POINT-OF-CARE ULTRASOUND

Improve enterprise imaging visibility and care

In today's healthcare environment there is renewed focus on patient centric care and how to improve patient outcomes. Point-of-care ultrasound (POCUS) is becoming more widely used by healthcare providers when treating patients in their care settings. Employing ultrasound technology directly at the bedside streamlines workflow and expedites clinical diagnosis and treatment.

POCUS can also increase the accuracy of a catheter such as a PICC line or vascular access and anesthetic blocks; or in fluid aspiration procedures like pericardiocentesis or arthrocentesis. POCUS can be performed rapidly, almost anywhere — from a busy emergency room, operating room or ICU, to ambulatory clinics or the inpatient's bedside.

Challenges exist however when it comes to linking images captured on POCUS devices to enterprise imaging storage platforms. Departmental POCUS devices are usually procured separately by the various department due to low cost and often lack integration to create automatic workflows and require additional work by IT. Many procedures performed in care settings are done spontaneously and don't follow consistent workflows. POCUS is considered an encounter-based workflow and orders are not always created for imaging procedures performed in the direct care setting. This often leads to siloed imaging data that cannot be used in downstream systems as part of the patient's comprehensive care as well as incurring loss of revenue for procedures that can be billed.

These functionality gaps mean images are often siloed at the point of capture and patient and study indexing data are often entered manually. These gaps inhibit clinical access with other systems such as the EMR and introducing an increased chance of error to the process. Luckily, Hyland Healthcare can help.

Hyland™

ADDRESS THE REQUIREMENTS FOR MANAGING POCUS

Hyland can provide healthcare delivery organizations with the tools necessary to capture, manage and visualize the images and videos captured from POCUS devices throughout the enterprise. With Hyland's POCUS solution, organizations solve the workflow issues and create accessibility to clinicians in a patient-centered manner via the systems they use most every day eliminating silos of imaging data and decreasing loss of revenue.

Hyland Healthcare provides the following to automate and streamline the process:

Capture: Encounter workflow

To increase the speed and accuracy of the indexing process for POCUS devices, Hyland's solution for encounters-based workflow bridges the worklist functionality gap that currently exists for many point-of-care ultrasounds by providing access to the HL7 patient and study data generated with the modality worklist as part of normal clinical workflows. With an automated process and by creating an industry standard worklist accessible on the device, manual workflow issues can be resolved. When the patient is chosen from the worklist, critical metadata is attached to the images and allows the study to be routed to the imaging archive, which provides access to viewing by EMRs or other systems.

Manage: Imaging platform

Once the ultrasound is captured and properly indexed, the content can then be stored and managed in Hyland's imaging platform. The transfer of imaging data to the Hyland solution can trigger the creation of an imaging order, allowing the normalization of downstream functions, including archiving, reporting, and linking for EMR accessed viewing by clinical users. The imaging repository allows the study to be centrally managed within the context of the patient alongside the variety of other imaging studies on that patient (radiology/DICOM, gastroenterology, dermatology, wound care, etc.).

This non-proprietary, vendor-neutral platform makes integrating POCUS content with enterprise clinical systems much easier, driving to consistent workflows.

FEATURES:
- Utilizes industry standard protocols to capture, manage and visualize POCUS studies within an enterprise imaging approach.
- Scalable archive and viewing capabilities that support POCUS and expand to other departmental use cases throughout the enterprise.
- Provides standardized interoperability that automates workflow and eliminates manual intervention.

BENEFITS:
- Eliminates clinical blind spots often created by siloed imaging data from point-of-care imaging devices enhancing clinical visibility throughout the enterprise.
- Reduces errors due to lack of metadata to connect patient to their images.
- Provides a more comprehensive patient imaging record that includes POCUS images.
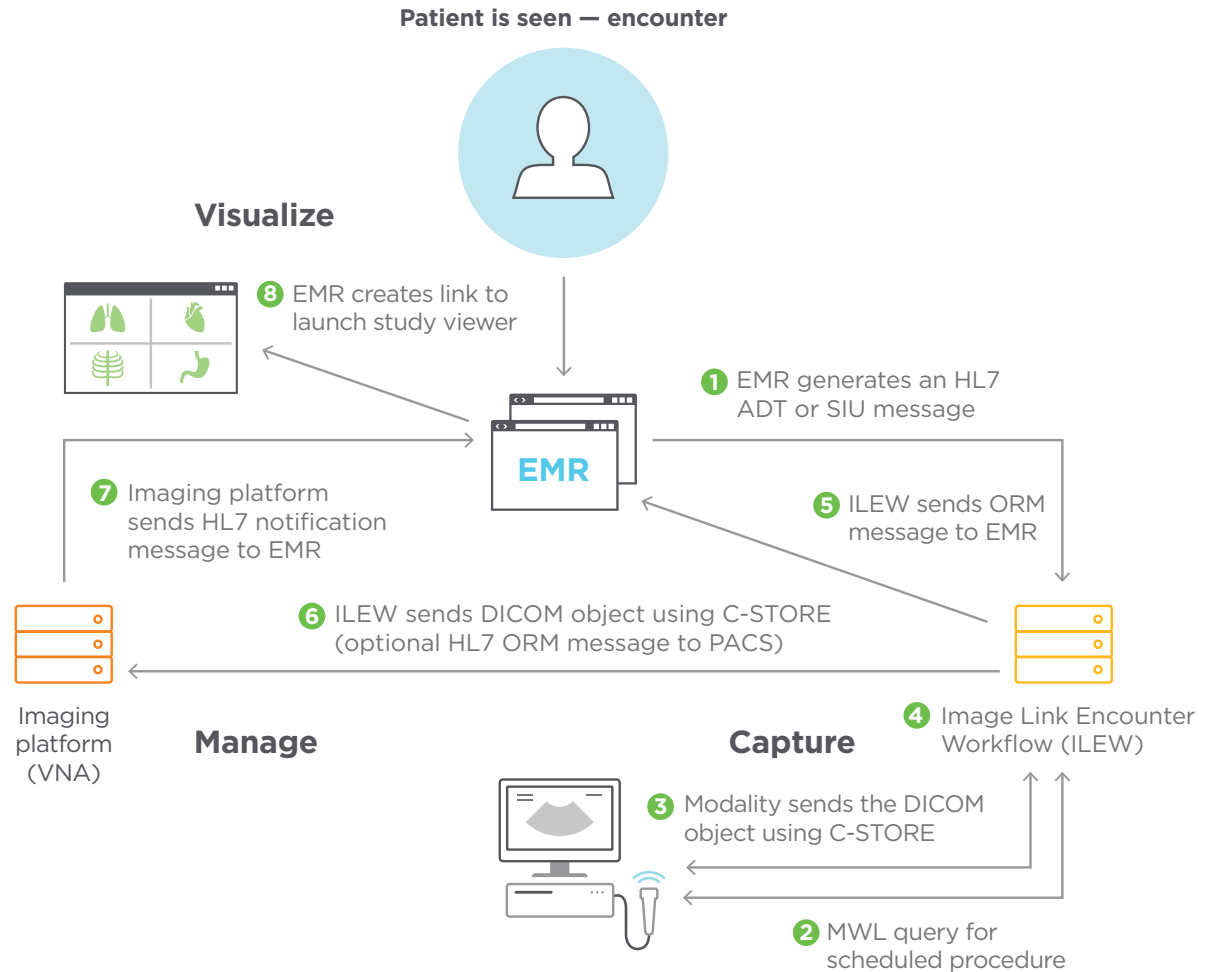- Provides the ability to capture charges for encounter-based imaging.

Visualize: Enterprise viewer

Once stored in the imaging platform, POCUS studies can be made available enterprise-wide through the enterprise viewer. This zero-footprint, web-based viewer allows images from any modality to be accessed and referenced by clinicians from within the EMR, on any PC or mobile device.

Hyland Healthcare's approach to POCUS eliminates clinical blind spots often created by siloed imaging from departmental ultrasound devices, enhancing clinical visibility and improving patient care. This common solution framework can also be easily expanded to address the needs of many other image-intensive specialty departments.

POINT-OF-CARE ULTRASOUND WORKFLOW

1. Patient presents for care and an HL7 message (ADT or SIU) message is generated.

2. The modality performs a DICOM modality worklist (DMWL) query for the scheduled procedure. The operator selects the appropriate scheduled procedure from a list to ensure proper indexing.

3. The procedure is performed and the modality sends the DICOM object via C-STORE to Image Link Encounter Workflow (ILEW) for reconciliation.

4. ILEW reconciles the received study with the scheduled procedure.

5. ILEW links the order to the patient by sending an HL7 ORM message to the EMR.

6. ILEW sends via C-STORE the reconciled DICOM object to the Acuo VNA or PACS.

7. The imaging platform (VNA) sends an HL7 notification message back to the EMR with an appropriate HTML URL to access the study.

8. The EMR creates an HTML URL within the patient's medical record to launch the study with the enterprise viewer.

Patient is seen — encounter

Visualize

8 EMR creates link to launch study viewer

1 EMR generates an HL7 ADT or SIU message

EMR

7 Imaging platform sends HL7 notification message to EMR

5 ILEW sends ORM message to EMR

6 ILEW sends DICOM object using C-STORE (optional HL7 ORM message to PACS)

Imaging platform (VNA)

Manage

Capture

4 Image Link Encounter Workflow (ILEW)

3 Modality sends the DICOM object using C-STORE

2 MWL query for scheduled procedure

Learn more at **HylandHealthcare.com/EnterpriseImaging**

Hyland™