

Accidental awareness during general anaesthesia in the United Kingdom and Ireland

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TITLE The 5th National Audit Project (NAP5) on accidental awareness during general anaesthesia: protocol, methods and analysis of data

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DECLARATION OF INTERESTS PN was President of the Royal College of Anaesthetists when NAP5 was conceived

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SUMMARY

This paper is the first of three published simultaneously in *Anaesthesia* and the *British Journal of Anaesthesia* and summarises the protocol, methods and data analysis for the 5th National Audit Project (NAP5).

Using a network of local co-ordinators, all public hospitals in the UK and Ireland participated in this service evaluation which was approved by all five Departments of Health. There were three parts to the project: i) a survey in early 2012 to ascertain anaesthetists' current knowledge of accidental awareness; ii) the main data collection from June 2012–May 2013; and iii) the collection of denominator data during 2012 and 2013.

The local co-ordinators developed multi-disciplinary networks encompassing medical, surgical, psychiatric and psychology contacts. Information about the project was also disseminated by the Colleges and national societies for psychologists, psychiatrists and general practitioners. Each month local co-ordinators reported whether any cases had been raised in their catchment area.

The second paper summarises the main findings and risk factors^{1,2} while the third paper looks at patient experiences, human factors, sedation, consent and medicolegal issues.^{3,4}

It is estimated that about 2.8 million anaesthetics are delivered in the NHS each year.⁵ The overall incidence of accidental awareness in NAP5 was ~1:19,600 anaesthetics. Of note was the variation of the incidence: with neuromuscular blockade it was ~1:8200 compared

to ~1:135,900 when neuromuscular blocking agents were not used. There was also a higher incidence in cardiothoracic cases and during caesarean sections.

The full report is available at http://www.nationalauditprojects.org.uk/NAP5_home#pt. For the physician who uses sedative techniques in their practice there is much to be gleaned from the report as a whole but particularly from the third paper.

OPINION

There has been no standardised definition of awareness for anaesthetists to work with. The paradox in the minds of anaesthetists is that studies suggest a rate of 1–2/1000 during general anaesthesia. If true, the average anaesthetist would see a case every year or so; this does not happen.

The strength of this service evaluation is that it is the largest ever in this field, and it has used a definition that is patient-centric, relying on patients reporting their experience spontaneously rather than through single or repeated, probing questionnaires. Thus, the patient (or their representative or carer) had to make a statement that they had been *aware for a period of time when they expected to be unconscious*. This methodology had face validity, but it is important to remember that there may still be patients who may have been affected but did not feel able or willing to raise the issue spontaneously.

The report makes 64 recommendations and these must be addressed on behalf of patients.

Undoubtedly NAP5 will lead to changes in practice, e.g. the use of supplementary doses of induction agent and clearer discussions with patients about what is expected. It also provides a number of useful definitions and tables. Interestingly, the report provides little support for the widespread use of brain monitors designed to assess the depth of anaesthesia.

The Safe Anaesthesia Liaison Group, which is a whole specialty forum, could prioritise the recommendations and take them forward. Certainly, some can be addressed rapidly, e.g. the introduction of a simple anaesthesia checklist to be performed at the start of every operation, and the introduction of an Awareness Support Pathway for the management of patients reporting awareness.

Accepting that female, obese patients (often associated with a difficult airway), undergoing obstetric emergency cases are one of the groups most at risk then this patient population could be re-audited to gauge progress.

What NAP5 does do is to demonstrate the pre-eminent position of UK and Irish anaesthesia services in being able to organise, undertake and populate such a large and robust registry from which many lessons can be learnt. The specialty should be pleased to have accomplished this audit but accept that even one aware patient is one too many and take steps to address this.

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