Global Coalition on Aging

THE GCOA COVID-19 PLAYBOOK:

Innovation for 21st-Century Healthy Aging: Lessons from the COVID-19 Pandemic

November 2020

Introduction

The devastating public health, economic and social consequences of the COVID-19 pandemic are well documented and continue to mount. Yet history shows that grave crises can also call forth heroic responses. A crisis like COVID-19 can focus our energy; unite us to advance the common good; generate cooperative partnerships among diverse stakeholders; and accelerate the transformative power of innovation to address urgent human needs.

We've seen all these creative forces at work in the global response to COVID-19. Although the crisis has not yet passed, it is not too early to start identifying some of the lessons we have learned so we are better prepared to defeat new public health threats, as well as rising challenges that are already on our doorstep.

These lessons should guide public policy reforms, align business practices and provide us a roadmap for decades to come. They have the potential to ensure our society can drive the scientific, medical and health progress needed to help us respond more rapidly and effectively to future virus outbreaks. They also promise to help sustain our highest human aspirations for long, healthy, productive lives by addressing other growing crises, such as the explosion of Alzheimer's and other diseases that target the rapidly aging global population.

"The twin mega-trends of population aging—more old than young already across the planet—and longevity of 100-year lives as a matter of course make the need for continuous, more efficient and more rapid innovation in health, elder care and technology the profound challenge of our 21st century."

—Michael W. Hodin, PhD,
CEO, Global Coalition on Aging

Healthcare innovations historically evolve slowly. Drug treatments and vaccines can take years to travel the journey from the laboratory through clinical trials to regulatory approval and widespread patient use. The pace of incorporating digital technology and the power of artificial intelligence (AI) into patient care at hospitals and physician practices had lagged behind other sectors of the economy.

The global pandemic has catalyzed action on these and other fronts. If we learn the appropriate lessons, the benefits will accumulate long after the worst of the pandemic passes, promising faster innovation, better patient care, improved health outcomes, lower health care costs, and greater access to care for those most in need.

While the COVID-19 pandemic has accelerated innovation, the foundation for such rapid progress was built on earlier decades of extensive, difficult scientific investigation supported by trillions of dollars invested in core R&D efforts, often with little or no immediate returns. Innovations that are saving lives and speeding recoveries in today's pandemic simply would not have been possible without that foundation.

In addition to marking the outbreak of COVID-19, the start of 2020 also kicked off the World Health Organization's (WHO) Decade of Healthy Ageing. In one of the miracles of modern medical science, since 1960 average life expectancy has increased from about 52 years to over 72 years.[1] Innovations in drug therapies and assistive technologies mean that we can live healthier and more active lives, even with conditions such as osteoporosis, vision deterioration or cardiovascular disease. For example, a wave of innovation by way of new treatments led to an 18 percent decline in U.S. melanoma deaths, with the greatest reduction coming in people over 50.[2]

Yet the very moment the global community planned to celebrate this stunning rise in longevity and aging positively, COVID-19 has shone a cruel spotlight on the vulnerability of the world's older citizens among us. According to the U.S. Centers for Disease Control and Prevention (CDC), people age 75-84 are 220 times more likely to die from COVID-19 compared to 18-29-year-olds. For people

above 85, the mortality rate is 630 times higher.[3] By 2050, one out of every six people will be over 65, while the number of people over age 80 is projected to triple to over 425 million.[4] In some countries like Japan, South Korea, Singapore, China and across Europe from Germany to Finland and the UK, in the next couple decades they will have well over a third of their populations over 60, and the fastest growing segment of the population will be the over 80.

The world now faces two options: Will COVID-19 challenge the very basis of the WHO's Decade of Healthy Ageing? Or will it become a catalyst for action aimed at advancing the Decade's goal of longer, healthier, more productive and happier lives for the unprecedented 2 billion people world-wide soon to be older than 60?[5]

The GCOA Playbook on COVID-19 is intended to help us steer a course through the current crisis, prepare us to confront the next one, and promote the policy transformations needed for a successful Decade of Healthy Ageing.

The Lessons of COVID-19

Lesson 1.

The private-sector R&D model is the only one proven capable of delivering innovations at the speed and scale needed to respond to critical health crises and advance our society's highest, long-term public health goals of a healthier and more active aging.

On May 1, the U.S. Food and Drug Administration (FDA) authorized the emergency use of Gilead Sciences' drug remdesivir to treat severely ill COVID-19 patients—the first therapy authorized to address the virus. This breakthrough was achieved less than 90 days after the first coronavirus case was diagnosed in the U.S.[6]—a pace FDA Commissioner Dr. Stephen Hahn described as "lightning speed."[7]

The drug (brand name Veklury) was subsequently approved by the FDA on October 22.[8]

Within those 90 days leading up to Emergency Use Authorization (EUA), Gilead scientists rushed to adapt remdesivir for COVID-19 patients. This effort was launched even before the WHO confirmed the human-to-human spread of the virus. But the true innovation process actually began over a decade earlier, when Gilead developed a precursor to remdesivir to treat hepatitis C. While Gilead eventually found a more effective hep C treatment, the company continued to invest R&D resources—both time and money—in remdesivir. Over a decade, the drug was tested against other viruses, including SARS, MERS and Ebola.[9] While these viruses faded before treatments were fully tested, this kind of careful science with no immediate financial benefit built the intellectual capital, expertise and manufacturing skill needed to respond to COVID-19.

These core capabilities—which existed in no other industry—enabled Gilead to quickly launch a clinical trial program designed to answer multiple scientific questions in parallel and rapidly evaluate remdesivir's potential for treating COVID-19. That program included two randomized, multi-center trials to determine the effectiveness of different dosing durations on adults with COVID-19.[10] It also allowed Gilead, working with the National Institute of Allergy and Infectious Diseases (NIAID), to launch a separate clinical trial of over 1,000 hospitalized patients, which found those taking remdesivir had a 31% faster recovery time—a result NIAID Director Dr. Anthony Fauci called "highly statistically significant."[11]

Hospitalized patients taking remdesivir:

31%

FASTER RECOVERY TIME

"I'm privileged to work with a group of amazing scientists at Gilead that have been working on antivirals for decades and were poised to put remdesivir immediately into clinical trials when we saw COVID-19 circulating."

—Daniel O'Day,
CEO, Gilead Sciences at Oval Office announcement of remdesivir FDA emergency use authorization, May 1, 2020

The race for a COVID-19 vaccine is following a similar trajectory. As of August 1st, biopharmaceutical companies and researchers had at least 87 vaccines in the preclinical phase, with 50 already advanced to human trials.[12] This unprecedented mobilization of science, medicine and manufacturing is advancing at an extraordinary pace.

On July 27, Moderna launched the final stage of clinical trials (Phase 3), with plans to enroll 30,000 patients at 90 sites across the U.S., including emerging COVID-19 hotspots. AstraZeneca and Oxford University teamed up for a large-scale trial in the U.K., which found the vaccine candidate generated robust immune responses in all tested patients.[13] Pfizer and BioNTech have also launched their 30,000-plus-participant Phase 3 trial on their jointly developed vaccine and anticipate seeking final regulatory review in November.[14] The two companies have reported the vaccine candidate to be more than 90% effective in preventing COVID-19.[15]

Crediting scientists and public health officials for the speed of these drug developments and expedited approvals is certainly warranted. But it conceals the even more vital innovation infrastructure and decision-making inside companies that make rapid healthcare advances possible but is too often poorly understood by policymakers and the wider public. This infrastructure rests on three pillars:

Deep expertise and science-based intellectual capital built up over decades

The discovery and development of chemical and biological compounds to treat novel viruses represent the leading edge of medical innovation. Through decades of research, companies like Gilead, Pfizer, AstraZeneca, and others have built up a bank of intellectual capital, virus expertise and molecule libraries that enabled scientists to innovate at incredible speed, putting treatments and vaccine candidates into clinical trials *as soon as* COVID-19 began spreading, rather than months or years later.

Patient private capital and reinvested corporate profits

Careful science and dedicated research must be supported by patient capital willing to endure more failure than success. An astonishing 90% of drug developments fail. Gilead scientists first determined remdesivir could be effective in fighting respiratory viruses over a decade ago, and many previous applications of remdesivir to treat other viruses were unsuccessful. But these setbacks are vital part of the innovation process. This process is sustained not just by investment capital, but by decades of corporate profits reinvested in R&D to understand the science behind emerging viruses. These investments have enabled scientists to deliver promising treatments and vaccine candidates when the world needed them most.

Telemedicine:
10 YEARS
OF INNOVATION IN
2 WEEKS

Public policy environments that encourage innovation

Decades of research and billions in investment are only possible through sound public policies. Such a policy framework must include robust intellectual capital protection through patents on innovations and enables companies to invest the resources needed to achieve future advances.

Drug treatments are not the only healthcare innovations accelerated by the challenge of COVID-19.

Just months before the first COVID-19 case was reported, Ernst & Young published a study that found healthcare delivery at hospitals and physician practices lagged behind other industries in introducing digital technologies.[16] But in an urgent effort to flatten the curve on virus infections and prevent hospitals from being overrun, doctors turned *en masse* to telemedicine, achieving what one doctor called 10 years of innovation in just two weeks.[17]

The initial goal was to keep at-risk patients away from waiting rooms and hospitals, while monitoring lower-risk COVID-19 patients who self-quarantined. As virtual meetings between doctors and patients exploded, analysts now estimate the number of virtual healthcare interactions could top 1 billion in 2020.[18]

"The home has proven to be the safest place be to prevent exposure to COVID-19. And, telemedicine and telemonitoring, combined with our one-on-one approach to home care has protected against the worsening of chronic conditions and the equally dangerous threat of social isolation. This type of innovation is critical for meeting the needs of the most vulnerable and highest risk among us—during the pandemic and for the long term."

—Jeff Huber,
CEO, Home Instead Senior Care

COVID-19 is clearly moving healthcare into patients' homes. But the growing embrace of telemedicine by patients, doctors and hospitals builds the foundation for far greater advancements than just replacing a visit to the doctor's office. For years, technologists have touted the untapped potential of telemedicine to transform healthcare. Now, that future may be arriving, propelled by the innovative deployment of technologies that are helping to address the current pandemic and paving the way for further benefits in treating other diseases and conditions.

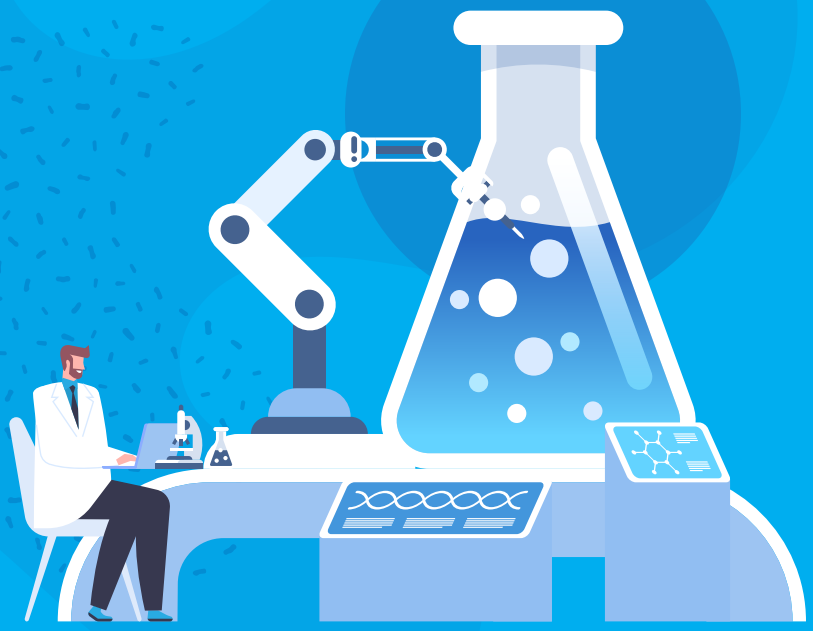
In May, health technology company Philips received FDA approval for a biosensor—a five-day wearable patch—that helps hospital staff monitor COVID-19 patients remotely, limiting exposure to the virus and preserving PPE supplies.[19] The device measures critical medical data such as respiratory and heart rates and transmits the data to physicians and nurses—addressing a key COVID-19 challenge of how to isolate patients and protect frontline workers while providing effective treatment.

Another Philips wearable device can help clinicians track symptoms for COVID-19 patients either released from the hospital or quarantining at home. By monitoring temperature, respiratory rate, frequency of coughs and pulse, the BioSticker alerts healthcare workers to any adverse changes in condition.[20]

While telemedicine has limitations, these and other innovations have the potential to expand access to care, especially in poorly served communities; increase medical productivity by automating tasks like checking vital signs, which can be taken at home and automatically transmitted to doctors; improve patient outcomes; and lower overall healthcare costs by reducing hospital stays and in-office doctor visits. And, by capturing data enabled by AI, scientists can advance their understanding of diseases, while speeding up the ability to monitor, detect, diagnose and treat these conditions.

Lesson 2:

Global health challenges require organizations that have the resources, capacity, skills and decision-making culture to turn scientific insights into products that can treat patients on a global scale.



We live in a highly globalized world linked together by a complex web of trade, markets, travel, supply chains, immigration and other human activities that practically guarantee a highly infectious virus like COVID-19 will quickly spread around the world unless contained immediately.

Such global challenges require organizations that can operate on a global scale. While academic labs and government-funded R&D efforts provide helpful support, they cannot scale breakthroughs at the speed or size required to meet global health challenges. The ability to ramp up from producing small batches of a drug for testing in a lab to mass manufacturing of billions of doses for a global population of patients requires a unique combination of medical insight, technical expertise and manufacturing proficiency—the ability to pair Nobel-level science with General Motors-scale production (only more complicated).

This capacity is an indispensable resource both in fighting COVID-19 and ensuring the world's rapidly growing aging populations can remain healthy, productive and safe as they age. In fact, we are already seeing the impact as companies and their research partners race to develop treatments and vaccines to save the lives of COVID-19 patients, reduce hospitalizations and protect against further infections.

"When it comes to tackling today's global health challenges—from COVID-19 to Alzheimer's—global companies are essential. Public and academic labs certainly contribute basic research, but only global companies have the scale, development, manufacturing, distribution expertise and leadership with links in multiple countries to deliver innovations to billions of people worldwide."

—Nicholas Eberstadt,
Henry Wendt Chair in Political Economy,
American Enterprise Institute

In January, just as the virus was beginning to emerge, Gilead began stockpiling raw materials and building up massive manufacturing capacity to produce remdesivir. This production commitment was made before determining that the drug worked to treat COVID-19, before clinical trials started, and before its emergency use was authorized by the FDA.

By making this commitment, Gilead reduced a complex, exacting chemical manufacturing process from one year to roughly six to eight months[21] and enabled the company to donate 1.5 million doses—its entire supply, developed before remdesivir was approved—free of charge.[22] And it created the manufacturing

capacity—through a network of more than 40 companies in North America, Europe and Asia—to manufacture more than two million treatment courses by the end of the year, with the potential to produce millions more in 2021 as needed. The company is also teaming up with generics manufacturers to supply remdesivir to 127 countries with large low-income populations.[23]

Pfizer and BioNTech also began building out a vaccine manufacturing infrastructure before winning regulatory approval. Because they took this step, the companies expect to have the capacity to produce up to 100 million vaccine doses by the end of 2020 and 1.3 billion by the end of 2021.[24]

Getting a new therapy or vaccine quickly to market in countries around the world requires the ability to scale across multiple disciplines, including scientific knowledge, raw material supply and manufacturing expertise.

A global supply chain of raw materials

The step-by-step manufacturing process for a drug starts by turning raw chemical materials into active pharmaceutical ingredients. In remdesivir's case, the raw materials—all in scarce supply—are being sourced from 10 different countries.[25]

A global manufacturing network

The intravenous doses of remdesivir can only be produced at a limited number of facilities with sterile drug manufacturing capabilities. Gilead created a global manufacturing network of 40 partners across three continents in order to produce remdesivir on the scale needed to address a global pandemic.[26]

"We made the early decision to begin clinical work and large-scale manufacturing at our own risk to ensure that product would be available immediately if our clinical trials prove successful..."[28]

—Dr. Albert Bourla,
Pfizer Chairman and CEO

A global industry with global reach

By year-end, Pfizer will have built out—before receiving FDA approval—the manufacturing capacity to produce up to 100 million doses of its COVID-19 vaccine in 2020 and 1.3 billion doses in 2021. Only a global industry with the strength and scale to deploy an army of doctors, scientists and researchers; that has built a robust, global manufacturing supply chain; and that has the resources to invest $1 billion to ramp up R&D and production—as Pfizer will have spent by the end of the year—can mobilize that quickly, scale that dramatically and deliver results that powerfully.[27]

Lesson 3.

Smart public policy is needed to support innovation and create the robust, R&D- and technology-based healthcare infrastructure we need to treat viruses like COVID-19 and deliver on the WHO's Decade of Healthy Ageing.

The drug approval process in the U.S. is one of the most costly and lengthy in the world. The entire process—from initial research identifying potentially beneficial compounds to three phases of clinical trials to final FDA approval—can take 12 to 15 years and cost billions.[29]

Yet the urgent response by pharmaceutical companies and the cooperation of leading public health authorities to fast-track treatments and vaccines for COVID-19 demonstrates that smart public policy can dramatically accelerate this process.

"The FDA has been using its expertise to help drugmakers develop evidence faster...In a public-health emergency, drug development can advance more quickly if scarce resources, including patients, can be focused on the most promising therapeutics."[30]

—Scott Gottlieb, MD, former FDA Commissioner

In June, the federal government launched Operation Warp Speed to accelerate the development, manufacturing and distribution of COVID-19 vaccines and treatments.[31] The program is a partnership between federal agencies—including the Department of Health and Human Services (HHS), Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), National Institutes of Health (NIH) and the Biomedical Advanced Research and Development Authority (BARDA) and private biopharmaceutical firms. Operation Warp Speed aims to fast-track the traditionally lengthy development process by commencing clinical trials, building manufacturing capacity and establishing a distribution infrastructure simultaneously.

The goal is to deliver 300 million doses of a safe, effective vaccine by January 2021—approximately one year after COVID-19 became widespread. How ambitious is this timeline? By comparison, the development of the chicken pox vaccine took 28 years.[32]

So far, Johnson & Johnson, Moderna, Novavax, AstraZeneca, Pfizer and Merck have received federal backing under Operation Warp Speed.[33] Companies such as Corning and SiO2 Material Science have also been awarded funding to produce the glass vials and containers needed to distribute any vaccine on a nationwide—or even global—scale.[34]

These partnerships enable companies to advance R&D efforts and accelerate promising vaccine candidates into clinical trials. Crucially, these also allow companies to ramp up production capacity in parallel with drug development, dramatically reducing the lead-time needed for mass manufacturing.

In fact, even before applying for emergency FDA approval, Pfizer was reported to have already produced several hundred thousand doses of its vaccine in preparation for urgent, rapid and widespread distribution as soon as approvals are granted.[35]

Operation Warp Speed follows the February launch by the FDA of an adaptive clinical trial of remdesivir, which now includes thousands of patients in 39 sites across the country.[36] Adaptive clinical trials provide the flexibility to observe patient outcomes in the trial's early stages and incorporate these findings into the trial's design and objectives. Working in partnership, the FDA and the drug company can use insights learned to adjust goals, optimize drug dosage levels and duration of treatment, and shift more patients to the most effective treatments.

In remdesivir's case, based on the rigorous, randomized, controlled clinical trials, within two months the FDA's independent review board determined the drug was effective in treating COVID-19 patients. At that point, patients taking the placebo were switched over to remdesivir, and remdesivir became the new standard of care other treatments will be measured against as new therapies are evaluated.

The drive for faster, more flexible, more cost-effective drug approval gained momentum during the nation's response to the HIV/AIDS pandemic in the 1980s. As AIDS activists called for faster access to treatments, the FDA responded by establishing an expedited review process, which accelerated the development of AIDS treatments and made them more widely available.

Adaptive clinical trials represent a logical step forward in this evolution. They can hasten the arrival of innovations that offer expansive benefits—not just to patients but to the healthcare system as a whole and to society itself.

Remdesivir, for example, did not result from the discovery of a brand new compound, but from continual investment in an existing line. These consistent investments are the backbone of innovation, making possible seemingly small alterations in a drug that deliver meaningful advances. Remdesivir promises not only to speed patient recoveries, but also to reduce hospital stays. By helping prevent hospitals from being overwhelmed with COVID-19 patients, the drug addresses a primary concern by public health officials and political leaders that led to widespread lockdowns, business closures, job losses and economic turmoil.

Just as smart public policy can advance medical innovation and help patients, poorly designed regulation or misunderstood studies can be confusing, undermine the innovative process, and inhibit life-saving drugs from reaching the patients who need them. An example is the WHO Solidarity study on remdesivir, which aggregated information that is often difficult to collect, analyze and validate, publicly raising issues of the drug's effectiveness against COVID-19.[37] Even though it was widely understood to have lacked the rigor of standard clinical trials, what impact might it have on innovation itself?

There are also examples of regulatory hurdles thwarting innovation. The Centers for Medicare & Medicaid Services (CMS) last summer issued a proposed rule that would redefine "line extension" drugs in a way that penalizes high-value drug combination therapies and discourages investment in these needed innovations.

"...the most transformative advancement in the treatment of HIV/AIDS came when individual treatments were combined. The same reformulation could end up as transformative for people living with lupus and so we caution [CMS] against advancing this broad definition [of "line extension"] without appropriately assessing the impact it may have on incremental treatment improvements that can greatly benefit patients."[38]

—Lupus Foundation of America, Comment on CMS proposed rule, July 20, 2020

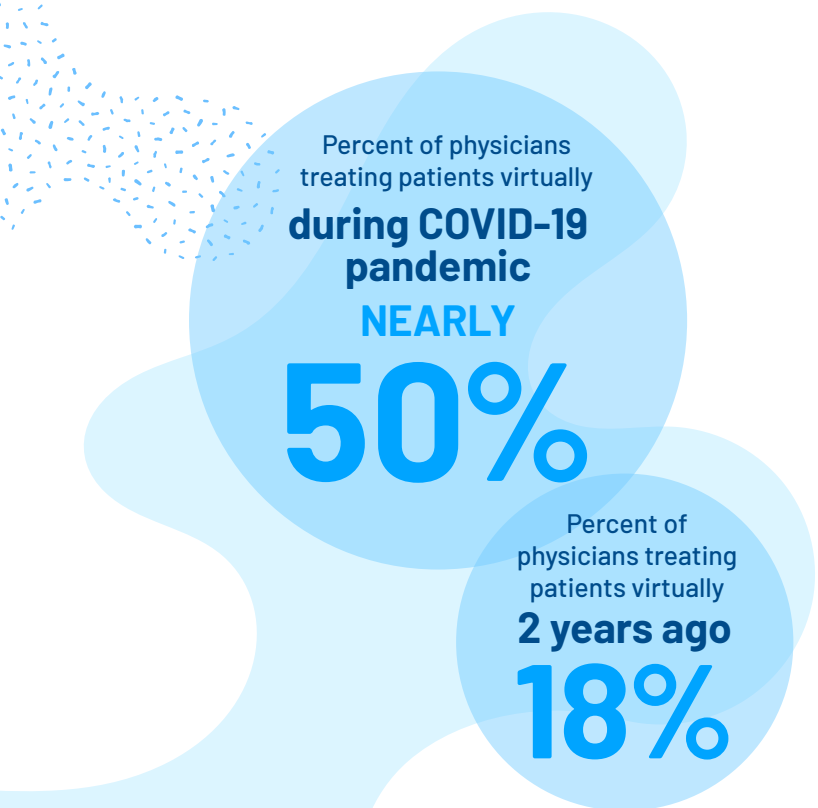
The need for these innovations becomes even more urgent given the demographic fact of an aging global population. In fact, the success of the WHO's Decade of Healthy Ageing hinges on them.

The world is counting on new drug therapies that can empower literally billions of people to stay healthier, more productive and more independent as they age. Without them, the 2 billion people worldwide over the age of 60 will pose a continuous crisis to global healthcare systems, government budgets and national economies. There will never be a "cure" for aging, so progress must be measured in terms of continual improvement in functional ability. The world cannot wait for an effective treatment

for COVID-19—nor can we wait for therapies that address age-related conditions like Alzheimer's.

"Innovation is an essential component for a successful Decade of Healthy Ageing in which we can advance functional ability as the basis for measuring healthy aging...keeping people healthier and more active to meet their desired functioning as we all age."

—Dr. John Beard,
former Director, Department of Ageing and Life Course, World Health Organization



Smart public policy is also accelerating potentially transformative innovations like telehealth. Nearly half of physicians are reportedly treating patients virtually, compared to just 18 percent two years ago.[39]

What's behind this explosive growth? After all, the technology has been available for years. In response to COVID-19, the federal government's Medicare program relaxed restrictions on doctor and hospital reimbursements for telehealth services, clearing the way for millions of American seniors to get faster, safer treatment during the pandemic.[40] Data shows that the use of telehealth services by Medicare beneficiaries increased by 11,718% in just six weeks during the pandemic.[41] Some private insurers are now offering zero co-pays on telehealth visits, expanding the use of digital healthcare even further.[42]

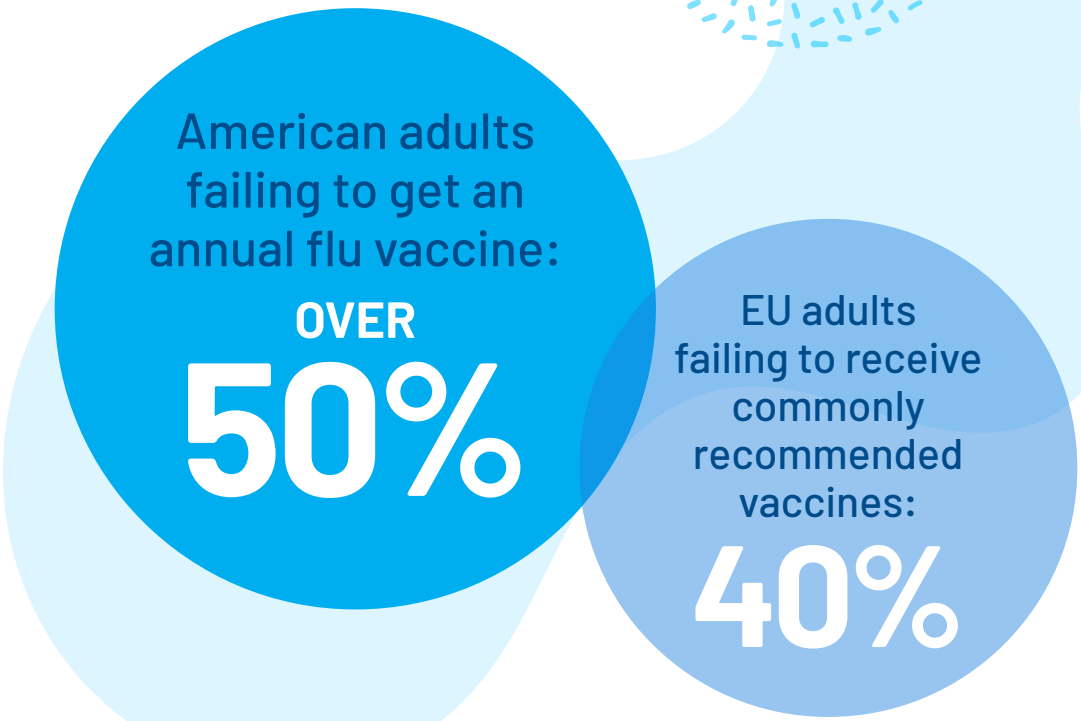
"There's no new technology needed. It's all there. If it can be built, it has been built...The barriers are access, social norms, economic workflow, workforce, [and] policy."[43]

—David Ryan,
former General Manager, Health and Life Sciences, Intel

Private healthcare companies and public health officials need to build on partnerships forged during COVID-19 to incorporate a bias toward innovation into healthcare policy and its regulatory framework—from clinical trial design to reimbursement plans.

Lesson 4:

Leadership, better public education and communication are critical not just in responding to a global pandemic, but to achieving baseline public health goals and realizing the full promise of healthy aging.



Many political leaders and public health experts predict social distancing, limited business openings and protective masks will be required until a vaccine against COVID-19 is developed, mass produced and distributed around the world. Yet the data suggests that the existence of a vaccine alone will not be sufficient to fully halt the spread of the virus.

The CDC estimates that as many as 646,000 people worldwide may die from the seasonal flu each year, even though we have decades of experience in creating effective annual flu vaccines.[44]

Despite widespread availability and low (if any) out-of-pocket expense, fewer than half of American adults get an annual flu vaccine.[45] In the European Union, 40 percent of adults fail to receive commonly recommended vaccines.

The aversion to vaccines takes a tremendous human and economic toll. According to the CDC, about 80% of children who die from the flu have not been vaccinated.[46] (Adult flu-related deaths and vaccination histories are not reported to the CDC.) Meanwhile, the U.S. alone spends $9 billion each year to treat vaccine-preventable diseases.[47]

The problem extends beyond vaccines to prescription drugs in general. In OECD countries—nations with the most highly developed healthcare systems—up to 25% of all hospital and nursing home admissions are due to patients who are not adhering to prescribed medications.[48]

Clearly, better public education and massive investment in effective public health campaigns are critical—not just to defeating

COVID-19 when a vaccine becomes available, but also in helping the world's growing older population stay healthy, active and productive as they age.

The CDC, OECD and WHO have a tremendous leadership role to play when it comes to public education. But all stakeholders in the healthcare ecosystem—governments, professionals, the private sector, academia, the media—need to take on the responsibility of ensuring people around the world have access to the information they need to keep themselves healthy, protect themselves against vaccine-preventable diseases and live lives where they can realize their full potential and happiness.

"Leadership is lifting a...vision to high sights, the raising of performance to a higher standard... beyond its normal limitations."

—Peter F. Drucker

Call to Action

Like other pandemics, COVID-19 is already generating profound changes in how we behave and even organize ourselves across multiple institutions of society. It's too early to know how lasting and transformational these changes will be. For example, will the changes in how we work and live reframe the urbanization trend that has been a hallmark of the 20th and now 21st century? How deep an impact on relations among nations will the pandemic leave—including global trade, ease of movement across borders, international travel? Which economic sectors might be permanently transformed or even eliminated?

Nevertheless, as we enter the Decade of Healthy Ageing, the Global Coalition on Aging believes a COVID-19 After Action Task Force—or perhaps even more accurate a Mid-Action Task Force—is needed to ensure the many lessons in innovation brought by COVID-19 are fully leveraged for success in the current and future pandemics. Some timely, even urgent, questions that should guide this work include:

1.

How has government and private industry best worked together to produce valued innovation, and what roles have they played respectively to ensure best results? How can these learnings become the basis for policy reform?

2.

What have been the most effective ways to ensure access to expedited innovations—public policies, regulations, innovator actions, public/private partnerships that ensure reimbursement and coverage of vital therapies and care delivery models, like telehealth?

3.

What lessons have we learned about scaling innovations? Can we identify the instruments and ideas that have led to the unique scaling of existing therapies, technology and other healthcare practices? What industry practices should be extended and emulated?

4.

What other innovations have we seen in responding to the challenges of COVID-19 that can also deliver benefits in the post-pandemic world?

5.

Globally, have we worked as collaboratively as the innovation challenge demands? Have we effectively leveraged global institutional knowledge and cross-national engagements? What have been the most successful models for global industry to collaborate among themselves and with academic and global institutions? How do we apply these lessons to meet the objectives of the Decade of Healthy Aging as a core part of the Sustainable Development Goals?

Conclusion

While COVID-19 has yet to be conquered, effective treatments and therapies have been and are being developed rapidly and are already helping patients around the world. Several vaccine candidates are showing promise in clinical trials. This progress is a testament to the power of bio-pharmaceutical and technology innovation to improve lives and benefit society. The question remains: How will we use these lessons learned to harness this process of rapid innovation to advance our aspirations to live longer, healthier, more productive, more fulfilling lives? As we embark on the WHO's Decade of Healthy Ageing and as we will surely face other pandemics in the future, this is a question that takes on greater relevance and urgency—for government and business leaders, for scientists and researchers, and for all global citizens.

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Global Coalition on Aging

About the Global Coalition on Aging

The Global Coalition on Aging aims to reshape how global leaders approach and prepare for the 21st century's profound shift in population aging. GCOA uniquely brings together global corporations across industry sectors with common strategic interests in aging populations, a comprehensive and systemic understanding of aging, and an optimistic view of its impact. Through research, public policy analysis, advocacy, and strategic communications, GCOA is advancing innovative solutions and working to ensure global aging is a path to health, productivity and economic growth.

For more information, visit www.globalcoalitiononaging.com.

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