**SUPPLEMENTARY MATERIAL**

**Interview topic guide**

Preliminary information and checks:

- introductions and confirmation of interviewee's name
- recap purpose of the interview, optional nature, able to withdraw data
- confirm still willing to proceed as per consent form, timeframe
- confirm consents to be recorded

Opening questions:

- role/s and experience of the interviewee
- current and previous place/s of work, what is it like?
- local anaesthesia providers: who, how many, what training?
- what kind of experience / knowledge do they have about the wider situation in their country?

Training NPAPs:

- personal experience (NPAPs) or observation/involvement (others)
- what do they recall about training?
  - structure of their training
  - memorable events / experiences
  - content of training

The working practice of NPAs (with a view to then discussing the transition between training and working)

- either personal experience (NPAPs) or working with them (others)
- caseload and nature
- work outside the OR
- factors improving safety and quality of care, and barriers
- job satisfaction / dissatisfaction and reasons

Transition between training and working:

- recall the first day of work (if NPA)
- how well prepared were they? Did they have to adjust?
- what do they wish they knew then, that they know now?
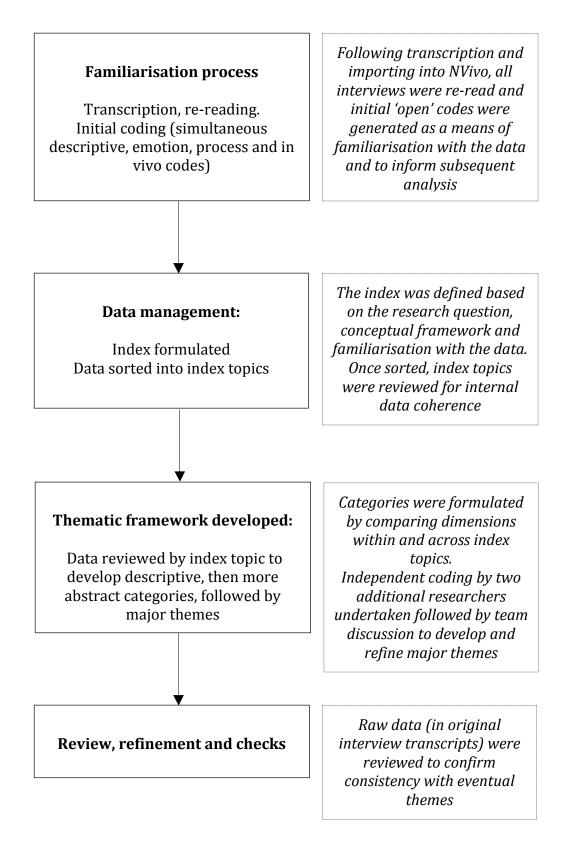- what is it like working with a newly qualified NPA (for non-NPAs)?

Physician and non-physician anaesthetists (if not already covered)

- Experience working together during NPA training?
- Experience working together after training?

Aspirations:

- How would you change NPA training and why?

**Coding/analytic strategy**

| | |
|---|---|
| **Familiarisation process**<br><br>Transcription, re-reading. Initial coding (simultaneous descriptive, emotion, process and in vivo codes) | *Following transcription and importing into NVivo, all interviews were re-read and initial 'open' codes were generated as a means of familiarisation with the data and to inform subsequent analysis* |
| ↓ | |
| **Data management:**<br><br>Index formulated<br>Data sorted into index topics | *The index was defined based on the research question, conceptual framework and familiarisation with the data. Once sorted, index topics were reviewed for internal data coherence* |
| ↓ | |
| **Thematic framework developed:**<br><br>Data reviewed by index topic to develop descriptive, then more abstract categories, followed by major themes | *Categories were formulated by comparing dimensions within and across index topics.*<br>*Independent coding by two additional researchers undertaken followed by team discussion to develop and refine major themes* |
| ↓ | |
| **Review, refinement and checks** | *Raw data (in original interview transcripts) were reviewed to confirm consistency with eventual themes* |

The following tables show the index topics used for early data management and the distribution of coder:source.

Table 1: Index created for data management

| Index topic | Index subtopic |
|---|---|
| 1. How current training is delivered | 1.1 Getting into training<br>1.2 Training structures<br>1.3 Experiences in training<br>1.4 Trainers |
| 2. Transitioning to practice | |
| 3. Working after training | 3.1 Doing the job<br>3.2 Referral and supervision<br>3.3 CME and career development |
| 4. Relationships across cadres | 4.1 NPAs and PAs<br>4.2 Surgeons and NPAs<br>4.3 Other NPA cadres |
| 5. Aspirations | |
| 6. International interactions | 6.1 International involvement in training<br>6.2 Countries as comparators<br>6.3 Other |

Table 2: Coding personnel

| Coder | Transcripts coded |
|---|---|
| LB | SL1-2, S2, U1-5 |
| FB | SL1-3, S1-4, S6 |
| HE | SL1-3, S1-6, U1-6 |
| SKI | SL3, S1, S5, U4-6 |
| VT | S3-6, U1-3, U6 |

**Recruitment flow and participant characteristics**

Table 3: Recruitment by country

|                                 | Sierra Leone   | Somaliland | Uganda        |
| ------------------------------- | -------------- | ---------- | ------------- |
| Approached                      | 9  (3N, 2P, 4S) | 8 (7N, 1S) | 8 (5N, 2P, 1S) |
| Declined                        | 1 (1S)         | 0          | 1 (1N)        |
| Did not respond                 | 4 (2N, 1P, 1S) | 1 (1N)     | 1 (1N)        |
| Accepted but unable to interview | 1 (1S)        | 1 (1N)     | 0             |
| Accepted and interviewed        | 3 (1N, 1P, 1S) | 6 (5N, 1S) | 6 (3N, 2P, 1S) |

*N: non-physician anaesthetist; P: physician anaesthetist; S: surgeon*

Table 4: Gender of participants

|        | Sierra Leone | Somaliland | Uganda |
| ------ | ------------ | ---------- | ------ |
| Male   | 2            | 2          | 4      |
| Female | 1            | 4          | 2      |

One participant was previously known to the interviewer as a professional colleague. Seven were known to current or previous colleagues of the interviewer (but had no prior direct relationship with the interviewer). Seven were recruited through two or more intermediaries.