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On the Radar

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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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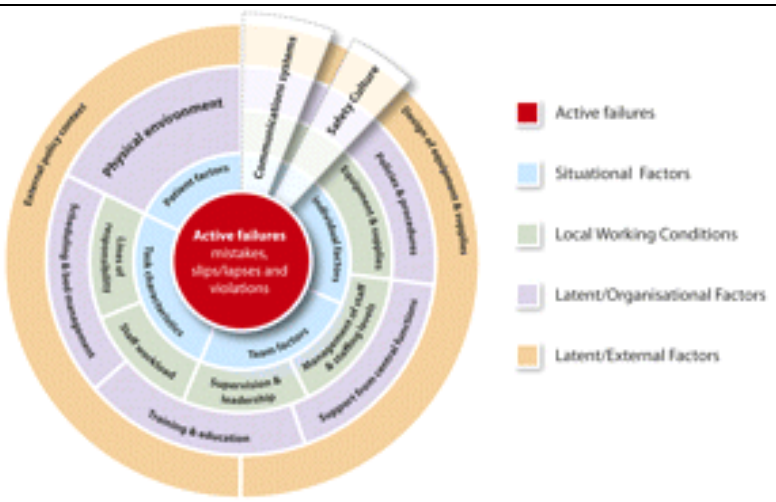
This week's content

Journal articles

Development of an evidence-based framework of factors contributing to patient safety incidents in hospital settings: a systematic review
Lawton R, McEachan RRC, Giles SJ, Sirriyeh R, Watt IS, Wright j
BMJ Quality & Safety 2012 [epub].

Notes	The authors conducted a systematic review of the literature in an attempt to identify factors that contribute to patient safety events in hospitals. From this identification of factors that sought to develop a 'contributory factors framework' in the hope that such a framework could aid in identifying and preventing factors that contribute to harm. From 1,502 potential articles, 95 were included and 1,676 contributory factors extracted. These factors were collated into 20 domains. The authors found that the five contributory factors identified most frequently were active failures (slips, lapses, mistakes, deviations from policy) (18.2%), individual factors (11%), communication (7.9%), equipment and supplies (6.6%) and management of staff and staffing levels (5.8%). The authors developed a diagrammatic summary 'of the findings of the review which represents the speculated hierarchical nature of the identified domains. The diagram entitled "the Yorkshire contributory factors framework" depicts the domains as a series of concentric circles, with active failures at the centre and external policy context as the outer circle.'



Factor	Definition
Active failures	Any failure in performance or behaviour (eg, error, mistake, violation) of the person at the 'sharp-end' (the health professional)
Communication systems	Effectiveness of the processes and systems in place for the exchange and sharing of information between staff, patients, groups, departments and services. This includes both written (eg, documentation) and verbal (eg, handover) communication systems
Equipment and supplies	Availability and functioning of equipment and supplies
External policy context	Nationally driven policies / directives that impact on the level and quality of resources available to hospitals
Design of equipment and supplies	The design of equipment and supplies to overcome physical and performance limitations
Individual factors	Characteristics of the person delivering care that may contribute in some way to active failures. Examples of such factors include inexperience, stress, personality, attitudes
Lines of responsibility	Existence of clear lines of responsibility clarifying accountability of staff members and delineating the job role
Management of staff and staffing levels	The appropriate management and allocation of staff to ensure adequate skill mix and staffing levels for the volume of work
Patient factors	Those features of the patient that make caring for them more difficult and therefore more prone to error. These might include abnormal physiology, language difficulties, personality characteristics (eg, aggressive attitude).
Physical environment	Features of the physical environment that help or hinder safe practice. This refers to the layout of the unit, the fixtures and fittings and the level of noise, lighting, temperature etc.
Policy and procedures	The existence of formal and written guidance for the appropriate conduct of work tasks and processes. This can also include situations where procedures are available but contradictory, incomprehensible or of otherwise poor quality
Safety culture	Organisational values, beliefs, and practices surrounding the management of safety and learning from error
Scheduling and bed management	Adequate scheduling to manage patient throughput minimising delays and excessive workload
Staff workload	Level of activity and pressures on time during a shift
Supervision and leadership	The availability and quality of direct and local supervision and leadership
Support from central functions	Availability and adequacy of central services in support the functioning of wards/ units. This might include support from Information Technology and Human Resources, portering services, estates or clinically related services such as radiology, phlebotomy, pharmacy
Task characteristics	Factors related to specific patient related tasks which may make individuals vulnerable to error
Team factors	Any factor related to the working of different professionals within a group which they may be able to change to improve patient safety
Training and education	Access to correct, timely and appropriate training both specific (eg, Task related) and general (eg, Organisation related)

DOI	http://dx.doi.org/10.1136/bmjqs-2011-000443

Development and evaluation of a 3-day patient safety curriculum to advance knowledge, self-efficacy and system thinking among medical students
Aboumatar HJ, Thompson D, Wu A, Dawson P, Colbert J, Marsteller J, et al
BMJ Quality & Safety 2012 [epub].

Notes	Paper describing the development of a 3-day training on patient safety for medical students. The course, developed at Johns Hopkins School of Medicine (in Baltimore) was taken by 120 second-year students who were assessed before and after on their safety knowledge, self-efficacy in safety skills, system-based thinking and student satisfaction. From their work the authors conclude that the 'patient safety intersession resulted in increased knowledge, system-based thinking, and self-efficacy scores among students. Similar intersessions can be implemented at medical, nursing, pharmacy and other allied health schools separately or jointly as part of required school curricula'
DOI	http://dx.doi.org/10.1136/bmjqs-2011-000463

Exploring the role of salient distracting clinical features in the emergence of diagnostic errors and the mechanisms through which reflection counteracts mistakes
Mamede S, Splinter TAW, van Gog T, Rikers RMJP, Schmidt HG
BMJ Quality & Safety 2012;21(4):295-300.

Notes	Paper discussing how reflection can aid in preventing clinicians from being overly influenced by salient clinical features that may misdirect diagnostic reasoning. The authors advocate for deliberate reflection as a tool to prevent diagnostic errors. They argue that 'reflection helps by enabling physicians to overcome the influence of distracting features'. However, they also caution that reflection is of value where it is supported by knowledge (and experience?).
DOI	http://dx.doi.org/10.1136/bmjqs-2011-000518

Using FDA reports to inform a classification for health information technology safety problems
Magrabi F, Ong M-S, Runciman W, Coiera E
Journal of the American Medical Informatics Association 2012;19(1):45-53.

The Triangle Model for evaluating the effect of health information technology on healthcare quality and safety
Ancker JS, Kern LM, Abramson E, Kaushal R
Journal of the American Medical Informatics Association 2012;19(1):61-65.

Notes	Two pieces from the a recent issue of the *Journal of the American Medical Informatics Association* (JAMIA) looking at health information technology. Magrabi et al. describe how a method for classifying health information technology safety issues was refined by using reports in the US Food and Drug Administration Manufacturer and User Facility Device Experience (MAUDE) database. From nearly 900,000 records 678 reports of 436 events revealed 712 problems. The existing classification of issues had 32 categories and this work led to the addition of 4 new categories: software functionality, system configuration, interface with devices, and network configuration. Ancker et al. propose a model for assessing its impact on healthcare quality and safety. The 'Triangle Model' apparently 'identifies structure-level predictors, including characteristics of: (1) the technology itself; (2) the provider using the technology; (3) the organizational setting; and (4) the patient population. In addition, the model outlines process predictors, including: (1) usage of the technology; (2) organizational support for and customization of the technology; and (3) organizational policies and procedures about quality and safety.
DOI	Magrabi et al: http://dx.doi.org/10.1136/amiajnl-2011-000369 Ancker et al: http://dx.doi.org/10.1136/amiajnl-2011-000385

BMJ Quality and Safety online first articles

Notes	*BMJ Quality and Safety* has published a number of 'online first' articles, including: • Do some trusts deliver a consistently better experience for patients? An analysis of patient experience across acute care surveys in English NHS trusts (Veena S Raleigh, Francesca Frosini, Steve Sizmur, Chris Graham) • Editorial: The science of interruption (Enrico Coiera)
URL	http://qualitysafety.bmj.com/onlinefirst.dtl

BMJ Quality and Safety
April 2012, Vol 21, Issue 4

Notes	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: • Medical error, incident investigation and the second victim: doing better but feeling worse? (Albert W Wu and Rachel C Steckelberg) • Factors associated with disclosure of medical errors by housestaff (Andrea C Kronman, Michael Paasche-Orlow, and Jay D Orlander) • Medical errors reported by French general practitioners in training: results of a survey and individual interviews (Emily Venus, Eric Galam, Jean-Pierre Aubert, and Michel Nougairede) • Learning from near misses: from quick fixes to closing off the Swiss-cheese holes (Lianne Jeffs, Whitney Berta, Lorelei Lingard, and G Ross Baker) • Attitudes towards infection prevention and control: an interview study with nursing students and nurse mentors (Deborah Jane Ward) • Assessment of adverse events in medical care: lack of consistency between experienced teams using the global trigger tool (Kristina Schildmeijer, Lena Nilsson, Kristofer Årestedt, and Joep Perk) • Using quality improvement to accelerate highly active antiretroviral treatment coverage in South Africa (Patty D Webster, Maria Sibanyoni, Dinah Malekutu, Kedar S Mate, W D F Venter, P M Barker, and W Moleko • Association of National Hospital Quality Measure adherence with long-term mortality and readmissions (David M Shahian, Gregg S Meyer, E Mort, S Atamian, Xiu Liu, A S Karson, L D Ramunno, and H Zheng) • Benefits and risks of structuring and/or coding the presenting patient history in the electronic health record: systematic review (Bernard Fernando, Dipak Kalra, Zoe Morrison, Emma Byrne, and Aziz Sheikh) • Time to accelerate integration of human factors and ergonomics in patient safety (Ayse P Gurses, A Ant Ozok, and Peter J Pronovost) • Using health status to measure NHS performance: another step into the dark for the health reform in England (J M Valderas, R Fitzpatrick, and M Roland) • Using health status to measure NHS performance: casting light in dark places (David Parkin and Nancy J Devlin)
URL	http://qualitysafety.bmj.com/content/vol21/issue4/

Online resources

[US] American Society for Healthcare Risk Management
ASHRM Patient Safety Portal.
http://www.ashrm.org/ashrm/education/programs/patient_safety/index.shtml
A site with educational resources for risk managers including articles, quizzes, and webinars covering a variety of patient safety topics.

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