

Perspectives on the Future of Research in a Changing World: General Perspectives and Conclusions on the 2020 IQVIA Research Forum

Caleb Alexander, MD
Professor, Epidemiology
Johns Hopkins Bloomberg School of Public Health

Murray Aitken
Executive Director
IQVIA Institute for Human Data Science

This year's IQVIA Research Forum was held virtually and featured 20 speakers on the topic of **Looking Beyond 2020: The Next Chapter for COVID-19 and Policy Priorities for the Next U.S. Administration**. Dr. Caleb Alexander and IQVIA Institute Executive Director Murray Aitken offer their views at the end of the week as a summary of the most pertinent points of discussion.

The 2020 election, the COVID-19 pandemic and the importance of research

Caleb Alexander remarked that while the Affordable Care Act has become a lightning rod in healthcare, a matter with more impact on the health of the country will be how the next administration deals with the pandemic, the development of the vaccine, and the distribution and the scaling of that.

Murray Aitken suggested that one of the reasons the Affordable Care Act still remains a lightning rod 10 years after its enactment is that many aspects that were incorporated in the law, as seen from a research perspective (for example, the impact of the removal of the individual mandate) are not well understood or modeled. "It is still unclear what impact the individual mandate or the removal of it has had."

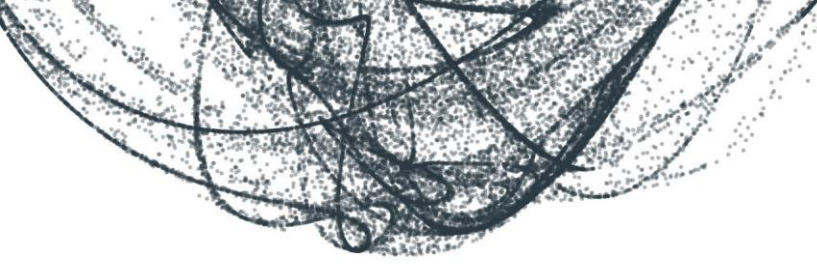
The results of the election and the Supreme Court ruling will likely have significant impact on health policies in the future, and that reinforces the important of sharpening the focus, from a research perspective, on the impact of those events to provide the best possible information and insights.

The issue about the incentives for innovation in the pharmaceutical sector and the linkage between drug pricing and innovation is a topic of strong interest to the Institute, said Aitken. "There is still more work to be done, realizing that the underlying science that underpins therapeutic innovation has moved significantly in the last 10 years, and it will move even further in the next 10 years. This is a case where overlaying policy measures – in this case, striking the right balance between patent exclusivity, drug pricing and value to the health system – on top of these dynamics becomes even more important. Everybody is still challenged with how to do that, and that becomes a major unmet need with respect to research approaches."

The question is how to conduct health policy research in an era where healthcare has become extremely politicized?

"It is a very important matter," said Alexander. "We need scientists more than ever, and we need scientists with experience in quality science. I don't think we need different approaches, but we need to put science and public health out in front. In the context of this pandemic, there has been an enormous mobilization of the world science community, but also stark contrasts in what science actually can deliver. There are still plenty of questions that are unknown and that we are still working on with respect to COVID-19, but there is also very strong pushback against things that are not terribly controversial. It is still a very important matter, and it is not going to go away regardless of the outcome of the election."

"Many countries are now entering the second wave of the pandemic, some countries the third wave, and some countries even just entering their first wave," said Aitken. "That raises the question about what have we actually learned from the March - April experience, and whether those lessons are clear, are evidence-based and scientifically based, and whether they cut through any political overlay – because if they don't, the value of that research is zero. So, in the context of



when does research matter, when does research make a difference, we have a very interesting example that might reveal something we as researchers are reluctant to admit as we move into a second or third wave.”

The effects of the pandemic

Alexander pointed to his interest in looking at the second and third order of effects of the pandemic, which is somewhat of a shift from the beginning where it was all about COVID. “It is understandable that it was all about COVID 24/7 in the beginning, but it is terribly important to understand the ripple effects of the pandemic, which we have seen on display during this week’s research forum. There is an enormous body of work that will continue to develop our understanding of the broader impact of the pandemic.”

“I also think the pandemic is an opportunity for Human Data Science to shine,” Alexander continued. “One of the things that the pandemic has put into stark perspective is the potential intersection of different sources of data and the ability to link data in unprecedented ways, but it also pushes the limits of data science. There is work now being done with a palpable urgency that historically has not been the case. This is an enormously exciting time, but sometimes it feels like COVID has sucked all the oxygen out of the room. It feels like everything else that we are working on that is important, now is less important. But I also think about how different the landscape may be three to six months from now if a vaccine comes out that is fairly efficacious and safe. The questions we are asking now may be very different a few months from now.”

“That also raises the question, how do we ensure COVID-19 is the catalyst for positive change?” said Aitken.

Telemedicine and the enablers of the future of research

On a positive note, the IQVIA Research Forum highlighted incredible advances in digital medicine and advances analytics, including AI and ML.

“I was reminded during the presentations about the importance of teamwork in science,” said Alexander. “One panelist mentioned anthropology, computer science, emergency medicine, and the importance of motivating behavioral change.”

“There is no better example of how the pandemic has galvanized the field than telemedicine,” Alexander continued. “But there is also a lot that is unknown and unknowable about telemedicine. I think two to three years from now, looking back at telemedicine, we will be in a very different place because of the pandemic. Telemedicine is not a one size fits all. One of the important questions for patients, clinicians and policymakers is around the settings where telemedicine should be the norm – the process and outcomes measures we need to be thinking about – and how we evaluate now to better understand how telemedicine can fulfil its promise. As an example, how can telemedicine help overcome some of the health disparities without falling victim to the digital divide?”

There were five sessions about digital enablers and advanced analytics during the week. “Some panelists were drilling into the underlying opportunities, but others reminded us about the cautionary notes and what it will take to realize the full potential of AI and ML,” said Aitken.

“There are enormous opportunities and needs from a research perspective,” Aitken continued. “I hope there will also be enormous funding to continue to look into the big experiment regarding COVID-19, but also go well beyond that to understand how to advance health outcomes and the sustainability of health systems from a cost perspective.”

“We have also heard a lot about new information sources that heretofore have not been available, through data linkages, new digital technologies, wearables, etc., but also new scientific research methods,” added Alexander. “And indeed, the pandemic is going to push a whole new wave of methodologic insights and a generation of fundamental new knowledge about how to conduct scientific work and to manage longitudinal studies that have been disrupted by the pandemic. We will consider how to manage missing data or even the design of endpoints of clinical endpoints of therapeutics against COVID-19. But we can’t lose sight of the tried and true. All the principles of sound research design and causal inference are no less important today.”