

Point-of-care ultrasound – an undergraduate clinical skill? Developing a course to enhance ultrasound experience within the undergraduate medical curriculum

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Background

- Ultrasound is a skill that can **enhance medical students' anatomical, physiological and clinical knowledge**¹.
- UK medical school curricula **vary in levels of ultrasound teaching**².
- We piloted an optional point-of-care ultrasound (POCUS) course for year 4 & 5 **medical students** at University of Cambridge, School of Clinical Medicine.

Methods

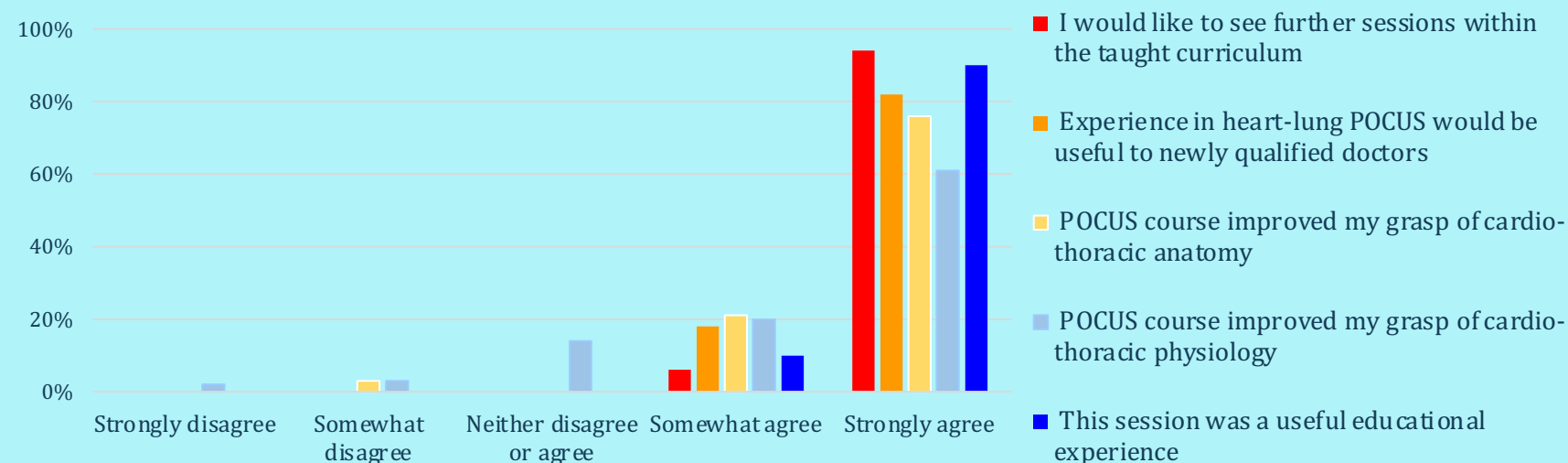
- **71 students** attended one of six **one-hour sessions** covering cardiac and pulmonary POCUS.
- Students rotated around different stations in **small groups** of 3-5, covering **hands-on scanning**, examples of **pathology** and **clinical correlation**.
- **51/71 (71.8%)** student completed the anonymous post-session feedback form.

Conclusions and Learning Points

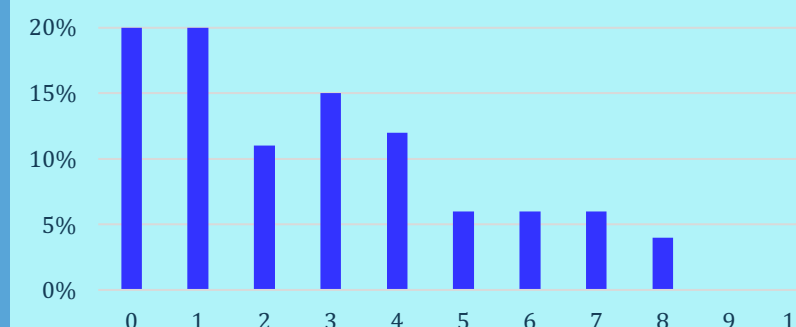
- This pilot programme demonstrated **proof of concept** for the delivery of a **high-throughput introduction** to cardiac and pulmonary POCUS.
- The cohort sampled reported **heterogenous degrees of exposure** to point-of-care cardio-respiratory ultrasound.
- The session was viewed as a **useful educational experience** and rated as beneficial in **improving understanding** of related **anatomy** and **physiology**.
- Students believe experience in cardio-respiratory ultrasound would be **beneficial to their future roles as newly qualified doctors** and desire to see it **incorporated into the formal curriculum**.
- Given this appreciation of relevance, it is anticipated that where teaching is offered on cardio-respiratory ultrasound, **students will be highly motivated to engage**.

Results

- 78% (40/51) of participants rated their prior exposure to ultrasound within clinical medicine as limited (0 to 4/10).
- **All participants agreed that the session was a useful educational experience** (100%, 51/51).
- 98% (50/51) agreed that the session **improved their understanding of cardiothoracic anatomy** and 80.4% (41/51) in agreed that it **improved their understanding of cardiorespiratory physiology**.
- All participants agreed with the statement that **heart-lung POCUS would be useful to newly qualified doctors** and would like **further education within the formal undergraduate curriculum** (100%, 51/51).



Previous exposure to POCUS in clinical practice on a 0 to 10 scale (0= no exposure and 10= ample exposure)



References

- ¹ Kondrashova, T., Kondrashov, P., 2018. Integration of Ultrasonography into the Undergraduate Medical Curriculum: Seven Years of Experience. *Mo. Med.* 115, 38–43
² Flanagan, B., Sweeney, E., 2022. The State of Ultrasound Teaching In UK Medical Schools: A Systematic Review. [Poster] British Medical Ultrasound Society Conference 2022.

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