

INNOVATION AND THE IMPACT OF COVID-19

The World Medical Innovation Forum (WMIF) was established to spotlight innovation and radical transformation in healthcare. The founders of this unique conference believed that the center of healthcare needs to be a shared, fundamental commitment to collaborative innovation. WMIF brings together senior healthcare leaders from around the world, representing academia, industry and government, who are working on solutions to improve clinical care and change patient's lives. The first WMIF was launched in May, 2015 in Boston and focused on neuroscience. Advances in brain-scanning technology, ultrasound and neuro-imaging diagnostics were featured. "The Disruptive Dozen" segment of the conference, which has become a unique part of WMIF, highlighted 12 technologies predicted to have the greatest impact on neurological disease in the 21st century. WMIF 2016 focused on cancer and featured advances in imaging, along with cutting-edge research to understand tumor development and growth, as well as advantages and risks in a variety of treatment approaches and standards on how clinicians monitor patients' responses to treatment. WMIF 2017 turned to cardiac care and the role that innovation plays in improving patient outcomes and development of devices and diagnostic technologies that significantly affect treatment of cardiac disease. "Disruptive technologies" consisted of 19 presentations of game-changing approaches to cardiology research and clinical care.

Since 2018 WMIF has focused on artificial intelligence (AI). WMIF 2018 featured early AI breakthroughs of that period. WMIF 2019 featured the impact of AI in clinical care, investigating the future of medicine and examining how machine learning affects hospital operations, drug discovery, population management and physician empowerment.

This year Covid-19 threw a wrench into the World Medical Innovation Forum and was held as a virtual meeting of over 11,000 healthcare leaders from around the Globe, who learned about the myriad

innovative tools and discoveries that have become essential in managing healthcare during this pandemic, including:

- Logistics for mass notification and data collection
- How to communicate with patients when whole populations are sheltered in their homes
- How to quickly but safely scale research to find the effective therapeutics and a vaccine, based on former research
- How to educate the public to effectively use devices such as thermometers, oximeters and cellphone apps for contact tracking and geo tracking.
- How to manage the supply chain
- Developing the software to match patients with platform trials

Much discussion centered on electronic automated screening tools, how clinicians are using telehealth to connect with their patients, the use of bots, digital interactions as a standard of care in the future, the balance between virtual and in-patient care, mental health of patients and front line workers, the benefits and risks of a massive shift to home care, expanded use of wearables requiring patients to be more responsible for their care, and investments in healthcare needed going forward. An extensive poll of the participants conducted throughout the day revealed the following:

- 80% of the attendees believe there will be a significant spike in Covid-19 cases in their local communities in the Fall of 2020 and beyond.
- 60.7% believe that there will be sufficient testing available in the Fall 2020.
- 49.9% believe that after Covid-19 is over in the United States, the country will be materially diminished and there will be high unemployment.
- 40% believe that remote encounters (telehealth visits) will shrink between 10% and 50%.
- 52.4% believe that regulations that have been rolled back in healthcare are temporary and will return to what they were.

- 45.4% believe that the impact of remote work technologies will result in their employers/industry will be shrinking their real estate committed to administrative roles
- 56.5% believe the Federal government will modestly increase spending on public health/prevention
- 58.6% believe U.S. government and private industry investment in infectious disease and monitoring will increase more than 20% in the next five years.
- 42.6% expect to be wearing a mask outside of their home in the next year.
- 33.8% feel that society will never return to what it had been prior to the pandemic and 30.7% said this will happen but not for two years.

Covid-19 has clearly changed our thinking. our priorities, and our ability to implement change and foster innovation, as we keep a sharp focus on economics, budgets, and especially the health and well-being of ourselves, our families and our loved ones. The conference attendees, a representative cross-section of individuals from around the Globe revealed that they believe it will be sometime before we emerge from this pandemic and move on to refocus our energies on innovation, including the practical implementation of technologies to foster better communication among all stakeholders in healthcare.

Covid-19 has also shown all of us how dysfunctional our U.S. healthcare system is and how urgent it is that we support changes to this system, so that the failures that we are currently experiencing including supply chain gaps, swift efficient response and readiness, availability of care for everyone, reasonable cost of care, and lack of protection of front line workers never happen again.