

# Do you actually regret the ones you don't put in?

## CSE usage and implementation of intrathecal alfentanil as an adjunct for spinal anaesthesia in Antrim

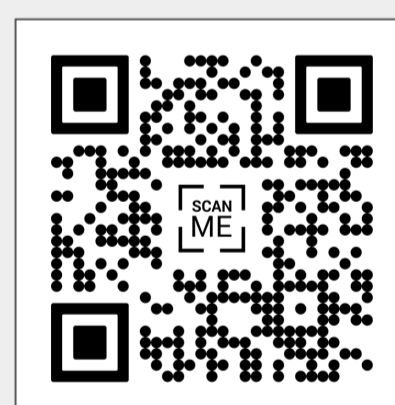
S.Crawford (ST5), E.Gardiner (ST5), B.Haughey (ST7) K.Spence (Cons.)

### Overview

Combined spinal epidural (CSE) are often used for caesarean deliveries. The majority of epidural components are not utilised (1). "It's always the ones you don't put a CSE in that you regret" is a common phrase uttered by anaesthetists, but do you really? We assessed the use of CSEs in Antrim Area Hospital (AAH) for elective sections followed by the introduction of intrathecal alfentanil as an adjunct to spinal anaesthesia (with hyperbaric bupivacaine/diamorphine) either as an alternative or in combination with a CSE.

Data on the usage of CSEs was gathered including whether epidural top-up was attempted and any complications. IT Alfentanil (100-150mcg) was then promoted as an option in the department. Staff were encouraged to complete an audit form on its use.

Our IT alfentanil guidance sheet:



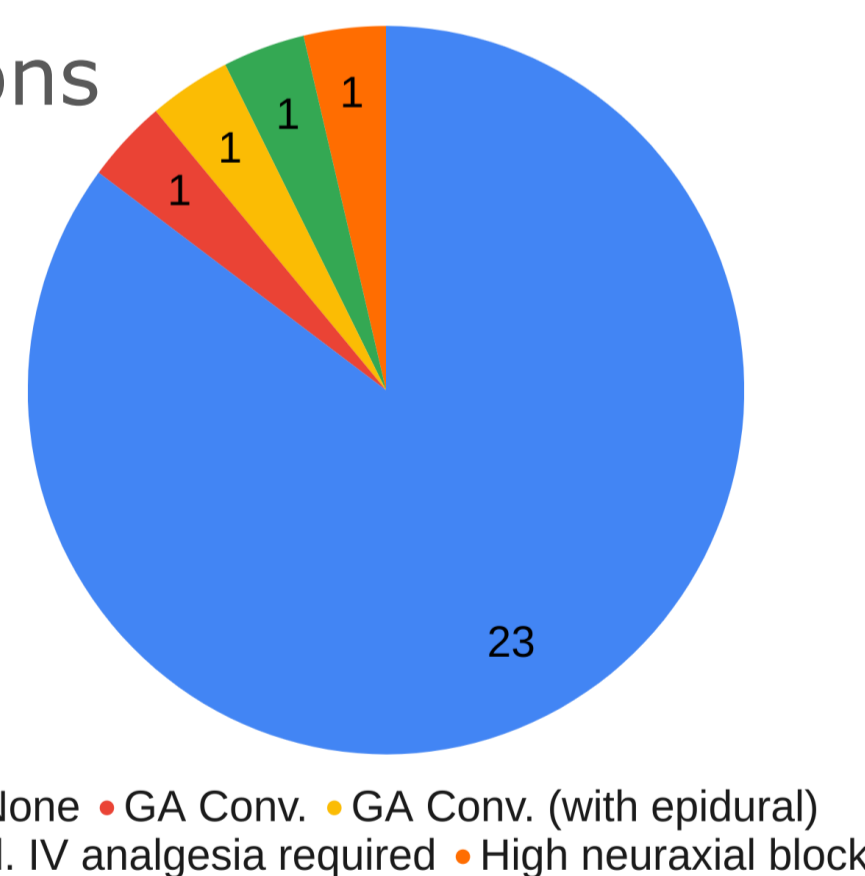
The answer is no...

### Results

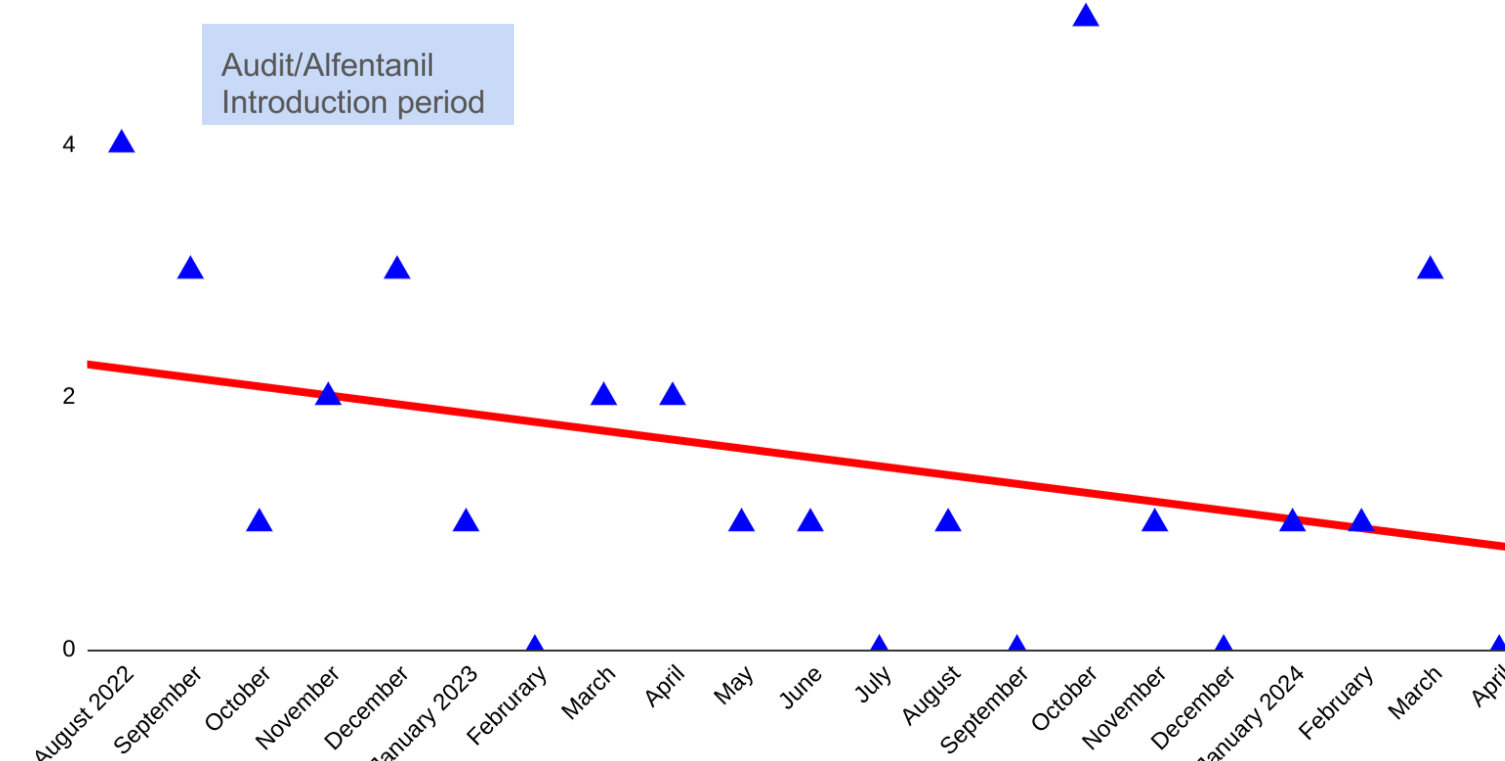
Twelve patients notes who received CSEs for elective section were reviewed. In two cases epidural top-ups were attempted, both prior to knife to skin and both proceeded to GA.

Following IT alfentanil introduction 27 audit sheets were returned. Two patients required GA conversion - one at knife to skin, one at pinch test. One of these patients also had an epidural sited and top-up attempted. There was a decrease in the number of CSEs performed despite increased workload with the relocation of Causeway maternity services to Antrim.

#### Complications



#### CSE Rates



### Discussion

The use of alfentanil is underrepresented in the audit forms as it is being used 15+/month (estimated by the controlled drug register) with only 27 forms being returned. This frequency of use represents extension beyond elective lists. One patient experienced high neuraxial block (not requiring intubation) which may be a consequence of the extra drug volume administered. However, when considering the widespread use of alfentanil not captured in the audit forms the incidence may not be dissimilar to the ~1% which has been previously reported in literature (2). The rate of requiring additional analgesia is within the normal incidence even without considering unreported uses of IT alfentanil (3). While there were two GA conversions these were felt to be unrelated to IT alfentanil – rather failed neuraxial block.

We speculated that in a DGH there may be limited need for CSE. Our project highlighted that despite epidural insertion there were still requirements for GA conversion. IT alfentanil is frequently seen in Northern Ireland however evidence to support its use is sparse. We feel this project has provided some objectively to its implementation.

**Overall, there was a reduction in the number of CSEs, limiting unnecessary epidurals and associated risks without significantly impacting on complications.** This was despite an increased workload with the relocation of Causeway services in July 2023.

References:  
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 2. Visser WA, Dijkstra A, Albayrak M, Gielen MJ, Boersma E, Vonsée HJ. Spinal anaesthesia for intrapartum Caesarean delivery following epidural labor analgesia: a retrospective cohort study. Can J Anaesth. 2009 Aug;56(8):577-83. doi: 10.1007/s12630-009-9113-y. Epub 2009 Jun 5. PMID: 19499280.  
 3. Plaat F, Stanford SER, Lucas DN, Andrade J, Careless J, Russell R, Bishop D, Lo Q, Bogod D. Prevention and management of intra-operative pain during caesarean section under neuraxial anaesthesia: a technical and interpersonal approach. Anaesthesia. 2022 May;77(5):588-597. doi: 10.1111/anae.15717. Epub 2022 Mar 24. PMID: 35325933; PMCID: PMC9311138.