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QUALITY AND PATIENT SAFETY

National critical incident reporting systems relevant to anaesthesia: a European survey

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Editor's key points

- Reliable incident reporting and dissemination of learning improves patient safety.
- Establishing a 'no blame' safety culture and ensuring legal protection will encourage greater incident reporting.
- Standardizing definitions, benchmarking, and closing the patient safety loop are important steps in this process.

Background. Critical incident reporting is a key tool in the promotion of patient safety in anaesthesia.

Methods. We surveyed representatives of national incident reporting systems in six European countries, inviting information on scope and organization, and intelligence on factors determining success and failure.

Results. Some systems are government-run and nationally conceived; others started out as small, specialty-focused initiatives, which have since acquired a national reach. However, both national co-ordination and specialty enthusiasts seem to be necessary for an optimally functioning system. The role of reporting culture, definitional issues, and dissemination is discussed.

Conclusions. We make recommendations for others intending to start new systems and speculate on the prospects for sharing patient safety lessons relevant to anaesthesia at European level.

Keywords: anaesthesia; clinical audit; critical incident technique; incident reporting, hospital; patient safety

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Critical incident reporting is a key component of patient safety.[1][2] Experience from risk management in other industries suggests that safety can be improved by learning from accidents and near misses. Optimal management of errors requires organizations to learn from the threats to safety, identify the underlying causes, and seek out opportunities for change.[3] Commonly, this involves the introduction of incident reporting systems (IRSs) which enable front-line staff to communicate their safety concerns and experiences of error to those responsible for safety and quality. These incident reports then provide organizations with the information needed to make proactive remedial changes to practice. Furthermore, there is often a great deal to learn from important individual reports.

Four key components must be optimized for IRSs to achieve their potential:[1] *Data input* must be encouraged with a non-punitive culture; the *data* themselves are best gathered by free text to allow as much detail as possible; *data analysis* needs time and expertise to turn the report into a 'lesson'; and *feedback* is essential not only to change practice but also to encourage further reporting. Reporting systems have been organized at a variety of levels: within individual departments of anaesthesia, within individual hospitals, at regional level, and at national level. While immediate analysis and feedback are essential at local level, wide dissemination of safety lessons can improve patient care on a larger scale. However, many countries do not yet have national systems for reporting

incidents arising from anaesthesia and critical care, and there is also no European platform for sharing the lessons from those countries that do. In this study, our aim was to compare the different IRSs operating in these European countries with a view to gathering intelligence which might help others establish new systems.

In addition, we aimed to bring together those who might in future collaborate to share the lessons learnt from incidents at European level.

Methods

A standardized questionnaire was sent out to representatives of nationally organized IRSs, which include reporting about anaesthesia in six European countries. The questionnaire invited free text responses on more than 30 questions grouped under seven headings (Table 1). We asked how and when systems started operating, how they were funded and publicized, and how they linked into local and other national systems. We also asked for data on the number of incidents and the processes of analyses and feedback, before inviting recommendations to those considering establishing similar systems in other European countries. We sent this questionnaire to representatives in Denmark, Finland, Germany, Spain, Switzerland, and the UK, as we were aware from preliminary work that these countries had national systems for incident reporting. Responses were analysed within the themes set out in the data collection tool and, specifically, advice for setting up new systems was extracted separately.

Results

The results of the enquiry are summarized and compared in Table 2. Detailed intelligence about each national system is presented below, in alphabetical order.

Denmark

The Danish National Board of Health raised the need for a patient safety IRS in 1997, but did not receive any support until after the publication of *To Err is Human* by the US Institute of Medicine in 1999.[4] A report from the Danish Institute for Health Services[5] showed that patient safety was similar to the situations in Australia, the UK, and New Zealand, where incident reporting was already developing. However, the electronic reporting systems were not quite suited to the Danish context and it was necessary to design a new one. Patient safety laws were passed in 2003, meaning that incidents are reported to the national patient safety reporting system in both public and private practice. In 2010, this was extended to include pharmacies, pre-hospital care, and the municipal health service. The online system was launched nationally in 2004, includes all incidents in all specialities, and is funded by the national budget (~€1 000 000 per year). Each hospital is required to have at least one safety representative in each department and between one and three patient safety managers. At regional level there is a patient safety unit with between five and ten managers. Nationally at the central authority (the Danish National Agency for Patients' Rights and Complaints or *Patientombuddet*), four full-time employees (two medical doctors, one nurse, and one pharmacist) are running the system and are disseminating learning nationwide. Anyone can report incidents using the system—including members of the public from 2011—although the public does not have access to the reports.

It is an extensive system in all hospitals with 140 285 cases (2004–2011) and in its second incarnation 156 000 cases (2010 until June 2012), a total of 296 285 reports.

Currently the system receives more than 150 000 reports in a year. After de-identification and local processing, the incidents are analysed at national level by the Danish National Agency for Patients' Rights and Complaints, which is responsible for disseminating learning nationwide. This is done using alerts, monthly newsletters, themed reports, annual reports, and by arranging 'awareness' days on specific themes. No regular/systematic analysis of the database is carried out. However, based on alerts from, for example, safety managers and safety representatives and special focus areas, specific analyses are carried out. Built-in search terms trigger an alarm in incidents of particular concern. Any publications using the database as a source are required to report their research findings to the central authority.

Since 2004, the central authority has issued 30 warnings about procedures/workflows posing a risk to patient safety and 18 major theme reports. The Danish system shares its findings internationally via the Global Patient Safety Alerts within the World Health Organization.[6]

In 2006, the system was formally evaluated: it was found to be well implemented and used but many healthcare professionals felt a lack of time to report and a lack of knowledge about what to report, and it was concluded that the system was not being used as effectively as it could be. The poor individual feedback to the reporter and the long lag time to follow-up with safety intervention were also highlighted. This led to changes in the law in 2010, which has since improved incident reporting in Denmark.

Finland

The IRS in Finland, HaiPro, was also developed after the publication of *To Err is Human* in 1999.[4] It started as a pilot project in one hospital—Helsinki University Hospital—in 2005, where 210 incidents were reported in a 4-month period. The system was gradually rolled out across the country in 2007 and now covers ~90–95% of hospitals in Finland and all specialties. Each hospital district pays for its own HaiPro. Although HaiPro is a national system, the reporting and resulting actions after the incidents take place at local level. Reporting is anonymous.

HaiPro is an online system aiming to capture all incidents and near misses with patient care, medications, and equipment anonymously within a 'no blame' culture. It is funded by the hospitals using it. By December 2012, more than 200 000 incidents from all specialities and all sections of healthcare, over the whole country, had been reported by clinical staff. Only in a few instances, has the report been filled out by a patient, assisted by a member of the nursing staff. Currently, the data