Elements from the Metadata Source matching the given selection criteria.
QRPH-44	Retrieve Metadata	This transaction is used by the Metadata Consumer to retrieve the metadata of a selected Data Element from the Metadata Registry. The Metadata Consumer has previously obtained the ID of the Data Element he is looking. He may have used the RetrieveDataElementList [QRPH-43] transaction to obtain the ID of the Data Element he is looking for.
QRPH-45	Communicate Hearing Screening Data	This transaction is used to communicate hearing screening result information.
QRPH-46	BFDRQuery	
QRPH-47	VRDRQuery	This transaction connects a Data Consumer to a Data Responder to allow query/retrieve of death reporting related health information.
QRPH-48	Mobile Retrieve Form	This message uses the HTTP GET method on the target endpoint to retrieve and launch a URL form.
QRPH-49	Mobile Retrieve Capability	This transaction is used to request a statement of behaviors from a Data Responder.
QRPH-50	Mobile Authorize Form	This transaction is used to request authorization for the FHIR resource server from a Data Responder.
QRPH-51	Mobile Retrieve Access Token	This message uses the HTTP POST method on the target endpoint to convey desire to retrieve access.
QRPH-52	Mobile Populate Form	This message uses the HTTP POST method on the target endpoint to convey specific desired resources.
QRPH-53	ADX POST Content	The POST Content transaction is used by the Content Creator to perform an HTTP POST request on the Content Consumer.
RAD-1	Patient Registration	The ADT system registers and/or admits a patient and forwards the information to other information systems.
RAD-2	Placer Order Management	The Order Placer informs the Order Filler of the initiation or cancellation of an order. The Placer/Filler Order Management transaction will sometimes be referred to as -New when a new order is being initiated, or as -Cancel when an existing order is canceled.
RAD-3	Filler Order Management	The Order Filler informs the Order Placer of the initiation, cancellation, or change in the status of an order. The Placer/Filler Order Management transaction will sometimes be referred to as -New when a new order is being initiated, or as -Cancel when an existing order is canceled.
RAD-4	Procedure Schedule	Schedule information is sent from the Department System Scheduler/Order Filler to the Image Manager.
RAD-5	Query Modality Worklist	Based on a query entered at the Acquisition Modality, a modality worklist is generated listing all the items that satisfy the query. This list of Scheduled Procedure Steps with selected demographic information is returned to the Acquisition Modality.
RAD-6	Modality Performed Procedure Step in Progress	An Acquisition Modality notifies the Performed Procedure Step Manager of the start of a new Procedure Step and the PPS Manager informs the Department System and Image Manager.

Transaction	Name	Transaction Description
RAD-7	Modality Performed Procedure Step Completed/Discontinued	An Acquisition Modality notifies the Performed Procedure Step Manager of the completion of a Procedure Step and the PPS Manager informs the Department System and Image Manager.
RAD-8	Modality Image Stored	An Acquisition Modality sends acquired or generated images to the Image Archive.
RAD-9	Modality Presentation State Stored	An Acquisition Modality sends acquired or generated images to the Image Archive.
RAD-10	Storage Commitment	An Acquisition Modality or Image Creator requests that the Image Manager take responsibility for the specified DICOM objects (images, GSPS objects, Key Image Notes, Evidence Documents or any combination thereof) that the requestor stored in the Image Archive.
RAD-11	Image Availability Query	The Department System Scheduler/Order Filler asks the Image Manager if a particular image or image series is available.
RAD-12	Patient Update	The ADT Patient Registration System informs the Order Placer and the Department System Scheduler/Order Filler of new information for a particular patient. The Department System Scheduler may then further inform the Image Manager.
RAD-13	Procedure Update	The Department System Scheduler/Order Filler sends the Image Manager updated order or procedure information.
RAD-14	Query Images	An Image Display queries the Image Archive for a list of entries representing images by patient, study, series, or instance.
RAD-15	Query Presentation States	An Image Display queries the Image Archive for a list of entries representing image Grayscale Softcopy Presentation States (GSPS) by patient, study, series, or instance.
RAD-16	Retrieve Images	An Image Display or an Imaging Document Consumer requests and retrieves a particular image or set of images from the Image Archive or an Imaging Document Source, respectively.
RAD-17	Retrieve Presentation States	An Image Display or an Imaging Document Consumer requests and retrieves the Grayscale Softcopy Presentation State (GSPS) information for a particular image or image set.
RAD-18	Creator Images Stored	An Image Creator sends new images to the Image Archive.
RAD-19	Creator Presentation State Stored	An Image Creator requests that the Image Archive store the created Grayscale Softcopy Presentation State objects.
RAD-20	Creator Procedure Step in Progress	An Image Creator notifies the Performed Procedure Step Manager of the start of a new Procedure Step and the PPS Manager informs the Department System and Image Manager.
RAD-21	Creator Procedure Step Completed	An Image Creator notifies the Performed Procedure Step Manager of the completion of a Procedure Step and the PPS Manager informs the Department System and Image Manager.
RAD-22	Intentionally Left Blank	Intentionally Left Blank
RAD-23	Print Request with Presentation LUT	A Print Composer sends a print request to the Print Server specifying Presentation LUT information.
RAD-24	Report Submission	A Report Creator sends a draft or final report to the Report Manager.
RAD-25	Report Issuing	A Report Manager sends a draft or final Report to the Report Repository.
RAD-26	Query Reports	A Report Reader provides a set of criteria to select the list of entries representing reports by patient, study, series, or report known by the Report Repository or External Report Repository Access.
RAD-27	Retrieve Reports	A Report Reader or an Imaging Document Consumer requests and retrieves a diagnostic report from the Report Repository, External Report Repository Access or an Imaging Document Source.

Transaction	Name	Transaction Description
RAD-28	Structured Report Export	A Report Manager composes an HL7 Result transaction by mapping from DICOM SR and transmits it to the Enterprise Report Repository for storage.
RAD-29	Key Image Notes Stored	An Acquisition Modality or an Image Creator sends a Key Image Note to the Image Archive.
RAD-30	Query Key Image Notes	An Image Display queries the Image Archive for a list of entries representing Key Image Notes by patient, study, series, or instance.
RAD-31	Retrieve Key Image Notes	An Image Display or an Imaging Document Consumer requests and retrieves a Key Image Note from the Image Archive or an Imaging Document Source, respectively.
RAD-32	Authenticate Note	Any two actors exchange certificates in order to validate the identity of another node.
RAD-33	Maintain Time	Synchronize the local time with the time maintained by the Time Server.
RAD-34	Record Audit Event	Create and transmit an Audit Record.
RAD-35	Charge Posted	The Department System Scheduler/Order Filler sends descriptions of potential procedure and material changes.
RAD-36	Account Management	The ADT Patient Registration Actor informs Charge Processor about creation, modification and ending of patient s account.
RAD-37	Query Postprocessing Worklist	Based on a query from a worklist client (Image Creator), a worklist is generated by the worklist manager (Post-Processing Manager) containing either Post-Processing or Computer Aided Detection (CAD) workitems that satisfy the query. Workitems are returned in the form of a list of General Purpose Scheduled Procedure Steps.
RAD-38	Workitem Claimed	A worklist client (Image Creator) notifies the worklist provider (Post-Processing Manager) that it has claimed the workitem (i.e. started a General Purpose Scheduled Procedure Step).
RAD-39	Workitem Performed Procedure Step in Progress	A worklist client (Image Creator) notifies the worklist provider (Post-Processing Manager) that it has started work (i.e. created a General Purpose Performed Procedure Step).
RAD-40	Workitem Performed Procedure Step Completed	A worklist client (Image Creator) notifies the worklist provider (Post-Processing Manager) of the completion of a General Purpose Performed Procedure Step.
RAD-41	Workitem Completed	A worklist client (Image Creator) notifies the worklist provider (Post-Processing Manager) that it has finished the workitem (i.e. completed a General Purpose Scheduled Procedure Step).
RAD-42	Performed Workstatus Update	The worklist provider informs other interested actors of the on-going status and completion of performed work.
RAD-43	Evidence Documents Stored	An Acquisition Modality or Image Creator sends measured or derived diagnostic evidence in the form of a DICOM Structured Report to the Image Archive.
RAD-44	Query Evidence Documents	An Image Display queries the Image Archive for a list of entries representing Evidence Documents.
RAD-45	Retrieve Evidence Documents	A user of Evidence Documents (Image Display, Report Creator or Report Reader) or an Imaging Document Consumer requests and retrieves an Evidence Document from the Image Archive or an Imaging Document Source, respectively.
RAD-46	Query Reporting Worklist	Based on a query from a Report Creator worklist client, a worklist is generated by the Report Manager containing reporting task workitems that satisfy the query. Workitems are returned in the form of a list of General Purpose Scheduled Procedure Steps.

Transaction	Name	Transaction Description
RAD-47	Distribute Imaging Information on Media	A source actor (Portable Media Creator) writes image data, other evidence objects and reports onto a piece of interchange media. The media is physically transported to another actor (Portable Media Importer, Image Display, Report Reader, Display or Print Composer) which then imports, displays or prints the evidence objects and reports. The media can also be provided to a patient or a referring physician for web-based viewing.
RAD-48	Appointment Notification	Department System Scheduler/Order Filler sends the Order Placer actor the date and time of the appointment(s) related to one or more Scheduled Procedure Step(s).
RAD-49	Instance Availability Notification	The Image Manager/Image Archive notifies interested workflow actors (such as the Department System Scheduler/Order Filler, Post- Processing Manager and Report Manager) about the availability status of instances at specified storage locations.
RAD-50	Store Instances	An Export Selector sends to an Export Manager instances that are to be de-identified, pseudonymized and exported.
RAD-51	Store Export Selection	An Export Selector sends to an Export Manager an instance of a Key Object Selection Document that references a list of instances that are to be de-identified, pseudonymized and exported.
RAD-52	Store Additional Teaching File Information	An Export Selector sends to an Export Manager instances containing additional information about the instances that are to be exported.
RAD-53	Export Instances	An Export Manager sends to a Received instances that have been exported.
RAD-54	Provide and Register Document Set	An Imaging Document Source actor initiates the Provide and Register Imaging Document Set transaction. For each document in the Submission Set, the Imaging Document Source actor provides both the documents as an opaque octet stream and the corresponding meta-data to the Document Repository. The Document Repository is responsible to persistently store these documents, and to register them in the Document Registry using the Register Documents transaction by forwarding the document meta-data received from the Imaging Document Source Actor. [RAD-54, derived from ITI-15].
RAD-55	Wado Retrieve	A WADO Retrieve transaction is issued by an Imaging Document Consumer to an Imaging Document Source to retrieve DICOM objects over HTTP/HTTPS protocol [RAD-55].
RAD-56	Spatial Registrations Stored	An Acquisition Modality or Evidence Creator stores transformation information for registering two image data sets in the same coordinate system for further processing or fused display.
RAD-57	Blending Presentation States Stored	An Acquisition Modality or Evidence Creator stores presentation information on registered image data sets for fused display.
RAD-58	Retrieve Spatial Registrations	An Image Display retrieves from an Image Archive the transformation information to be applied to image data sets for further processing or fused display.
RAD-59	Import Procedure Step in Progress	The Performed Procedure Step Manager receives progress notification of an importation Procedure Step and in turn notifies the Order Filler, Image Manager and the Report Manager.
RAD-60	Import Procedure Step Completed/Discontinued	The Performed Procedure Step Manager receives completion notification of an importation Procedure Step and in turn notifies the Order Filler, Image Manager and the Report Manager.
RAD-61	Imported Instances Stored	A system importing DICOM Objects or digitized hardcopy sends imported DICOM Composite Objects to the Image Archive.
RAD-62	Store Dose Information	An Acquisition Modality sends Dose objects to an Image Manager/Archive for storage so they can be later used for monitoring or analysis of patient radiation exposure.

Transaction	Name	Transaction Description
RAD-63	Submit Dose Information	A Dose Information Reporter sends Dose objects to a Dose Register for subsequent compilation, monitoring and analysis of population radiation exposure and current practices. Dose objects will often be de-identified prior to submission.
RAD-64	Query Dose Information	A Dose Information Reporter or Dose Information Consumer requests and receives from the Image Manager/Archive a list of instance metadata describing Dose objects matching a specified filter.
RAD-65	Retrieve Dose Information	A Dose Information Reporter or Dose Information Consumer requests and receives from the Image Manager/Archive specified instances of Dose objects.
RAD-66	(Image) Rejection Note Stored	Create and send a manifest referencing images that are rejected for quality or patient safety reasons, rejected for incorrect modality worklist selection, or deleted due to data retention expiration. The manifest can be used to hide or provide rejected images later in routine use, based on specific configuration.
RAD-67	Media Information Stored	
RAD-68	Provide and Register Imaging Document Set – MTOM/XOP	Provide & Register Imaging Doc Set-MTOM/XOP
RAD-69	Retrieve Imaging Document Set	Retrieve Imaging Doc Set
RAD-70	Image Manager Instances Stored	An Image Manager/Archive supporting the Multiple Identity Resolution option sends DICOM SOP Instances to another Image Manager/Archive.
RAD-71	Image Manager Storage Commitment	A requestor Image Manager/Archive supporting the Multiple Identity Resolution option requests that the receiving Image Manager/Archive confirm ownership for the specified DICOM objects (images, GSPS objects, Key Image Notes, Evidence Documents or any combination thereof) that the requestor stored in the Image Manager/Archive, thus allowing the requestor Image Manager/Archive to delete those objects now owned by the receiving Image Manager/Archive.
RAD-72	Image Manager Instances Query	An Image Manager/Archive supporting the Multiple Identity Resolution option queries another Image Manager/Archive for a list of entries representing DICOM SOP Instances.
RAD-73	Image Manager Instances Retrieval	An Image Manager/Archive supporting the Multiple Identity Resolution option requests and retrieves a particular SOP Instance or set of SOP Instances from another Image Manager/Archive.
RAD-74	Replacement Instances Stored	A Change Requester send new updated instances with corrected header information to an Image Manager/Image Archive.
RAD-75	Cross Gateway Retrieve Imaging Document Set	The scope of the Cross Gateway Retrieve Imaging Document Set transaction is semantically the same as the Retrieve Imaging Document Set transaction [RAD-69]. Differences from the Retrieve Imaging Document Set transactions are: - The Cross Gateway Retrieve Imaging Document Set is between an Initiating Imaging Gateway and a Responding Imaging Gateway - The 'homeCommunityId' parameter is required. This means that the homeCommunityId parameter which is conditionally required on the Retrieve Imaging Document Set transaction is required by this transaction - The Responding Imaging Gateway is required to support Asynchronous Web Services Exchange on the Cross Gateway Retrieve Imaging Document Set
RAD-76	Query For Study	The Importer queries the Image Manager/Archive to find out if a study already exists.

Transaction	Name	Transaction Description
RAD-77	Query For Patient ID	The Importer queries the Image Manager/Archive to find the local patient identifier corresponding to the patient demographics in the objects to be imported.
RAD-78	Request Filling of Order	This transaction is used by the Importer to create and fill an order with the DSS/Order Filler. The DSS/Order Filler in turn informs the Order Placer about the order it creates and then returns the placed and filled order information to the Importer. Once the order has been filled, the Importer cannot change or cancel it. Only the DSS/Order Filler can change or cancel the order.
RAD-79	Import Instructions Request	This transaction is used by the Importer to send Import Instructions directly to an Image Manager/Archive in an order message. Once the order message has been sent, the Importer cannot change or cancel it.
RAD-80	Query UPS Worklist	This transaction is used to create a new workitem. The contents of the workitem describe both the task to be performed and associated information such as references to the input data, the order and accession number with which the task is associated, etc.
RAD-81	Claim UPS Workitem	This transaction is used to find workitems of interest. The contents of workitems describe both the task to be performed and related information such as references to the input data, the order and accession number with which the task is associated.
RAD-82	Complete UPS Workitem	This transaction is used to take "ownership" of a selected workitem by telling the managing system to change the state to IN PROGRESS. This permits other worklist users to detect that this workitem has been claimed and locks out others from claiming or modifying the workitem.
RAD-83	Create UPS Workitem	This transaction is used to retrieve the contents (i.e., values of a requested list of attributes) from a workitem.
RAD-84	Update UPS Workitem	This transaction is used by a workitem performer to request that the workitem manager modify the contents of a workitem it manages.
RAD-85	Manage UPS Subscription	This transaction is used by a work performer to tell the managing system (e.g., a Post Processing Manager) that the contents of the selected workitem (e.g., references to result objects, etc.) have been finalized and the state should be changed to a Final State of either COMPLETED or CANCELED. Once in a Final State, further updates to the workitem are not permitted.
RAD-86	Send UPS Notification	This transaction is used by an interested actor to subscribe (or unsubscribe) to notifications for one or more UPS workitems.
RAD-87	Get UPS Workitem Contents	This transaction is used to notify systems of the state or contents of a given UPS workitem.
RAD-88	Request UPS Workitem Cancellation	This transaction is used by an interested actor to request that a workitem be canceled.
RAD-89	Start Application	This transaction is used to launch a Hosted Application.
RAD-90	Stop Application	This transaction is used to shut down a Hosted Application.
RAD-91	Bring Application Front	This transaction is used to ask the Hosted Application to bring its Graphical User Interface (GUI) window to the front (not be obscured by other windows in the workstation's GUI) and come into focus (take control of the user input devices) and resize the GUI if requested.
RAD-92	Start Task	This transaction is used to instruct a Hosted Application to start working on a task.
RAD-93	Get Task Details	This transaction retrieves the contents of a Unified Procedure Step (UPS) instance using the Application Hosting interface.

Transaction	Name	Transaction Description
RAD-94	Get Task Data	This transaction is used to retrieve data from the Hosting System.
RAD-95	Notify Task Status	This transaction is used to inform the Hosting System of notable events during the processing of an assigned task
RAD-96	Notify Task Results	This transaction is used to inform the Hosting System that the Hosted Application has data available for storage, created through the processing of the Application's assigned task.
RAD-97	Get Task Results	This transaction is used to retrieve data from the Hosted Application
RAD-98	Notify Task Complete	This transaction is used to inform the Hosting System that the Hosted Application has completed processing of its assigned task.
RAD-99	Finalize Task	This transaction is used to request an Application to finalize a task by releasing all remaining resources consumed by the task and going into the IDLE state.
RAD-100	Cancel Task	This transaction is used to cancel task processing in a Hosted Application.
RAD-101	Suspend Application	This transaction is used to suspend a running Application.
RAD-102	Resume Application	This transaction is used to resume task processing in a Hosted Application that had been suspended.
RAD-103	Retrieve Imaging Report Template	A Requester retrieves a template from a Responder.
RAD-104	Store Imaging Report Template	A Sender stores a report template to a Receiver.
RAD-105	Query Imaging Report Templates	A Requester queries for a list of templates from a Responder.
RAD-106	Invoke Image Display	Invokes the display of DICOM image studies.
RAD-107	Wado-RS Retrieve	The WADO-RS Retrieve transaction accesses DICOM SOP Instances via an HTTP interface.
RAD-108	Store Instances over the Web	Store one or more DICOM instances using DICOMweb STOW-RS.
RAD-109	Open Event Channel	Opens an event channel that can be used to send back events such as notifications.
RAD-110	Store Radiopharmaceutical Activity Information	Send details of Radiopharmaceutical Administration Events encoded in DICOM SR using DICOM Store.
RAD-111	Create XDW Read	The Create XDW Read transaction starts a Remote Read workflow. A Create XDW Read transaction carries the Remote Reading Workflow Document and the Read Request document and associated metadata.
RAD-112	Cancel XDW Read	This transaction cancels an ongoing Remote Reading Workflow.
RAD-113	Accept/Reject XDW Report	Used to acknowledge production or revision of a Final Report.
RAD-114	Revoke XDW Assignment	This transaction acknowledges the production of a Final Report (or Preliminary Report) or requests the revision of a Final Report.
RAD-115	Assign XDW Read	This transaction records the result of assignment in a Remote Reading Workflow Document. The result can be an assignment to a specific Task Performer or the failure of that assignment.
RAD-116	Accept/Reject or Release XDW Read	This transaction allows a Task Performer to accept or reject the assignment of a Remote Read. This transaction also allows a Task Performer that claimed a Remote Read to release it.

Transaction	Name	Transaction Description
RAD-117	Update XDW Read	This transaction makes update(s) to the Perform Remote Read task without changing the status of the task (e.g., attach a Preliminary Report, attach an Addendum to the Final Report, attach the Final Report if the Task Requester asked only for a Preliminary Report, etc.). The Preliminary Report, the Final Report or the Addendum to the Final Report can be submitted by using this transaction or by using a Provide and Register Document Set-b [ITI-41] transaction.
RAD-118	Subscribe Remote Read Task	This transaction allows the Subscriber actor to subscribe for notification of updates to specific tasks. The Subscriber actor will receive notifications for events of interest in separate transactions.
RAD-119	Claim XDW Read	This transaction allows a Task Performer to claim a Read without a previous assignment.
RAD-120	Complete XDW Read	This transaction marks the Perform Remote Read task as completed with a reference to the Final Report (or the Preliminary Report) produced, and document inputs used.
RAD-121	Store Protocol	Transfers a DICOM Defined Procedure Protocol instance from a Sender to a Receiver.
RAD-122	Query Protocol	Requests and receives metadata about Protocol instances matching a specified filter.
RAD-123	Retrieve Protocol	Retrieves a DICOM Defined Procedure Protocol instance.
RAD-124	Transfer Multiple Events	Delivers a payload of many event reports as a single RESTful HTTP PUT transaction.
RAD-125	Store Protocol Approval	Transfers a DICOM Protocol Approval instance from a Sender to a Receiver.
RAD-126	Query Protocol Approval	Requests and receives metadata about Protocol Approval instances matching a specified filter.
RAD-127	Retrieve Protocol Approval	Retrieves a DICOM Protocol Approval instance.
RAD-128	Send Imaging Result	Transfer imaging results (i.e., radiology reports) using an HL7 v2 ORU message.
RO-1	Single/Contoured Image Series Retrieve	In the Single/Contoured Image Series Retrieve transaction, the Archive sends a series of CT-Images to the Contourer, Geometric Planner, or Dosimetric Planner.
RO-2	Structure Set Storage	In the Structure Set Storage Transaction, the Contourer stores a Structure Set on an Archive to make it available
RO-3	Geometric Plan Storage	In the Geometric Plan Storage transaction, the Geometric Planner sends the newly created Geometric Plan to the Archive.
RO-4	Dosimetric Plan Storage	In this transaction, the Dosimetric Planner sends the plan containing the references to the structure set to the Archive
RO-5	Dose Storage	In the Dose Storage transaction, the Dosimetric planner sends the newly created Dose to the Archive.
RO-6	Multi-Series Image Retrieval	In the Multi-Series Image Retrieve Transaction, the Archive stores CT Images from multiple series (but a single study) on a Contourer to make these Images available for contouring
RO-7	Structure Set Retrieval	In the Structure Set Retrieval Transaction, the Archiver stores a Structure Set on a Contourer, Geometric Planner, Dosimetric Planner, or Dose Displayer.
RO-8	Geometric Plan Retrieval	In the Geometric Plan Retrieve Transaction, the requested Geometric Plan is transferred from the Archive to the Dosimetric Planner.
RO-9	Dosimetric Plan Retrieval	In this transaction, the Dose Displayer retrieves the plan containing the references to the structure set to the Archive
RO-10	Dose Retrieval	In the Dose Retrieve Transaction, the requested Dose is transferred from the Archive to the Dose Displayer



Transaction	Name	Transaction Description
RO-11	Resampled/Combined CT Series Storage	In the Resampled/Combined CT Series Storage Transaction, the Contourer stores CT Images which have been combined or resampled into a single series on the Archive.
RO-12	Spatial Registrations Stored	In the Spatial Registrations Stored transaction, the Registrar sends Spatial Registration instances to the Archive. Spatial registration objects define how the pixel coordinates of one image data set are transformed to another coordinate system (for example to a coordinate system defined by another image data set thus allowing each dataset to be spatially aligned).
RO-13	Utilize Spatial Registrations	A Registration Display receives from an Archive one or more Spatial Registration objects carrying the transformation information to be applied to two image data sets intended for further processing or registered display.
RO-14	Registered Structure Set Storage	In the Registered Structure Set Storage Transaction, the Registered Contourer stores a Structure Set on an Archive to make it available.
RO-15	Registered Structure Set Retrieval	In the Registered Structure Set Retrieval Transaction, the Archive stores a Structure Set on a Registered Contourer or Registered Dose Displayer.
RO-16	Registered Dose Retrieve	In the Registered Dose Retrieve Transaction, the requested Dose is transferred from the Archive to the Registered Dose Display actors.
RO-17	Worklist Query for Positioning and Delivery	In the Worklist Query for Positioning and Delivery transaction, a PDS requests and receives a patient positioning and treatment delivery worklist from a TMS.
RO-18	Retrieve Workitem Input Objects from Archive	In the Retrieve Workitem Input Objects from Archive transaction, a PPS, PDS, or TDD requests and receives from the Archive any SOP Class Instances required for performing desired procedure steps returned by a previous query. Each SOP instance must have been supplied in the Input Information Sequence of one or more of the returned worklist items.
RO-19	UPS In Progress	In the UPS in Progress transaction, a PPS, PDS, or TDD signals to the TMS that responsibility has been taken for the performing of the selected work item.
RO-20	Retrieve Workitem Input Objects from TMS	In the Retrieve Workitem Input Objects from TMS transaction, a PDS or TDD requests and receives requests and receives SOP Class instances from the TMS, in order to support execution of the requested work item. These requested instances are of a "transient" nature, typically generated 'on-the-fly' by the TMS.
RO-21	UPS Final Update	In the UPS Final Update transaction, a PPS, PDS, or TDD signals to the TMS changes in the properties of the work item that is currently in progress, prior to the UPS being signaled as completed or canceled.
RO-22	Store Position Acquisition Results to Archive	In the Store Position Acquisition Results to Archive transaction, when a patient position acquisition workitem has been completed by a PPS or PDS, the results of the acquisition are stored to the Archive. These results may subsequently be referenced in the Output Information Sequence of the corresponding Unified Procedure Step.
RO-23	Store Position Registration Results to Archive	In the Store Position Registration Results to Archive transaction, when a patient registration workitem has been completed by a PPS or PDS, the results of the registration operation are stored to the Archive. These results may subsequently be referenced in the Output Information Sequence of the corresponding Unified Procedure Step.

Transaction	Name	Transaction Description
RO-24	Store Delivery Results to Archive	In the Store Position Registration Results to Archive transaction, when a treatment delivery workitem has been completed by a PDS or TDD, the results of the treatment delivery operation are stored to the Archive. These results may subsequently be referenced in the Output Information Sequence of the corresponding Unified Procedure Step
RO-25	UPS Completed/Canceled	In the UPS Completed/Canceled transaction, a PPS, PDS, or TDD signals to the TMS that the selected work item has either been completed or canceled.
RO-26	UPS Progress Update	In the UPS Progress Update transaction, a PDS or TDD signals to the TMS changes in the progress of the work item that is currently in progress.
RO-TDPC-1	Retrieve RT Plan	The retrieval of the RT Plan by a Treatment Delivery Plan Consumer, typically for the purpose of delivering a Radiotherapy treatment to the patient. Could be also used for other purposes, e.g., for quality assurance prior to treatment.
TPPC-01	Basic Static Beam Storage	In the Basic Static Beam Storage transaction, a Static Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static, non-MLC treatment beams.
TPPC-02	Basic Static Beam Retrieval	In the Basic Static Beam Retrieval transaction, a Static Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static, non-MLC treatment beams.
TPPC-03	Basic Static MLC Beam Storage	In the Basic Static MLC Beam Storage transaction, a Static MLC Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static, MLC treatment beams.
TPPC-04	Basic Static MLC Beam Retrieval	In the Basic Static MLC Beam Retrieval transaction, a Static MLC Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static, MLC treatment beams.
TPPC-05	Arc Beam Storage	In the Arc Beam Storage transaction, an Arc Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only non-MLC arc treatment beams.
TPPC-06	Arc Beam Retrieval	In the Arc Beam Retrieval transaction, an Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only non-MLC arc treatment beams.
TPPC-07	MLC Fixed Aperture Arc Beam Storage	In the MLC Fixed Aperture Arc Beam Storage transaction, an MLC Fixed Aperture Arc Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only MLC Fixed Aperture Arc treatment beams.
TPPC-08	MLC Fixed Aperture Arc Beam Retrieval	In the MLC Fixed Aperture Arc Beam Retrieval transaction, an MLC Fixed Aperture Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only MLC Fixed Aperture Arc treatment beams.
TPPC-09	MLC Variable Variable Aperture Arc Beam Storage	In the MLC Variable Aperture Arc Beam Storage transaction, a MLC Variable Aperture Arc 860 Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only MLC Variable Aperture Arc treatment beams.
TPPC-10	MLC Variable Variable Aperture Arc Beam Retrieval	In the MLC Variable Aperture Arc Beam Retrieval transaction, an MLC Variable Aperture Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall 865 contain only MLC Variable Aperture Arc treatment beams.
TPPC-11	Hard Wedge Beam Storage	In the Hard Wedge Beam Storage transaction, a Hard Wedge Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static treatment beams using physical wedges.

Transaction	Name	Transaction Description
TPPC-12	Hard Wedge Beam Retrieval	In the Hard Wedge Beam Retrieval transaction, a Hard Wedge Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static treatment beams using physical wedges.
TPPC-13	Virtual Wedge Beam Storage	In the Virtual Wedge Beam Storage transaction, a Virtual Wedge Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static treatment beams using virtual wedges.
TPPC-14	Virtual Wedge Beam Retrieval	In the Virtual Wedge Beam Retrieval transaction, a Virtual Wedge Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static treatment beams using virtual wedges.
TPPC-15	Motorized Wedge Beam Storage	In the Motorized Wedge Beam Storage transaction, a Motorized Wedge Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static treatment beams using motorized wedges.
TPPC-16	Motorized Wedge Beam Retrieval	In the Motorized Wedge Beam Retrieval transaction, a Motorized Wedge Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static treatment beams using motorized wedges.
TPPC-17	Static Electron Beam Storage	In the Static Electron Beam Storage transaction, a Static Electron Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static electron treatment beams.
TPPC-18	Static Electron Beam Retrieval	In the Static Electron Beam Retrieval transaction, a Static Electron Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static electron treatment beams.
TPPC-19	Step & Shoot Beam Storage	In the Step & Shoot Beam Storage transaction, a Step & Shoot Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only step & shoot IMRT treatment beams.
TPPC-20	Step & Shoot Beam Retrieval	In the Step & Shoot Beam Retrieval transaction, a Step & Shoot Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only step & shoot IMRT treatment beams.
TPPC-21	Sliding Window Beam Storage	In the Sliding Window Beam Storage transaction, a Sliding Window Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only sliding window IMRT treatment beams.
TPPC-22	Sliding Window Beam Retrieval	In the Sliding Window Beam Retrieval transaction, a Sliding Window Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only sliding window IMRT treatment beams.
TPPC-23	IMAT/VMAT Beam Storage	In the IMAT/VMAT Beam Storage transaction, a IMAT/VMAT Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only IMAT/VMAT IMRT treatment beams.
TPPC-24	IMAT/VMAT Beam Retrieval	In the IMAT/VMAT Beam Retrieval transaction, a IMAT/VMAT Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only IMAT/VMAT IMRT treatment beams.
TPPC-25	Photon Applicator Beam Storage	In the Photon Applicator Beam Storage transaction, a Photon Applicator Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only static treatment beams using photon applicators.

Transaction	Name	Transaction Description
TPPC-26	Photon Applicator Beam Retrieval	In the Photon Applicator Beam Retrieval transaction, a Photon Applicator Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only static treatment beams using photon applicator.
TPPC-27	Photon Applicator Arc Beam Storage	In the Stereotactic Arc Beam Storage transaction, a Stereotactic Arc Beam Producer stores a treatment plan to the Archive. The treatment plan shall contain only stereotactic arc treatment beams.
TPPC-28	Photon Applicator Arc Beam Retrieval	In the Stereotactic Arc Beam Retrieval transaction, a Stereotactic Arc Beam Consumer or a TMS receives a treatment plan from the Archive. The treatment plan shall contain only stereotactic arc treatment beams.