COVID-19: BEYOND TOMORROW

VIEWPOINT

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Institute for Healthcare Improvement (IHI), Boston, Massachusetts. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has only 15 genes, compared with 30 000 in the human genome. But it is a stern teacher, indeed. Answers to the questions it has raised may reshape both health care and society as a whole.

Choices for the "New Normal"

No one can say with certainty what the consequences of this pandemic will be in 6 months, let alone 6 years or 60. Some "new normal" may emerge, in which novel systems and assumptions will replace many others long taken for granted. But at this early stage, it is more honest to frame the new, post-COVID-19 normal not as predictions, but as a series of choices. Specifically, the pandemic nominates at least 6 properties of care for durable change: tempo, standards, working conditions, proximity, preparedness, and equity.

The Speed of Learning

Will the tempo for learning and improvement be faster in the new normal than before? A famous meme in health services research is that proven, favorable innovations take years to reach scale; one often-quoted study claims that the average cycle time is 17 years.¹ Not in this pandemic. In London, the National Health Service converted the massive Excel Convention Center into a 2900-bed intensive care unit—renamed the Nightingale Hospital London—which admitted its first patient just 18 days after planning for this new center began. Within weeks of COVID-19's arrival, US academic medical centers produced detailed clinical care guides with sound pedigrees available for all²; the more familiar, former pace

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of official guideline development would have taken months or years. Within weeks of the outbreak in China, a case series of nearly 73 000 patients defined the basic risk factors for mortality.³ Biomedical companies, start-up entrepreneurs, and universities are on a fast track toward new diagnostics, antivirals, and vaccines. Assumptions are dissolving about how much time progress takes.

The Value of Standards

Clinicians in the new normal may be less tolerant of unwarranted variation in health care practices. The COVID-19 norm is to welcome standardized clinical processes, as opposed to reflex defense of "clinical autonomy" as the primary basis for excellence. The strangeness of the COVID-19 clinical territory leaves even experts looking for guidance from trusted sources. Clinicians and hospitals want counsel on how to handle the unwelcome ethical dilemmas they may encounter if and when resources reach their limits, such as rationing ventilators.⁴ On March 11, 2020, the National Academies of Sciences, Engineering, and Medicine created a new Standing Committee on Preparedness for Emerging Infections and 21st Century Threats; by April 11 the committee had issued 11 formal "rapid expert consultation" documents, consumed immediately by both professional and lay media.⁵ Will the new normal embrace global learning, shared knowledge, and trusted authority as foundations for reducing harmful, wasteful, and unscientific variation in care?

Protecting the Workforce

SARS, MERS, and Ebola placed health care workers at very high risk, and the COVID-19 pandemic, because of its scale, amplifies that threat massively. Sadly, attention to health care worker safety has languished at far too low a level of priority for decades. Now it is evident how unwise that is, as millions of workers face personal risks that they would not encounter if protective equipment and preparatory procedures had been arranged in advance. Will the new normal address more adequately the physical safety and emotional support of the health care workforce in the future? Without a physically and psychologically safe and healthy workforce, excellent health care is not possible.

Virtual Care

Hippocrates saw patients face-to-face, and medical care still mostly relies on personal encounters. COVID-19 has

unmasked many clinical visits as unnecessary and likely unwise. Telemedicine has surged; social proximity seems possible without physical proximity. Progress over the past 2 decades has been

painfully slow toward regularizing virtual care, self-care at home, and other web-based assets in payment, regulation, and training. The virus has changed that in weeks. Will the lesson persist in the new normal that the office visit, for many traditional purposes, has become a dinosaur, and that routes to high-quality help, advice, and care, at lower cost and greater speed, are potentially many? Virtual care at scale would release face-to-face time in clinical practice to be used for the patients who truly benefit from it.

Preparedness for Threats

As virtual care has lagged leading up to COVID-19, so, even more, has preparedness for 21st-century threats. The foundations of preparedness, most crucially a robust public health system, have been allowed to erode or have never been laid in the first place. Several major reports in the past decade have tried to call attention to that lack of readiness, with only minimal response.⁵

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The COVID-19 toll may be the largest paid so far for this failure, but without taking public health and preparedness seriously, it will be neither the last nor the greatest. Other pathogens, massive trauma, cyberthreats to the electric grid, and more no longer seem so abstract or distant. Will public health finally get its due?

Inequity

Perhaps the most notable wake-up call of all is inequality, as the worm in the heart of the world.^{6,7} Students of either health or justice are not at all surprised to read headlines about the unequal toll of COVID-19 on the poor, the underrepresented minorities, the marginalized, the incarcerated, the indigenous peoples. In Chicago, 30% of the population is African American, but they account for 68% of the COVID-19 deaths. In Wisconsin, African Americans account for 6% of the population, but 50% of the deaths. Anyone who studies the toll of vast inequality, in either the US or the world at large, could have predicted those disproportionate deaths with absolute certainty long before they occurred. The most consequential question in the new normal for the future of US and global health is this: Will leaders and the public now at last commit to a firm, generous, and durable social and economic safety net? That would accomplish more for human health and well-being than any vaccine or miracle drug ever can.

These tectonic changes in health care mirror similar ones in societies overall. Who could possibly have imagined billions of people willingly sheltering in place or social distancing barely 2 months after almost no one knew those terms? The public has become suddenly avid consumers of trustworthy scientific guidance on what they should do and what may lie ahead, and people are adopting skepticism about fake science and untested assertions. Tens of millions of people in a few weeks have replaced trips by air or car with virtual meetings on Zoom and Skype and are managing to work from home, get groceries online, visit grandchildren with FaceTime, and appreciate outdoor walks more (at a safe distance). People of New York, London, Milan, and elsewhere experience social solidarity as they cheer health care workers in synchrony from their balconies in the evening, and suddenly the grocery clerks and bus drivers are seen as heroes. Surgical masks in communities protect others, not those who wear them; and yet millions don masks.

Some favorable effects will quickly disappear unless policies are established and practices change after COVID-19. For now, motor vehicle crashes have plummeted. The temporary effects of the pandemic on carbon emissions and pollution are large and instructive. The planet is, by that measure, a healthier celestial body. For the first time in decades, people in Kathmandu can see the tallest Himalayas through clean air with their naked eyes. Will the smog simply return?

There will be political consequences, as well. Everywhere people ask, "How could this have happened? Why were nations caught sleeping? If they knew, why did they not act?" These questions will settle, as they should, soon at the doorsteps of policy makers and elected leaders. They will need good answers and better plans.

Fate will not create the new normal; choices will. Will humankind meet its needs—not just pandemic needs—at the tempo the COVID-19-related morbidity and mortality demand? Will science and fact gain the high ground in guiding resources and behaviors? Will solidarity endure? Will compassion and respect be restored for the people—all the people—who make life agreeable and civilization feasible, including a guarantee of decent livelihoods and security for everyone? Will the frenzied world of commerce take a breath and let technology help simplify work without so much harm to the planet and without so much stress on everyone? And will society take a break from its obsessive focus on near-term gratification to prepare for threats ahead?

Most important of all: Is this the time for equity, when the evidence of global interconnectedness and the vulnerabilities of marginalized people will catalyze at last the fair and compassionate redistribution of wealth, security, and opportunity from the few and fortunate to the rest? This virus awaits an answer. So will the next one.

ARTICLE INFORMATION

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REFERENCES

1. Balas E, Boren S. Managing clinical knowledge for health care improvement. In: van Bemmel JH, McCray AT, eds. Yearbook of Medical Informatics. Schattauer Verlagsgesellschaft mbH; 2000:65-70. doi:10.1055/s-0038-1637943

2. COVID-19 Clinical guidelines. Brigham and Women's Hospital. Accessed April 29, 2020. https://covidprotocols.org/quick-guides **3**. Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. *JAMA*. 2020;323 (13):1239-1242. doi:10.1001/jama.2020.2648

4. White DB, Lo B. A framework for rationing ventilators and critical care beds during the COVID-19 pandemic. *JAMA*. Published online March 27, 2020. doi:10.1001/jama.2020.5046

5. Berwick DM, Shine K. Enhancing private sector preparedness for 21st century health threats:

foundational principles from a National Academies initiative. JAMA. 2020;323(12):1133-1134. doi:10. 1001/jama.2020.1310

6. Yancy CW. COVID-19 and African Americans. JAMA. Published online April 15, 2020. doi:10.1001/ jama.2020.6548

7. Owen WF Jr, Carmona R, Pomeroy C. Failing another national stress test on health disparities. *JAMA*. Published online April 15, 2020. doi:10.1001/ jama.2020.6547