New report finds global health research infrastructure imperiled by COVID-19

December 11 2020

Credit: Pixabay/CC0 Public Domain

The strong foundation of global health research and development (R&D) that greatly accelerated the development of COVID-19 innovations is now being weakened by pandemic pressures that are diverting funding and expertise away from other dangerous diseases and putting clinical trials and scientific endeavors around the world on indefinite hold.

That's a key conclusion of a new report released today from the non-profit Global Health Technologies Coalition (GHTC). It's based on qualitative interviews with experts in academia, philanthropy, industry, government agencies and product development partnerships discussing how the battle against one all-consuming global health threat—COVID-19—is affecting efforts to combat a wide range of other diseases still sickening and killing millions of people worldwide.

"A lot of veterans of global health R&D are confronting a confounding situation of a pandemic that has generated new appreciation for the value of their work while at the same time potentially causing long-term harm to the field," said GHTC Director Jamie Bay Nishi. "Global health R&D has always subsisted on thin budgets and a tight-knit coalition of infectious disease experts—and both of these, funding and talent, are being redirected to COVID-19, which is putting many important projects in a precarious position."

The interviews, conducted anonymously, included experts working at the forefront of developing new innovations for fighting challenging problems like HIV/AIDS, tuberculosis, malaria, dengue and a host of neglected tropical diseases. They discussed how research and product development efforts for poverty-related and neglected diseases, already fighting for resources before COVID-19 hit, are now "at significant risk of disruption due to the pandemic, despite the sector's central role in enabling the COVID-19 R&D response."

One immediate impact is that global health expertise has been in high demand, forcing many researchers to put all other projects aside. The report notes that two people at key U.S. government agencies said that "half their teams have been deployed to COVID-19 response." A representative of a private sector company noted staffing shortages as personnel were diverted to developing COVID-19-related products. There were reports of labs affiliated with academic research institutions,

normally focused on various neglected diseases, shifting their staff and facilities to deal with state or university COVID-19 testing demands. In one case, a lab's entire discretionary budget was spent responding to state testing demands, so far without compensation.

Clinical trials—the most costly and complex aspect of developing new health interventions—have been hit especially hard. Nearly every interviewee involved in clinical trials, many of which are located in low- and middle-income countries, reported significant issues, including many being delayed indefinitely. The biggest problems involved the most consequential trials: phase 3 trials that, if successful, are the last hurdle in the long march to product licensure. But they are also the largest and most logistically challenging as they typically involve thousands of participants.

Researchers reported pausing many or all of their late-stage trials. One clinical trial administrator reported that where a trial was already underway, numerous trial participants were not showing up for essential follow-up visits at the clinic because of fear of contracting COVID-19. People managing clinical trials said switching to virtual visits was proving challenging, in part due to infrastructure barriers in low-resource settings—such as the need for many people to regularly purchase new SIM cards for their phones, which changes their phone number—and because many trials require in-person follow-up to collect samples.

It was difficult to assess the impact to global health work at U.S. government agencies like the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and the US Agency for International Development (USAID). But the interviews provided reason for concern.

For example, an official at one research center asked staff to estimate the funding they would need to accomplish COVID-19-related work

while maintaining existing projects. The estimates were four times higher than the amount of supplemental funding provided by Congress to the center that was supposed to cover those costs. Another agency leader reported trying to hire contract workers to cover COVID-19 work so that existing staff could return to their research projects but acknowledged it can be difficult to backfill positions that require niche expertise.

Meanwhile, many respondents said their work has been stymied by the lack of reagents and personal protective equipment or PPE because both are urgently needed for pandemic-related duties. Even seemingly routine matters like shipping costs to send supplies to global research sites have become big concerns. One researcher working in a high-income country reported that the cost of international shipping had increased six-fold during the pandemic, which would have sapped the entire shipping budget for their five-year NIH grant.

But there were also signs of hope that the pandemic could offer many benefits for the long-term effort to generate new innovations for fighting infectious diseases in low-income countries. One senior government scientist noted that the speed of COVID-19 vaccine development demonstrates to potential funders that, with adequate resources, there could be rapid progress is solving a wide array of global health challenges.

Other interviewees noted that the surge of COVID-19 alliances between governments and industry "has affirmed the value of public-private partnerships for producing new medical products." And there was excitement that new insights and technologies generated over the last few months, along with new approaches to conducting clinical trials, could have applications for many other diseases. The most optimistic opinion, while not universal, involved hopes that the pandemic could create "a new era in which global public health becomes an enduring political priority."

Ultimately, the report predicts global health research will emerge somewhere in the middle. It described the pandemic's impact on global health as operating like a "driverless bulldozer," alternately damaging certain areas while carving promising new paths in others.

"The critical role falls to policy makers to identify and restore vital global health initiatives that have been harmed by the pandemic while capitalizing on opportunities revealed by COVID-19 R&D to accelerate work on a number of diseases," Nishi said. "Their decisions will determine whether the legacy of COVID-19 is a tragic setback for the broader fight against infectious diseases or a new awareness of the incredible value of investing in global health innovations."

Provided by Burness