



On the Radar

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This is the last issue of *On the Radar* for 2012. The next issue will appear in mid-January 2013.

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.

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On the Radar

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Journal articles

Patient Safety in the Critical Care Environment

Rossi PJ, Edmiston Jr CE

Surgical Clinics of North America 2012;92(6):1369-1386.

Notes	<p>An extended commentary that describes patient safety issues pertinent to the 'critical care' or intensive care setting. The authors identify these key points:</p> <ul style="list-style-type: none"> • In the United States, more than 5 million patients per year are admitted to the intensive care unit (ICU), composing 30% of the acute care cost or approximately \$160 billion per annum nationwide. • Errors in patient care at some level cause up to 10% of patient fatalities in trauma ICUs in patients with otherwise survivable injuries; estimates are that critically ill patients may suffer up to 1.7 medical errors a day, mostly from medication administration errors. • It will be of utmost importance to implement quality and safety measures that are already supported by evidence, such as hand hygiene, implementation of evidenced-based care bundles, adequate identification and treatment of health care-acquired infections, and increasing the percentage of patients in ICU settings that are cared for by dedicated intensivists.
DOI	http://dx.doi.org/10.1016/j.suc.2012.08.007

Waking up the next morning: surgeons' emotional reactions to adverse events

Luu S, Patel P, St-Martin L, Leung ASO, Regehr G, Murnaghan ML, et al.

Medical Education 2012;46(12):1179-1188.

Notes	<p>This addition to the literature on the 'second victim' is a qualitative study based on interviews with surgeons to explore "surgeons' reactions to adverse events and their impact on subsequent judgement and decision making."</p> <p>The authors report that surgeons reported "feeling unique and alone in the depths of their reactions to adverse events and consistently described four phases of response after such events." The authors describe these thus: The initial phase (the kick) involved feelings of failure. This was followed by a second phase (the fall), during which the surgeon experienced a sense of chaos and assessed the extent of their contribution to the event. During the third phase (the recovery), the surgeon reflected on the adverse event and experienced a sense of 'moving on'. In the fourth phase (the long-term impact), the surgeon experienced the prolonged and cumulative effects of these reactions on their personal and professional identities. Surgeons also described an effect on their clinical judgement, both for the case in question (minimisation) and future cases (overcompensation).</p> <p>The authors suggest this framework of response may have "implications for teaching, surgeon wellness and surgeon error."</p> <p>A more literate and personal view can be found in this piece by a neurosurgeon in which he talks about some his experiences, including "my disasters – another headstone in that cemetery which the French surgeon Leriche once said all surgeons carry within themselves."</p> <p>http://www.granta.com/New-Writing/Henry-Marsh</p>
DOI	<p>http://dx.doi.org/10.1111/medu.12058</p>

Bar-code Verification: Reducing but not Eliminating Medication Errors

Henneman PL, Marquard JL, Fisher DL, Bleil J, Walsh B, Henneman JP, et al.

J Nurs Adm 2012;42(12):562-566.

Notes	<p>Various technological solutions have been suggested for medication safety issues. Bar coding has been one such. This paper reports on an simulation study that identified several mechanisms by which medication errors could occur even when a bar code medication administration system was used. Potential errors that were still possible included patient identification errors and failure to comprehend medication warnings.</p> <p>Other bar coding projects that have apparently been more successful have included ones where the clinician, patient and medication were all bar coded and had to be successfully matched in the system for dispensing to be authorised. Such a solution requires data on all elements to be accurate and up-to-date and the rules governing their interaction had been established.</p>
DOI	<p>http://dx.doi.org/10.1097/NNA.0b013e318274b545</p>

For information about the Commission's work on medication safety, see

<http://www.safetyandquality.gov.au/our-work/medication-safety/>

For information about the Commission's work on safety in e-health, including electronic medication management systems in hospitals, see <http://www.safetyandquality.gov.au/our-work/safety-in-e-health/>

The relationship between organizational culture and performance in acute hospitals

Jacobs R, Mannion R, Davies HTO, Harrison S, Konteh F, Walshe K

Social Science & Medicine 2013;76(0):115-125.

Notes	<p>An interesting contribution to the literature examining organisational culture (OC) and performance in hospitals. The investigators measured OC over three time periods between 2001/02 and 2007/08 by surveying a total of 2464 senior NHS (UK) hospital managers from 187 (first time period) to 140 (final time period). The Competing Values Framework was used, which maps OC across two spectra:</p> <ol style="list-style-type: none"> 1. flexibility/dynamism versus stability and predictability; and 2. integration and collaboration versus competition and rivalry. <p>Using these dimensions the CVF articulates four cultural ‘types’:</p> <ol style="list-style-type: none"> 1. Clan (cohesive, emphasis on morale); 2. Developmental (creative, adaptive, innovative); 3. Rational (competitive, acquisitive, goal-oriented); and 4. Hierarchical (ordered, uniform, predictable). <p>Results indicate that, overall, the OC hospitals included in the study moved towards Rational OC, but also exhibited a stronger blend of OC types in the later time period (a single dominant culture became less prominent).</p> <p>In terms of performance, results indicate an association between Developmental OC and higher ‘Star Ratings’ (a composite performance indicator set by the NHS’ Healthcare Commission).</p> <p>Other interesting finding include an association between (a) lower negligence expenditure with Developmental compared to Clan and Rational OC, (b) the proportion of day cases were lower in hospitals with a Hierarchical than Developmental and Clan OC.</p> <p>The paper provides an overview of theoretical links between OC and performance and previous empirical work in this area, which may be of interest to readers. The study may have been enhanced by including clinical staff in the survey.</p>
DOI	<p>http://dx.doi.org/10.1016/j.socscimed.2012.10.014</p>

Preventing Lethal Hospital Outbreaks of Antibiotic-Resistant Bacteria

Sandora TJ, Goldmann DA

N Engl J Med 2012; 367:2168-2170

Notes	<p>In this perspective piece the authors consider an episode of <i>Klebsiella pneumoniae</i> outbreak in the intensive care unit of the Clinical Center of the National Institutes of Health (NIH), when a strain resistant to multiple antibiotics, including carbapenems, was identified and at least 19 people were infected, with several deaths. The article asks ‘What does this episode tell us about how to mitigate the risk of future outbreaks?’</p> <p>The authors note that multidrug-resistant organisms (MDROs) are transmitted ‘mainly on the hands of caregivers who do not practice effective hand hygiene after every contact with patients and their environment’ and argue that ‘anything less than complete adherence to hand-hygiene guidelines constitutes a violation of sound practice and requires accountability’.</p> <p>The authors also highlight environmental infection control, antimicrobial stewardship, improved screening, better communication between units and more research to prevent the spread of MDROs.</p>
DOI	<p>http://dx.doi.org/10.1056/NEJMp1212370</p>

For information about the Commission’s work on healthcare associated infection, see <http://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/>

The struggle to improve patient care in the face of professional boundaries

Powell AE, Davies HTO

Social Science & Medicine 2012;75(5):807-814.

Notes	<p>Professional boundaries are recognised as potentially influencing the quality of patient care. This qualitative study examined how efforts to improve quality of post-operative pain management were affected by professional boundaries. 71 in-depth interviews were conducted in three UK healthcare organisations with anaesthetists, surgeons, nurses, managers and other health professionals in 2003/04. Quality improvement efforts were hindered by</p> <p>(a) the reluctance of many health professions to accept that this was part of their professional role,</p> <p>(b) health professionals’ defence of their existing professional boundaries and roles, and</p> <p>(c) inter- and intra-professional conflicts that hindered effective communication and collaborative working.</p> <p>The study supports previous work but also provides evidence that professional groups not only try to enlarge their territory, but equally defend the status quo and resist addition of new tasks. The authors note that resistance to expansion of professional scope was not necessarily grounded in a sense of power. For nurses, this reluctance stemmed from a sense of fear and perceived lack of competence. Another finding was that the specialist team set up to implement the program came to assume the unintended role of ‘go-betweens’ across professional boundaries, described by medical and nursing interviewees as one of the most important functions the team provided.</p>
DOI	<p>http://dx.doi.org/10.1016/j.socscimed.2012.03.049</p>

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 2012;15(4):424-432.

Notes	<p>Building on the lessons on three decades of user involvement in health and social care, this theoretical paper proposes a new approach to patient involvement in patient safety. The authors argue that current attempts to increase patient involvement in safety, at both the individual and aggregate levels, are fundamentally flawed. This, they suggest, is largely due to the inherent difficulty of building meaningful patient involvement into the dominant biomedical model of health and illness, and the power asymmetry embedded within it.</p> <p>The authors suggest a broader and more critical framework for patient involvement in safety. This approach goes beyond the instrumentalist approach and reliance on individual agency associated with the current models, where patients and representatives are expected to work within existing systems and rules. Instead, the framework recognises the importance of permitting the lay perspective to safety issues and including alternative narratives.</p> <p>The core of the argument is that the problems faced by patients have a personal, cultural and structural, as well as clinical dimension. For example, patients should be empowered to bring different conceptualizations of health and illness to discussions around patient safety.</p>
DOI	<p>http://dx.doi.org/10.1111/j.1369-7625.2011.00695.x</p>

For information about the Commission’s work on patient and consumer centred care, see <http://www.safetyandquality.gov.au/our-work/patient-and-consumer-centred-care/>

Thirty-Day Outcomes Support Implementation of a Surgical Safety Checklist

Bliss LA, Ross-Richardson CB, Sanzari LJ, Shapiro DS, Lukianoff AE, Bernstein BA, et al. *Journal of the American College of Surgeons* 2012;215(6):766-776.

Notes	This paper reports on how the use of a comprehensive surgical safety checklist and implementation of a structured team training curriculum led to a statistically significant decrease in 30-day morbidity. This study compared 2,079 historical control cases, 246 cases without checklist use, and 73 cases with checklist use. Overall completion of the checklist sections was 97.26%. Comparison of 30-day morbidity demonstrated a statistically significant reduction in overall adverse event rates from 23.60% for historical control cases and 15.90% in cases with only team training, to 8.20% in cases with checklist use.
DOI	http://dx.doi.org/10.1016/j.jamcollsurg.2012.07.015

Realist randomised controlled trials: A new approach to evaluating complex public health interventions

Bonell C, Fletcher A, Morton M, Lorenc T, Moore L *Social Science & Medicine* 2012;75(12):2299-2306.

Notes	The focus of this paper is the evaluation of public health interventions, but there are insights and lessons for research in safety and quality. The authors examine the tension between randomised controlled trials (RCT) and ‘realist’ approaches to program evaluation. The basis of the realist approach is that systems are not static, but comprise dynamic structures, mechanisms and contexts, which combine to affect and influence the effect of an intervention in often unpredictable ways. It is therefore difficult to control or ‘bracket off’ how these will interact to produce change. An insightful critique of RCT from a realist position is provided, especially its application to complex interventions, citing several examples with strong parallels to large-scale safety and quality interventions. The authors then argue that it is not prudent to abandon the RCT approach altogether, and that the two can be synthesised to produce ‘realist RCTs’. Several propositions on how this can be achieved are provided. One suggestion is combining qualitative and quantitative methods, where one can inform and supplement the other. Another is to develop interventions within a clear framework of change in order to provide more information on how intervention mechanisms interact with system context. There are useful lessons here for those looking to evaluate system- or organisation-wide quality improvement initiatives, as well as those trying to make sense of such evaluations. The authors acknowledge that such an approach would inevitably require more investment and resources but argue that in the long run it would be more efficient than current uncoordinated efforts.
DOI	http://dx.doi.org/10.1016/j.socscimed.2012.08.032

Online resources

ResistanceMap

Extending the Cure [US]

<http://www.extendingthecure.org/>

Extending the Cure is a 'research and consultative effort' examining the challenge of antibiotic resistance. It is housed in the Center for Disease Dynamics, Economics & Policy, a non-profit and non-partisan organisation that conducts independent research, and funded in part by the Robert Wood Johnson Foundation.

Following on from Antibiotic Awareness Week, *Extending the Cure* has released an updated and re-designed ResistanceMap, an online platform for tracking antibiotic use and resistance in the USA.

Most popular items

The items that have been most popular in the last three months are:

1. *Safety and Quality Improvement Guides and Accreditation Workbooks*, ACSQHC <http://www.safetyandquality.gov.au/our-work/accreditation/nsqhss/safety-and-quality-improvement-guides-and-accreditation-workbooks/>
2. *Health Outcomes of Care: An Idea Whose Time Has Come*, Canadian Institute for Health Information https://secure.cihi.ca/free_products/HealthOutcomes2012_EN.pdf
3. *The Never Events Policy Framework: An update to the never events policy*, Department of Health (UK) <https://www.wp.dh.gov.uk/publications/files/2012/10/never-events-policy-framework-update-to-policy.pdf>
4. *Integration of patient safety systems in a suburban hospital*, Stride P, Seleem M, Nath N, Horne A, Kapitsalas C, Australian Health Review 2012;36(4):359-362. <http://dx.doi.org/10.1071/AH11099>
5. *Australian Commission on Safety and Quality in Health Care Annual Report 2011/12*, ACSQHC <http://www.safetyandquality.gov.au/publications-resources/annual-reports/>

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