

“An Afternoon of Regional Anaesthesia”

A Peer to Peer, Curriculum Mapped Regional Plan A Block Course incorporating Live Needling and Scanning

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Introduction

The RCOA 2021 Curriculum¹ for Regional Anaesthesia has led to increased need for provision of Plan A Block teaching to Stage 1, 2 and 3 Resident Doctors.

Barriers to providing a single course across training stages include:

- Managing the differing curriculum requirements of participants and differing individual resident exposure to regional anaesthesia
- Providing opportunity for live scanning, needling and injecting without patient risk, particularly for the less experienced.
- Availability of Equipment and Consultant Faculty

The Benefits of providing a single course across training stages are:

- Peer learning environment: Those with greater expertise contribute to teaching more junior colleagues.
- ‘Expert’ Peers gain feedback and experience on their teaching style and delivery
- Maximised efficiency of allocated teaching time, with minimal impact on service provision

We present a Pilot “Regional Anaesthesia Afternoon” which ran at Kingston Hospital in South West London. The trust benefits from a wide variety of regional anaesthesia list provision and as a result, serves as a placement for SIA and Fellows in Regional Anaesthesia. The course incorporated pedagogical theory; utilising learners’ zone of proximal development alongside a peer learning environment of more senior residents. The course was mapped to the New RCoA Curriculum and aimed to provide practical, hands-on teaching to residents at **all** training stages and SAS Anaesthetists, free of charge. Participants were provided with live scanning models alongside a tofu and meat scanning and injecting station to practice needling skills in real time with supervision. The course was advertised to internal and external participants, creating an opportunity to showcase regional anaesthesia and the SIA within our hospital.

Method

Course Principles

Peer to Peer Learning Environment: Enabling a flat hierarchy and psychological safety

Curriculum Mapped: Participants divided into curriculum stage; station focus depended on curriculum need of group.

Practical: opportunity for live scanning, needling and injecting

High faculty:participant ratio: ‘hands off’ faculty (dependent on group ability) to maximise participant scanning

Planning

The course ran during pre-existing weekly 4 hr protected teaching time.

Scanning and Needling Equipment was provided by GE and Pajunk, respectively.

Models were obtained via the Trust Volunteer Network.

The course was advertised to local and external participants, free of charge.

The faculty comprised Regional SIA Fellows and Senior Trainee Residents.

Communication ahead of the day was via Whatsapp group (enabling rapid feedback, opinion polls)

A Pre-Course Survey was conducted using survey monkey to ascertain baseline confidence scores

Course Format

Welcome and Introduction

- Set Psychological Safety: address hopes and concerns

- Showcase Regional SIA at Kingston Hospital

Participants divided into ‘Curriculum Stage’

4 ‘Plan A Block’ Live Scanning Stations:

Visual sonoanatomy aids at each station

RCOA Curriculum Capabilities print out for Regional Anaesthesia for Stage 1/2/3

For Stage 3 experienced participants: opportunity to practice Plan B blocks

1 Live Needling Drop In Station:

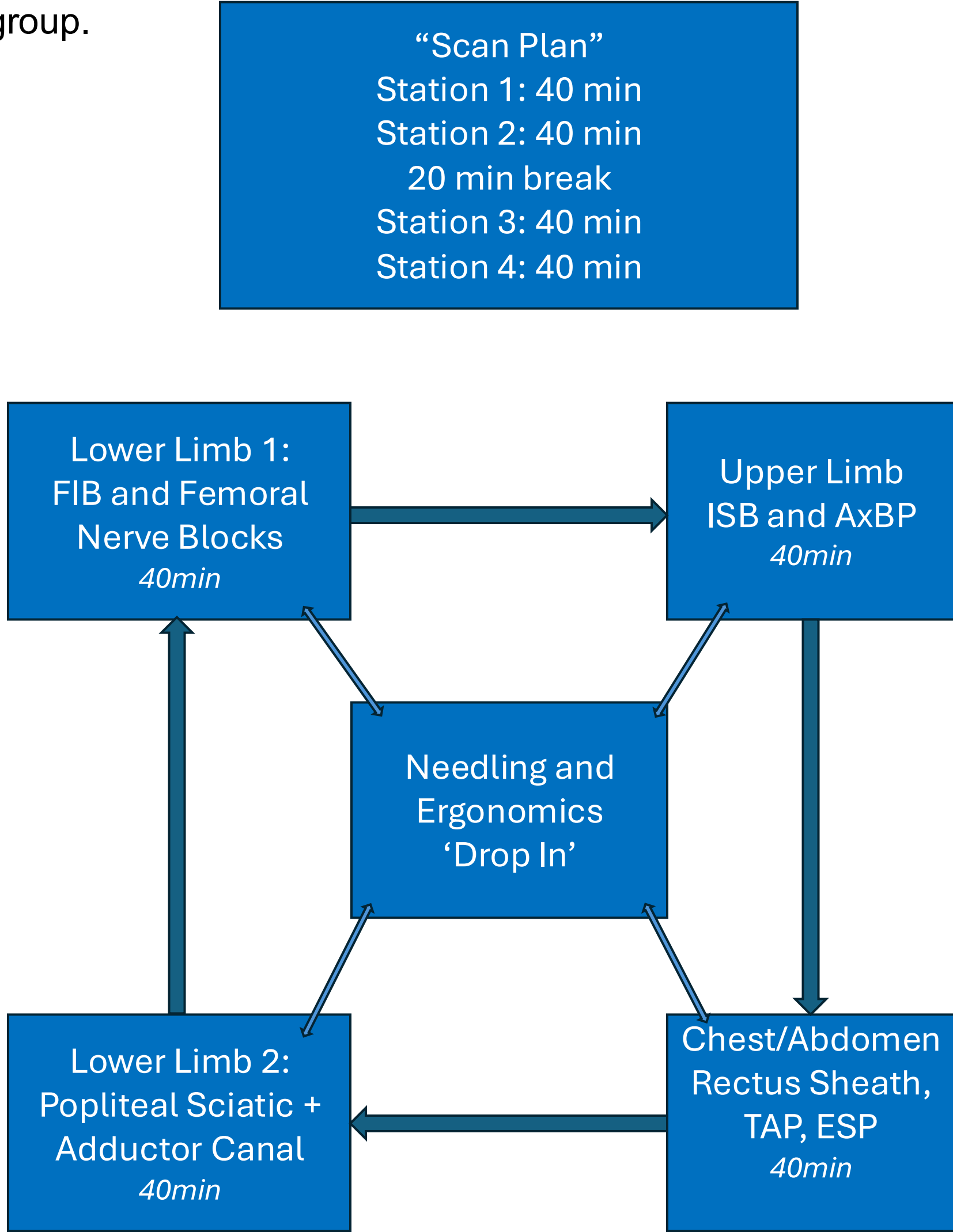
For participants to attend when completed scanning session

Ergonomics teaching

Vacuum sealed Tofu Model/ Lamb Shoulder / Beef Short Rib

to enable needling and injection with direct faculty feedback

Plan A Lower Limb: Curriculum Mapping	
NB there is a separate FIB Station	
Stage 1 Curriculum	
Key capability F	
F	Performs ultrasound-guided femoral or fascia iliaca blocks independently
Regional Techniques	Supervision level for stage 1
Ultrasound guided lower limb block including femoral nerve block and fascia iliaca block	2a
Stage 2 Curriculum – WIDER RANGE + MORE DISTANT SUPERVISION	
Regional Techniques	Supervision level for stage 2
Ultrasound guided lower limb block including femoral nerve block and fascia iliaca block	3
Stage 3 Curriculum - INDEPENDENT	
Key capability A	
A	Takes regional anaesthesia techniques to patients undergoing day surgery
Key capability E	
E	Performs ultrasound-guided nerve blocks for lower limb surgery independently
Regional Techniques	Supervision level for stage 3
Ultrasound guided lower limb block including femoral nerve block and fascia iliaca block	4



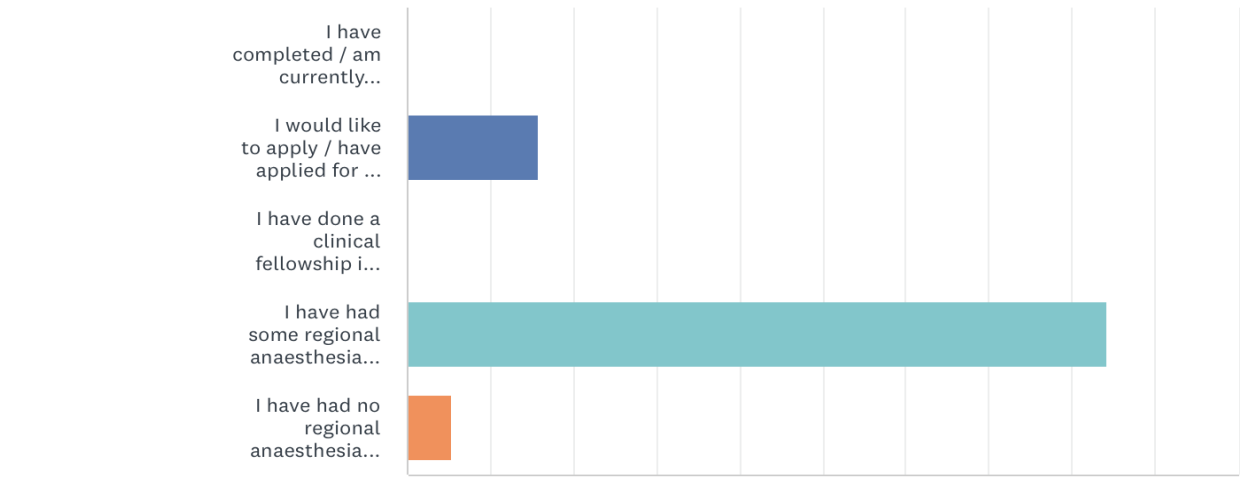
Results

The pilot course ran in November 2024. 12 internal and 8 external participants attended. The majority of participants were Stage 1 and 2 anaesthetists alongside senior SAS doctors. Participants reported having ‘some’ regional anaesthesia experience or an interest in completing a Regional SIA block. Pre-course concerns included ‘comparison’ against other peers and lack of ‘knowledge’. Following the course, there was improved confidence across all Plan A Blocks with a rightward shift demonstrated in the post course feedback. The needling station proved highly popular with participants also providing positive feedback on time available for scanning and hands on practice. Suggestions for further improvements included further information on consent for regional anaesthesia and focus on anatomy theory. Constructive individualised feedback was also provided by participants for the non-consultant faculty.

Pre Course Feedback: Stage of Training, Experience in Regional Anaesthesia and Confidence scores for Plan A Blocks

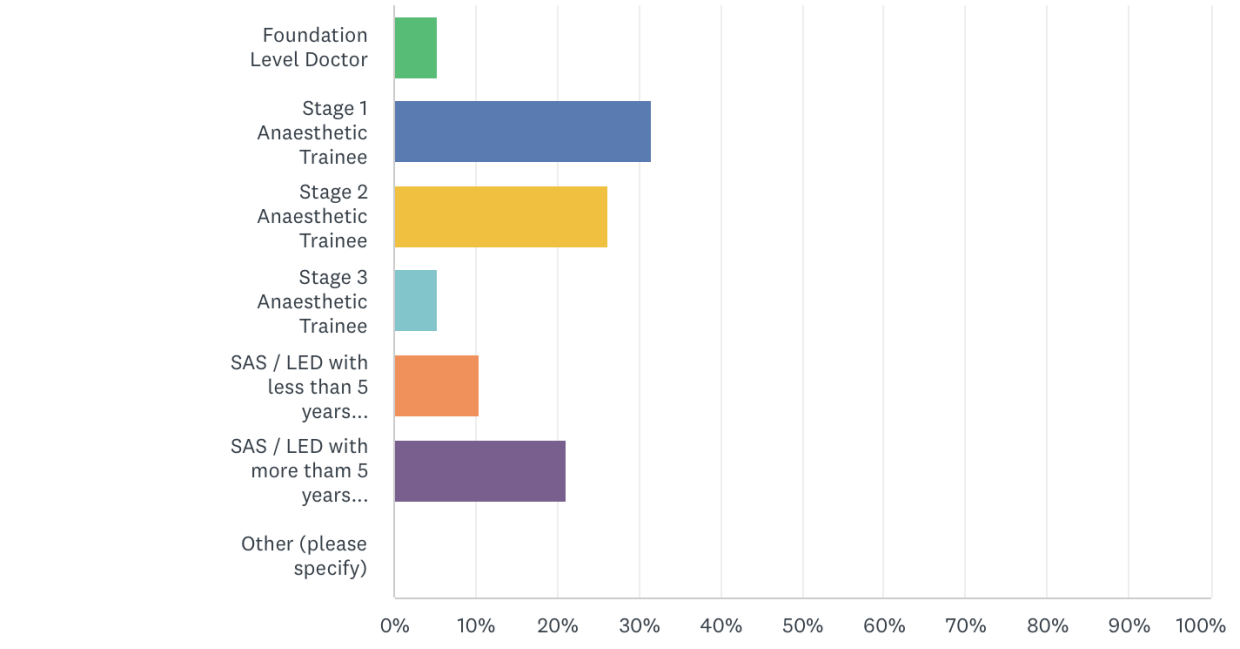
Regarding your experience in Regional Anaesthesia

Answered: 19 Skipped: 0

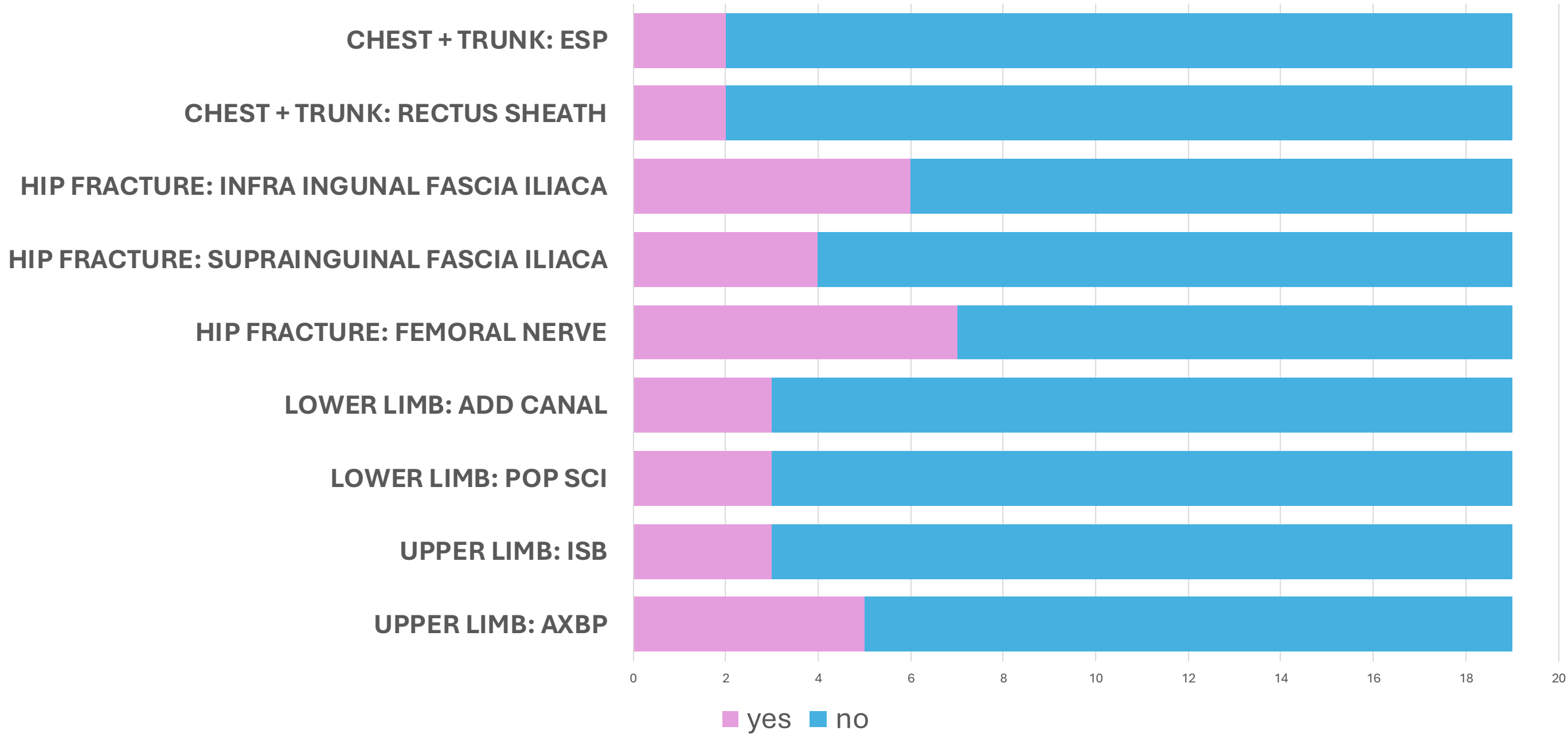


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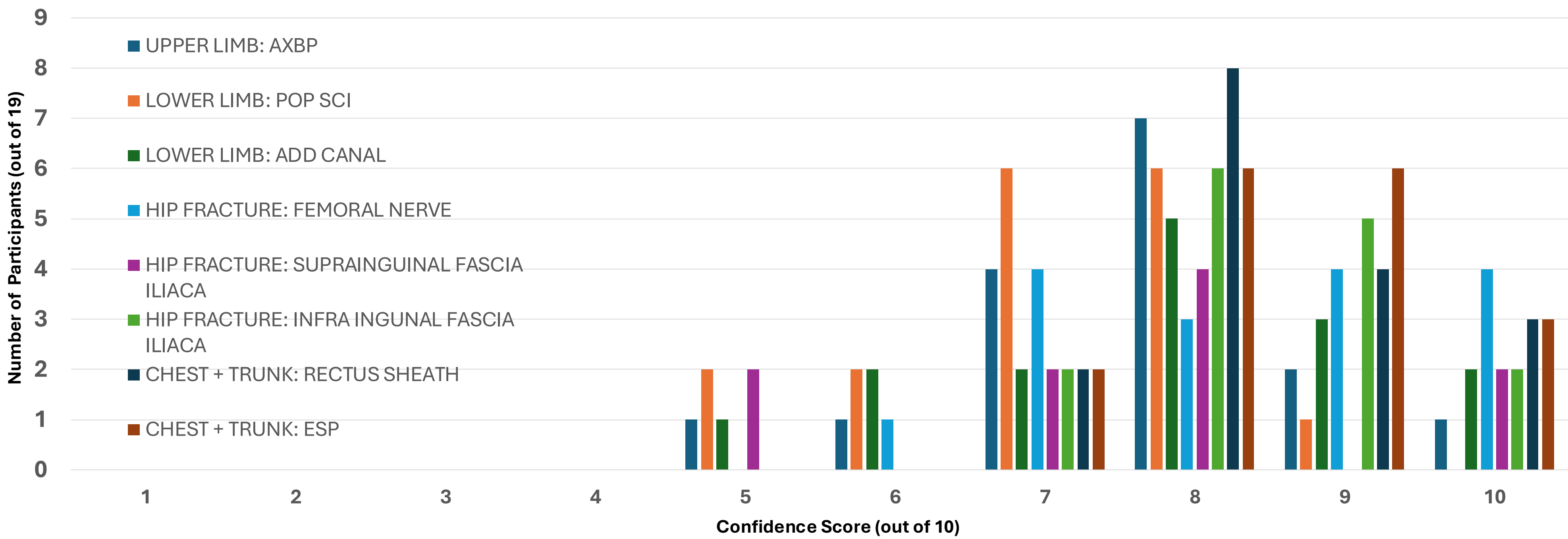
Answered: 19 Skipped: 0



“I Feel Confident in the Following Plan A Blocks”



Post Course Confidence Scores by Type of Block



Educational Theory Underpinning Course

Lev Vygotsky and The Zone of Proximal Development (ZPD)

The ZPD highlights the gap between what a learner can do on their own and what they can do with the assistance of a ‘more knowledgeable other’.

Scaffolding

Scaffolding helps to bridge the above gap by providing the necessary support within the ZPD, enabling learners to achieve tasks they would otherwise find challenging.

Jerome Bruner and Scaffolding

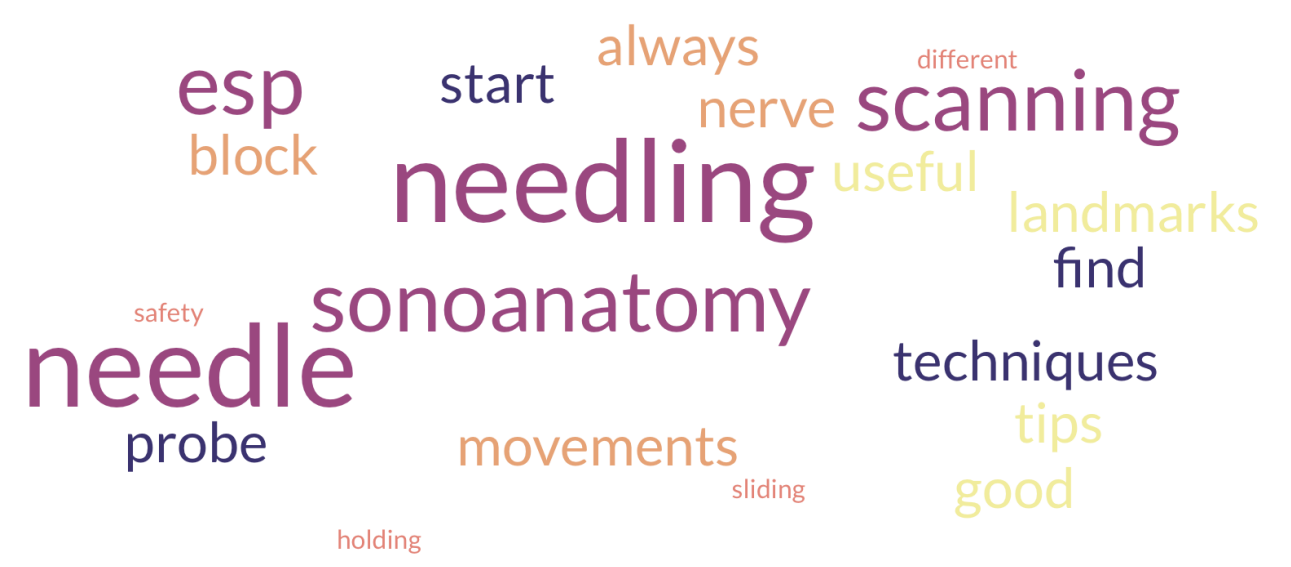
Bruner applied Vygotsky’s ZPD to educational settings, emphasising that learning occurs through social interaction and the guidance of more knowledgeable others.

Effective learning occurs when the learner actively constructs their own knowledge, supported by temporary scaffolding which is gradually removed as the learner becomes more independent.

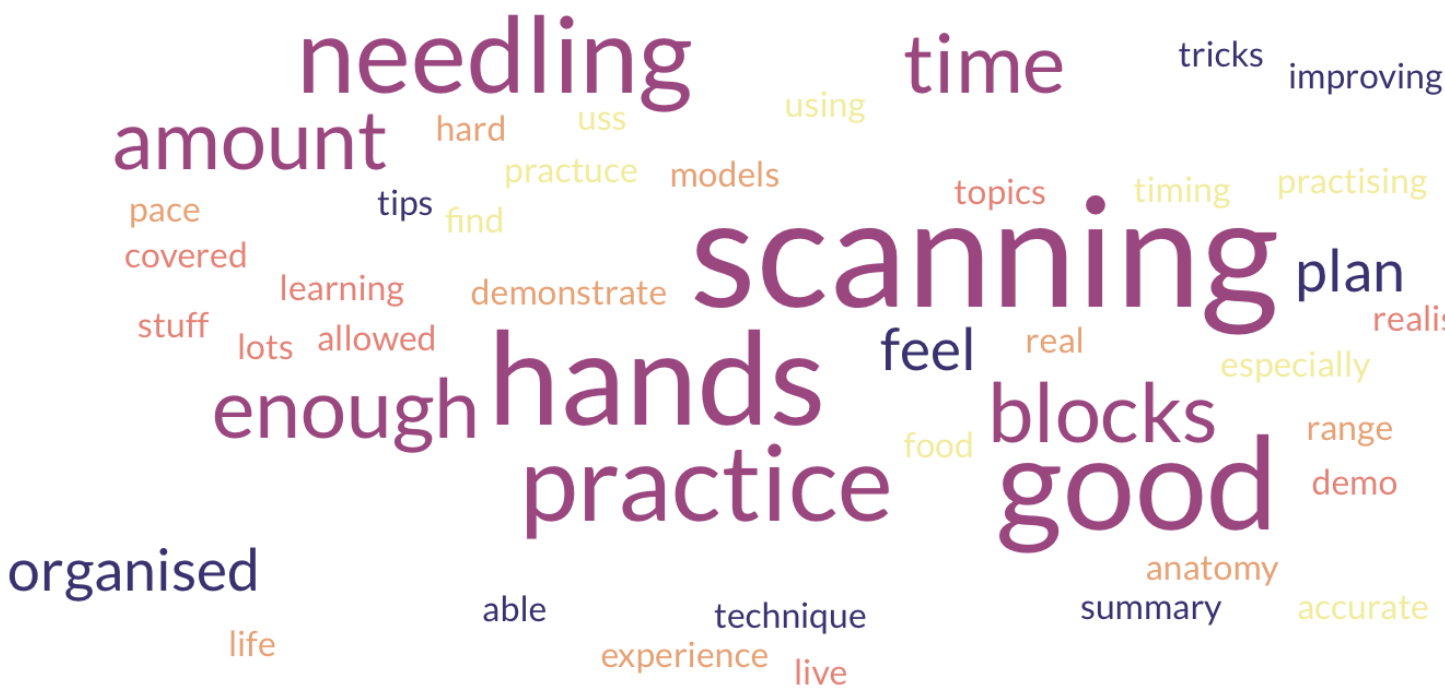
Different modalities cater to different learning styles e.g. Active learning (real time scanning), Visual Learning (sonoanatomy visual aids) and Social learning (opportunity to talk to peers).

Post Course Feedback Word Clouds

Give 3 Take home messages following the course



What was most enjoyable about the course?



Discussion

This pilot course was of benefit to both faculty and participants, with a rightward shift in confidence scores for the latter, and faculty specific feedback provided to the former. The participants learned from the ‘more knowledgeable other’ (non consultant faculty), demonstrating that this does not necessarily have to be a complete expert / consultant to achieve positive outcomes.

Participants were given adequate time to scan models and practice needling and injecting skills, forming the scaffolding for regional anaesthesia. Future directions for this course include:

- Consent for Regional Anaesthesia Session
- Live Sonoanatomy demonstrations at start of day
- Dedicated Needling / Injecting / Ergonomics Station in place of a drop in session

The Peer to Peer format may provide a method for addressing the new curriculum requirements for regional anaesthesia.

References

1. 2021 Curriculum for a CCT in Anaesthetics. RCOA. V1.3, August 2021. Available at <https://www.rcoa.ac.uk/sites/default/files/documents/2024-04/2021%20Curriculum%20for%20a%20CCT%20in%20Anaesthetics%20v1.3.pdf>
2. Bruner’s Theory of Cognitive Development. Available at <https://pdfs.semanticscholar.org/1ac4/04016fba7175ba8a268537d92b627d747f70.pdf>