**National Obstetric Anaesthesia Data for 2012 - A report**

**Introduction**

Collection of annualised block data from maternity units in the United Kingdom was commenced in 2004 with a dataset of 20 core items. Items have gradually been added to this dataset and in 2009, were expanded to 31 items, to include more data related to complications.

Data collection for the 2012 period was started on 11th June 2013 and closed on 21st April 2014. Requests were sent to 206 units. 142 units submitted data, with 103 able to provide data in most columns (72%).

![Figure 1: Response rate (%) in the last 6 years of NOAD report](image)
Results

Mode of delivery.

All but two units sent in data on the number of actual deliveries. A total of 549,088 mothers delivered in 2012 in 140 units. The smallest unit had 174 deliveries and the largest 8372. The Caesarean section rate was 25.6% (135,718 Caesarean sections out of 544,445 deliveries, excluding two Trust where the number of C-sections was not given and the two Trusts where the number of deliveries was unknown), which is similar to last year. The Caesarean section rate varied from 13.4% to 51.3%, with a median [interquartile range] of 25.2% [23.3%-28.0%].

4 units did not send in data related to elective Caesarean sections. The number of category 4 (elective) Caesarean sections was 57,556 in the remaining units who had performed 139,093 Caesarean sections. This means that 41.3% of Caesarean sections were planned in these units. This varied from 26.4% to 69.2% with a median [interquartile range] of 41.1% [37.9%-45.1%]. As can be seen from Figure 2, there was no correlation between the number of deliveries per year and the rate of Caesarean delivery, with the line of best fit having a slope of 0.

![Figure 2: Number of deliveries vs. rate of Caesarean delivery](image-url)
Regional analgesia for labour

All units produced data on the number of patients that received regional analgesia for labour. In 6 units, no regional analgesia service was offered to patients. The highest regional anaesthesia rate was 49.7%, in a unit with 4572 deliveries. The median [interquartile range] was 20.2% [15.9%-24.9%]. There was a positive correlation between the regional analgesia rate and the number of deliveries (linear regression best fit y=0.001x + 16.85 , p=0.0059) (Figure 3)

Figure 3: Rates of regional analgesia vs. number of deliveries per year
The overall regional analgesia rate was 20.8% (114,363/549,088 deliveries) (Figures 4). This is similar to what was reported for the previous years.

Figure 4: Rates of regional analgesia for labour, assisted vaginal delivery and Caesarean delivery.
Information was received about initiation of regional anaesthesia from 136 units. 5 units had no epidural service, with 174, 199, 1072, 1287 and 1763 deliveries per year. Initiation began with epidural analgesia for 114,378 (96.8%) patients, CSE for 2966 (2.5%) patients and spinal catheter for 791 patients (0.7%). Analgesia was maintained with using continuous infusions for 36, 287 (31.9%) and intermittent top-ups for 31,551 patients (27.7%). PCEA was used for over 40% of patients, with 27,948 having PCEA alone (24.6%) and 17,953 (15.8%) having PCEA having PCEA with a background infusion.

Figure 5: Maintenance of regional analgesia in labour
Anaesthesia for Caesarean delivery.

Most Caesareans were performed under single shot spinal anaesthesia: 86,395 (62.0%). Epidural anaesthesia was used in 26,413 cases (19.0%) (Figure 6). Most were topped-up epidurals (24,952). A small minority, 1,461 cases, were de novo epidural anaesthetics. CSE accounted for 9,832 cases (7.1%), of which 774 cases were top-up of previously sited CSE and 9,832 were de-novo CSE’s (Figure 4).

From 139,261 Caesarean deliveries performed in 2012 in these units, 10,594 were performed under general anaesthesia (GA rate of 7.6%). De novo general anaesthesia for Caesarean delivery was administered in 6,027 patients. Conversion to GA was done in 4,567 cases. Among the GA sections, there appears to a steady proportion of GA conversions during Caesarean delivery over the last few years. In addition, the overall number of Caesarean deliveries under GA appears to have reduced when compared to previous years. (Figures 7 and 8).

Figure 6: Anaesthesia for Caesarean Delivery
Figure 7: Epidural analgesia rate, de novo GA rate and GA conversion rate

Figure 8: Caesarean Delivery under GA
Complications.

1344 accidental dural punctures were reported (ADP-rate of 1.1%; 1,344/114,378), and 734 blood patches were performed. The ADP rate appears to be no different from that collected in previous years. These figures are in line with reported rates in the literature. There were reports of 35 cases of total spinal anaesthesia (1:7,051 cases of regional analgesia and anaesthesia including all unit responses). Lipid rescue was used for 45 patients, with 32 patients having local anaesthetic toxicity were reported. There was two cases of GA in which the airway could not be secured and ventilation could not be achieved. Thirty two cases were reported in which the trachea could not be intubated. (1:331 cases of GA). Five hundred and fifty patients were admitted to ICU.

Conclusion and future goals

The increase in the dataset from the original 20 items in 2009 has led to a drop in response rate, which has been rescued by an increased effort to capture data. However, many units are still only providing data from the original fields. Some will be due to the lack of systems within hospital to capture complications of neuraxials. They may not have a database, with a disincentive to invest in new IT if a national system is around the corner. There is also a lack of time dedicated to local data collection and analysis. But yet there is ever increasing pressure on Trusts to demonstrate that they are providing an excellent service which means that we do need actually and contemporaneous figures.

The response rate has, however, remained close to 70% for the second year, and we hope that this positive trend will be maintained. As the data collection becomes more contemporaneous, we believe that more units will find it easier to gather data and find the results more relevant to their practice.

Data appear to be relatively unchanged over the last few years. There appears to be a decrease in the number of units using continuous epidural infusion as their sole means of providing analgesia. The number of units providing PCEA alone as the method of analgesia is rising and the trend of PCEA with or without background infusion is likely to rise over the next few years.

There appears to be a steady rise in the number of conversions to GA among Caesarean sections since 2006, despite a small decrease in 2010. However the overall GA section rate is steady with the rate currently at around 8%. It will be interesting to observe if this trend is maintained in the following years.
On behalf of the OAA we would like to thank all the lead clinicians and NOAD representatives who provided the data.

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June 2014