



Improving opioid use at induction of general anaesthesia in obstetric patients in a large tertiary centre

Niamh Toner^{*1}, Sean Harbison¹, Julia Critchley², Nicki Alexander², Kate Theodosiou²

¹ South East Scotland School of Anaesthesia, ² Simpson Centre for Reproductive Health, Royal Infirmary of Edinburgh, NHS Lothian, UK

*Niamh.Toner@nhs.scot



Background

- Administration of opioid medication at induction of general anaesthesia (GA) in obstetrics is safe and beneficial.
- Reluctance is associated with concerns about neonatal ill-effects.
- A systematic review with meta-analysis demonstrated no association between rapid-acting opioids use and poorer Apgar scores¹.
- Routine use of opioids at induction is the intended standard of care in our high-volume tertiary obstetric unit.
- However despite an increase in adherence from 40% in 2022 to 62% in 2023, the potential for further improvement remains.

Objective

- To improve adherence to the local departmental guideline:
 - Opioid medication should be used at induction in all obstetric GA cases (unless contraindicated).

Methods

Data Collection

- Data were collected prospectively from Jan 2023 - Sep 2024 (21 months) from the continuous department audit activity.
- Procedural data were recorded by the case anaesthetists.
- The project was registered with the local Clinical Governance team and Caldicott approval was granted.



QI Interventions

Workplace Interventions

- Multimodal improvement interventions encouraged opioid use provided evidence-based rationale for their use:



- *Visual:* Posters in obstetric anaesthetic rooms
- *Practical:* Pre-labelled opioid syringe with induction drugs
- *Oral:* Reminder at daily Safety Brief

Educational Interventions

- A component was introduced into the departmental *Tea Trolley Teaching* educational programme.
- This provided orientation to our bespoke Intubation Checklist, highlighting the opioid care standard.
- Delivered to regular / non-regular anaesthetic staff



Fig 1. Percentage of obstetric GA cases with opiates used at induction



Results

Data pertaining to anaesthetic practice were available for
238/281 (85%) in 2023 vs 241/267 (90%) in 2024

Adherence – All obstetric GA cases

Opioid use at induction for all obstetric GA cases:

149/238 (67%) in 2023 vs 187/241 (78%) in 2024 ($p < 0.001$)

Adherence – GA Caesarean sections

Opioid use at induction for GA Caesarean cases:

67/144 (46.5%) in 2023 vs 112/160 (70%) in 2024 ($p < 0.001$)

Discussion

- Neonatal ill effects are likely to be overstated, especially in the context of newer short-acting opioids.
- There was an increase in opioid use, which is likely attributable to the practical and educational interventions in this QIP.
- Further work will:
 - Develop the educational programme
 - Increase support for transient anaesthetic team members
 - Monitor opioid use as part of the ongoing audit of practice.

¹White 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 Anesthesia* 2019; 40: 4–13