

A 'work smarter, not harder' approach to improving healthcare quality

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Over the past 20 years, we have seen increasing activity aimed at achieving reliable, safe and high-quality care. The Institute of Medicine's *Crossing the Quality Chasm* report collated the evidence of the need for change and provided a framework and a set of key recommendations that challenged providers, organisations, professionals and policymakers to pursue a common goal of high-quality healthcare for all.¹

In many ways, the summary of evidence and the accompanying challenge have been accepted and demonstrable improvements have occurred. For example, at the provider level, the rate of central line-associated bloodstream infections has been reduced through directed efforts to implement evidence-based strategies.² Healthcare organisations are increasingly introducing health information technology to advance the quality and safety of care.³ Professional bodies are influencing the inclusion of safety and quality improvement training in health professional education.⁴ Policymakers, organisational leaders and legislators have introduced mechanisms to promote and incentivise high-quality healthcare delivery.^{5–7}

Although this degree of change is meaningful, the rate at which healthcare quality is improving has been slower than most would want. Despite a greater understanding of why improvement initiatives fail, including the importance of having the right context and the need for improvement capability,^{8–9} the desire for an increased pace has resulted in more improvement initiatives, greater accountability, tougher accreditation standards and more legislation.^{5–10–11} Yet, according to the *Crossing the Quality Chasm*, "a higher level of quality cannot be achieved by further stressing current systems of care."¹ In non-healthcare industries, a 'work harder' response to address

performance gaps occurs when the existing workforce is expected to achieve more with the same resources, methods, supports or capacity.¹² Although this initially may result in higher performance, it has been shown to lead to a decreased ability to sustain ongoing improvement, an increased numbers of workarounds and errors, and, in turn, loss of productivity.¹² Many recent quality improvement initiatives have counted on the healthcare workforce, especially staff at the point of care, to implement the desired changes, effectively layering additional workload on an already busy environment, complex and generally inefficient system. For example, in critical care recent studies have demonstrated that implementation of evidence-based practices to prevent ventilator-associated pneumonia¹³ and tight glycemic control¹⁴ have added tasks equating to four additional hours of nursing care per day. At the same time, staff are being asked to implement electronic medical records and decision support applications aimed at reducing errors, improving documentation and gaining access to data, which, paradoxically, results in spending more time completing routine tasks.¹⁵ Although providers understood the importance of such initiatives, they reported increased difficulty in getting their work done accurately and reliably and find themselves reducing attention to other tasks, creating more system workarounds and spending less time interacting with patients.^{13–15} Such an increase in job demands without the provision of additional resource has been shown to induce defensive strategies among recipients of change and likely contributes to resistance to change and lack of 'buy-in'.^{15–16}

In an effort to improve the quality of healthcare delivery, are we actually making the delivery of healthcare harder?

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There appears to be an assumption that there is abundant elasticity and available capacity within the health-care work setting, yet years of study of innovation diffusion, change management and behaviour change have demonstrated that increasing workload demands—especially when not understood, perceived to be unneeded or felt unlikely to lead to improvement—leads to change fatigue and resistance, cynicism, burnout and turnover.^{17 18}

If asking providers to ‘work harder’ as an approach is unlikely to succeed, then what are alternative strategies? One could decrease the demand for change—reducing the number of new initiatives, performance measures, reporting requirements and regulations. Given the perceived slow pace of improvement in quality and safety, this approach seems unpalatable; however, a smaller, more coordinated set of improvement objectives may help alleviate the perceived untenable demand. Another option would be to increase the number of healthcare personnel to offset the increased workload, but this approach would come at increased cost that is likely not desirable given the need to control healthcare spending. A third approach would be to adopt a ‘work smarter’ strategy that emphasises the need for organisations to invest in preserving or increasing the capacity and capability of implementing change, which includes understanding the associated workload demands on the healthcare workforce and aiming to reduce them.

What would a ‘working smarter’ improvement approach look like? Building on existing theories and tools, such a strategy would place more emphasis on the impact of the workload associated with improvement on the recipients of change. This approach would guide the design of initiatives that carry less added workload (or better yet, reduce workload) and are perceived to be helpful and of value to those charged with carrying out the tasks. Such improvement initiatives are more likely to be sustainably adopted, more likely to achieve their intended outcomes and encounter less ongoing resistance. This strategy would require a more careful assessment of the tasks and processes associated with the change initiative; the time and resources needed to plan and effectively implement; and the complexity of the any added work assignments. Achieving this will require a greater partnership with and participation of the healthcare workforce, who will need to help prioritise, design, test and guide the adaptation and implementation of the new work.

Such a strategy is not novel. For years, the aeronautical industry has made tools available to measure the perceived and actual workload associated with tasks to achieve high, reliable system performance without overextending operators.¹⁹ Suggested approaches to achieving patient-centred care are employing strategies that involve co-designing care with patients that result in a better fit with patients’ abilities and needs.²⁰ Why

would we not use a similar approach with the health-care workforce? Although existing improvement methods (such as model for improvement and LEAN) employ similar principles and tools of designing with end-users and seeking and removing inefficiencies, these methods need a more explicit understanding of and goal to preserve workforce capacity and reduce the workload associated with change.

There is no argument that there exists a quality performance gap in healthcare, one that needs ongoing attention and pressure. However, if true and sustainable improvement in outcomes is to be realised, we must, at all levels of the system, understand and aim to embed a ‘work smarter, not harder’ approach and limit the workload—including improvement-related workload—on those charged with delivering care.

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REFERENCES

- 1 *Crossing the quality chasm: a new health system for the 21st century*. Washington, DC: The National Academies Press, 2001. http://www.nap.edu/catalog.php?record_id=10027 (accessed 24 Feb 2013).
- 2 Pronovost P, Needham D, Berenholtz S, *et al*. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med* 2006;355:2725–32.
- 3 DesRoches CM, Charles D, Furukawa MF, *et al*. Adoption of electronic health records grows rapidly, but fewer than half of US hospitals had at least a basic system in 2012. *Health Aff (Millwood)* 2013;32:1478–85.
- 4 Batalden P, Leach D, Swing S, *et al*. General competencies and accreditation in graduate medical education. *Health Aff* 2002;21:103–11.
- 5 Patient Protection and Affordable Care Act. 2010.
- 6 Excellent Care for All Act. Ontario, Canada, 2010.
- 7 Health and Social Care Act. England, 2012.
- 8 Kaplan HC, Brady PW, Dritz MC, *et al*. The influence of context on quality improvement success in health care: a systematic review of the literature. *Milbank Q* 2010;88:500–59.
- 9 Ovreteit JC, Shekelle PG, Dy SM, *et al*. How does context affect interventions to improve patient safety? An assessment of evidence from studies of five patient safety practices and proposals for research. *BMJ Qual Saf* 2011;20:604–10.
- 10 Lee GM, Kleinman K, Soumerai SB, *et al*. Effect of nonpayment for preventable infections in U.S. Hospitals. *N Engl J Med* 2012;367:1428–37.
- 11 Department of Health. Patients First and Foremost. 2013. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/170701/Patients_First_and_Foremost.pdf
- 12 Repenning N, Sterman J. Nobody Ever Gets Credit for Fixing Problems that Never Happened—Copy.pdf. *Calif Manage Rev* 2001;43:1–24.

- 13 Branch-Elliman W, Wright SB, Gillis JM, *et al.* Estimated nursing workload for the implementation of ventilator bundles. *BMJ Qual Saf* 2013;22:357–61.
- 14 Aragon D. Evaluation of nursing work effort and perceptions about blood glucose testing in tight glycemic control. *Am J Crit Care* 2006;15:370–7.
- 15 Miller RH, Sim I. Physicians' use of electronic medical records: barriers and solutions. *Health Aff* 2004;23:116–26.
- 16 Alvaro C, Lyons RF, Warner G, *et al.* Conservation of resources theory and research use in health systems. *Implement Sci* 2010;5:79.
- 17 Gorgievski MJ, Hobfoll SE. Work Can Burn Us Out or Fire Us Up: Conservation of Resources in Burnout and Engagement. In: Halbesleben JR, ed. *Handbook of Stress and Burnout in Health Care*. Nova Scotia Publishers, Inc. 2008:1–17.
- 18 Rathert C, Williams ES, Lawrence ER, *et al.* Emotional exhaustion and workarounds in acute care: cross sectional tests of a theoretical framework. *Int J Nurs Stud* 2012;49:969–77.
- 19 Hart SG. Nasa-task load index (NASA-TLX); 20 years later. In: *Proceedings of the Human Factors and Ergonomics Society 50th Annual Meeting*. Santa Monica, CA: 2006:904–8. doi:10.1037/e577632012-009
- 20 Bate P, Robert G. Experience-based design: from redesigning the system around the patient to co-designing services with the patient. *Qual Saf Health Care* 2006;15:307–10.