
Volume 15 - Issue 2, 2015 - Editorial

Guest Editorial



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Creating Safer Healthcare

Healthcare professionals have long recognised the benefits of fostering wellness—that is, focusing on what is going right—instead of just trying to head off, or ameliorate, what might otherwise go wrong. By understanding the key determinants of good health we can keep as many patients as possible out of doctor's surgeries and hospitals, and greatly reduce the burden of preventable diseases and ill health. In patient safety, we can, and should, be doing much the same thing.

Although it may not seem immediately apparent, a similar focus on success is the best way to tackle the seemingly intractable problem of harm to patients due to adverse events in modern healthcare systems. As many as one in 10 patients in hospitals are currently harmed by care; between seven and 10 percent of patients acquire infections in hospital, and the World Health Organization estimates 20-40% of all health spending is wasted due to poor quality care

To break this impasse we need to change how we do things. To date we have defined safety as a state in which as few things as possible go wrong, or what we call 'Safety-I'. When we do experience an adverse event or accident, we zoom in on that particular event, and work backwards to identify the exact point at which a process was derailed, often finding that 'human error' played a part. Consequently we often cast people as potential liabilities.

By isolating adverse events in this way, we assume we can both understand and learn from our mistakes and so prevent them recurring. Yet virtually no serious problem ever eventuates in precisely the same way again. Meanwhile we are overlooking what is in plain sight.

Most of the time everything goes right. But no one stops to ask clinicians "How do you manage to do that?" day in and day out, within incredibly complex systems that operate in partly degraded states under considerable pressure. Our doctors, nurses, administrators and support staff are overwhelmingly committed to their patients and to safety, and almost always pull it off.

Yet we don't invest in research that could offer us invaluable insights into how our health systems manage to get millions and millions of encounters right every day; that is, what a health system looks like when it's performing as it should, flexing and adjusting to accommodate the unexpected while still achieving its goals. Consequently, we miss the opportunity to improve safety by facilitating and supporting successes.

Our familiar but outdated Safety-I approach recapitulates the thinking in safety critical industries like aviation and nuclear power in the late 20th century, when systems were less complex. We assumed neat, stable models of cause-effect relations could be used to identify a faulty part (or player) and replace it—the so-called 'find and fix' approach. But in healthcare today, clinical work is carried out within dynamic webs of constant interaction between many different professionals and patients interfacing with increasingly complex healthcare technologies, communication systems and equipment.

In such fast moving and often unpredictable environments it is, in fact, people—individually and collectively—who are our key safety asset. The unique ability of humans to constantly adjust their performance to variable conditions and so ensure that as many things as possible go right is what we call a 'Safety-II' perspective. In a 'Safety-II' world, research seeks to reveal how things usually go right, as the basis for explaining how things occasionally go wrong.

Worldwide we have made some initial progress towards understanding success. The development of standard operating protocols and clinical guidelines and the implementation of simple but effective 'best practice' in hand hygiene, for example, has undoubtedly saved many lives. But

slavish adherence to increasingly voluminous and often piecemeal guidelines is an obstacle to flexible, intuitive, effective care. Proceduralisation cannot prevent the adverse events that continue to impose phenomenal costs on stretched health budgets and unacceptable burdens on patients and their families.

We need the more holistic approach that Safety-II promises. A good starting point for this is to simply spend more time looking at what goes right as well as what goes wrong. We'll learn far more from what works well than from what fails.

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Dr. Jeffrey Braithwaite, BA, MIR (Hons), MBA, DipLR, PhD, FAIM, FCHSM, FFPHRCP (UK) is Foundation Director, Australian Institute of Health Innovation, Director, Centre for Healthcare Resilience and Implementation Science and Professor of Health Systems Research, Faculty of Medicine and Health Sciences, Macquarie University, Australia. His research examines the changing nature of health systems, particularly patient safety, standards and accreditation, leadership and management, the structure and culture of organisations and their network characteristics, attracting funding of more than AUD\$60 million. He holds visiting professorial appointments at the University of Birmingham, UK; Newcastle University, UK; The University of Southern Denmark; the University of New South Wales, Australia; and the Canon Institute of Global Studies, Tokyo, Japan.

Professor Braithwaite has published extensively (more than 300 total publications) and has presented at international and national conferences on more than 600 occasions, including over 60 keynote addresses. His research appears in journals such as the *British Medical Journal*, *The Lancet*, *Social Science & Medicine*, *BMJ Quality and Safety*, *International Journal of Quality in Health Care*, *Journal of Managerial Psychology*, *Journal of the American Medical Informatics Association*, and many other prestigious journals. Professor Braithwaite has received numerous national and international awards for his teaching and research.

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Dr. Bob Wears, MD, PhD, MS, is an emergency physician, Professor of Emergency Medicine at the University of Florida, and Visiting Professor in the Clinical Safety Research Unit at Imperial College London. His further training includes a Master's degree in computer science, a 1 year research sabbatical focused on psychology and human factors in safety at Imperial College, followed by a PhD in industrial safety from Mines ParisTech (Ecole Nationale Supérieure des Mines de Paris). He serves on the board of directors of the Emergency Medicine Patient Safety Foundation, and multiple editorial boards, including *Annals of Emergency Medicine*, *Human Factors and Ergonomics*, the *Journal of Patient Safety*, and the *International Journal of Risk and Safety in Medicine*.

Professor Wears has co-edited two books, *Patient Safety in Emergency Medicine*, and *Resilient Health Care*, and he is working on two more. His research interests include technical work studies, resilience engineering, and patient safety as a social movement. His research papers and commentaries have appeared in *JAMA*, *Annals of Emergency Medicine*, *Safety Science*, *BMJ Quality & Safety*, *Cognition Technology & Work*, *Applied Ergonomics*, and *Reliability Engineering & Safety Science*.

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His professional interests include industrial safety, resilience engineering, patient safety, accident investigation, and modelling large-scale socio-technical systems. He has published widely and is the author or editor of 22 books, including five books on resilience engineering, as well as a large number of papers and book chapters. The latest titles, from Ashgate, are *Safety-I and Safety-II: The past and future of safety management*, *Resilient Health Care*, *FRAM – the Functional Resonance Analysis Method*, and *Resilience engineering in practice: A guidebook*. Professor Hollnagel also coordinates the Resilient Health Care net (www.resilienthealthcare.net) and the FRAMily (www.functionalresonance.com).

Published on : Mon, 11 May 2015