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Clinical events reported by surgeons assessing their peers

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Abstract

BACKGROUND: All surgical deaths in Queensland, Australia are reviewed by external surgeon peers, and clinical events are recorded. The study objective was to classify clinical events in surgical patients who died.

METHODS: Deaths notified to the Queensland Audit of Surgical Mortality between 2007 and 2013 were assessed by surgeons' peers who decided whether a clinical event occurred. The most serious clinical event per patient was analyzed.

RESULTS: Peer surgeons reviewed 4,816 deaths. Most patients (70.7%) had no clinical event. Events were preventable in 58% of patients and less than 1 in 10 events was severe. The most frequent events were classified as patient assessment (34.5%), suboptimal therapy (15.3%), and delays (15.1%).

CONCLUSIONS: Peer review of all surgical deaths identifies preventable clinical events and provides opportunities to improve decision making, better therapy and reduce delay in implementing appropriate surgical care. Review feedback to surgeons and other stakeholders should improve patient safety and quality.

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Data sharing statement: No additional data are available. The corresponding author is able to provide deidentified data for this study if requested.

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Worldwide 1 in 10 patients admitted to hospital have a clinical event.[1] In Australia, clinical events also occur in 1 in 5 surgical patients.[2] A clinical event is defined as patient harm regardless of its intent. The term "harm" includes adverse events regardless of severity and whether the patient survived or died.[3] Reducing the number of clinical events would improve patient outcomes and reduce health care costs. Clinical events are often preceded by isolated harmless events which may lead to harmful clinical events when combined.[4] Systems reporting risk from health care episodes need to include "near misses" as well as clinical events and adverse events.[3,5–7]

Event reporting in hospitals worldwide has largely become the governance responsibility of nurses,[8] but these reports may not cover the patients' full surgical experience. Reporting of clinical events using mortality data as reported by surgeons is unusual and has only been previously published by the Scottish Audit of Surgical Mortality (SASM). SASM has reported that clinical events were more likely because of systems and process rather than clinician error.[7,9] In 2003, the Royal Australasian College of Surgeons established their own mortality audit, the Australian New Zealand Audit of Surgical Mortality[10] which incorporates the Queensland Audit of Surgical Mortality (QASM). The purpose of such an audit is to minimize patient harm by improving surgeons' accountability and promoting reflection on their practice and thus learning.[11–16]

The aim of this study was to identify and classify clinical events that occurred in patients who underwent surgery and died in-hospital in Queensland, using mortality data collected as part of the QASM audit. The secondary aim was to determine the proportion of preventable clinical events.

Methods

Audit inclusion criteria

This cross-sectional analysis involved all patients who died in-hospital under the care of surgeons in participating public and private hospitals in Queensland, Australia between July 2007 and December 2013. Cases were reported from 42 hospitals (27 public and 15 private)—representing all public hospitals and 76% of private hospitals. No hospital withdrew participation. All patients admitted by a surgeon who died in-hospital after a surgical procedure or while under nonoperative care by a surgeon were eligible for inclusion. Patients who were admitted for nonoperative terminal care or only underwent a tracheostomy were excluded. "Admitted patient episode of care" usually refers to the entire hospital stay of a patient. However, on some occasions patients receive more than one type of care and separate episodes of care are counted.[17]

Audit process and data collection

Every in-hospital death while under the care of a surgeon is notified to QASM by the admitting hospital. Deaths are notified regardless of whether an operation had been performed. Surgeons have no jurisdiction over which deaths are reported. QASM forward the treating surgeon a standard data collection form (surgical case form [SCF]) to complete.

Peer review

Every notified death undergoes a first-line assessment by an independent external surgeon peer to determine if clinical care could have been improved. Cases are deidentified before assessors receive the SCF, to ensure a double-blind process. Assessors can recommend either no further action or may request further investigation; this occurs when there is insufficient information on the SCF or when an area of care requires clarification. Approximately 15% of notified deaths proceed to a more forensic second-line assessment.[18] Second-line assessors have access to the patients' medical records but are not privy to the first-line assessment. Each assessor is from the same surgical specialty but from a different geographical location. A pool of approximately 400 surgeons assesses notified cases.

Clinical events

Clinical events are defined in terms of severity as either: an adverse event that contributed to or caused the death of the patient (level 1 event); an area of concern that should have been handled better (level 2 event), or an area of consideration that could be improved (level 3 event). All notified cases with clinical events, as identified by first- and second-line assessors are included in this report. When patients had more than one clinical event; the most serious clinical event was analyzed. Identified clinical events were categorized using READ codes.[19] READ codes are a clinical decision tree that contains terms, synonyms, and abbreviations covering all aspects of patient care.

Qualified privilege and ethical approval

The audit is managed by the Royal Australasian College of Surgeons and supported by the Queensland State Health Department. In Queensland, it is a declared quality improvement committee under the Hospital and Health Boards Act 2011 and Regulation 2012. It is recognized as an Australian Government gazetted quality assurance activity under Part Vc of the Health Insurance Act 1973 (August 2011).

Statistical analysis

Summary statistics are presented as median (interquartile range) for continuous variables and frequency