



On the Radar

Issue 94
27 August 2012

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 whether your individual or institutional access to subscription sites/services. Material that may require subscription is included as it is considered relevant.

On the Radar is available via email or as a PDF document from
<http://www.safetyandquality.gov.au/publications-resources/on-the-radar/>

If you would like to receive *On the Radar* via email, please email us at
mail@safetyandquality.gov.au

For information about the Commission and its programs and publications, please visit
<http://www.safetyandquality.gov.au/> You can also follow us on Twitter @ACSQHC.

This week's content

Reports

Findings and Lessons from the Enabling Quality Measurement Through Health IT Grant Initiative
Prepared by Westat, under Contract HHS 290200900023I. AHRQ Publication No. 12-0047-EF.
Rockville, MD: Agency for Healthcare Research and Quality. May 2012.

Notes	Report on research into using health information technologies to measure quality. Based on the experiences of 17 researchers, the <i>Findings and Lessons from the Enabling Quality Measurement Through Health IT Grant Initiative</i> report draws on work examining the development of electronic quality measures, methods of capturing and integrating quality data in electronic health records, the accuracy of IT-enabled measurements, methods for providing meaningful feedback to clinicians, and ways that health IT could improve the efficiency of quality measurement. One aim of such work is to transform raw data into meaningful feedback for clinicians so as to better understand and improve practice.
URL	http://healthit.ahrq.gov/ASQ http://healthit.ahrq.gov/portal/server.pt/document/958334/6_1_3_d_final_508-compliant_eqm_report_6_21_12-to_client_pdf
TRIM	67406

Journal articles

Adverse events among children in Canadian hospitals: the Canadian Paediatric Adverse Events Study

Matlow AG, Baker GR, Flintoft V, Cochrane D, Coffey M, Cohen E, et al
Canadian Medical Association Journal 2012 [epub].

Notes	<p>The Canadian Paediatric Adverse Events Study sought to understand the epidemiology of adverse events among children in hospital in Canada. It involved a 2-stage medical record review at 8 academic paediatric centres and 14 community hospitals involved 3,669 patients admitted in April 2008–March 2009, evenly distributed across 4 age groups (0 to 28 d; 29 to 365 d; > 1 to 5 yr and > 5 to 18 yr). In stage 1, nurses and health records personnel who had received training in the use of the Canadian Paediatric Trigger Tool reviewed medical records to detect triggers for possible adverse events. In stage 2, physicians reviewed the charts identified as having triggers and described the adverse events.</p> <p>The weighted rate of adverse events was 9.2%. Adverse events were more frequent in academic paediatric centres than in community hospitals. The incidence of preventable adverse events was not significantly different between types of hospital, but non-preventable adverse events were more common in academic paediatric centres.</p> <p>Surgical events predominated overall and occurred more frequently in academic paediatric centres than in community hospitals, whereas events associated with diagnostic errors were significantly less frequent</p> <p>The authors conclude that “[m]ore children have adverse events in academic paediatric centres than in community hospitals; however, adverse events in the former are less likely to be preventable. There are many opportunities to reduce harm affecting children . . . , particularly related to surgery, intensive care and diagnostic error.”</p>
DOI	http://dx.doi.org/10.1503/cmaj.112153u

Improving care transitions: Optimizing medication reconciliation

American Pharmacists Association and American Society of Health-System Pharmacists
Journal of the American Pharmacists Association 2012;52(4):e43-52.

Notes	<p>Commentary piece that asserts that medication reconciliation is now “an integral part of the care transitions process in which health care professionals collaborate to improve medication safety as the patient transitions between patient care settings or levels of care” and that “the overall focus of the medication reconciliation process is on global patient safety and improved patient outcomes”. The authors then argue that further work/research is needed “on the implementation and adoption of effective medication reconciliation processes, with emphasis on the identification of current best practices for medication reconciliation.”</p>
DOI	http://dx.doi.org/10.1331/JPhA.2012.12527
URL	http://japha.org/article.aspx?doi=10.1331/JPhA.2012.12527

For information on the Commission’s work on medication safety, including medication reconciliation, see <http://www.safetyandquality.gov.au/our-work/medication-safety/>

Standardized postoperative handover process improves outcomes in the intensive care unit: a model for operational sustainability and improved team performance

Agarwal HS, Saville BR, Slayton JM, Donahue BS, Daves S, Christian KG, et al
Critical Care Medicine 2012;40(7):2109-2115.

Notes	<p>A recent addition to the literature on handover that also adds to the argument for a degree of standardisation in such tools. This study sought to determine whether structured handover tool from operating room to paediatric cardiac intensive care unit following cardiac surgery was associated with a reduction in the loss of information transfer and an improvement in the quality of communication exchange.</p> <p>The study involved paediatric cardiac surgery patients over a 3-yr period with the two evaluation periods: verbal handover (July 2007–June 2009) and structured handover (July 2009–June 2010).</p> <p>Two anonymous surveys administered to the entire clinical team of the paediatric cardiac intensive care unit evaluated loss of information transfer for each of the two handover processes.</p> <p>Patient complications including cardiopulmonary resuscitation, mediastinal reexploration, placement on extracorporeal membrane oxygenation, development of severe metabolic acidosis, and number of early extubations in the first 24-hr paediatric cardiac intensive care unit stay were compared for the two time periods. Survey results showed the general opinion that the structured handover tool was of excellent quality to enhance communication.</p> <p>The tool was associated with a significant reduction in loss of information for every category of patient clinical care including patient, preoperative, anaesthesia, operative, and postoperative details and laboratory values. Patient data revealed significant decrease for three of the four major complications studied and a significant increase in the number of early extubations following introduction of our standardized handover tool.</p> <p>As with a number of other studies, a tool for handover has been found to enhance communication, reduce information errors and deficits and was related to a reduction in adverse events.</p>
DOI	<p>http://dx.doi.org/10.1097/CCM.0b013e3182514bab</p>

For information on the Commission’s work on clinical communications, including clinical handover, see <http://www.safetyandquality.gov.au/our-work/clinical-communications/>

Last Orders: Follow-up of Tests Ordered on the Day of Hospital Discharge

Ong MS, Magrabi F, Jones G, Coiera E

Archives of Internal Medicine 2012 [epub].

Notes	<p>A study examining rates of review of tests ordered on the day of discharge in a 370-bed metropolitan teaching hospital in Australia. The authors found that of the tests ordered on the day of discharge, 46.8% were not reviewed at discharge, and 41.1% remained unread at two months post-discharge. The implications for these missed test results can be serious, with critical information missing from discharge summaries and tests duplicated. The authors use this evidence to call for improved discharge planning, better communication between clinicians, better use of computerised systems, and the inclusion of ‘test results pending’ information on discharge summaries.</p>
DOI	<p>http://dx.doi.org/10.1001/archinternmed.2012.2836</p>

Individualising type 2 diabetes management: new treatment options and models of care

N Wah Cheung

Medical Journal of Australia 2012; 197 (4): 196-197.

Medical Groups Can Reduce Costs By Investing In Improved Quality Of Care For Patients With Diabetes

Kralewski JE, Dowd BE, Xu YW

Health Affairs 2012;31(8):1830-1835.

Notes	<p>A pair of items on diabetes care.</p> <p>The first, by Cheung (President of the Australian Diabetes Society) advocates an individualised approach to diabetes care in both the glycated haemoglobin (HbA1c) targets and the choice of pharmacotherapy used. This call for a more individualised or patient-centred care may also mesh with the second item which asserts that improving the quality of care for patients with diabetes saves money. This US study found a net savings of US\$51 per patient, per year, for every percentage-point increase in the quality of care provided. The researchers analysed 234 US medical groups, serving 134,000 patients with diabetes, to better understand the relationship between adhering to quality measures and simultaneously keeping costs down. They found that cholesterol testing for all of a practice's patients with diabetes, for example, was associated with a dramatic drop in avoidable hospitalisations.</p>
DOI	<p>Cheung: http://dx.doi.org/10.5694/mja12.11041</p> <p>Kralewski http://dx.doi.org/10.1377/hlthaff.2011.0887</p>

Errors during the preparation of drug infusions: a randomized controlled trial

Adapa RM, Mani V, Murray LJ, Degnan BA, Ercole A, Cadman B, et al

British Journal of Anaesthesia 2012 [epub].

Notes	<p>Report on a British study examining the extent and frequency of dose errors and treatment delays made as a consequence of preparing drug infusions at the bedside, rather than using pre-filled syringes.</p> <p>Using 48 volunteers (all nurses with critical care experience) this randomized, blinded, controlled study was conducted in the simulation centre of an urban hospital. The volunteers assisted in the management of a simulated patient with septic shock. Infusions were prepared either by diluting concentrated drugs from ampoules or were provided in syringes pre-filled beforehand by an intensive care unit resident.</p> <p>The time taken for the infusion to be started and the final concentration of the drugs were measured.</p> <p>The study found that the nurses took 156s to start infusions when using pre-filled syringes compared with 276s when preparing them de novo, a mean delay of 106s. One infusion prepared from ampoules contained one-fifth of the expected concentration of epinephrine; another contained none at all. Medication errors were 17.0 times less likely when pre-filled syringes were used, and infusions prepared by pharmacy and industry were significantly more likely to contain the expected concentration.</p> <p>These results—errors were less frequent and medications were administered more rapidly, when pre-filled syringes were used—led to the conclusion that “[p]roviding drug infusions in syringes pre-filled by pharmacists or pharmaceutical companies would reduce medication errors and treatment delays, and improve patient safety”, but did not that this may have substantial financial implications.</p>
DOI	<p>http://dx.doi.org/10.1093/bja/aes257</p>

When financial incentives do more good than harm: a checklist

Glasziou PP, Buchan H, Del Mar C, Doust J, Harris M, Knight R, Scott A, Scott IA, Stockwell A
 BMJ 2012;345:e5047

Notes	<p>This review of the “modest and inconsistent” evidence around the positive and negative effects of financial incentives presents its findings in the form of a checklist. The proposed checklist is aimed at guiding implementers of financial incentives.</p> <p>The checklist is presented in two parts, with nine questions in total. If all answers to Part A are “yes”, then the three questions in Part B will help with the design of the potential program. The checklist proposes:</p> <p>Part A: Is a financial incentive appropriate?</p> <ol style="list-style-type: none"> 1. Does the desired clinical action improve patient outcomes? 2. Will undesirable clinical behaviour persist without intervention? 3. Are there valid, reliable, and practical measures of the desired clinical behaviour? 4. Have the barriers and enablers to improving clinical behaviour been assessed? 5. Will financial incentives work, and better than other interventions to change behaviour, and why? 6. Will benefits clearly outweigh any unintended harmful effects, and at an acceptable cost? <p>Part B: Implementation</p> <ol style="list-style-type: none"> 7. Are systems and structures needed for the change in place? 8. How much should be paid, to whom, and for how long? 9. How will the financial incentives be delivered? <p>The review also gives examples of the application of the checklist to real programs.</p>
DOI	http://dx.doi.org/10.1136/bmj.e5047

Beating the weekend trend: increased mortality in older adult traumatic brain injury (TBI) patients admitted on weekends

Schneider EB, Hirani SA, Hambridge HL, Haut ER, Carlini AR, Castillo RC, et al
 Journal of Surgical Research 2012 [epub].

Notes	<p>Out-of-hours admissions and their perceived greater risk have been written about before. This study looked at trauma, where some earlier work suggested equal outcomes in patients with traumatic injuries regardless of the day of admission. This finding was ascribed to the protocolised and closely supervised nature of trauma care.</p> <p>This new study of older adults admitted with traumatic brain injury did find increased mortality for those patients admitted on the weekend, despite the fact that patients admitted on the weekend were less severely injured.</p> <p>However, as the PSNet email from the US Agency for Healthcare Research and Quality (ARHQ) noted, this study did not analyse outcomes for patients cared for at specialised trauma centres, and work on such centres in Australia has shown the centres do lead to better outcomes.</p>
DOI	http://dx.doi.org/10.1016/j.jss.2012.06.022

Preventing Patient Harms Through Systems of Care

Pronovost PJ, Bo-Linn GW

Journal of the American Medical Association 2012;308(8):769-770.

Notes	<p>A commentary piece that argues that patient harms are not independent events (“Harms tend to cluster within patients, making these harms interdependent rather than independent. Inpatients often experience multiple harm”) and hence any hope of truly eliminating them requires a systematic approach: “solutions for harm reduction must be integrated and interdependent”.</p> <p>This view argues that “[c]linicians can reduce patient harm in the same way that engineers manage dynamic complexity: as a systems problem that requires an interdisciplinary systems solution. A holistic view is necessary when analyzing patient requirements.” The authors suggest that “practices should be implemented efficiently by organizing them as a system of care, automating as many practices as possible, showing when practices are needed or completed, ensuring integration across devices and with the EMR [electronic medical record], and continuously learning how to improve performance.”</p> <p>This is a call for quite a profound change, a change to a highly technological, interdependent, systems approach. Pronovost and Bo-Linn believe that “It is time for the science of health care delivery to mature and embrace systems engineering. It is time for health care to embrace the compelling goal of reducing preventable patient harm. By systematically addressing all the known harms patients may experience, clinicians may realize this goal and, by doing so, improve health care and reduce costs of care, ultimately improving value for the nation and its citizens.”</p>
DOI	<p>http://dx.doi.org/10.1001/jama.2012.9537</p>

BMJ Quality and Safety online first articles

Notes	<p><i>BMJ Quality and Safety</i> has published a number of ‘online first’ articles, including:</p> <ul style="list-style-type: none"> Recorded quality of primary care for patients with diabetes in England before and after the introduction of a financial incentive scheme: a longitudinal observational study (Evangelos Kontopantelis, David Reeves, Jose M Valderas, Stephen Campbell, Tim Doran)
URL	<p>http://qualitysafety.bmj.com/onlinefirst.dtl</p>

International Journal for Quality in Health Care online first articles

Notes	<p><i>International Journal for Quality in Health Care</i> has published a number of ‘online first’ articles, including:</p> <ul style="list-style-type: none"> Editorial: What does the patient know about quality? (Karen Luxford) http://intqhc.oxfordjournals.org/cgi/content/extract/mzs053v1?papetoc Implementation of early goal-directed therapy and the surviving sepsis campaign resuscitation bundle in Asia (Sungwon Na, Win Sen Kuan, Malcolm Mahadevan, Chih-Huang Li, Pinak Shrikhande, Sumit Ray, Michael Batech, H. Bryant Nguyen, and for the ATLAS Investigators) http://intqhc.oxfordjournals.org/cgi/content/abstract/mzs045v1?papetoc
-------	--

Online resources

The Conversation Project [US]

<http://theconversationproject.org/>

In collaboration with the Institute for Healthcare Improvement (IHI), The Conversation Project launched on 15 August 2012 with the goal **to have every person's end-of-life wishes expressed and respected.**

“The Conversation Project is engaging the public in a campaign to encourage open and honest end-of-life discussions among families and friends. The cornerstone of the project is a website that offers a Conversation Starter Kit and asks people to share their personal stories. By sparking cultural change at the kitchen table - not in the intensive care unit - The Conversation Project hopes it will become easier for people to express their end-of-life wishes in advance and have them respected at the end. IHI is also gearing up to help health care organizations become ‘Conversation Ready’.”

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.