



Best practice statement on recording and storage of point-of-care ultrasound examinations

Increasing numbers of ultrasound examinations occur outside traditional radiology departments. These point-of-care ultrasound (PoCUS) examinations performed by appropriately trained professionals are to be encouraged and are valuable for expediting patient care either through offering a timely diagnosis or by allowing direct visualisation of structures during ultrasound-guided procedures. Such imaging may be performed for example, but not exclusively, in the emergency department, in triage centres, maternity delivery units, at the patients' bedside and in theatre.

There are multiple advantages to PoCUS including treatment benefits for patients, shorter hospital stays, and a decreased burden on radiology departments by negating the need for another ultrasound scan or alternative imaging such as CT or MRI performed by radiology staff. The full benefits of PoCUS scans are realised, however, only through responsible practice aligned with robust clinical governance.

In the absence of governance, PoCUS scans may go undocumented in patients' records and images may not be saved in an accessible and permanent repository such as a Picture Archiving and Communication System (PACS). These so called 'ghost scans' may not benefit the patient and may indeed cause harm through repeat unnecessary imaging when the first scan results may have been adequate if documented and shared. In addition, follow up imaging after a recommended interval, such as in some types of early pregnancy scanning or abdominal aortic aneurysm imaging, may not be performed at the right time if initial scan reports and/or images go unrecorded.

As a minimum, therefore, practitioners performing these scans must have a means of documenting findings and archiving images for medicolegal purposes. Equally, if means are in place, practitioners must show due diligence by complying. The gold standard for best practice is that all PoCUS imaging, with the exception of training scans, is recorded permanently.

It is appreciated that some PoCUS examinations, such as ultrasound-guided procedures, do not require saving images. Furthermore, storage of cine clips, as in echocardiography, may be problematic with some existing modes of archiving. However, a permanent report indicating that the procedure took place should still be recorded in the patients' notes and be readily accessible to other healthcare professionals.

PoCUS reports must include at least: Time, date, location, practitioner name and grade, clinical area (e.g. pelvis, lung or FAST), outcome, complications if any, and subsequent action / recommendation if appropriate. For ease and speed, we advocate the use of a simple proforma listing the above sections.

An obvious home for PoCUS images and reports is PACS within radiology departments and staff here are encouraged to liaise with PoCUS users to facilitate access and storage. However, the growing use of handheld devices that connect to smartphones means that other data-secure cloud-based repositories may provide more appropriate immediate archiving. Some of these systems also offer connectivity to PACS. Therefore, purchasing the best storage platform requires communication and collaboration with all key stakeholders to ensure best continuity and safety for the patient.

PoCUS is a rapidly expanding clinical field and its governance extends beyond reporting and image storage. Processes involving administration, equipment procurement and maintenance, transducer decontamination, and practitioner training and audit should also be in place and overseen by a named lead practitioner. These processes again necessitate team working, local agreement and compliance.