Achieving routine use of opioids at induction of general anaesthesia in obstetric patients at a large tertiary unit

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Background

Short-acting opioids (e.g. alfentanil and remifentanil) at induction of obstetric general anaesthesia (GA) are safe and beneficial, with meta-analysis demonstrating no adverse effect on neonatal Apgar scores [1].

Benefits include:

- Reduced induction agent dose
- Improved intubating conditions
- Blunted haemodynamic response
- Reduced risk of awareness

Despite these benefits, use in UK obstetric anaesthetic practice is variable [2].

Our hospital is a large tertiary centre with almost 6000 deliveries per year. Local consultant consensus agreed short-acting opioid (alfentanil or remifentanil) administration should be standard practice for all obstetric intubations. This quality improvement project aimed to increase routine use of short-acting opioids at induction.

Methodology

Prospective data was collected for obstetric GAs between January 2023 and November 2025. Data was recorded by the intubating anaesthetist and included opioid use at induction at the time of the GA.

Planned awake intubations and cases were no induction agents recorded were excluded (cases with other induction drugs listed but no opioid were included).

Caldicott approval was obtained.

Interventions during this period included;

- Staff education via daily safety briefs and posters in obstetric anaesthetic rooms
- from April 2024; placement of a labelled alfentanil syringe in the emergency GA drug tray to act as a prompt

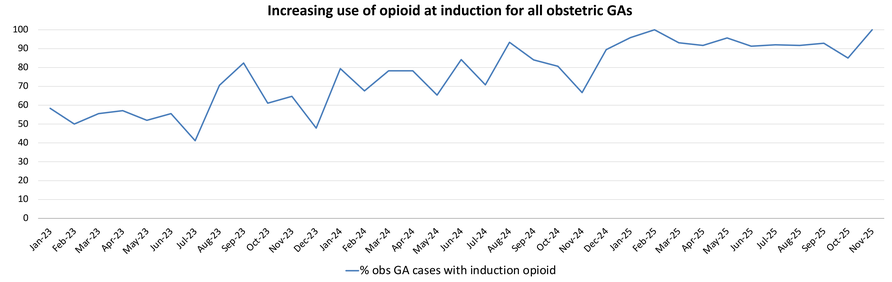
Results

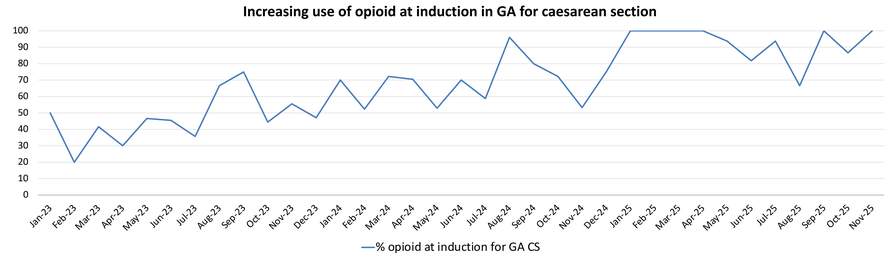
Data on induction opioid use were available for 233/281 (82.9%), 315/341 (92.3%) and 220/240 (91.6%) obstetric GAs in 2023, 2024 and 2025 respectively.

Overall opioid use increased from 57.5% (134/233) in 2023, to 77.7% (245/315) in 2024 and 93.6% (206/220) in 2025.
For GA caesarean sections alone, use increased from 46.5% (67/144) in 2023, to 69.3% (142/205) in 2024 and 94.8% (130/137) in 2025.

These results demonstrate a statistically significant increase in opioid use in all cases since 2023 (χ^2 test for trend, $p < 0.001$).

Year	% cases data captured	% opioid used all cases	% opioids used GA CS
2023	82.9	57.5	46.5
2024	92.3	77.7	69.3
2025	91.6	93.6	94.8





Conclusion

Concerns regarding neonatal effects have been a barrier to opioid use during GA for obstetric operations such as caesarean section. Strong evidence now supports the safety of short-acting agents.

Following our interventions, we have continued to improve our rate of opioid use with either alfentanil or remifentanil now being used for most obstetric GAs in our unit.

We encourage other units to consider adopting a similar strategy to improve opioid use due to its well-established benefits in this high-risk population.

References:
[1] White LD, Hodsdon A, An GH, et al. Induction opioids for caesarean section under general anaesthesia: a systematic review and meta-analysis of randomised controlled trials. International Journal of Obstetric Anaesthesia 2019; 40: 4–13
[2] Donaldson H, Shorrock P. Obstetric rapid sequence induction: a national survey of current practice. *Obstetric Anaesthetists Association*. 2026.