

# Reuters Events

## Digital Health

Transitioning to a Data-Driven Health Ecosystem

### Post Event Report



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Based on insights from speakers at Reuters Events Digital Health Forum that took place on June 16th 2021.



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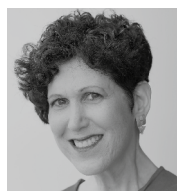
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# Transitioning to a Data-Driven Health Ecosystem

**Clinical medicine and data science are converging. Much of the technology needed for this digital health transition already exists but the pandemic has laid bare the urgency of exploiting this convergence.**

“Every industry was disrupted by COVID but no industry transformed as much as the healthcare industry,” says Greg Moore, Corporate Vice President, Microsoft Health and Life Sciences. COVID-19 has given us a glimpse of how healthcare innovation will accelerate, in terms of virtual care, precision health, and a historic shift in the cloud, he says. “It’s a new era of human health.”

Reuters Events convened eight panels on June 16 to address the future of digital health. The topics covered included how to harness and centralize explosions of scientific and medical data; developing models of care that meet the needs of disparate demographics, disease-specific populations, preventative care, and health equity. Panelists also explored how to use artificial intelligence (AI) for clinical decision-making, preventative health strategies, reducing healthcare disparities, and exploring predictive healthcare solutions.

“Every industry was disrupted by COVID but no industry transformed as much as the healthcare industry”

Greg Moore, Corporate Vice President, Microsoft Health and Life Sciences



## The digital prognosis

We know virtual medicine is capable of high accuracy in diagnosis and enables quicker treatment. If we can stop the fragmentation of data, the power of digital health is enormous, says Kieran Murphy, President and CEO, GE Healthcare. "I've never been more optimistic about the ability to make more care available to more people around the world and achieve the goal of precision health."

One of the most significant impacts of virtual care is the enabling of health systems to scale scarce resources, says Murphy. He describes a tele-ICU system in India where 800 beds were connected to remote monitoring of critically ill patients around the country. "The chief intensivist who was dealing with this said he was able to change his output from managing 10 to 15 patients, to between 80 and 100 patients a day," says Murphy.

In addition to the productivity and cost-savings benefits for hospitals, technology is making home care possible. "Getting patients back into a social setting away from the hospital is the fastest path to recovery. So, if we can fully utilize remote monitoring... it's very good for the patient," Murphy says.

But the future will require new approaches, enterprise-wide platforms, and data management techniques. "You need a good infrastructure for these technologies to be democratized," Murphy stresses.

To drive the best outcomes, information about patients needs to be captured at every encounter and analyzed at a central location before being refined and integrated, says Amit Phadnis, Chief Digital Officer, GE Healthcare. "The data aggregation itself is no good unless we can actually layer on top of it technologies that can give us insight into that information." Phadnis notes that 95% of data acquired is never accessed.

Ultimately, AI can be used to assess large data sets retrospectively to unearth useful clinical insights for prevention, diagnostics, and therapy. Machine learning may be used for medical claims, readmission risk scores, and informing transitions of care as well.

## The impact of COVID-19

"We've probably experienced more cultural and technological change in the last year than the prior five or 10," says Matt Eyles, Chief Executive Officer, America's Health Insurance Plans, about the impact of COVID-19. The public health crisis created opportunities to move to a wellness-based health care system, he says.

In particular, COVID-19 accelerated progress in telemedicine and home care. Medicare telehealth visits went from 14,000 each week to 1.7 million per week. The results showed good clinical outcomes, lower costs and increased access to care. The coronavirus also magnified healthcare disparities and the need to address them.

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When providers and consumers were forced to embrace virtual care during the pandemic, they gained a better appreciation for it, says Susan Diamond, chief financial officer and president for the Home Business, at Humana. "It also changed provider mindsets about the benefits of home versus facility-based care. We believe COVID will prove to have been a permanent accelerant for home-based care models."

In short, the pandemic "gave us a chance to rethink how we deliver care, pushing health care into the digital age," says Lindsay Jubelt, Chief Population Health Officer at Mass General Brigham.

## Toward a new preventative model of care

"Far too often we still have a health care system that prioritizes sick care over wellness and patients pay the price," says Eyles. About 70 percent of U.S. deaths are caused by a preventable chronic disease, he says.

"It's all about moving from sick care to health care, shifting care upstream, and using preventive health care models," says Eyles,

noting that technology will be key in these efforts. Remote monitoring reduces hospitalizations for patients with congestive heart failure, he mentions as an example.

Eyles says new models of care can contribute to reducing healthcare disparities, too. He cites a telehealth service for improving maternal health outcomes in African American women who experience higher rates of mortality and complications than white women. The app connects women directly with maternity nurses to answer pregnancy-related questions. Experts send health and safety text messages on prenatal care and post-delivery care for up to a year after the birth.

There's a longstanding misconception that technology-based solutions will not work for low-income families, he continues. Some companies have overcome these barriers by investing in smart phones and iPads along with programs to teach people how to use them. Care needs to be taken so no-one is left behind with new technologies, Eyles says.

## Developing a hybrid care model

Hybrid care - a combination of traditional inpatient in-person care and virtual care - is the best of both worlds, says Jubelt.

Physicians were forced to adapt to a hybrid care model during the pandemic but it's still a work in progress, she says. "One model won't scale across all geographies and demographics." The transformation also requires a shift from fee-for-service to a value-based model, says Jubelt.

Mass General has reduced the risk of heart attack and stroke for patients dramatically in its hybrid iHeart program. Through remote patient monitoring and AI algorithms, physicians are informed immediately when a patient's blood pressure or cholesterol are not being managed well. Pharmacists work directly through the primary care provider to help make medication adjustments when advised. Through this program "a patient's blood pressure and cholesterol can be brought down under control within a matter of weeks rather than waiting years," says Jubelt.

"Hybrid care - a combination of traditional inpatient in-person care and virtual care - is the best of both worlds"

Lindsay Jubelt, Chief Population Health Officer at Mass General Brigham

She expects to see similar integrated value-based programs expand.

The hybrid care model is especially valuable for dialysis patients, she notes. It is also convenient for prostate cancer patients who can be monitored at home post-treatment for recurrence using an evidence-based algorithm and without the need for an in-person blood draw.

Traditional care is still preferred by many providers and healthcare workers because it is optimized for their workflow, Jubelt acknowledges. "Workforce recruitment and training for this new model of care will be a top challenge for the next decade," she says.

## Home, sweet home care

On average, 10,000 baby boomers turn 65 every day. This trend calls for stepped-up use of home-centric models of care which are particularly effective in preventing and managing the chronic conditions that become more prevalent with age, says Diamond.

Beyond convenience and comfort to the patient, clinicians at the home can more readily identify social determinants of health (SDOH) and

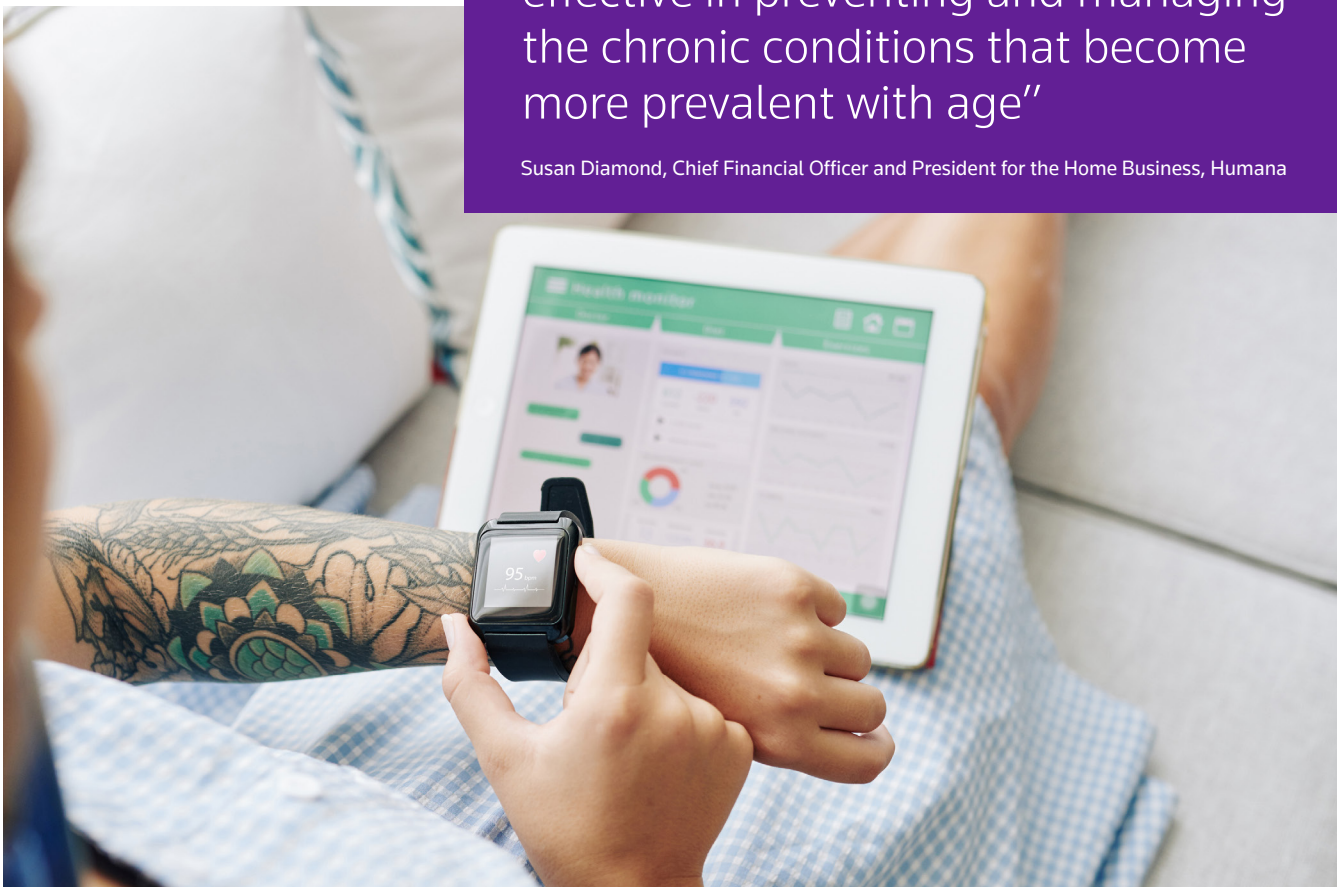
lifestyle or environmental issues which can affect health outcomes, says Diamond.

Unlike traditional home health services, tomorrow's home care clinicians must be empowered to leverage broader ecosystem capabilities and real-time interventions such as virtual visits and remote monitoring, she says.

"Our long-term vision is for hospitals to be used for surgical and ICU-level care and that most other care can be delivered in people's homes," says Diamond.

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Susan Diamond, Chief Financial Officer and President for the Home Business, Humana





## Leveraging big data for preventative care and closing disparity gaps

How do we move the data needle to achieve better outcome, high-value care and greater health equity? “The data is there, but the analytics capability of what to do with that data is something that we are continuing to work on every day,” says Alisahah Cole, Senior Vice President, Population Health, CommonSpirit Health.

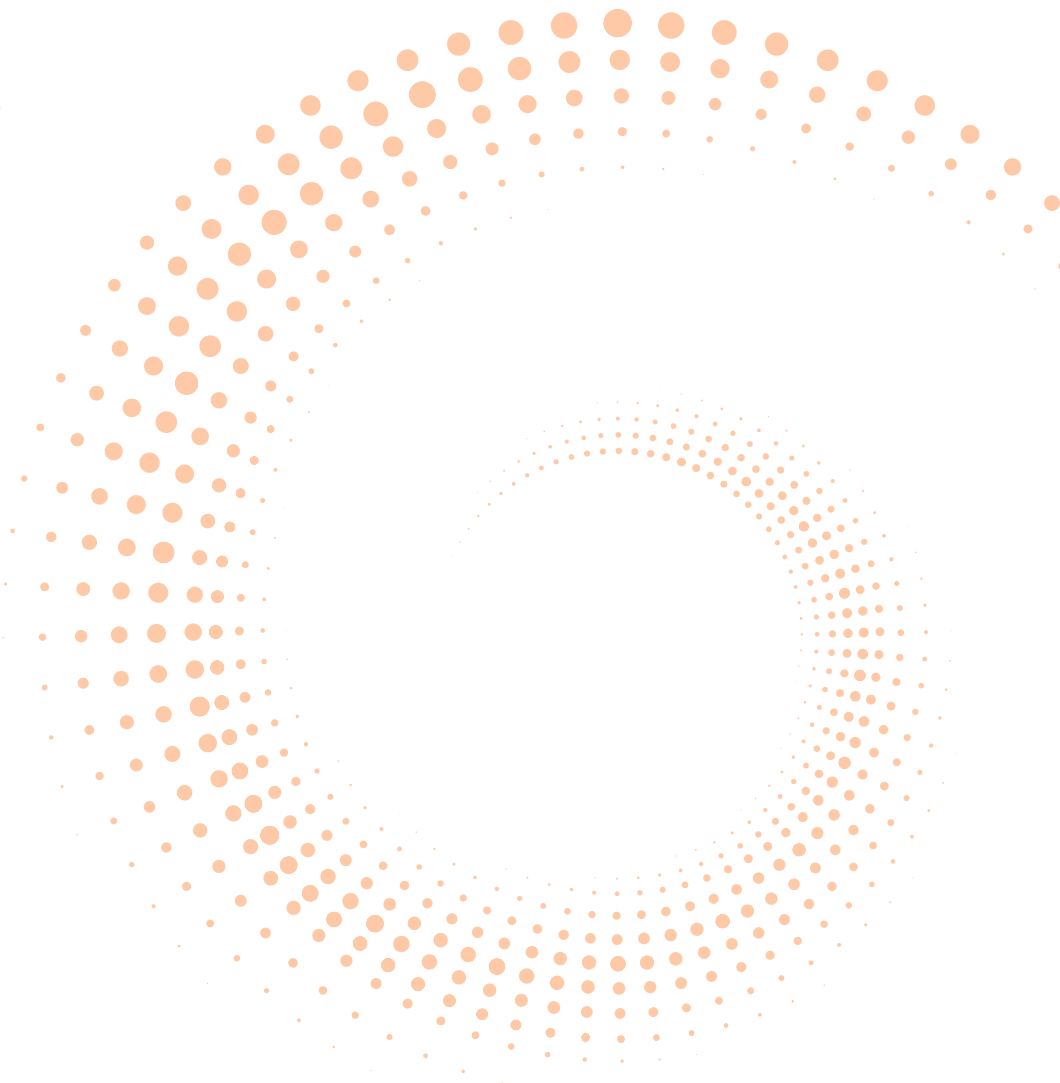
One successful effort is Digital Bridge, a collaboration between healthcare organizations and vendors of electronic health records, says John Lumpkin, president of Blue Cross and Blue Shield (BCBS) of North Carolina Foundation and Vice President of Drivers of Health Strategy, BCBS.

Digital Bridge created a system for COVID reporting— codes that send COVID data automatically from medical records to public health departments— that is used by 7,000 facilities today. “COVID taught us the need to more closely link public health and health care data ...connecting the dots. We shouldn’t be trying to do it as separate systems. Linking this data is a moral imperative [for population health],” Lumpkin says.

Digital health architects are also focusing on how to use data to close disparity gaps and improve preventative care. Ethics must be at the center of data strategy so it becomes a force for greater health equity. “Eighty percent of health care outcome is attributed to nonclinical factors,” says Karly Rowe, New Product Development, Care & Identity Management, and Vice President, Experien Health. Establishing and incorporating

standardized measures of SDOH factors is one important step in improving information technology, says J. Pérez-Stable, Director, National Institute on Minority Health and Disparities, NIH.

“We have better tools than we’ve ever had to tackle [these issues],” sums up John Showalter, Chief Product Officer, Jvion. “What we need are resources. [These efforts] need to be funded.”







## Improving clinical decisions with AI

Consider this: More data has been created in the last two years than the previous 5000 years of humanity, says Moore.

"Health care is AI's most urgent application at Microsoft," reveals Moore, who believes AI technologies will reshape diagnosis and treatment and become standard of care. A major challenge is incorporating the explosion of data into the medical workflow, he says. "The liquidity of using datasets is not where it needs to be."

But there's been progress. Advances in textual analysis software allow physicians to extract insights from clinical documents and health records while reducing workload. Tools to decode the immune system have been developed. Health bots have been used effectively to triage incoming calls about COVID at healthcare facilities.

Moore describes a project where AI was programmed to identify acute issues on a non-STAT list. Through CT scan analysis and an algorithm to detect brain hemorrhage, strokes were quantified in 11 minutes instead of the usual 17 months.

"These tools enable clinicians to focus on patients, not computers," says Moore. Relieving physician burnout through the automation of manual, repetitive work is a side benefit that will also result in huge cost savings.

## Using AI to analyze, predict, and prevent

"I get in my car every day and in an eerie way, my phone knows where I'm going. But when I log into my EMR [electronic medical records] and see a patient I've seen many times before, it's as if it were the first time," observes Dan Roth, Vice President and Chief Clinical Officer, Trinity Health. So how can we anticipate peoples' needs for health care in advance? he asks.

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"Data is one thing, but knowledge and information and then outcomes are another thing entirely," stresses John D. Morrow, Senior Vice President and Physician Executive at MDClone. His company has been successful in making information accessible and effective by organizing it according to patient timeline. The goal is to shorten the span from data to innovation to experience, to outcomes, to patient care, he says.

We've seen many AI successes already. John Brownstein, Chief Information Officer at Boston Children's Hospital, points to AI crowdsourcing efforts to mine data about COVID symptoms and gain insights about the value of lockdown and masking in driving down transmission.

But as we start applying AI to current data streams and workflow processes, Karley Yoder, GM & Chief Digital Officer, Ultrasound and former Vice President and CM of Artificial Intelligence at GE Healthcare, advises care. Remember when physicians transitioned to EMR? "We took a painful paper process and created a fairly painful digital process. We don't want to make the same mistake," she stresses.

"It's incumbent on us to figure out how to incorporate the technology into the workflow so it's outcome-

driven and not disruptive to health care," echoes Jeri Koester, Chief Information Officer, Marshfield Clinic. No data that doesn't work for patients of all races and ethnicities should be fed into the AI system, for example.

Improving the health of Americans requires a system-wide transformation to make health are accessible to everyone, says David Nash, founding Dean Emeritus, Jefferson College of Population Health. "The system that brought us to the brink of disaster, where COVID shined a bright light on the scope of the disparities, cannot be the system that will take us into a bright future." It's not about getting people to go to the doctor, he says, but overcoming the drivers of health inequities.

Personalized medicine is gaining traction, says Brownstein. "It's not going to be about the algorithms. It's about actually changing operations."

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