The changing face of anaesthetic assistance in UK obstetric units: a national survey

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Abstract

Background: In the last ten years anaesthetic assistance in United Kingdom (UK) obstetric units has been shaped by the publication of guidelines, unit re-organisation and changes in workforce planning. We aimed to investigate the current state of obstetric anaesthetic assistance in the UK.

Method: A survey was emailed to 211 lead obstetric anaesthetists in the UK. The survey took place between December 2010 and June 2011.

Results: The response rate was 80% (168 replies). One hundred and fifty six units (93%) had operating department practitioners, 62 (40%) had nurse assistants and 12 (7%) had midwife assistants. Only 34 units (20%) reported dedicated assistants working solely on the obstetric unit. The majority of these (78%) receive regular exposure to non-obstetric work for professional development. Anaesthetic assistants not normally working on labour ward covered maternity regularly in 30 units (18%). In 91 hospitals (74%) prior experience is essential before working in obstetric unit. Assistance with epidural insertion was the most frequently reported additional duty (20%). Assistance was considered optimal by 102 responders (80%). Thirty units (18%) reported changes to anaesthetic assistance over the last two years. Thirty-seven units (22%) anticipated staffing problems in near future.

Conclusion: Anaesthetic assistance in the majority of obstetric units in the UK currently reflects published guidelines. Concerns remain over inexperienced staff, additional duties and future staffing problems.

Keywords: Obstetric anaesthetic assistance; Obstetric unit; Anaesthetic team; Obstetric anaesthetic services
**Introduction**

A 2003 Obstetric Anaesthetists’ Association (OAA) approved survey found over a third of respondents thought it desirable to have dedicated obstetric unit anaesthetic assistance resident on labour ward.\(^1\) It was clear that this was more an aspiration than a standard at this time. Anaesthetic assistants were resident for the hospital but not the obstetric unit. Midwives mainly provided assistance during regional labour analgesia blocks. Since 2003 there have been significant workforce changes nationally and major re-organisation of maternity services in Glasgow that may be reflected elsewhere in the UK. This has coincided with reduced training hours and increased demands on obstetric services both in terms of workload and complexity. Two relevant guidelines have also been published in the interim: Guidelines for Obstetric Anaesthetic Services (revised edition) 2005 and The Anaesthesia Team 2010.\(^2,3\) We wished to establish how anaesthetic assistance on the obstetric unit has changed since 2003 in light of these developments.

**Methods**

A survey was designed and approved by the Obstetric Anaesthetists Association (OAA survey no. 112). This was sent to the lead obstetric anaesthetist of all consultant led obstetric units in the UK using the OAA electronic survey tool. Questions focused on numbers of anaesthetic assistants, experience, dedicated obstetric provision, additional roles and consideration of future workforce planning (Appendix 1). A reminder was sent after three months to non-responders.

**Results**

Surveys were sent to 211 units and 168 were returned (80%). Some respondents did not answer all the questions. An altered denominator in the results reflects this. Annual delivery rates varied from under 3000 per year in 63 units (38%), 3000-5000 in 61 units (36%) and greater than 5000 in 44 units (26%). The majority of responders (90; 54%) had access to two dedicated obstetric theatres. 71 units (42%) had one obstetric theatre with the remainder having three or greater (6; 4%).

One hundred and fifty-six units (93%) have operating department practitioners (ODPs) assisting anaesthetists. 62 units employ nurse assistants (40%) and 12 units (7%) use midwife assistance. The skill mix within each department was not ascertained but eight units (5%) relied solely on nurse and/or midwife assistants. Thirty-four respondents (20%) had anaesthetic assistants dedicated to working in the obstetric unit. The majority of these (78%) participate in continuing professional development activities and undertake non-obstetric work on a periodic basis.
Anaesthetic assistants whose primary role involved working outwith the obstetric unit still provided maternity cover regularly in 30 units (18%), occasionally in 47 (30%) and rarely in 43 units (26%). Forty-three units (26%) only ever used anaesthetic assistants whose primary role was within the unit. Ninety-one hospitals (74%) deemed prior obstetric experience essential before commencing work. Twenty-nine units (24%) mostly seek experienced assistance and 3 (2%) may consider assistants without prior obstetric experience. Additional duties performed by anaesthetic assistants in the units we surveyed are summarised in table 1. An extended role in HDU reported by 8 units (5%) was the most common ‘other’ duty.

Table 1 Additional duties performed by anaesthetic assistants.

<table>
<thead>
<tr>
<th>Duty</th>
<th>Number of units</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assist with epidural insertion</td>
<td>34</td>
<td>20</td>
</tr>
<tr>
<td>Epidural infusion set-up</td>
<td>21</td>
<td>13</td>
</tr>
<tr>
<td>Recovery assistance</td>
<td>66</td>
<td>39</td>
</tr>
<tr>
<td>IV cannulation</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>Set-up PCA</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Fetal blood sampling assistance</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other *</td>
<td>15</td>
<td>9</td>
</tr>
</tbody>
</table>

*‘Other’ duties reported were preparation of drugs for rapid sequence induction, attendance at resuscitations, preparation of the cell saver, assistance with central venous cannulation and high dependency care of obstetric patients.

When asked to compare anaesthetic assistance in the obstetric unit with anaesthetic assistance in other areas of the hospital 102 responders (80%) considered it to be optimal. 16 (13%) felt it was sub-optimal and 9 (7%) were unsure. Thirty obstetric units (18%) reported changes to anaesthetic assistance over the last two years. These are summarised in table 2.
Table 2  Changes to anaesthetic assistance within obstetric units since 2008

<table>
<thead>
<tr>
<th>Reported change to assistance</th>
<th>Number of units affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased staffing pool</td>
<td>12 (7)</td>
</tr>
<tr>
<td>Reduced staffing pool</td>
<td>6 (4)</td>
</tr>
<tr>
<td>Increased out of hours cover</td>
<td>4 (2)</td>
</tr>
<tr>
<td>Reduced out of hours cover</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Increased skill mix</td>
<td>6 (4)</td>
</tr>
<tr>
<td>Reduced skill mix</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Increased workload</td>
<td>9 (5)</td>
</tr>
<tr>
<td>Increase in additional duties</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Reduction in additional duties</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Dedicated obstetric anaesthetic assistance introduced</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Continuing professional development improvements</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Amalgamation of two units</td>
<td>5 (3)</td>
</tr>
</tbody>
</table>

Thirty-seven units (22%) anticipated staffing problems in the near future while a further 32 (19%) were unsure if such issues were on the horizon.

Discussion

The obstetric unit is a challenging and unpredictable environment. Relatively junior anaesthetic doctors can often find themselves compelled to deal with rapidly developing and difficult clinical situations out of hours. Skilled anaesthetic assistance is an important component of the obstetric unit team and is essential in preventing adverse outcomes. The obstetric population is becoming increasingly complex. With a rise in obesity, increasing maternal age, mothers with serious illness surviving to childbearing age and rising Caesarean section rates the demand on obstetric anaesthetic services in the UK is growing. Clear recommendations for provision of obstetric services exist and are continually being developed. This reflects a general rise in standards of services and safety within anaesthesia. The 2005 Guidelines for Obstetric Anaesthetic Services recommend parturients have the right to the same standards of peri-operative care as other surgical patients and that skilled anaesthetic assistance and recovery care are of particular importance in obstetrics. Clear recommendations for provision of obstetric services exist and are continually being developed. This reflects a general rise in standards of services and safety within anaesthesia. The 2005 Guidelines for Obstetric Anaesthetic Services recommend parturients have the right to the same standards of peri-operative care as other surgical patients and that skilled anaesthetic assistance and recovery care are of particular importance in obstetrics. The AAGBI recommends that assistance be provided by ODPs or registered nurses trained to the nationally accepted standard. The majority of units we surveyed had anaesthetic assistance provided by ODPs which is an improvement from the OAA survey from 2003.
Assistants working in the obstetric unit should be routine in order to maintain competence. It is concerning that almost half the responding units reported they would ‘regularly’ or ‘occasionally’ use assistants who do not routinely work on the obstetric unit.

Assistants new to the maternity unit are expected to undergo a period of induction before performing duties on the labour ward. It is worrying some of our respondents would allow assistants to work on labour ward with no prior experience.

Our respondents reported a range of additional duties performed by anaesthetic assistants illustrating an extended role. The majority reasonably appear to be part of the assistant’s expected role but some (e.g. fetal blood sampling, intravenous cannulation) may encroach upon the dictum that the assistant should have ‘no other duties in the operating department’ while assisting the anaesthetist.

A majority of the dedicated obstetric anaesthetic assistants maintain skills through exposure to non-obstetric anaesthesia and are provided with continuing professional development opportunities as recommended by AAGBI.

On the whole the recent changes to obstetric units are likely to reflect recommendations for increased staffing levels in busy obstetric units and amalgamation of smaller obstetric units. The majority of respondents consider their current level of anaesthetic assistance to be optimal however a significant percentage foresee future staffing problems. This survey provides information on the structure and potential extended roles of anaesthetic assistants that may prove useful in planning or redevelopment of obstetric services.

**Appendix 1**

**Questionnaire:**

**Obstetric anaesthesia assistance**

1. How many deliveries per year do you have in your obstetric unit?
   - (a) <2000 (b) 2000-3000 (c) 3000-4000 (d) 4000-5000 (e) >5000

2. How many obstetric theatres do you have?
   - (a) 1 (b) 2 (c) 3 (d) >3

3. How many anaesthetic assistants regularly work in your unit and what is their level of training (state numbers)?
   - (a) ODPs (b) Nurse assistants (c) Midwife assistants

4. Are these assistants dedicated to working only in the obstetric unit?
   - (a) Yes (b) No (if ‘No’ jump to question 6)
5. If so is there provision for regular CPD or exposure to non-obstetric work on a periodic basis?
   (a) Yes (b) No (c) Unsure

6. Do anaesthetic assistants who don’t normally work in obstetrics get asked to cover shifts in maternity?
   (a) Regularly (b) Occasionally (c) Rarely (d) Never

7. Regarding anaesthetic assistants who don’t normally work in obstetrics but who may cover shifts in maternity: How would you generally rate their prior experience?
   (a) Assistants always have prior experience (b) Assistants mostly have prior experience
   (c) Assistants may not have prior experience

8. Do anaesthetic assistants perform other duties outside theatres?
   (a) Assisting with epidural insertion (b) Assisting in theatre recovery (c) IV cannulation
   (d) Setting up epidural infusions/PCEA bags (e) Setting up PCA pumps (f) Assisting with fetal blood sampling (g) Other – please specify

9. Is your current obstetric anaesthetic assistance considered optimal (in terms of being able to deliver anaesthetic assistance on a par to all other areas of the hospital 24/7)?
   (a) Yes (b) No (c) Unsure

10. Have there been any recent changes to the nature of your anaesthetic assistance?
    (a) Yes, recently (b) Yes, within the last year (c) Yes, within the last two years (d) No

11. Are staffing problems anticipated within the near future?
    (a) Yes (b) No (c) Don’t know

References


