Quality Lines

EDITOR'S CHOICE

We know that throughout the world a significant number of people are inadvertently and unnecessarily harmed by the health care from which they expected to benefit. On the other hand, we also know that many people who would benefit from proven interventions do not get them. Studies demonstrating these findings are depressingly similar and, despite knowing much more about the causes and the circumstances of poor quality care, little seems to have changed over the years. One of the problems is that the information about lapses in care and clinical incidents is rarely available to clinicians in ''real time''. Usually such information is revealed some months later and, being retrospective, has limited effect on current practice. Two papers in this issue suggest ways in which information technology can be used to help provide such information in a timely way. In Osaka Hospital, Japan, a web-based incident reporting system has helped increase the reporting of critical incidents and already some important situations have been identified and harm averted ***(see p 123)***. But, getting staff—in particular doctors—to engage in this required a huge amount of work and organisational development. Nurses who previously had a paper based system entered four times as many reports with the web-based system. In another paper, integrating performance measures into electronic medical records showed the superiority of electronic review of care to manual review ***(see p 99)***. Not only is sensitivity increased but this approach will allow care to be reviewed quickly and fed back to prescribing clinicians. But beware, technological approaches to safety and quality alone will not be enough to make care safe enough. Another paper in this issue outlines the mistakes in administration of intravenous medication that can occur with the use of infusion pumps ***(see p 80)***. Technological solutions will undoubtedly have a pivotal role in developing safer care; but in addition health professionals need to change attitudes; be prepared to report incidents whenever they occur; and develop that sense of ''chronic unease'' that will enable them to identify potentially unsafe situations and be in a position to be able to prevent harm.

See p 80, 99, 123

THE SHARP END OF MEDICATION ERRORS: IMPLICATIONS FOR INFUSION PUMP TECHNOLOGY

Intravenous medication errors have a high potential for serious harm to the patient. Intravenous pumps have been tauted for the 20 years or so as a solution to some of these errors including protection against free-flow and air-in-line problems. The most recent safeguard introduced to the market is the so-called ''smart'' pump with software that reportedly alerts clinicians when a programmed dose exceeds pre-set dose limits. However, there is very little information in the literature regarding the exact nature and frequency of errors that these smart pumps are designed to prevent. An investigation reported in this issue describes types, frequency, and severity of errors associated with intravenous pumps. In contrast to the assumption that most errors associated with intravenous pumps are due to programming mishaps, it was found that these errors are likely to be more epidemiologically diverse. Additionally, an evaluation to determine the likelihood that this new smart pump technology could have prevented these errors showed that these pumps will fail to generate meaningful improvements in patient safety until they are interfaced with other electronic systems in the medication use process. With this said, however, give credence to the fact that the introduction of any new technology can be expected to introduce new error and therefore proactive research and planning is necessary to minimise these glitches.

See p 80

ELECTRONIC MEDICAL RECORDS

Electronic medical records (EMR) seldom integrate performance indicators into daily operations. Assessing quality indicators traditionally requires resource intensive chart reviews of small samples. In this five year cross-sectional analysis of US Medicare beneficiaries hospitalised at an academic centre, an EMR was compared with standardised manual assessment of use of beta adrenergic antagonist medications (beta blockers) following myocardial infarction. Among 4490 older adults, 4% of their 9018 hospitalisations contained codes for myocardial infarction. Based on exclusion criteria, patients were eligible for beta blockers in 17% of hospitalisations. Among these hospitalisations, physicians prescribed beta blockers in 72% on admission and 62% at discharge. Compared with manual chart review, electronic review had a sensitivity of 83% to 100% and led to fewer false negative findings. The study shows that an EMR system can be used instead of chart review, to measure use of beta blockers after myocardial infarction. This should lead to integration of real time, automated performance measurement into EMRs.

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