

# Implementation of flashcards to aid ROTEM® result interpretation

Gregory Duncan, Andrew Martin

Department of Anaesthesia, Aintree University Hospital, University Hospitals of Liverpool Group, Liverpool

## Background

- The use of thromboelastometry has been proven to improve correction of clotting deficits in patients with major bleeding (1)
- Aintree University Hospital uses point-of-care (POC) rotational thromboelastometry (ROTEM®) to guide correction of clotting deficits in acutely bleeding patients
- Interpretation of ROTEM results can be challenging for Clinicians, particularly when involved in acute resuscitation scenarios

## Aims

- To improve confidence in ROTEM® interpretation for clinicians working in Anaesthesia and Intensive Care

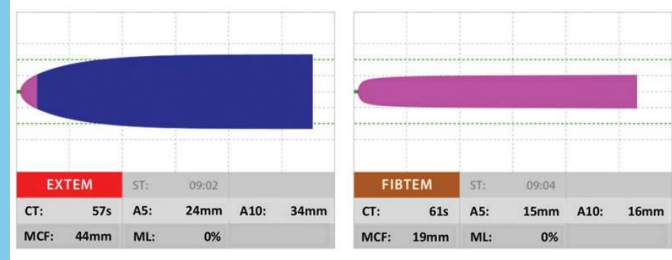
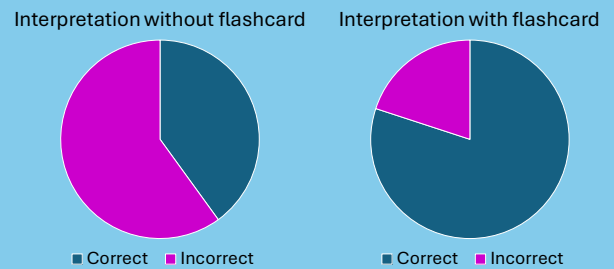


Fig 1 (above): Example ROTEM® result (2)

Fig 2: interpretation of Fig 1 by core trainees with and without flashcard



## Methods

- Flashcards with the trust guide to ROTEM® interpretation were printed and distributed to members of staff working in Emergency Theatres and Intensive Care
- Staff were asked via survey on their confidence in interpretation of ROTEM® results (with and without guidance) before and after use of the flashcards

## Results

- Mean self-reported confidence scores (1-5) in ROTEM interpretation remained consistent without use of the ROTEM® flashcard before and after implementation (1.73 vs 1.70, Fig 1)
- Mean self-reported confidence in interpretation improved from before to after use of the flashcard (4.09 vs 4.40, Fig 1)
- Qualitative feedback:
  - “..what was a daunting topic is now much less so”
  - “Brilliant idea, great project”

## Discussion

- Clinicians find interpretation of thromboelastometry challenging without reference
- The use a guide to interpret results improves confidence in interpretation and guiding transfusion in major haemorrhage
- Use of a flashcard provides a simple and effective way of accessing a guide, particularly in acute resuscitation scenarios

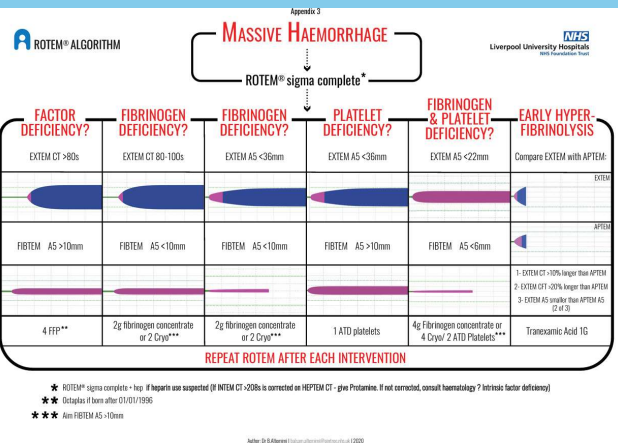
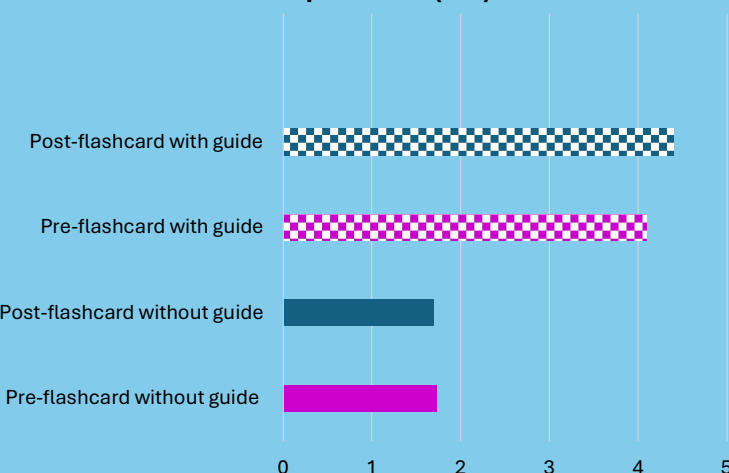


Fig 3: LUHG trust guide to ROTEM® interpretation

Fig 4: mean self-reported confidence scores in ROTEM® interpretation  
Mean self-reported confidence in ROTEM® interpretation (1-5)



### References

- Wikkelso A, Wetterslev J, Møller AM, Afshari A. Thromboelastography (TEG) or thromboelastometry (ROTEM) to monitor haemostatic treatment versus usual care in adults or children with bleeding. Cochrane Database of Systematic Reviews 2016, Issue 8.
- Görlinger K, Pérez-Ferrer A, Dirkmann D, Saner F, Maegele M, Calatayud AAP, Kim TY. The role of evidence-based algorithms for rotational thromboelastometry-guided bleeding management. Korean J Anesthesiol. 2019 Aug;72(4):297-322.