

## Workflow Transactions Summary

### **Patient Registration**

This transaction involves the patient information, including demographics, captured at the point of encounter. This may occur when the visit is scheduled, if that precedes patient arrival at the institution. This transaction is used for both in-patients (i.e., those who are assigned a bed at the facility) and outpatients (i.e., those who are not assigned a bed at the facility).

### **Placer Order Management**

This transaction is used by the Order Placer to place a new order with the Order Filler. It also allows the Order Placer to cancel the order. To change order information, the Order Placer would cancel the initial order and place the new one. The Order Placer and Department System Scheduler/Order Filler must agree on the support of recurring orders and panel orders, if used.

### **Filler Order Management**

This transaction is used by the Order Filler to inform the Order Placer about the orders it creates and cancels, including the status of the orders it is fulfilling. If the Order Filler needs to change an order, it has to do so as a combination of Order Cancel followed by New Order.

### **Procedure Scheduled**

This transaction specifies a message from the Department System Scheduler/Order Filler to the Image Manager and the Report Manager notifying them that a procedure has been scheduled.

### **Query Modality Worklist**

This transaction takes place at the Acquisition Modality at the point of scan/acquisition by a technologist. When a patient arrives for the scheduled procedure, the technologist performing the procedure must examine key information elements as they relate to the procedure, the correctness of the procedure that has been ordered, and comments that may have been entered by the referring physician and/or radiologist, among others.

### **Modality Procedure Step In Progress**

This transaction includes a message from the Acquisition Modality to the Performed Procedure Step Manager, which in turn issues the message to the Department System Scheduler/Order Filler, the Image Manager and the Report Manager that the Performed Procedure Step is in progress.

### **Modality Procedure Step Completed/Discontinued**

This transaction includes a message from the Acquisition Modality to the Performed Procedure Step Manager, which in turn issues messages to the DSS/Order Filler, the

Report Manager and the Image Manager that the Performed Procedure Step has been completed.

### **Modality Images Stored**

In the Modality Images Stored transaction, the Acquisition Modality sends the acquired images to the Image Archive.

### **Modality Presentation State Stored**

In the Modality Presentation State Stored transaction, Acquisition Modality sends Presentation States for storage along with the images so they can be later used for support of consistent display of imaging data

### **Storage Commitment**

After the Acquisition Modality or Evidence Creator has sent images, Presentation States, or Key Image Notes to the Image Archive, it requests that the Image Manager/Image Archive accept responsibility for them. The objective of this transaction is to provide a formal release of storage responsibility to the Acquisition Modality or Evidence Creator, allowing it to reuse its internal resources allocated to the study.

### **Image Availability Query**

The purpose of this transaction is for the Department System Scheduler/Order Filler and Report Manager to determine whether SOP instances associated with a particular performed procedure step have been stored and are available for use in subsequent workflow steps as well as the storage location for retrieval of these SOP instances.

### **Patient Update**

This transaction involves changes to patient information, including demographics, patient identification, patient location/class changes, and patient merges. These changes may occur at any time for a patient record. This transaction is used for both inpatients (i.e., those who are assigned a bed at the facility) and outpatients (i.e., those who are not assigned a bed at the facility) if the patient has been previously registered.

### **Procedure Update**

This transaction involves changes to procedure information communicated from the Department System Scheduler to the Image Manager and Report Manager. Unlike the order ORM message sent between the Order Placer and Order Filler (where only the order status can be updated without requiring a Cancel/New Order to change an order), the ORM message from the Department System Scheduler/Order Filler and Image Manager may reference a previously scheduled Requested Procedure identified by a Study Instance UID.

### **Query Images**

In this transaction, the Image Display queries the Image Archive for study, series and image instances for retrieval.

## **Query Presentation States**

In this transaction, the Image Display will query and then retrieve Presentation State objects together with the image data referenced in the return keys supplied in the response from the Image Archive or referenced in the Presentation State object. The transformations will be applied by the Image Display to the image data to assure the image display is consistent with the device that originally created and stored the Presentation State.

## **Retrieve Images**

In this transaction, the Image Display requests image retrieval from Image Archive for viewing.

## **Retrieve Presentation States**

In this transaction, the Image Display will query and then retrieve Presentation State objects. The transformations will be applied by the Image Display to the image data to assure the image display is consistent with the device that originally created and stored the Presentation State.

## **Creator Images Stored**

In the Creator Images Stored transaction, the Evidence Creator sends the newly generated images for a study to the Image Archive.

## **Creator Presentation State Stored**

In the Creator Presentation State Stored transaction, the Evidence Creator sends Presentation States for storage along with the images so they could be later used for support of consistent display of imaging data.

## **Creator Procedure Step In Progress**

In this transaction, the Performed Procedure Step of the Evidence Creator is appended to the Modality Performed Procedure Steps done at the Acquisition Modality for the same Scheduled Procedure Step. It includes a message from the Evidence Creator to the Performed Procedure Step Manager, which in turn issues the messages to the Department System Scheduler/Order Filler and the Image Manager.

## **Creator Procedure Step Completed**

This transaction includes a message from the Evidence Creator to the Performed Procedure Step Manager, which in turn issues the messages to the DSS/Order Filler and the Image Manager that the Performed Procedure Step has been completed. Information is not being released for billing at this point but a code may be assigned.

## **Print Request with Presentation LUT**

This transaction supports the capability of the Print Composer to ensure display consistency for images rendered by the Print Server. The Print Composer sends a DICOM Print Request to the Print Server. The request includes the specification of a Presentation Look Up Table (LUT) to be applied to the image data at the Film Box level.

## **Report Submission**

In the Report Submission transaction, the Report Creator transmits a DICOM Structured Report (SR) object in an initial draft or final state to the Report Manager. The Structured Report object is required minimally to conform to the template TID 2000. Creators may introduce increased complexity as long as it conforms to the SOP class.

## **Report Issuing**

In the Report Issuing transaction, the Report Manager transmits either an unchanged draft DICOM Structured Report (created by a Report Creator) or a new modified DICOM Structured Report to the Report Repository or both. The Report Manager handles all state and content changes to DICOM Structured Reports, and with each change new DICOM Structured Report objects are created and may be stored in the Report Repository.

## **Query Reports**

In the Query Reports Transaction, the Report Reader queries the Report Manager, Report Repository or External Report Repository Access for draft or final DICOM Structured Reports.

## **Retrieve Reports**

In the Retrieve Reports Transaction, the requested DICOM Structured Reports are transferred from the Report Manager, Report Repository or External Report Repository Access to the Report Reader for viewing.

## **Structured Report Export**

In the Structured Report Export transaction, the Report Manager transmits verified Structured Reports as unsolicited HL7 observations to the Enterprise Report Repository. The Report Manager is responsible for mapping DICOM SR to HL7.

## **Key Image Note Stored**

In the Key Image Note Stored transaction, the Acquisition Modality or the Evidence Creator transmits a DICOM Key Image Note, which is stored in the Image Archive.

## **Query Key Image Notes**

In this transaction, the Image Display queries (in order to later retrieve) for Key Image Note objects together with the image objects referenced in the return keys supplied in the response from the Image Archive.

## **Retrieve Key Image Notes**

In the Retrieve Key Image Notes Transaction, the requested DICOM Key Image Notes are transferred from the Image Manager to the Image Display for viewing along with the images flagged by the Key Image Note.