On the Radar

Issue 49
25 July 2011

On the Radar is a summary of some of the recent publications in the areas of safety and quality in health care. Inclusion in this document is not an endorsement or recommendation of any publication or provider.

Access to particular documents may depend on whether they are Open Access or not, and/or your individual or institutional access to subscription sites/services.

On the Radar is available via email or as a PDF document from
If you would like to receive On the Radar via email, please contact us at mail@safetyandquality.gov.au

For information about the Commission and its programs and publications, please visit

This week's content

Reports


<table>
<thead>
<tr>
<th>Notes</th>
<th>Adapted from the WHO site: Each year, hundreds of millions of patients around the world are affected by health care-associated infections (HAIs). Although HAI is the most frequent adverse event in health care, its true global burden remains unknown because of the difficulty in gathering reliable data. Understanding and assessing the global burden of HAI is one of the key areas of work of the Clean Care is Safer Care programme. Systematic reviews of the literature have been conducted to identify published studies from both developed and developing countries and highlight the magnitude of the HCAI problem. The results of these reviews are compiled in this report.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIM</td>
<td></td>
</tr>
</tbody>
</table>

For information on the Commission’s work on healthcare associated infections, see
Journal articles

BMJ Quality and Safety
August 2011, Vol 20, Issue 8

A new issue of BMJ Quality and Safety has been published. Many of the papers in this issue have been referred to in previous editions of On the Radar (when they were released online). Articles in this issue of BMJ Quality and Safety include:

- Improving teamwork in healthcare: current approaches and the path forward
- Displaying random variation in comparing hospital performance
- Effectiveness of collaborative improvement: evidence from 27 applications in 12 less-developed and middle-income countries
- The development of quality indicators for community pharmacy care
- Process support for risk mitigation: a case study of variability and resilience in vascular surgery
- Effects of hospital-wide interventions to improve care for frail older inpatients: a systematic review
- Development and validation of a tool to improve paediatric referral/consultation communication
- Interest of the preliminary risk analysis method in a central sterile supply department
- The roles of practice systems and individual effort in quality performance
- Pre-surgery briefings and safety climate in the operating theatre
- Towards saving a million bed days: reducing length of stay through an acute oncology model of care for inpatients diagnosed as having cancer
- Reduction of central line infections in Veterans Administration intensive care units: an observational cohort using a central infrastructure to support learning and improvement
- Safety implications of missed test results for hospitalised patients: the use of electronic discharge summary systems

URL http://qualitysafety.bmj.com/content/vol20/issue8/

Notes

In recent days the BMJ Quality and Safety has published a number of ‘online first’ articles. These include:

- A framework for engaging physicians in quality and safety (14 July) [see below]
- Improved communication in post-ICU care by improving writing of ICU discharge letters: a longitudinal before-after study (18 July)
- A nationwide Hospital Survey on Patient Safety Culture in Belgian hospitals: setting priorities at the launch of a 5-year patient safety plan (18 July) [see below]
- Impact of department volume on surgical site infections following arthroscopy, knee replacement or hip replacement (18 July) [see below]
- Improving RCA performance: the Cornerstone Award and the power of positive reinforcement (20 July)

URL http://qualitysafety.bmj.com/onlinefirst.dtl

On the Radar Issue 49
### A framework for engaging physicians in quality and safety

**Taitz JM, Lee TH, Sequist TD**  
BMJ Quality & Safety 2011 [epub].

**Notes**  
The importance of – but also the difficulty in obtaining – clinician engagement in safety and quality initiatives are widely recognised. This paper reports on an attempt to develop a framework for engaging clinician. Given this has been propounded in the US such a framework is likely to need tweaking to suit other settings; but such context-sensitivity is true of many, if not most, initiatives. The authors themselves note that their findings may not be generalisable.  
The authors developed their framework after surveying the activities in ten high-performing hospitals in the USA to determine how they engage their physicians in quality and safety. 42 interviews with 46 ‘quality leaders’ including CEO’s, Chief Medical Officers, Vice Presidents for Quality and Safety and physicians figured in the development of the a six-point framework for physician engagement in quality and safety. The framework consists of engaged leadership, a physician compact, appropriate compensation, realignment of financial incentives, data plus enablers and promotion. The authors hope that this framework ‘can assist organisations in the development of strategies to engage physicians in quality-and-safety activities’.

**DOI**  
http://dx.doi.org/10.1136/bmjqs-2011-000167

**For information on the Australian Safety and Quality Framework for Health Care, see**  

### A nationwide Hospital Survey on Patient Safety Culture in Belgian hospitals: setting priorities at the launch of a 5-year patient safety plan


**Notes**  
Article reporting on the results of a national survey of patient safety culture in Belgian hospitals and the examination of underlying safety culture dimensions. The Hospital Survey on Patient Safety Culture was distributed across 180 Belgian hospitals participating in the federal program on quality and safety between 2007 and 2009. Participating hospitals were invited to submit their data to a comparative database. Hierarchical cluster analysis was used to identify groups of underlying safety culture dimensions  
90 acute, 42 psychiatric and 11 long-term care hospitals submitted their data for comparison with a total of 55,225 completed questionnaires (53.7% response rate). Overall dimensional scores were low, although scores were found to be higher for psychiatric and long-term care hospitals than for acute hospitals. The overall perception of patient safety was lower in French-speaking hospitals. Hierarchical clustering of dimensions resulted in two distinct clusters. Cluster I grouped supervisor/manager expectations and actions promoting safety, organisational learning–continuous improvement, teamwork within units and communication openness, while Cluster II included feedback and communication about error, overall perceptions of patient safety, non-punitive response to error, frequency of events reported, teamwork across units, handoffs and transitions, staffing and management support for patient safety.  
The authors find that national view confirms the need for ‘a long-term national initiative to improve patient safety culture’ and also gives individual hospitals a baseline patient safety culture profile with which they can devise their response.

**DOI**  
http://dx.doi.org/10.1136/bmjqs.2011.051607
Impact of department volume on surgical site infections following arthroscopy, knee replacement or hip replacement
Meyer E, Weitzel-Kage D, Sohr D, Gastmeier P
BMJ Quality & Safety 2011 [epub].

The latest contribution to the volume-quality debate looks at orthopaedic surgery in Germany, where in 2006 a minimum volume regulation of at least 50 knee replacements per year was implemented. Here the measure of interest is the rate of surgical site infection (SSI) and whether that demonstrates a volume-quality relationship.

Using data from the Krankenhaus-Infektions-Surveillance-System (national nosocomial infections surveillance system) for January 2003–June 2008 the study looked 206 surgical departments that performed 14,339 arthroscopies, 63,045 knee replacements and 43,180 hip replacements during the study period. SSI rates were significantly higher in departments with a procedure volume of \( \leq 50 \) arthroscopies and knee replacements. A higher threshold of 100 procedures per year did see a significant decrease in SSI rates for all three procedures in the uni-variate analysis. Multi-variate analysis showed that the risk of SSI in low volume departments was sevenfold higher for arthroscopies and twofold higher for knee replacement than in medium volume departments. SSI risk after hip replacement was significantly lower in high volume centres.

The authors assert that these findings offer support for recommendations for concentrating arthroscopy and knee replacement in surgical departments with more than 50 procedures and hip replacement in departments with more than 100 procedures per year in order to reduce SSI rates.

DOI http://dx.doi.org/10.1136/bmjqs.2011.051250

Crisis Checklists for the Operating Room: Development and Pilot Testing
Ziewacz JE, Arriaga AF, Bader AM, Berry WR, Edmondson L, Wong JM, et al

Much has been written on checklists in recent years. Much of that has focussed on the use of checklists to routine care as a way of reducing unwanted variation. This paper looks at the use of checklists in operating theatre (OT) crises, reporting on the development and simulation testing of checklists for this setting.

The study group identified 12 of the most frequently occurring operating room crises and corresponding evidence-based metrics of essential care for each (46 total process measures). Checklists for each crisis – based on a method which included literature review, multidisciplinary expert consultation, and simulation – were developed. 2 operating room teams (11 participants) were each exposed to 8 simulations with random assignment to checklist use or working from memory alone. Each team managed 4 simulations with a checklist available and 4 without. The group report that checklist use resulted in a 6-fold reduction in failure of adherence to critical steps in management for 8 scenarios with 2 pilot teams. The authors conclude that they believe that ‘checklist use can improve safety and management in operating room crises’ and that their findings warrant broader evaluation, including in clinical settings.

DOI http://dx.doi.org/10.1016/j.jamcollsurg.2011.04.031
**A policy-based intervention for the reduction of communication breakdowns in inpatient surgical care: results from a Harvard surgical safety collaborative**

Arriaga AF, Elbardissi AW, Regenbogen SE, Greenberg CC, Berry WR, Lipsitz S, et al

<table>
<thead>
<tr>
<th>Title</th>
<th>Notes</th>
<th>DOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>A policy-based intervention for the reduction of communication breakdowns in inpatient surgical care: results from a Harvard surgical safety collaborative</td>
<td>According to the ARHQ PS Net, ‘communication failures in the surgical setting are a known threat to patient safety and the second most common root cause of adverse events (following technical errors).’ This paper reports on the implementation of a set of tailored policy and education initiatives at 4 teaching hospitals that sought to increase timely and consistent resident–attending communication and promote attending visits with surgical patients. From analysis of 211 critical events and 1,360 patient cases the study found significant improvements in communication between residents and attendings. The number of patients not visited by attendings on weekends decreased by half, and the improved communications resulted in attending-level changes in patient management a third of the time. An accompanying editorial reviewed the findings and stressed the importance of simply setting clear and explicit expectations for communication.</td>
<td><a href="http://dx.doi.org/10.1097/SLA.0b013e3181f4dfc8">http://dx.doi.org/10.1097/SLA.0b013e3181f4dfc8</a></td>
</tr>
</tbody>
</table>

**ED handoffs: observed practices and communication errors**

Maughan BC, Lei L, Cydulka RK

<table>
<thead>
<tr>
<th>Title</th>
<th>Notes</th>
<th>DOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED handoffs: observed practices and communication errors</td>
<td>Clinical handover is a known problem, and has been one of the Commission’s priority programs. This paper looks specifically at handover/handoff in the emergency department setting. On observing 110 handover sessions covering 992 patients the authors report that examination handoff errors and omissions were noted in 130 (13.1%) and 447 (45.1%) handovers. Interestingly, more examination errors were associated with longer handoff time per patient, whereas fewer examination omissions were associated with use of written or electronic support materials. Laboratory handover errors and omissions were noted in 37 (3.7%) and 290 (29.2%) handovers. Fewer laboratory errors were associated with use of electronic support tools, whereas more laboratory handover omissions were associated with longer ED lengths of stay. The authors see standardization as one source of improvement.</td>
<td><a href="http://dx.doi.org/10.1016/j.ajem.2009.12.004">http://dx.doi.org/10.1016/j.ajem.2009.12.004</a></td>
</tr>
</tbody>
</table>

**For information on the Commission’s work on clinical handover, see**

**Developing a ‘critical’ approach to patient and public involvement in patient safety in the NHS: learning lessons from other parts of the public sector?**

Ocloo JE, Fulop NJ
Health Expectations 2011 [epub].

<table>
<thead>
<tr>
<th>Title</th>
<th>Notes</th>
<th>DOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing a ‘critical’ approach to patient and public involvement in patient safety in the NHS: learning lessons from other parts of the public sector?</td>
<td>In the British NHS there has been a push for greater patient and public involvement (PPI). This drive for greater involvement has been regarded as an important means of developing a safety culture. However, the authors suggest that progress has been slow and even more variable here than in health care generally. This paper seeks to identify key underlying drivers for involvement in the wider context and makes</td>
<td></td>
</tr>
</tbody>
</table>
some suggestions for greater engagement in patient safety. The authors suggest a ‘greater understanding is needed of the contested nature of involvement in patient safety’ and to understand what supports and hinders involvement, apparently often related to power inequities and control.

DOI http://dx.doi.org/10.1111/j.1369-7625.2011.00695.x

For information on the Commission’s work on patient-centred care, see http://www.safetyandquality.gov.au/internet/safety/publishing.nsf/Content/PCCC

Nicolini D, Waring J, Mengis J
Policy and practice in the use of root cause analysis to investigate clinical adverse events: Mind the gap

In this paper a number of academics based in various Business Schools examine the tension between the theory of root cause analysis (RCA) and its use in practice. While RCA was envisaged as a way of driving organisational learning, the authors argue that contradictory agendas observed provide an opportunity to re-evaluate its use.

By conducting an 18-month ethnographic study in two large acute NHS hospitals in the UK and documenting the process of incident investigation, reporting, and translation of the results into practice the author found that RCA has both strengths and weaknesses. The weakness stem part, from contradictions between ‘potentially incompatible organisational agendas and social logics that drive the use of this approach’. While RCA was originally conceived as an organisational learning technique, it is also used as a governance tool and ‘a way to (re)establish organisational legitimacy in the aftermath of incidents’.

The authors note that ‘the presence of such diverse and partially contradictory aims creates tensions with the result that efforts are at times diverted from the aim of producing sustainable change and improvement’. They suggest that a ‘failure to understand these contradictions, together with unreflective policy interventions, may produce counterintuitive negative effects which hamper, instead of further, the cause of patient safety’.

DOI http://dx.doi.org/10.1016/j.socscimed.2011.05.010

To make or buy patient safety solutions: A resource dependence and transaction cost economics perspective
Fareed N, Mick SS.
Health Care Manage Rev 2011 [epub].

The two authors (from a US university Department of Health Administration) develop a theoretical model incorporating the constructs of resource dependence theory and transaction cost economics theory to predict a hospital's reaction to the USA Centers for Medicare & Medicaid Services ‘never event’ regulations. It is an attempt to develop a theoretical framework to understand which hospitals may engage in safety solutions, and where they may source these. The findings suggest that hospitals with certain characteristics (‘larger, teaching, safety net, horizontally integrated, highly interdependent, and public hospitals in concentrated, high public payer presence, competitive, and resource-rich environments’) are more likely to innovate, and that they are more likely to develop internally than going to the market. An accompanying editorial challenges the
piece, suggesting it may be too narrow or take an incomplete perspective of strategic behaviour and decision-making around patient safety.

**Online resources**


To protect patients and help educate clinicians about minimum expectations of safe care, the [US] Centers for Disease Control and Prevention (CDC) have released a new guide and checklist specifically for health care providers in outpatient care settings such as endoscopy clinics, surgery centers, primary care offices, and pain management clinics.

The *Guide to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care* is based on existing, evidence-based CDC guidelines that apply to a wide range of health care facilities but are mostly used by hospitals. The guide is accompanied by an Infection Prevention Checklist for Outpatient Settings and supporting materials including a new, no-cost, certified continuing medical education course titled *Unsafe Injection Practices: Outbreaks, Incidents, and Root Causes*.

Among other important recommendations, the guide states that all outpatient practices should ensure that at least one individual with specific training in infection control is on staff or regularly available. This individual should be involved in developing a written infection control policy and have regular communication with health care providers to address specific issues or concerns.

To access the guide, checklist, and supporting materials (including the course, commentary about the guide, clinician and patient education materials, a CDC Safe Surgery feature, and additional information), visit [http://www.cdc.gov/HAI/settings/outpatient/outpatient-settings.html](http://www.cdc.gov/HAI/settings/outpatient/outpatient-settings.html).


**[US] Institute for Healthcare Improvement**

The IHI has re-designed their website. The site includes ‘The Knowledge Center’ – content ‘library’ featuring tools, change ideas, measures, improvement stories, and other resources to support your improvement efforts. The ‘Explore by Interest’ section provides a more in-depth look at key topic areas.

---

**Disclaimer**

*On the radar* is an information resource of the Australian Commission on Safety and Quality in Health Care. The Commission is not responsible for the content of, nor does it endorse, any articles or sites listed. The Commission accepts no liability for the information or advice provided by these external links. Links are provided on the basis that users make their own decisions about the accuracy, currency and reliability of the information contained therein. Any opinions expressed are not necessarily those of the Australian Commission on Safety and Quality in Health Care.