

# What problems in health care quality should we target as the world burns around us?

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In 2001, an influential report defined quality health care in terms of 6 domains: safety, effectiveness, timeliness, efficiency, patient-centredness and equity.<sup>1</sup> Physicians primarily focus on effectiveness, which can be defined operationally as the degree to which patients receive the recommendations from practice guidelines relevant to their care. Only about 50% of patients receive such recommended care.<sup>2</sup> In addition, patients frequently receive nonrecommended care and undergo tests and treatments with no clear benefits.<sup>3</sup>

In related research, Squires and colleagues provide contemporary estimates of these twin problems of underuse and overuse in Canada.<sup>4</sup> Using Canadian data from 174 studies published from 2007 to 2021, they found a median proportion of inappropriate care (either underuse or overuse) of 30%. This inventory of shortfalls in the delivery of effective care comes after decades of efforts to address such quality problems,<sup>5</sup> begging the question, “What should we be doing to deliver better quality care?”

The mainstream approach to quality improvement — my professional focus for many years — aims to ensure that tests and treatments with established benefits are offered routinely to patients. Yet, efforts to promote the uptake of recommended care have produced few substantive successes. A systematic review of more than 100 interventions to improve professional practice that was published in *CMAJ* in 1995 concluded that “we have no magic bullets — most interventions achieved small to modest improvements in recommended practices.”<sup>6</sup> More than 25 years later, promoting the uptake of effective interventions or de-implementing ineffective ones remains difficult. For instance, 2 common improvement interventions, computerized decision support and performance report cards, typically increase the proportion of patients receiving recommended care by just 5% overall according to the findings of 2 meta-analyses.<sup>7,8</sup> Although some individual trials report larger improvements, the circumstances producing such results remain unclear. Even if worthwhile improvements could be generated consistently, overloading physicians with report cards and reminders for multiple different quality targets is unsustainable.

The authors of the related systematic review<sup>4</sup> identified glycosylated hemoglobin (HbA<sub>1c</sub>) testing as the most frequently underused diagnostic test in Canada. Addressing underuse of HbA<sub>1c</sub>

## Key points

- Decades of research have identified shortfalls in the delivery of effective care, with many patients not receiving well-established care while many others receive wasteful, ineffective care.
- More than 20 years of knowledge translation efforts to address concomitant problems of widespread underuse and overuse have produced few substantive successes.
- The mainstream approach to improving health care quality amounts to eking out marginal increases in the delivery of care, which itself has mostly small benefits, which seems inappropriate in the face of current crises with large impacts on health, such as the COVID-19 pandemic, the climate crisis, ever worsening economic inequality, systematic racism and the opioid epidemic.
- Efforts in quality improvement might better focus on increasing resilience of the health system and devising better models of care.
- Efforts to address social determinants of health would offer larger impacts on health care quality and population health than continuing the quest to implement the care recommended in practice guidelines.

testing might prompt use of the many effective therapies for diabetes that have become available in recent years. Yet, more than 100 randomized controlled trials evaluating improvement interventions for outpatients with diabetes achieved an average reduction in HbA<sub>1c</sub> of just 0.37%.<sup>9</sup> Although future research might identify more effective improvements, the question then becomes how to decide which quality problems to prioritize. This prioritization might depend on the anticipated health benefits from closing any particular shortfall in recommended care. Statins, the most frequent therapeutic example of underuse in the systematic review,<sup>4</sup> provides a telling example. Among patients with established atherosclerotic cardiovascular disease, 33–100 must take a statin for 10 years to prevent 1 cardiovascular death, myocardial infarction, stroke or recurrent ischemic event.<sup>10</sup> In addition, use of statins postpones death in patients with established atherosclerotic disease by just 17 days.<sup>11</sup> Of course, clinical interventions with larger benefits exist — vaccines for SARS-CoV-2, for example — but they represent the

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exceptions rather than the rule. Thus, the mainstream approach to quality improvement amounts to implementing marginally effective interventions to promote the uptake of care with mostly marginal benefits.

Health systems face the ongoing COVID-19 pandemic on top of existing and looming massive threats to health, including the opioid epidemic, the climate crisis, worsening economic inequalities and systemic racism. The impacts these crises have on both the health systems and population health make promoting the uptake of practice guidelines seem like rearranging deck chairs on the Titanic. Now seems like a particularly important time to consider alternatives to the ground game of eking out marginal gains for multiple narrow aspects of care. Even recommended care with large benefits, such as cancer screening, can have limited impact if the surgeries to treat detected cancers cannot occur in a timely fashion because elective surgeries are being cancelled owing to insufficient bed capacity and staff shortages. System-level barriers to delivering recommended care will occur with increasing frequency as the rapidly worsening climate crisis causes catastrophic weather events, disruptions in supply chains, and surges in patient volumes from heat waves and acute changes in air quality. Thus, bolstering the resiliency of the health systems in hospitals, ambulatory clinics and long-term care represents an obvious target for improvement efforts.

The need to reconsider priorities applies not just to improvement efforts but to the entire research enterprise. For example, the most likely outcome of the ongoing development of dozens of potential treatments for early dementia is a medication as good for dementia as statins are for cardiovascular disease — a drug that many patients need to take for years for 1 patient to derive worthwhile benefit. After the devastating death toll exacted by COVID-19 in long-term care facilities, surely developing better models of care for frail older adults in community and long-term care settings offers greater health benefits than continuing to pursue a magic bullet for dementia. Similarly, do we really want to meet the health threat of air pollution, which the World Health Organization estimates now contributes to more deaths than tobacco, primarily by developing and evaluating endless permutations of inhalers? Small changes in air quality cause detectable changes in morbidity and mortality within 48 hours.<sup>12,13</sup> Research should surely focus on preparing the health systems for predictable surges in respiratory illness from periods of poor air quality and also on collaborating across sectors to reduce pollution.

Pursuing such research may seem outside the remit of health care. However, accumulating evidence shows that social determinants of health, including the conditions of early childhood, education, housing, work environments, neighbourhood violence, and air and water quality, all exert large effects on health.<sup>14</sup> Interventions addressing these factors would likely offer larger returns on investment than generating small increases in the uptake of recommended practices that mostly have small absolute impacts on health.

When biomedical research does produce a “magic bullet,” as with SARS-CoV-2 vaccines, uptake of the intervention can be substantially reduced owing to misinformation and divisive social forces. Rudolf Virchow (German pathologist and statesman, and

one of the 19th century’s most prominent physicians) wrote, “Medicine is a social science and politics is nothing else but medicine on a large scale.” Health care professionals often blame politicians for “not listening to the science.” But people in health care should also take a hard look at what types of science best meet the massive health challenges we face.

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