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# Fighting a common enemy: a catalyst to close intractable safety gaps

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Since March 2020, the world has faced a singular threat: COVID-19. The shared commitment and responsibility uniting everyone within and outside of healthcare to bend the COVID-19 curve has been unparalleled. Prior to the pandemic, this type of shared commitment has been discouragingly lacking for other major healthcare concerns such as patient safety.<sup>1</sup> Reasons for this include organisational leaders who are incentivised to focus on activities essential for reimbursement and quality measurement rather than those involving the promotion of safety culture and implementation of systems-based approaches to improve safety, compounded by lack of clear ownership and accountability to solve long-standing safety challenges.<sup>2,3</sup>

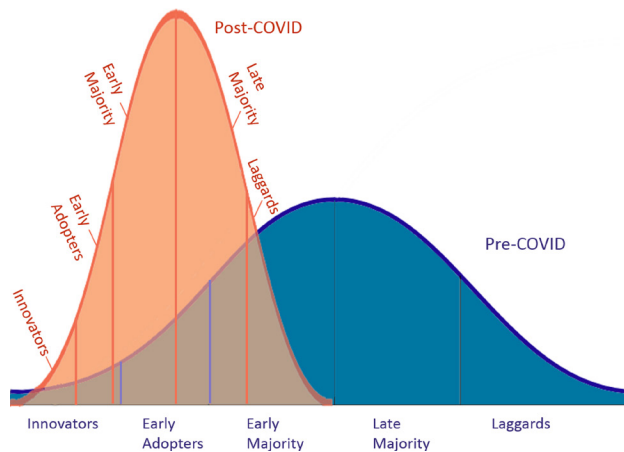
The COVID-19 pandemic is leading to several ongoing impacts on the healthcare delivery system,<sup>4</sup> many of which have patient safety implications and will be quantified in future work. We are witnessing negative effects from delays in care from patients not seeking (or unable to seek) healthcare, patients with complex chronic conditions not having ongoing ambulatory care and new types of diagnostic errors.<sup>5</sup> However, we are also witnessing some early short-term positive effects in selected safety areas where the COVID-19 pandemic has provided a new glimmer of hope. As of now, several changes have occurred in at least three safety-related domains: (1) adoption of key attributes of safety culture (transparency, communication and collaboration); (2) rapid implementation of safety practices to care for the previously often neglected healthcare workforce; and (3) use of state-of-the-art health information technology (IT) to improve the safety of patients and clinicians within the healthcare delivery

system. Even though currently only temporary and not universal, the rapid adoption of these strategies demonstrates the potential of diverse stakeholders with competing interests to rally together against a common enemy, in this case a deadly virus.

Bringing about long-term changes and improvement of patient safety outcomes requires dedicated sustainment efforts and continuous evaluation to minimise unintended consequences. Safety professionals are now uniquely positioned to contribute to the know-how of how to address organisational change to improve care, reduce variations and overcome long-term inertia.<sup>6–8</sup> In this Viewpoint, we present some examples for optimism resulting from unifying against a common enemy and discuss why early transformations in three safety domains should be harvested to create permanent mechanisms to target another common enemy—preventable harm—in the next decade. In an effort to address long-standing safety challenges, we posit that harvesting lessons learned from early COVID-19 related transformations could sustainably ‘accelerate the curve’ of Diffusion of Innovations<sup>9</sup> such that more organisations (so-called ‘laggards’ and ‘late majority’ that are delayed in adoption of best practices) will more rapidly adopt useful safety practices and innovations going forward (figure 1).

## OVERCOMING INERTIA FOR SAFETY CULTURE

Despite being a major focus of safety efforts, a safety culture where everyone feels comfortable speaking up about errors and near misses without fear of unjust punishment has remained frequently unachievable.<sup>10</sup> Healthcare organisations have not prioritised transparency and



**Figure 1** Potential use of COVID-19 as a catalyst to accelerate the Diffusion of Innovations curve for patient safety.

learning. Culture change requires strong leadership for creation and sustainability, but progress has been frustratingly slow.<sup>11</sup> In 2018, for example, less than half of respondents on organisational culture surveys report working in a non-punitive environment.<sup>12</sup>

So why should this be an opportune time to catalyse sustainable culture change? During the current pandemic, we are witnessing previously unimaginable rapid shifts in culture-related practices and focus from leadership. Fighting the pandemic has resulted in major changes in healthcare delivery and exposed several health system vulnerabilities. Certain characteristics of healthcare organisations that struggle to improve quality,<sup>13</sup> including poor organisational culture, lack of a cohesive mission and vision and dysfunctional external relations, all have been tested by COVID-19. Leaders have realised that in order to successfully battle this disease, they need to focus on culture and transparency to drive organisational change. Many organisational leaders are communicating daily with urgency about safety and much more visibly through teleconferences, daily huddles and safety rounds, often getting frequent input from the frontlines about concerns.<sup>14 15</sup> Incident command structures also facilitated rapid decision making and breaking down silos. In addition, at the individual clinician level, far less resistance occurred for rapid deployment of new protocols and standardisation of care processes.

Transparency also has rapidly become the norm with daily communications about census, personal protective equipment (PPE) availability, numbers of cases and deaths not just internally but also to the public. Transparency across organisations has hit a new high, with clinicians and hospital system leaders working together regionally and nationally to rapidly share internal data, concerns, challenges and best practices.<sup>15 16</sup> For instance, the world's largest medical centre complex, Texas Medical Center in Houston, Texas, is providing data to the public on infection rates, actions to increase

patient capacity, ICU bed availability modelling, ventilator availability, PPE needs and current COVID-19 hospitalisations and deaths involving all major local hospitals.<sup>17</sup> Data on healthcare indicators, and safety in particular, has rarely been shared so openly yet now this is becoming a basic, daily expectation.

These leadership behaviours could be the impetus for organisations to continue moving towards a high-reliability organisation culture that facilitates transparency, communication, collaboration, non-punitive reporting and speaking up. These behaviours are paramount for creating a culture of safety and high reliability and illustrate at least 3 of the 5 principles of high-reliability that could be leveraged for long-term sustained impact: (1) sensitivity to operations with 'heightened awareness of the state of relevant systems and processes'; (2) deference to expertise by valuing insights from staff with safety knowledge; and (3) increasing resilience by proactively preparing for possible system failures.<sup>18</sup>

Nevertheless, not all organisations have witnessed the same level of transparency and/or witnessed short-term effects on culture.<sup>19</sup> In addition, there are anecdotes of safety reporting rates going down during the crisis, possibly due to time pressures or lack of psychological safety. Going forward, we recommend efforts to sustain early positive momentum and to reduce the risk of unintended consequences. For example, organisations should implement safety culture measurement and continue daily huddles, leadership rounding and transparent communication of both positive and negative events within and across organisations. For all organisations—those who have been leaders on implementation and those who are lagging—these behaviours and strategies will need to be sustained to ensure that a high reliability culture promotes learning from failures and safety improvements across the board.<sup>20</sup> This is how more organisations could achieve 'early majority' status on an 'accelerated' Rogers' Diffusion of Innovations curve for patient safety.

### PRIORITISING WORKFORCE SAFETY

Even before the pandemic, healthcare was more dangerous than mining, manufacturing or construction, with burnout and suicide rates much higher than the general population.<sup>21 22</sup> Yet, attention to the physical and emotional well-being of the workforce has been difficult to gain other than recently for burnout.<sup>22</sup> Support systems are few, and previously healthcare workers have often kept working due to organisational expectations even when symptomatic with infections.<sup>23</sup> Other forms of injury and illness, resulting from slips, needle-sticks, falls, moving patients and infections such as influenza and Methicillin-resistant *Staphylococcus aureus* (MRSA),<sup>24</sup> lead to significant days lost from work and sometimes long-term sequelae. However, they

are seen as part of doing business by leaders even though it is clear that workforce safety is a precondition for patient safety. Notably, the majority of hospital boards often do not even routinely review workforce injury rates.<sup>25</sup>

The COVID-19 pandemic has rapidly brought discussions of worker physical safety front and centre for hospital leaders, particularly with the challenges of obtaining PPE. Workforce infection rates are now being tracked diligently with great amounts of effort focused on procuring PPE, protocols for use, as well as training and monitoring staff on donning and doffing. Multiple efforts have been implemented in very short time frames to address concerns about the emotional and psychological harms to the workforce.<sup>26 27</sup> Many leaders are purposefully communicating about how important it is to get help dealing with anxiety, stress and uncertainty, and further making sure this is not viewed as a sign of weakness. Some organisations are creating well-being teams with robust staff support mechanisms.<sup>28</sup> Counselling has become readily available and is no longer seen as a stigma. Buddy systems to help providers check in on each other's well-being, hotlines to ask for help and personal well-being strategies are being implemented.<sup>29</sup> Finally, the US government has relaxed regulations<sup>30</sup> allowing healthcare organisations to provide benefits and support to their workers in the form of food, childcare issues and laundry services, and WHO has selected 'Health Worker Safety: A Priority for Patient Safety' as the theme for World Patient Safety Day 2020.

However, not all organisations have done a positive job with workforce safety. Thousands of healthcare workers have been affected worldwide, and many have died from COVID-19 as a result due to lack of availability of adequate personal protection. In addition, some organisations targeted workers who spoke up against poor safety practices,<sup>31</sup> and there are reports of trainee mistreatment.<sup>32</sup> Nurses have been particularly affected<sup>33</sup> and so have nursing aides and support workers in nursing homes.<sup>34</sup> For instance, in the midst of inadequate staffing and PPE, nurses have been exploited and/or silenced with reports that certain hospitals suspended nurses trying to fundraise for PPE and forced them to work while they showed COVID-19 symptoms if tests were negative.<sup>33</sup>

Even though not all organisations are currently nurturing workforce physical and psychological well-being similarly, the early positive efforts should inspire others and continue beyond this current crisis, as physical and emotional safety concerns preceded this crisis and will also exist beyond it.<sup>35</sup> It will also be important to make lasting changes to support the workforce and address neglected areas across the continuum such as safety in nursing homes.<sup>36</sup> Only then can we ensure that these irreplaceable human resources are available when most needed.

## REMOVING BARRIERS TO USING HEALTH IT TO IMPROVE SAFETY

Over the last decade, despite billions being spent on implementation of health IT, use of health IT to improve patient safety remains suboptimal.<sup>37</sup> Technology applications, including electronic health records (EHRs) and the digital data they capture, have not been adequately used to either predict or reduce preventable harm.<sup>38</sup> EHRs have emerged as a major source of clinician burnout with potential negative effects on patient safety.<sup>22</sup> Involved stakeholders (clinicians, healthcare organisations, vendors, government agencies and regulators) have tended to attribute failures to one another.<sup>39</sup> Yet over the past few months, we have seen unparalleled cooperation between these stakeholders leading to substantive progress in removing previously intractable barriers and allowing technology to help clinicians do their work and improve quality and safety.

For example, prior to the COVID-19 crisis, telemedicine, in all its incarnations over the last 25 years,<sup>40</sup> was limited in USA because Centers for Medicare & Medicaid Services and other insurers would not pay for it in most situations, physicians were limited to providing services in states they were licenced in and overly restrictive Health Insurance Portability and Accountability Act regulations limited the types of hardware and software for connecting physicians and patients.<sup>41</sup> Within a few days, these non-technical barriers were removed<sup>42</sup> when it became apparent that telemedicine enabled many physicians to continue to care safely for their patients while eliminating risks of virus transmission in the waiting or exam rooms. This led to organisations and clinicians, often resistant to major changes in clinical workflow, implementing telemedicine rapidly and efficiently.<sup>43</sup> In addition to creating telehealth solutions, EHR vendors have partnered with healthcare organisations in new ways—working expeditiously on sharing records more broadly and implementing new screening tools, predictive analytics, charting templates, order sets, reporting tools and dashboards and access to data streams for research.<sup>44</sup> Finally, the unique collaboration between Google and Apple to enhance the Bluetooth capabilities of their mobile phone operating systems to enable anonymous contract tracing between individuals infected with COVID-19 is astonishing on technical, social and legal fronts.<sup>45</sup>

Nevertheless, removing barriers to development and use of health IT interventions, be they telemedicine or apps, is not without risk. While telemedicine has been around for several decades, its benefits are still being studied. Increased use of telemedicine may be good in the short term, but its safety and long-term workforce implications are unclear and warrant evaluation. For instance, it could lead to less need for healthcare workers with subsequent job losses and increased adverse events such as diagnostic and management

errors. Furthermore, widespread use of telemedicine and emerging apps has the potential to lead to data privacy breaches, billing fraud and inappropriate care. While having the two largest technology companies working together is also not a fail-safe solution, without such cooperation, widespread contact tracing may not be possible. During times of public health emergencies, we may need to err on the side of collecting and using data to protect lives while cautiously working to prevent the potential for abuse by developing new rules and regulations against the misuse of these data.<sup>46</sup> This is admittedly a difficult trade-off to manage.<sup>47</sup>

In the past, without this common enemy, this shared responsibility and technical collaboration between vendors and with vendors and the clinical world has been unachievable even in the midst of long-standing safety concerns about poor usability and interoperability.<sup>39</sup> Now that there is precedent for change, it is time to remove sociotechnical barriers and use IT and related data science solutions to predict and reduce harm beyond the current crisis.

## CONCLUSION

Rapid care delivery transformation has been a silver lining in recent months. As the COVID-19 pandemic subsides, healthcare will still be left with the chronic and widespread public health crisis of preventable patient and workforce harm. Similar to the virus, safety issues affect all healthcare stakeholders, including patients and clinicians, either physically, financially or emotionally. The existential threat that every healthcare stakeholder is facing during the COVID-19 crisis has galvanised a response across multiple stakeholders (government, health systems leaders and clinicians, industry and the general public to name a few) with promising strides that could improve future safety culture, prioritise workforce safety and remove barriers to use of IT to improve safety. Harvesting lessons from these transformations, continuous evaluation of promising early changes and dedicated sustainment efforts could *accelerate* the curve of Diffusion of Innovations to promote more rapid and successful spread of safety strategies and innovations. Efforts must be made now to fully catalyse this momentum to overcome decades of slow progress in reducing preventable medical harm.

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