

Solutions for Point of Care Ultrasound

HOW ORPHEUS SOLVES POCUS WORKFLOW

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Point of Care Ultrasound – Live, Secure & Focused

Point of Care Ultrasound (POCUS) is ultrasonography brought to the patient and performed by the provider in real time. Point-of-care ultrasound images can be obtained immediately, and the clinician can use real-time dynamic images (rather than images recorded by a sonographer and interpreted later), allowing findings to be directly correlated with the patient’s symptoms. It is used in various specialties and usually divided into three main areas of applications: **procedural, diagnostic, and screening.**

Specialty	Ultrasound Applications
Anesthesia	Guidance for vascular access, regional anesthesia, intraoperative monitoring of fluid status and cardiac function
Critical & Emergency care medicine	Procedural guidance, pulmonary assessment, focused emergency assessment
General and trauma surgery	Ultrasonography of the breast, procedural guidance, intraoperative assessment
Gynecology	Assessment of cervix, uterus, and adnexa; procedural guidance
Obstetrics and maternal-fetal medicine	Assessment of pregnancy, detection of fetal abnormalities, procedural guidance
Neurology	Transcranial Doppler, peripheral-nerve evaluation
Ophthalmology	Corneal and retinal assessment
Pediatrics	Assessment of bladder, procedural guidance
Radiology and Interventional Radiology	Ultrasonography taken to the patient with interpretation at the bedside, procedural guidance
Vascular surgery	Carotid, arterial and venous assessment; procedural guidance

POCUS Live Workflow

The POCUS workflow demands the ability to provide timely consultation by a specialist with minimal disruption to workflow. These ultrasound machines are portable and can be used in various departments and in unplanned circumstances (meaning, there is no order for the study)

Clinicians require a convenient way to:

1. Easily stream and capture video with hands-free controls.
2. Minimal HW footprint on the mobile ultrasound imaging modality.
3. Instant and secure access from anywhere to the video stream for immediate collaboration between sonographer and expert clinician.
4. Ability to select which streams to include in the permanent patient record and which ones to delete.



Clinician performing POCUS

How Orpheus Improves POCUS Workflow

The Orpheus System combines a low footprint, state of the art device that serves as an efficient streaming and recording device. Combined with a web-enabled client application, the stream is initiated remotely by the expert.

Bi-directional collaboration begins seamlessly. The Orpheus centralized video management system provides tools for clinicians and administrators to manage the streams and recordings (store, share with PACS/VNA).

The Orpheus CAST video and image streaming and capture solution combined with the Orpheus workflow software connected to the centralized Orpheus server empowers you with an advanced POCUS live workflow.

- The Orpheus CAST is an ultrasound modality vendor neutral solution that directly connects to the raw video source.
- The Orpheus CAST automatically registers on the network and can be remotely controlled to start and stop the stream and recording session.
- The Orpheus system assigns a unique identifier (if no patient ID is available) to the session to ensure accurate documentation, easily locate the session and later associate it to the patient record.
- The system provides modality worklist for accurate and time saving patient and procedure identification.
- The Orpheus Live user interface provides the remote expert with all the tools necessary to document the session – take snapshots and bookmarks, easily associate to the patient record and share results with EMR and PACS/VNA.

Timely Collaboration

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Patient Safety and Quality Outcomes

Patients in early shock who were evaluated with point-of-care ultrasound spent less time being treated with vasoactive medications. This has the effect of fewer days spent in the intensive care unit (ICU), as well as decreased morbidity.

The POCUS patients spent considerably less time on vasopressor medication. There are trends toward improvement in other therapy milestones such as hours to wean off vasopressors, total hours spent on ventilators, and days in the ICU.

The decreased morbidity and calculated cost savings of around \$20,000 per patient from the use of point-of-care ultrasound could be very significant.

Advantages of a Centralized Approach

The advantages of a centralized clinical media management platform include:

- Instant access from anywhere, anytime for uploading images and videos and reviewing them.
- Standardized documentation and accessibility for clinical diagnostics and reporting.
- Minimal ongoing costs to capture and store thousands of videos and images.
- Secure storage, access controls and auditing that enhance patient privacy.
- Single point of integration with enterprise systems such as electronic medical record (EMR) and PACS.

POCUS Live Workflow with Orpheus

Step 1: Turn On Orpheus CAST
 Sonographer turns on Orpheus CAST
 Streamer automatically registers on network and ready for stream

Step 2: Engage Remote Physician
 Alert physician that collaboration session is needed
 Physician logs in to Orpheus client application from any laptop or PC (same hospital credentials)

Step 3: Start Stream
 Physician selects the modality from a list
 Stream starts in a single click
 The session is assigned unique identifier
 The stream is recorded on server (optional)

Step 4: Bi-directional Collaboration
 View live POCUS session
 bi-directional audio visual
 take snapshots, tag and annotate
 share with PACS/VNA

Step 5: End Stream
 Physician logs off from Orpheus client - stops stream
 Sonographer turns off Orpheus CAST or it can shut off automatically when unplugged or after timeout