



Sonography
High
Intensity
Focused
Training

SHIFT

Sonography High Intensity
Foundation Training

What are the current challenges?

- Current challenges faced in clinical practice (COVID backlog, recruitment and retention)
- There is a need to do something different – relieve pressure
- Discussion around early skills development has been ongoing for years
- Previous ideas do not work

There is a critical need to challenge the way training is conducted in the early stages of learning ultrasound technique

To support training across specialties and at scale, all early-stage skills development needs to be moved out of the clinical department and achievable within a short timescale.

SHIFT

- Removing early ultrasound skills development from the clinical environment
- 1 week high intensity short course
- Allows focus on skills development in a week of immersion in ultrasound
- To enable grounded theory base knowledge and skills development

Enables trainees to enter clinical placement with minimal disruption to service delivery and reduced impact on supervising staff.



SHIFT

Core learning

Scan orientation

Transducer
movement

Basic scan
technique

Normal US
abdominal
anatomy

Equipment
controls

Optimised
images

Clinical decision
making

Governance

Safety

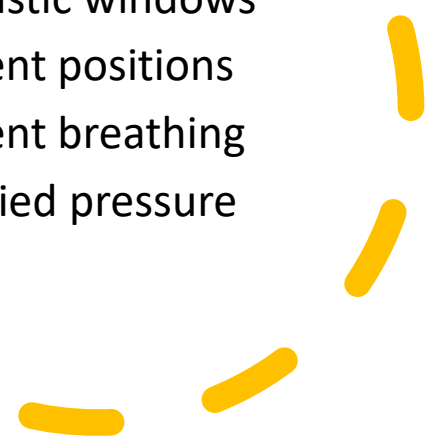
Scan orientation

- Image orientation
- Transducer markers
- Image conventions
- Image landmarks

Transducer movement

- Transducer handling
- Sliding
- Tilting
- Rotation

Basic scan technique

- Scan planes
 - Acoustic windows
 - Patient positions
 - Patient breathing
 - Applied pressure
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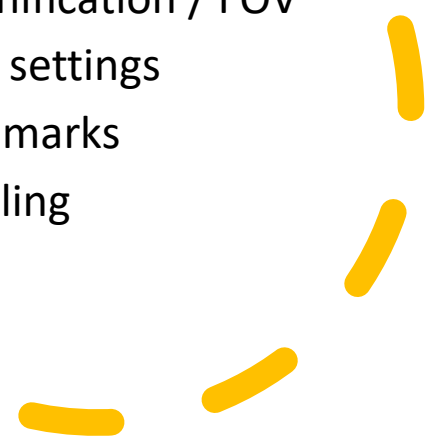
Normal US abdominal anatomy

- Kidneys
- Bladder
- Liver
- Gallbladder
- Spleen
- Aorta / IVC
- Vascular landmarks

Equipment controls

- Pre-sets
- Depth
- Gain / TGC
- Focus
- Calipers

Optimised images

- Image quality
 - Magnification / FOV
 - Gain settings
 - Landmarks
 - Labeling
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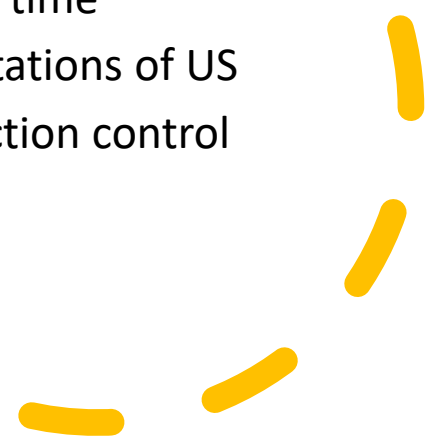
Clinical decision making

- Imaging objectives
- Rule-in / rule-out
- Immediate / differed dx
- Protocols
- Needs of referrers
- Care pathways

Governance

- Supervision
- Vetting / justification
- Image capture / PACS
- Logging scans
- Report writing
- Audit

Safety

- Ergonomics
 - Scan time
 - Limitations of US
 - Infection control
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Practical activities

Simulation - abdo haptic / EVE

Normal volunteer scanning

Test object / 'found object' scanning

Live demo

Patient simulations

Final skills assessment

Active learning

Classroom activities

'Micro-seminars' (30 mins max)

Daily formative assessment / 'quiz'

Case presentations

Report writing

Image review

Student activities

Pre-reading

Scan trainer tutorials

Technique video review

Workbook (to support learning)



What are the outcomes?

- Positive experience
- Confident equipment use
- Development of early skills and understanding of image acquisition

- Some trainees noted that they had an overconfidence in their skills prior to joining the SHIFT programme but realised the need to 'look' at the anatomy
- There was a move from copying behaviours
- Trainees recognised that no two patients will be the same – adaptive techniques, finding windows

“you have to do this to learn it!”

What next?

- Formal research project – findings hopefully spring 23
- Whilst this week was piloted with Radiology trainees, the intention is that this could be used for all new trainees (sonographer, acute medicine, Obstetric etc)



However..

- No value in SHIFT if this is not followed by adequate scanning sessions on regular basis – 1 trainee reports they have scanned 8 patients since SHIFT
- Needs to be ‘buy in’ from clinical teams to support this process and avoid disruption to clinical service at early stages of training
- Clinical backlogs – need to challenge the rhetoric that this takes priority over training. Without training, service will crumble



Funding!

Resource intensive (faculty, normal volunteers, practical scanning)

- Ideally need 2:1 ratio (so minimum 5 faculty each day)
- Absolute max 20 trainees per training week
- Facilities

Needs to be collective commitment to fund this longterm but also clinical commitment to release new trainees to do this before entering clinical setting

Any
questions?

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