Joint OAA/RCoA Obstetric Anaesthetic Training Survey 2010

1. Introduction

In 2009, Jigajinni et al [1] conducted a survey of trainees to explore how prepared trainees felt they were to start obstetrics on call. The results were worrying, with 28% reporting they did not feel prepared to be on call. Of more concern was that 26% reported they had had no formal assessment of their competence. It has been recognised for some time that trainees have difficulty getting experience in providing general anaesthesia for caesarean sections but it was disappointing that only 11% reported they had had any training using simulation.

In response, the Royal College of Anaesthetists (RCoA) has collaborated with the Obstetric Anaesthetists' Association (OAA) to survey lead obstetric anaesthetists throughout the country to gain information about the variation in training programmes, identify the challenges and to audit compliance with the Initial Assessment of Competence of Obstetric Anaesthesia (IACOA) and knowledge of the new curriculum.

2. Results

The survey was sent to 218 lead obstetric anaesthetists. Seven were returned from rejected email addresses, hence 211 were received.

2.1 Response Rate

The survey response rate was 55.9% (118/211), which was disappointing.

2.2 Demography

The survey covered a wide spectrum of obstetric units, which were staffed by a variety of grades of anaesthetist.

Unit size:

No. of deliveries per year	< 2000	2000 - 3000	3000 - 4000	4000 - 5000	> 5000
%	11.6%	21.5%	27.3%	16.5%	23.1%

Grade of anaesthetist covering obstetrics:

	% of units with contributions from this grade of anaesthetist
Staff Grades	61
ST 3-7	81
Core Trainees/ SHOs	48
Other	14

2.3 Training

The number of core trainees presenting to a department for training in obstetric anaesthesia within the previous year (May 2009 – May 2010) covered the full range from one to more than 10. Training in regional anaesthesia outside the obstetric unit prior to starting obstetric anaesthetic training was very variable.

Number core trainees trained in the previous 12 months:

No. of CTs	No of units reporting	% of total no. units
1 - 2	12	11.5%
3 - 5	52	50%
6 - 9	28	27%
10 or more	12	11.5%

Previous experience performing regional anaesthesia on non-pregnant patients:

Number of trainees with previous experience of:	All	Most	Some	None
Spinals	91.2%			8.8%
Epidurals	50%	14%	32.5%	2.5%

69.3% of units reported that they provide core trainees with blocks or modules of obstetric anaesthetic training but the duration of the blocks varies considerably.

The RCoA recommends a **minimum** of 20 supervised sessions. All units with less than 2 months reported they did a minimum of 20 sessions; some did this in a concentrated 2 week period.

Duration of Training:

Length of module/ training block	No. of units reporting	% of all units reporting
< 4 weeks	6	7.7
4 weeks	11	14.3
6 weeks	9	11.5
2 months	10	12.8
3 months	37	47.4
4 months	2	2.6
6 months	1	1.3
Other	1	1.3

When asked directly whether trainers felt 20 sessions was adequate the responses were evenly split 50% saying 'yes' and 50% saying 'no'.

2.4 Assessment of Competence

It is an RCoA and CNST standard that all trainees must demonstrate their competence before starting on call. The response from the trainer's survey triangulates with the response from the trainees survey with only 74% reporting they always complete a formal assessment. This has been a requirement for some years in the 2007 curriculum. The 2010 curriculum states a copy of the certificate of completion of the Initial Assessment of Competence in Obstetric Anaesthesia (IACOA) needs to be returned to the College for filing in a trainee's records.

Formal assessment of competence before on call:

	% of respondents	No. of respondents
Yes	73.7	70
Sometimes	11.6	11
No	14.7	14

2.5 Numbers of cases

Only 15% of units stipulate a minimum number of cases that trainees are required to complete prior to joining the out-of-hours on call rota.

4.3% of units are using CUSUM charts to record trainees' success with spinals and epidurals. Among the units stating numbers, the number of spinals required ranged from 2 to 50, the range of epidurals required ranged from 3 to 25 and the number of general anaesthetics (GAs) for lower segment caesarean sections (LSCS) from 'at least 1' to 10. Many units stated that achieving a certain number of GAs for LSCS is very difficult and acknowledge that some trainees may go on the on-call-rota without ever having even seen one.

2.6 Use of Simulation

50% of units use some form of simulation to provide obstetric anaesthesia training for core trainees. In those units that reported using simulation, most used artificial model/back simulators within the department, and a quarter used sessions at local simulation centres. Very few reported using formal skills and drills or obstetric emergency courses.

Type of simulation (in units where simulation used):

	% of those units which use simulation	No. of units
Skills drills	7	4
Mannequins	65	37
Simulation centres	25	14
Obstetric emergency courses	8	5

2.7 On call duties

48% of units require their core trainees to contribute to the obstetrics on call rotas.

The frequency of the resident obstetric anaesthesia on-call:

Frequency of on call	No. of units reporting	%
>1 in 5	3	2.8
1 in 5	7	6.6
1 in 6	12	11.3
1 in 7	31	29.2
1 in 8	47	44.3
<1 in 8	6	5.6

If, despite passing their IACOA and it being felt that trainees are ready to work without immediate supervision, the trainee does not feel happy to do so 92.7% of units would be able to delay their start of the obstetric anaesthetic rota.

A more experienced trainee or staff grade would cover the gap in the rota in the majority of units. In 3.7% of units such a gap would need to be covered by a consultant.

Supervision on call:

Grade of supervising anaesthetist	%
Senior trainee or Staff Grade resident on the same site	44.6
Senior trainee or Staff Grade resident in the same hospital but not on the same site	7.2
Consultant Anaesthetist Resident within the hospital	0.9
Consultant Anaesthetist non-resident	40
Other	7.3

40% of trainees starting obstetric anaesthetic on call will be supervised by a non-resident consultant.

2.8 Manpower

49.1% of units reported gaps in their obstetric rotas because of vacancies within the school.

Gaps in numbers of trainees within a school programme create difficulties running a working time directive compliant rota whilst maintaining optimal training opportunities. This is particularly acute in obstetrics because of the level of skill required to be on call. Obstetric rotas are frequently reported to have priority and staff grades or trainees are taken from the general rotas and locums, where available, are used to fill the gaps on the general rota.

2.9 Knowledge of 2010 curriculum

The survey was started in May 2010 prior to the introduction of the new curriculum in August. At the time of the survey only 60% of lead obstetric anaesthetists reported they were aware of the new curriculum and 47% were aware of the new requirements for the Initial Assessment of Competence for Obstetric Anaesthesia. It is hoped that participating in the survey resolved this issue.

3. Discussion

The survey has uncovered considerable variation in the amount of exposure to obstetric training across the country. It is more difficult to assess the quality.

The College view is that rotas more onerous than 1 in 8 are unlikely to be able to comply with the working time regulation (WTR) laws and provide adequate daytime training opportunities. [2] It was disappointing that 50% of units reported a frequency of on call that fails to meet this target.

The reduction in working time necessitates a more focussed approach to training and preparation before starting an obstetric attachment. One model used is for the trainee to attend an 'introductory course' where they attend in a supernumerary capacity for a few days in advance of starting their attachment to prime their learning. Another underused resource is the obstetric

module of the e-learning anaesthesia course (e-LA), which is free for all trainees to use. It is designed to cover the knowledge components of the curriculum and when used in advance of a clinical attachment should speed up the learning curve. [3] (see Appendix 1)

Only 50% of units reported the use of any form of simulation. It is well known that there are difficulties gaining experience providing general anaesthesia for Caesarean Sections but this can be taught by simulation at a variety of different levels, without the requirement for a visit to a dedicated simulation centre. All intubated cases, and especially rapid sequence induction (RSI) cases, have the potential to be used to address the issues of preoxygenation, adjusting cricoid pressure, failed intubation choices, and the use of intubation aids. We consider simulation to be an under-utilised facility, and would encourage units to incorporate simulation-based training in their obstetric modules.

The core learning outcomes of basic training in obstetric anaesthesia are to pass the formal practical initial assessment of competence in obstetric anaesthesia and, having achieved this, be able to provide analgesia and anaesthesia as required for the majority of the women in the delivery suite. In addition, trainees should be able to understand the management of common obstetric emergencies and be capable of performing immediate resuscitation and care of acute obstetric emergencies [e.g. eclampsia; pre-eclampsia; haemorrhage], *under distant supervision* but recognising when additional help is required. [4]

Only 48% of units require core trainees to contribute to out of hours rotas, but some units use core trainees to cover the labour ward during the day. However, concern has been expressed, both in responses to this survey (see Appendix 2) and directly to the College, that ST3s are taking up posts without this level of competence.

There is evidence that some trainees are under pressure to contribute to out of hours service requirements before they are adequately trained. The College Initial Assessment of Competence in Obstetric Anaesthesia (IACOA) is the minimum standard and is obligatory.

However, we recognise that completion of the IACOA is not necessarily the same as being ready to cover labour ward on call without immediate supervision, which requires more complex skills and an ability to prioritise and work under pressure. The IACOA should be used in conjunction with a local system of review that satisfies local clinical governance arrangements. The local standard will need to take into account the proximity and level of supervision available for the trainee.

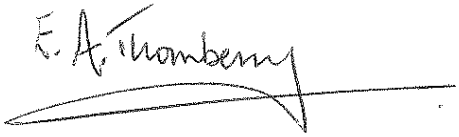
4. Recommendations

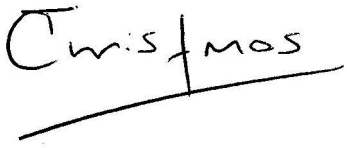
1. Training opportunities need to be maximised and this should include simulation training for all trainees.
2. The RCoA e-LA obstetric anaesthesia module is a highly recommended source of knowledge to underpin basic obstetric anaesthesia learning.
3. The IACOA should be used in conjunction with a local system of review that satisfies local clinical governance arrangements before a trainee works without immediate supervision.

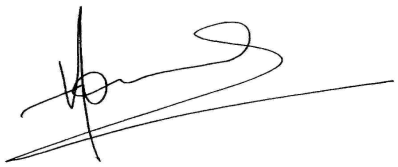
4. No trainee, who feels unprepared to start obstetric on call, should be expected to join the on call rota unless directly supervised. Departments should make provision for this eventuality where rotas are written a long time in advance.
5. All trainees who have completed their basic obstetric training should have some opportunity to cover the labour ward without immediate supervision so that they are confident to take on this responsibility as soon as they are appointed to an ST3 post.

5. References

1. Jigajinni S. Trainee preparation and worries prior to commencing obstetric on-call. Do we have a problem? RCoA Bulletin 2010;63:18–20.
2. Shift working rotas (www.rcoa.ac.uk/index.asp?PageID=1008).
3. www.e-lfh.org.uk/projects/ela/index.html.
4. The CCT in Anaesthetics Training Programme – Annex B: basic level training. RCoA 2010: 56–58 (www.rcoa.ac.uk/index.asp?PageID=1479).







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Appendix 1: e-LA module for obstetrics

Curriculum

04a Obstetrics

Total Number of Sessions 28

		Date Completed			Quicklink Code
01 Pregnancy and labour					
4a_01_01	Physiological changes during pregnancy	/	/	☐	001-0368
4a_01_02	Pharmacological changes during pregnancy	/	/	☐	001-0369
4a_01_03	Pregnancy and drugs used by Anaesthetists	/	/	☐	001-0370
4a_01_04	Anatomy/physiology/pharmacology of fetal circulation	/	/	☐	001-0371
4a_01_05	Physiology of labour	/	/	☐	001-0372
02 Assessment and consent					
4a_02_01	Pre-operative assessment and preparation	/	/	☐	001-0373
4a_02_02	Informed consent in obstetric anaesthesia	/	/	☐	001-0374
03 Labour analgesia					
4a_03_01	Labour analgesia: alternatives to regional analgesia	/	/	☐	001-0375
04 Regional analgesia & anaesthesia					
4a_04_01	Regional analgesia 1: Anatomy, equipment, drugs	/	/	☐	001-0376
4a_04_02	Regional analgesia 2: Technique - Epidural/CSE analgesia	/	/	☐	001-0377
4a_04_03	Regional analgesia 3: Technique - Spinal CSE anaesthesia	/	/	☐	001-0378
4a_04_04	Regional analgesia 4: Risks and benefits	/	/	☐	001-0379
4a_04_05	Regional analgesia 5: Managing common complications	/	/	☐	001-0380
4a_04_06	Regional analgesia 6: Managing serious complications I	/	/	☐	001-0381
05 General anaesthesia in obstetrics					
4a_05_01	General Anaesthesia for Caesarean Section	/	/	☐	001-0383
4a_05_02	General Anaesthesia in Obstetrics: Risks and Benefits	/	/	☐	001-0384
4a_05_03	General Anaesthesia in Obstetrics: Managing Serious Complications	/	/	☐	001-0385
06 Choice of anaesthetic technique					
4a_06_01	Basic obstetrics	/	/	☐	001-0386
4a_06_02	Choice of anaesthetic technique	/	/	☐	001-0387
07 Serious problems in obstetric anaesthesia					
4a_07_01	Lessons from CEMACH	/	/	☐	001-0388
4a_07_02	Cardiac arrest in pregnancy	/	/	☐	001-0389
4a_07_03	Recognising the sick mother	/	/	☐	001-0390
4a_07_04	Major haemorrhage in obstetrics	/	/	☐	001-0391
4a_07_05	Preeclampsia and eclampsia	/	/	☐	001-0392
4a_07_06	Venous Thromboembolism (VTE) and Pregnancy	/	/	☐	001-0393
4a_07_07	The Obese Mother	/	/	☐	001-0394
08 Postnatal issues					
4a_08_01	Breastfeeding and anaesthesia	/	/	☐	001-0395
09 Anaesthesia during pregnancy outside the delivery suite					
4a_09_01	Anaesthesia in early pregnancy, and for incidental surgery	/	/	☐	001-0396

Appendix 2 – Free text comments from survey

Previous experience of regional anaesthesia

- The trainees that come to do obstetric block have very little experience in non-obstetric spinal cases. Most would have done 2 or 3 spinals
- They should do but some of them don't seem to be allocated lists that provide spinal anaesthesia as training 5 new people each year.
- We had a CT trainee recently who had only done 3 months anaesthesia; the rest of the year was spent in ITU and medicine. She had not done an epidural before on anybody!
- Depends where the trainee has completed their CT1 year as get trainees from one local DGH who have no epidural experience at all
- Very variable. Enormous number of spinals done for orthopaedic surgery, but relatively few epidurals done for non obstetric purposes

Duration

- 3 to 4 weeks depending on their progress. We sometimes have a lot of scrabbling around trying to rearrange the rota if they have not achieved competence
- When they start the obstetric module they have 3-4 weeks of dedicated daytime supervision before moving on to the on call. This has been longer on occasions but this has a negative effect on other trainees
- 3 months as long as they complete their competences otherwise we extend it up to another 3 months
- Depends on ability: several weeks until we are happy with their ability to perform and a few more until they are happy that they can cope
- Patients get older, more complex and more obese. CEMACH emphasizes lack of experience, and in 20 sessions you don't necessarily experience a severe PET, massive obstetric haemorrhage or simply a section under general anaesthetic. We are expected to play a much more involved role as anaesthetists on labour ward, and need to be safe, assertive and knowledgeable.

Assessment of competence

- The lead obstetric anaesthetist in conjunction with the other consultant obstetric anaesthetists discuss the trainees progress at a formal meeting. Competencies are discussed and only if the trainee and trainers are happy is the trainee put on the rota - at first this is with a senior ST on the ICU to help if in difficulty
- In house assessment - the school based WPA do not assess sufficiently for ability to cope on call
- This does not simply reflect time spent but also numbers of procedures seen and performed, with comments written beside. There are also 'talking topics' to be signed off.

Appendix 2 – Free text comments from survey

- We have tried to instigate this but changes get made in the rota without the lead obstetric anaesthetist being informed
- They certainly have a long list of competences, which are supposed to be signed off, and formal assessment before being on call - but at the same time, the rota has to be done a number of weeks in advance. Thus they are put on the rota in the assumption that by the time they get to do the first day on call they will have achieved all competences. In the real world, they are often doing their first out of hours evening or night before all competencies have been formally completed.
- We assess our trainees individually, but accept that with our small department we cannot formally sign nationally agreed competences

On call duties – Frequency

- We know we need more people but the trust's decision when reducing hours was to reduce 'day time' rather than increase the rota to a 1:8.
- EWTD compliant but perhaps not quite training compliant

On call duties – Rota management difficulties

- Rota is designed for 8 people, but we have Internal cover if possible with occasional locum cover (usually from neighbouring trust)
- Only 3 on a rotation plus ad-hoc locums

The role of core trainees

- We have to be happy with their ability before they go on call - we do not always allow it
- As long as they have done at least a year of anaesthetics, have achieved the goals set out for their 2 weeks intro, and feel comfortable themselves doing it
- This may vary with individual trainees, competent/enthusiastic trainees may go onto the night rota, less competent trainees may not 'graduate' to nights
- There is no other way to make up the numbers
- We do not have enough non-core trainees for them not to
- We do not use CT doctors on the Maternity out of hours.
- No core trainees