Overcoming the 'self-limiting' nature of QI: can we improve the quality of patient care while caring for staff?

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In this month's edition, Mandel and Cady draw on organisational change theories to argue that quality improvement (QI), as currently deployed, is self-limiting.[1] In other words, if left untamed it will fail to produce valuable change and may have a raft of negative consequences, including stress, reduced engagement and burnout among healthcare staff. While acknowledging that some improvement methods (eg, appreciative inquiry, positive deviance) do address the emotional experience of staff as well as their performance, and focus on socio-behavioural (teamwork, cultures, etc) as well as process-technical design elements, Mandel and Cady call for these to be explicit elements of all healthcare QI initiatives.

We argue here that this article represents a theoretical framing for messages that ring loud throughout the QI and safety literature. These linked messages are (1) additive change means asking staff to do more and more, potentially creating safety clutter, and (2) improvement initiatives can have negative as well as positive consequences, including for staff. Unless we address 1 and 2, QI might inadvertently increase staff burnout. In turn, healthcare staff burnout, already rife, has the potential to exacerbate a global shortage of nurses, doctors and other staff and impact directly on the quality and safety of care.[2] We set out some recommendations for reducing the potential harm caused by unchecked and uncritical approaches to QI.

Questioning the power of QI to improve healthcare is certainly nothing new. Problems with fidelity to method,[3] a lack of expertise or time among those tasked with conducting QI, little attention to sharing learning about success and failure and QI interventions that do not account for context[4 5] have all been documented. In 2019, Dixon-Woods coined the term 'lovely-baby syndrome' to highlight the strong belief in, but lack of robust evidence for, many improvement approaches and interventions.[5] Indeed, in a recent systematic review of 28 randomised controlled trials of QI methods,[6] the only two studies identified as having a low risk of bias were also those that demonstrated no effect on clinical processes or patient outcomes. Overall, less than half of studies demonstrated any significant improvement. Thus, the message that QI is not a panacea for improvement in complex healthcare systems is uncontentious. What is more novel in what Mandel and Cady argue is that QI may sometimes, even frequently, have negative repercussions for staff well-being.

For example, in a recent edition of this journal, Catlow and colleagues[7] set out to understand the unintended consequences of one widely used improvement approach—audit and feedback. While the endoscopy audits they studied focused on outcome measures such as withdrawal time (a longer withdrawal of the scope from the colon indicating a more thorough examination), completion rates and polyp removal, the authors were most interested in those effects that were not predicted. These included negative effects on the emotions of endoscopists, such as anxiety that reduced confidence and then affected performance. Duncan *et al* in their editorial,[8] in the same edition, discuss the need for a wider conceptualisation of potential harms from these types of approaches that include direct harm to patients, and to audit and feedback recipients and healthcare systems. They provide examples such as health professionals' anxiety, morale, team dynamics, professional culture and staff retention.

Another potential negative consequence of QI for staff occurs when local teams focus on making something happen more reliably without stepping back and asking what is the evidence that change will result in improvement; or more simply expressed—doing a QI project on a whim. For example, Rae and colleagues[9] argue that there is asymmetry between the ease and the opportunity for adding new safety activities and the difficulty or lack of opportunity to remove them. A recent article in *Nature*[10] provides experimental evidence for this human default to additive, rather than subtractive, change. When an idea, object or process has more components than the original, it is described as an additive transformation and when components are removed this is known as subtractive change.[10] Additive changes can lead to unnecessary rules and procedures, with a substantial opportunity cost, that are likely at some point in the future to require time and effort to deimplement.

Moreover, the recourse to adding protocols, rules, new initiatives and safety practices can leave staff feeling inadequate, cynical and disengaged as they try to square their values of safe and personalised care with the many tasks they perceive to be of low value but they are required to carry out. Our work on this topic has identified some of those practices perceived to be of low value by healthcare staff.[11]

Other critiques of QI have raised questions about the sustainability of these approaches. Some have argued that QI is too simplistic and too focused on single-loop learning rather than addressing the fundamental theories and values that guide behaviour within organisations which would be required for system change (double-loop learning).[12] Others argue that because complex systems do not respond predictably to improvement efforts, they often fail or, worse, require continual adaptations or workarounds that add to the burden for staff. In these cases, 'the system can become increasingly dependent on the dedication and self-sacrificing behaviours of clinicians, leading to an emotionally exhausted workforce'.[13]

In 2019, UK think tanks such as the King's Fund and Health Foundation warned that staffing of the National Health Service in England was at breaking point. Then, COVID-19 struck and individuals who were already struggling to meet demand are now exhausted, have increased 'post'-COVID workloads and are leaving the service in droves. The most recent staff survey in the UK (2020) found that 44% of staff reported feeling unwell because of work-related stress. A recent survey during the first waves of the COVID-19 pandemic in the US healthcare workforce reported that 49% of the 20 000 respondents had burnout.[14] A similar international survey (UK, Poland and Singapore) of healthcare staff in the first half of 2020 reported burnout levels of 67%.[15]

In this challenging context, with tremendous workplace stressors, it stands to reason that marshalling resources for QI efforts focused on creating better systems could help mitigate some of the burnout. By improving the systems and processes of care, caregivers may have a better experience. However, if in doing QI, we keep pushing staff to do more, while ignoring the things that matter to them—working in supportive teams and feeling joy and pride in their work—we are in danger of QI backfiring. In their call for a Quadruple Aim that adds improving the worklife of healthcare staff to the triple aims of enhancing patient experience, improving population health and reducing costs, Bodenheimer and Sinsky[16] argue that when staff are burnt out, patient satisfaction drops, health outcomes get worse and costs may increase. In other words, burnout threatens the Triple Aim. If we do not stop and think about how we do QI, it can (or may already) reduce the quality of care for patients and increase healthcare costs.

QI is not, in itself, bad, but like any other treatment, it should not be prescribed without reason and only when there is a strong evidence base. Adverse reactions and side effects should be anticipated and

Box 1 Recommendations for avoiding the negative side effects of quality improvement (QI)

- ⇒ As noted by Mandel and Cady,[1] leaders must pay attention to the impact of QI projects on staff well-being to prevent burnout and turnover, and to maintain and improve quality and safety.
- ⇒ Also endorsed strongly by Mandel and Cady is thinking differently about measurement for QI. QI initiatives should include measures of staff well-being, team relationships and culture.
- ⇒ Leaders should adopt a leadership framework, such as adaptive leadership, that explicitly calls for them to pay attention to the 'pressure' in an organisation, and thereby gauge if additional QI work is feasible at any given time.[18]
- ⇒ QI initiatives should draw more on approaches that focus on how staff routinely create positive outcomes (eg, appreciative inquiry, positive deviance, Safety-II).
- ⇒ QI initiatives should focus more on subtractive change, working with teams to deimplement low-value care or processes.
- ⇒ There should be a greater focus on socio-behavioural elements as ingredients for success when leading QI: recognising the value of collective action, seeing things from others' perspectives, getting the right people in the room and mutual respect.[19]
- ⇒ Organisations should have a diverse portfolio of QI initiatives that include projects that make it easier for staff to care for patients (eg, simplifying or deimplementing cumbersome policies and procedures, improving turnaround time for radiology reports or making it easier to access supplies needed for patient care).

countered; there should be involvement of the user and thought given not just to the outcome of the QI project, but to emotional, behavioural, relational and cultural effects of both the treatment itself and the outcome. We should not continue to do QI thinking that it is harmless or without recognition of the challenges of deimplementation. The ideas raised here and in the companion paper, together with those of others cited here, demonstrate that, in the wrong hands and without consideration of the negative consequences, QI has the potential to be a force for bad, not good.

We are not arguing here that QI should be abandoned altogether. In fact, there is some good news from the USA suggesting that improvement efforts (likely aided by secular trends) have reduced rates of 21 adverse events in that country over the last decade.[17] However, the poor application of QI methods has the potential to harm. A more thoughtful approach, considering the lessons learnt both in and out of healthcare, and heeding the recommendations highlighted in box 1, may serve to improve the quality of QI.

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