

Implementing a remifentanil Patient-Controlled Analgesia (PCA) service for labour analgesia in a district general hospital

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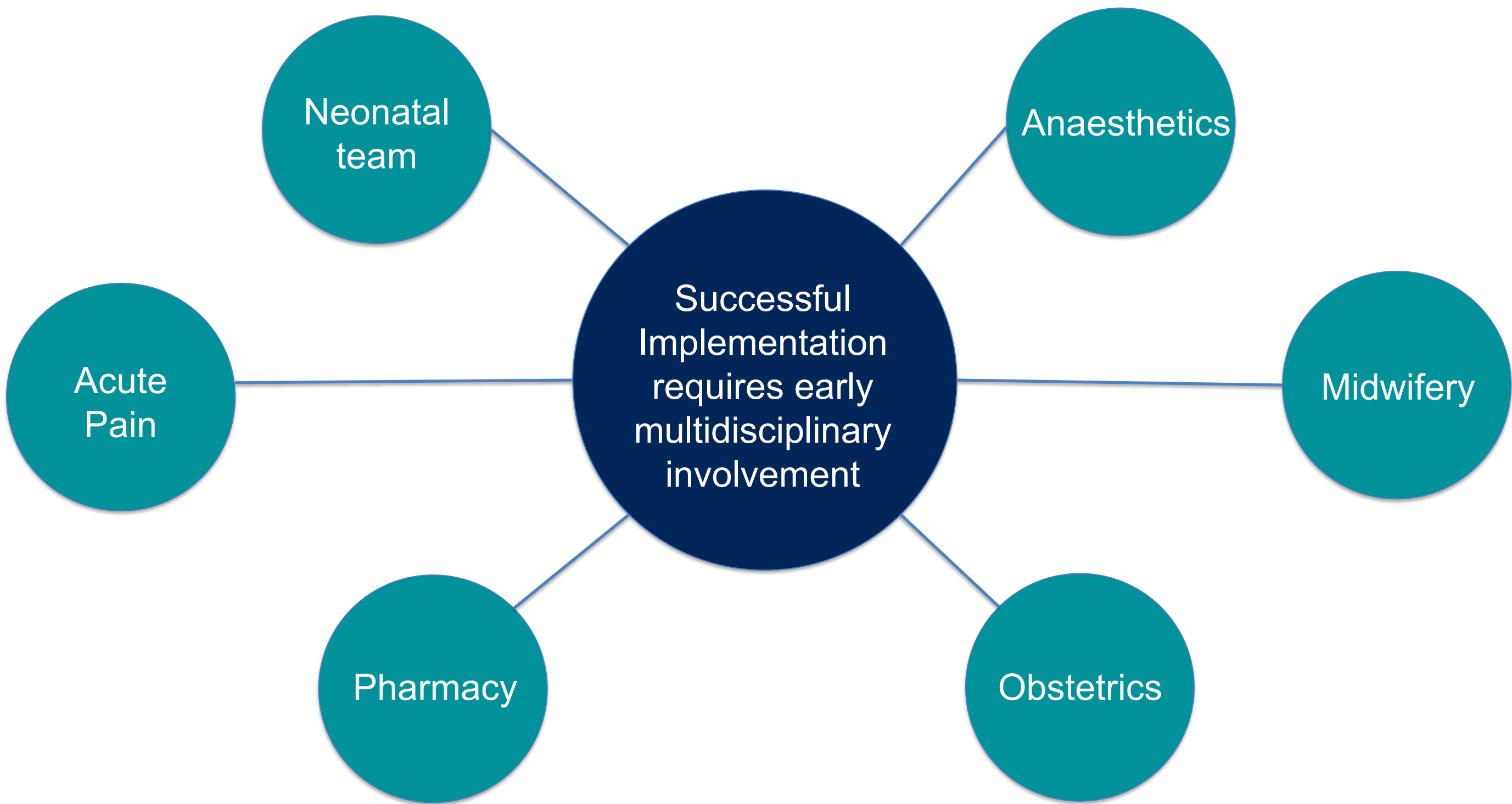
BACKGROUND

Remifentanil patient-controlled analgesia (PCA) is recommended as an alternative to traditional labour analgesia when epidural analgesia is contraindicated, declined, or unavailable. In comparison to intramuscular pethidine, it has shown significantly fewer women converting to an epidural and lower rates of instrumental deliveries.^{1,2} However, implementation within District General Hospitals (DGHs) remains variable, particularly in units without prior experience. We describe a structured, multidisciplinary approach to introducing a remifentanil PCA service in a DGH, with a focus on transferable methodology.

AIM

To safely introduce a remifentanil PCA service in a DGH using a structured, multidisciplinary and transferable framework.

STAKEHOLDER ENGAGEMENT



SERVICE IMPLEMENTATION PATHWAY

- 1 Identify Service Gap**
Reviewed existing labour analgesia provision and identified a gap for women unsuitable for or declining an epidural
- 2 Benchmark Other Units**
Contacted neighbouring hospitals with established remifentanil PCA services to review pathways, training models, governance and challenges
- 3 Review NICE / National Guidance**
Reviewed NICE recommendations and published safety standards to underpin local policy
- 4 Draft Local Guideline**
Developed local guideline covering patient selection, consent, prescribing and pump settings, monitoring standards, contraindications and escalation pathways
- 5 Multidisciplinary Approval**
Presented at multiple forums and obtained approval from pharmacy, obstetrics, midwifery leadership, acute pain team and neonatology
- 6 Pump Standardisation**
Standardised remifentanil PCA delivery using locked pump libraries and clear prescribing pathways
- 7 Structured Training and Compliance Monitoring**
Structured education programme was introduced for relevant staff, supported by mandatory training completion records to monitor uptake and compliance.
- 8 Safety & Monitoring**
Mandatory one-to-one midwifery care and continuous maternal oxygen saturation monitoring embedded into practice
- 9 Service Launch**
Service launch with prospective audit and governance oversight

UTILISING CURRENT AVAILABLE OPTIONS

We utilised existing CADD® Solis PCA pumps and monitoring equipment already available on labour ward, ensuring the service was developed with minimal financial implications.

SAFETY STANDARDS

Mandatory one-to-one midwifery care and continuous maternal oxygen saturation monitoring are required throughout remifentanil use. Drug delivery was standardised through locked pump settings. Clear escalation and stopping criteria were published. Only trained and competent staff are authorised to deliver the service.

RESULTS

The service was successfully implemented with strong multidisciplinary engagement. A safe prescribing and monitoring framework was established, and staff training completed. Prospective audit is planned to assess utilisation, compliance with standards, and early outcomes.

KEY LEARNING POINTS FOR DGHs

- Build multidisciplinary team and secure engagement
- Utilise existing resources (pumps, monitoring) to minimise cost
- Standardise practice with clear guidelines
- Deliver mandatory training, monitor compliance and audit outcomes

ACKNOWLEDGEMENTS

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References

1. Wilson MJA, MacArthur C, Hewitt CA, et al.; RESPITE Trial Collaborative Group. Intravenous remifentanil patient-controlled analgesia versus intramuscular pethidine for pain relief in labour (RESPITE): an open-label, multicentre, randomised controlled trial. *The Lancet* 2018; **392**: 662–72. [https://doi.org/10.1016/s0140-6736\(18\)31613-1](https://doi.org/10.1016/s0140-6736(18)31613-1)
2. NICE. Intrapartum Care. NICE guideline NG235. <https://www.nice.org.uk/guidance/ng235> (accessed 26/04/2026)