

RCoA Research, Education & Travel Grants 2016

Award: The Ernest Leach Research Fund

Applicant: Dr Nicola Jones, Papworth Hospital NHS Foundation Trust

Project Title: *Focused Ultrasound: Barriers and Enabling Factors to Successful Completion of Training and Meaningful Changes in Practice*

Project Description:

Appropriateness and importance at local, national and international level

Focused ultrasound is increasingly regarded as an essential skill for practitioners in acute specialties such as anaesthesia, acute, emergency and intensive care medicine [1], offering rapid bed side detection of potentially reversible yet life threatening conditions such as pneumothorax, pleural and pericardial collections and free intra-peritoneal fluid.

Numerous protocols exist, including Focused Assessment with Sonography in Trauma (FAST), Focused Echo in Emergency life Support (FEEL), Focused Intensive Care Echo (FICE), Core Ultrasound Intensive Care (CUSIC) and training usually comprises a combination of e-learning, hands on course, mentored practice, logbook collection and triggered assessment.

However a significant proportion of candidates enrolling in such programs fail to complete training or incorporate newly learned skills into practice [2]; this has major relevance to individuals, spending time and money on training, institutions investing in ultrasound equipment, and Colleges and Faculties seeking to integrate focused ultrasound into specialist curricula.

Little is known about the factors that act as barriers or enablers to successful training in FICE; we aim to (i) identify and conceptualise these factors (ii) develop and pilot questionnaire to assess effective implementation at scale in order to inform future work to design more effective training and reconfigure the workplace to support widespread use of focused ultrasound. This work may have wider relevance to continuous professional development and implementing change in practice.

Methodology

The study will follow a sequential mixed methods design. In Stage 1, candidates enrolled in focused echo training at Papworth, one of the largest FICE training centres in the UK, will be invited to participate in telephone interviews and then selected to attend a focus group to identify and explore barriers and enabling factors to successful completion of training and meaningful change in practice.

Of those candidates that consent, 20 will be randomly selected to participate in an individual 20 minute semi-structured telephone interview, conducted by an

experienced investigator. The interview schedules have already been developed and piloted and are ready to be implemented immediately. After each 4 interviews data will be reviewed and learning integrated into subsequent interviews so as to extend emerging understanding of barriers and enabling factors.

10 candidates will then be selected to attend one of two 1 hour long focus groups facilitated by an experienced investigator. Candidates will be selected on basis of the findings from the individual telephone interviews so as to represent a range of experiences in completing training and implementing skills in practice, preferably in diverse workplace settings.

Interviews and focus groups will be transcribed and data examined thematically, with the help of qualitative analysis software, to explore identified barriers and supporting factors. Based on analysis of interview data a questionnaire will be developed and piloted so as to be used at scale in a future study. Data generation and analysis will be supported by an expert investigator.

Timescale and justification of funding

Funding will be required for skills of expert investigator, transcription services and to reimburse travel costs of candidates.

Collaborators

Dr A Rubino, Lead of Papworth Peri-operative Echo Group, Dr R Hofmann, Faculty of Education, University of Cambridge.

References

[1] Via et al. J Am Soc Echocardiogr. 2014 Jul; 27(7):683

[2] Charron et al European Journal of Emergency Medicine. 2015 Feb; 22: 17-22