

No longer HOCUS POCUS. The time has come for surgeons to embrace point of care ultrasound training

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Ultrasound provides non-invasive real time high-resolution multiplanar quality imaging, which avoids ionizing radiation and is cost-effective. Traditionally, radiologists and radiographers have provided ultrasound services from centralised radiology departments. The development of portable, more versatile, cheaper equipment that is user friendly has led to the increased use of bedside ultrasound by non-radiologists which has been coined point of care US (POCUS). Despite the many advantages of applying ultrasound in clinical practice, surgeons have been slow to incorporate formal ultrasound training and experience in the surgical curriculum. In the current and in the previous issue of the journal, the clinical use and application of ultrasound were reported.¹⁻³ The therapeutic use of ultrasound for monitoring the response of hydrostatic reduction of intussusception attests to its safety and efficacy. Hydrostatic reductions were performed by a combined surgery radiology team in the radiology suite with safe reduction of 70 out of 78 intussusceptions.¹ In this issue authors report how the utilization of a centralised vascular ultrasound service is overwhelmed by an “open” service for the diagnosis of deep venous thrombosis.² This can be appropriately curtailed by a request form that limits the application of the technique to those most likely to benefit. The POCUS philosophy is embraced by a further article in this issue.³ In paediatric blunt abdominal trauma, a cohort of surgeons and medical students underwent training in Focused Abdominal Sonography in Trauma (FAST). Their newly acquired skill was applied as a screening tool for high velocity blunt trauma in children. FAST was highly specific and when combined with physical examination was highly sensitive in predicting intra-abdominal injury.

POCUS was originally defined as a limited or focused bedside real time US patient evaluation by a clinician utilizing an abbreviated protocol designed to answer specific diagnostic questions.^{4,5} The successful implementation encouraged other specialities including obstetrics, anaesthetics, cardiology and emergency medicine to incorporate bedside US into their diagnostic and therapeutic armamentaria.⁴ In the surgical context, the advantages and benefits of POCUS make the technique particularly suited to trauma management. When performed by the surgeon, the results provide immediate

information which can be incorporated into patient management decisions. As a rapid, sensitive and specific diagnostic test for the detection of pericardial tamponade, haemothorax and haemoperitoneum, ultrasound is now established as an integral part of point of care management in many Level I trauma centres.⁶ In addition, there is a growing demand to provide bedside ultrasound in critical care, in specialised clinics and intraoperatively either for diagnostic purposes or to guide therapy and to simplify or shorten the investigative or care pathway. Breast, endocrine, vascular, gastrointestinal and trauma surgeons have proven that bedside US and intraoperative US are effective aids to physical examination, diagnosis, monitoring, staging, decision making, treatment initiation and conduct of surgical procedures.⁷⁻¹⁰

The implementation of bedside US in South Africa has been sluggish due to perceived concerns regarding formal training, availability of equipment, competency and medico legal issues. Some of the concerns are baseless and have been addressed and overcome elsewhere with the establishment of comprehensive curricula and formal educational programs with hands-on clinical training and strict validation and credentialing criteria.¹¹ A barrier to adoption of surgeon-performed bedside ultrasonography in both the United Kingdom (UK) and overseas has been the perceived medico-legal issues of non-radiologists performing routine ultrasound examinations.¹² Non-medically qualified practitioners, such as ultrasonographers, and medically qualified non-radiologists, for example, cardiologists or rheumatologists, have been performing routine ultrasound examinations for decades under a clear education and medico-legal framework.^{4,5,11}

It is now time surgical leadership in South Africa addresses ultrasound training to ensure that quality ultrasound is performed to provide our patients with the best possible service. This has already been done in Emergency Medicine where the process has been formalised, and in UK the College of Radiologists have produced guidelines on how training should be conducted.^{13,14} We should take heed of forward-looking medical schools and professional bodies who have incorporated POCUS in undergraduate and postgraduate training to enhance competency. It is inevitable that POCUS will evolve and be increasingly used in all surgical disciplines. The opportunity to enhance the application of POCUS in

surgical practice will be to the benefit of all patients and should not be missed.

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