The role of a logbook in demonstrating competence in pre-procedural ultrasound for central neuraxial block

M Sinnott[1], K Hoyland[1], N Nguyen-Lu[2]

1. Obstetric anaesthesia fellows, 2. Consultant, Guy's and St Thomas' NHS Foundation Trust

- The benefits of performing pre-procedural ultrasound (US) prior to central neuraxial blockade (CNB) are well established[1].
- No established accreditation pathway exists to ensure optimal training, image acquisition and reproducibility in different US guided regional anaesthetic blocks.
- The Lifelong Learning Platform's simple 'yes/ no' checkbox for whether US was used for a regional block is insufficient to allow trainees to demonstrate competence, and for trainers to assess progress.
- This is a problem for trainees who rotate frequently, which has been further exacerbated by the time pressures introduced by the Covid-19 pandemic.
- We aimed to develop a detailed logbook to address this issue.

METHODS

- Brief literature review of the best methods of achieving competence in US-guided RA techniques techniques.
- Creation of a checklist-style logbook to separate the scan into its component parts
- Prefaced with both US images and schematics of the ideal paramedian sagittal oblique and transverse views to act as an aide-memoir.
- Made available to trainees after attendance at a targeted teaching session

RESULTS

An example page from the logbook is displayed in figure 1. Feedback from the training session was broadly positive and 91% of candidates either 'agreed' or 'strongly agreed' that they would start using the technique in routine clinical practice.

FIGURE 1: Example logbook entry page

Scan No	
Scan Indication	

Paramedian sagittal oblique plane				
Sacrum	Interspaces S1/L5 – L3/4	Saw-tooth sign (laminae)	Equal sign	Depth to epidural space

Transverse plane plane				
Spinous processes	Flying bat sign	Equals sign	Depth to epidural space	Needle trajectory

Neuraxial block performed?	
No of attempts	

Comments:

DISCUSSION

- Checklist-style logbook appeared the optimal format:
  - Sets structured learning outcomes,
  - Promotes continued thoroughness,
  - Provides opportunities for further formative feedback[2].
- We hope it will facilitate standardised continued learning and development.
- While there is no agreed minimum number of scans required for 'competence' in this procedure, thorough documentation of attempts is crucial to demonstrate progression and competence.
- Future work will focus on the sustainability of this intervention.
- It is our opinion that this format could easily be extended to other regional anaesthetic blocks.

REFERENCES

1. Sadeghi A, Patel R, Carvalho JCA. Ultrasound-facilitated neuraxial anaesthesia in obstetrics. *BJA Education* 2021; 21(10): 369 – 375
2. Chaun A, Wan AS, Royse CF, Forrest K. Competency-based assessment tools for regional anaesthesia: a narrative review. *Br J Anaesth.* 2018; 120(2): 264 – 273

NHS
Guy's and St Thomas'
NHS Foundation Trust