Scan first, ask questions later - the evolution of ultrasound as an adjunct to clinical history taking and examination in acutely and critically ill patients

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Background

Since its inception in the 20th century, ultrasonography has been the preserve of radiologists, aside from certain specific uses, such as echocardiography in cardiology, and vascular access scans for critical care clinicians. Recently, ultrasonography training programmes aimed at non-radiologists have become available – spanning diagnostic and interventional imaging. The Royal Colleges of Emergency Medicine, Anaesthetics and Physicians all stipulate varying degrees of competency which doctors must demonstrate to complete postgraduate clinical training. (1-3) Diagnostic imaging by treating clinicians may allow rapid detection of serious pathology, leading to timely treatment initiation.

Aims

Assess prevalence of ultrasound training amongst acute care clinicians

Survey uptake of training courses and accreditation

Assess impact of training methods on ultrasound use

Methods

An electronic data capture tool was created using Google Forms[®] (4) – cloud-based questionnaire-building software. Questions were co-authored by all authors of this abstract, and refined across multiple iterations until wording was clear and unambiguous. Invitations to participate were distributed to clinicians of varying grades from foundation trainees to consultants working in critical care, emergency medicine, and acute medicine across 5 hospitals in the West Midlands, UK. Results were compiled into a database for analysis. Ethical review not required (Heath Research Authority decision aid tool). (5)

Results

74 Responders
78% Ultrasound Users

57% of ultrasound using practitioners who have attended one of the 5 most popular courses have or expect to have attained accreditation within 12 months.

Ultrasound based clinical decisions by...

55%

Of these practitioners...

“Lack of established practice and training of ultrasound within the workplace”

45%

“Finding it difficult to find a mentor or supervisor to oversee ultrasound training”

60%

“No quality control system”

78%

“It should become part of training just like using a Stethoscope.”

“Beneficial for SHOs to have training especially for difficult cannulations”

“It needs to be sorted out with a proper scheme; proper image recording; enough mentors; methods to maintain skills.”

Discussion

Ultrasound use is increasingly prevalent amongst non radiologists both for diagnostic and interventional purposes. Our data show many ultrasound practitioners who have not been formally trained nonetheless make clinical decisions based on their findings. Good clinical governance requires supervision of all non-experts, our data suggest such supervision is lacking.

Demand for ultrasound training is high, but a reported lack of skilled trainers, equipment and unfamiliarity with the medium due to a lack of basic training at an undergraduate and foundation level may be preventing qualification of practitioners. We plan further work to assess barriers to formal training and accreditation, and to ensure that all clinical decisions are based on images attained or reviewed by competent practitioners.

Conclusion

Point of care ultrasound training is increasingly prevalent. Formal training is not always a prerequisite to its use; therefore more robust governance should be developed.

References

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