Reports

Top of Mind 2021

A recap of the **Center forConnected Medicine's** program exploring digital health priorities in **2021**

Center for **Connected** Medicine

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Top of Mind Program Expanded in 2020

The Center for Connected Medicine (CCM) expanded its annual Top of Mind program in 2020 offering more resources to more people. The program, which was in its fourth year of exploring digital health priorities and challenges for the future, included the following components:

- **Research report**
- **Webinar**
- **Roundtable series**
- **Virtual summit**

Top of Mind focused on three areas of health technology that will be prominent in 2021 and beyond: **Telehealth, Artificial Intelligence** (AI), and **Revenue**

Cycle Management. And with the rapidly evolving health care environment created by COVID-19, the program also explored the influence of the pandemic on innovation priorities at health systems.

The CCM, which collaborates with a network of innovators and leaders to produce resources and convene discussions to advance health care, kicked off the program in October 2020 with a *Top of Mind Exchange*, an invitation-only virtual roundtable on telehealth, and publication of the *Top of Mind for Top Health Systems* research report. The program continued in November with the *Top of Mind Webinar*, which brought together health system leaders to discuss key findings from the research report, and a second *Top of Mind Exchange* focused on AI. In December, the program culminated with the *Top of Mind Online* virtual summit – which featured a mix of on-demand and live sessions with top speakers from across health care.

Through each of these programmatic elements, the CCM was honored to collaborate with some of the top leaders and innovators who are working to advance our industry. More than 40 executives, clinicians, technology experts from across health care generously lent their time and expertise to Top of Mind in 2020 as speakers and advisors.

Continue reading to learn more about the Top of Mind program. Thank you for your interest. Learn more about the CCM and our mission at **www.connectedmed.com**.

Top of Mind Advisory Committee

The CCM worked with its partners as well as leaders and innovators at health systems to produce the Top of Mind program. We thank our Advisory Committee members for their contributions.

Advisory Committee members:

Rob Bart, MD
Chief Medical Information Officer, UPMC

Cindy Bergevin
Head of Global Enterprise Marketing for Healthcare, Nokia

Brent Burns
Executive Vice President, UPMC Enterprises

Pamela Peele, PhD
Chief Analytics Officer, UPMC Health Plan and UPMC Enterprises

Christopher Pickard
Business Development Leader, Nokia

Emily C. Webber, MD
Chief Medical Information Officer, Indiana University Health and Riley Children's Health

Mark Zhang, DO
Medical Director, Digital Innovation Hub, Brigham and Women's Hospital

COVID-19 Shifts Innovation Priorities at Health Systems

Serving as the basis for the Top of Mind program, the CCM published its fourth annual *Top of Mind for Top Health Systems* research report in October 2020. The research project was designed in early 2020 as the COVID-19 pandemic was taking hold and presenting health systems across the U.S. with a need to accelerate innovation.

Conducted in partnership with KLAS, quantitative and qualitative data were collected from 117 executives representing 112 health care provider organizations. The research found that health systems quickly turned their attention to scaling telehealth, deploying artificial intelligence (AI), and improving revenue cycle management. It focuses on how innovation priorities shifted in response to COVID-19 and the role of key technologies in managing the pandemic.

Download the report

Key findings include:

- **Nine out of 10 organizations successfully met increased telehealth demand during the pandemic.**
- **Three-quarters of respondents said their organizations are measuring and analyzing data from telehealth.**
- **Half of respondents reported using AI in response to the pandemic.**
- **A majority of respondents said their organizations are using 20% or less of their health care data to inform AI applications.**
- **Identified as an area most in need of innovation, revenue cycle management has become a greater priority for health systems,**
- **Predictive analytics, AI, bots, and automation are cited as the most-needed technologies to improve revenue cycle management.**

Top of Mind Webinar

Adam Gale
President, KLAS (moderator)

Oscar Marroquin, MD
Chief Healthcare Data and Analytics Officer, UPMC

Emily C. Webber, MD
Chief Medical Information Officer, Indiana University Health and Riley Children's Health

Mark Zhang, DO
Medical Director, Digital Innovation Hub, Brigham and Women's Hospital

Leaders Ask, What's Next for Digital Health?

To put greater context around the Top of Mind research results for health system leadership, the CCM organized a webinar to discuss key findings from the report. Held in November 2020, the webinar examined how health systems are providing a better virtual experience, using digital health technology to keep patients engaged between visits, and harnessing data, analytics, and advanced tools to fully leverage the power of digital health.

While the COVID-19 pandemic accelerated digital health at many health systems, leaders are now asking, "What's next?"

"Many of these health systems had a three-year strategy that was achieved in three weeks," said Adam Gale, President of KLAS.

"I've asked several executives, look, if you've hit that telehealth strategy that you had much more quickly than you expected, what happens next? They said, we can't just replicate what we've done before." said Gale, explaining that health system leaders are considering how virtual visits can evolve and be different from in-person visits.

The expert panelists discussed three ways digital health will benefit health systems moving forward:

> **“Many of these health systems had a three-year strategy that was achieved in three weeks”**

Digital health can reduce fragmentation of care. Health care delivery has been criticized for being episodic and fragmented. But digital health gives providers the opportunity to stay connected to their patients outside of hospital or clinic.

We won’t Excel our way out. Health systems must move beyond generating lists of patients in need of follow-up or additional services. Analytics and other solutions can better manage patient care across populations and connect with individual patients who are due for screening, tests, and procedures. These tools need to be integrated with telemedicine solutions, the patient portal, and other systems.

Data must be part of the digital strategy. The explosion of digital health has created a huge volume of new data that should be incorporated into a health system’s strategy. Understanding these new data streams from digital health can lead to unexpected insights and opportunities for improvement.

Click below to watch the video on this page or watch it on our **website**.

Introduction to Top of Mind Exchange

Roundtables convene industry leadership for intimate dialogue on key issues

The mission of the Center for Connected Medicine (CCM) is to connect and inspire leaders and innovators who want to advance health care and to serve as a resource for information on the future of digital health. To that end, the CCM established the *Top of Mind Exchange* series in 2020 to convene experts for candid discussions on important and timely topics in their respective areas of expertise.

Top of Mind™ *Exchange*

The goal of the invitation-only, virtual roundtables was to provide a forum where leaders could share progress, raise needs, and discuss what's "top of mind" in the Top of Mind program topic areas of telehealth and AI.

The first *Exchange* was held in October 2020 and featured telehealth leaders focused on telehealth sustainability, value, and measurement. The virtual roundtable was moderated by Senator William H. Frist, MD, and included senior-most leaders from all corners of health care — from provider, to payer, to policymaker, to advocate, to technology leader.

The second *Exchange* was held in November 2020 and included a group of experts in health care data science, artificial intelligence (AI), and machine learning (ML). Moderated by Robert M. Califf, MD, Head of Clinical Policy and Strategy for Verily and Google Health, the roundtable included experts from academia, government, health systems, and industry and focused on structural bias and health disparities.

The CCM expresses its sincere gratitude to the Exchange moderators and participants for their time and expertise. Continue reading for more about the two Exchange roundtables.

Top of Mind Exchange:
Telehealth

Rob Bart, MD
Chief Medical Information Officer, UPMC

Ceci Connolly
President and CEO, Alliance of Community Health Plans

Senator William H. Frist, MD
(opening remarks and facilitator)

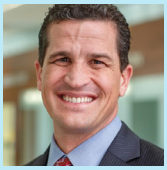
Alexis Gilroy
Partner, Jones Day

Kristi Henderson
Senior Vice President, Innovation & Telehealth, Optum

Adam Landman, MD
Chief Information Officer, Brigham Health

Ann Mond Johnson
Chief Executive Officer, American Telemedicine Association

Peggy O'Kane
Chief Executive Officer, National Committee for Quality Assurance



Jim Sheets
Vice President, Outreach Services, Intermountain Healthcare

Tim Tarnowski
Chief Information Officer, Indiana University Health

Jason Tibbels, MD
Chief Quality Officer, Teladoc Health

Sara Vaezy
Chief Digital Strategy and Business Development Officer, Providence

Andrew Watson, MD
UPMC, Past-President, American Telemedicine Association

> Working in lockstep with operational leaders has been critical to successfully incorporating telehealth, and building new telehealth programs"

Virtual Roundtable of Telehealth Executives Discuss What's 'Top of Mind' in Virtual Care

The invitation-only *Top of Mind Exchange*: *Telehealth Beyond the Pandemic* roundtable was moderated by former U.S. Senate Majority Leader Senator William H. Frist, MD, and focused on the sustainability, value, and measurement of telehealth.

The executives came together to raise needs, share progress, and engage in a candid discussion about where telehealth is headed in the year after a surge in utilization related to the COVID-19 pandemic. The executives who participated in the roundtable started and ended by emphasizing the opportunities of the moment. The impact of the COVID-19 pandemic on health care culture and the utilization of technology — particularly virtual care — is unprecedented.

Participants resoundingly acknowledged the need for research and data analysis and agreed that the industry faces an opportunity to evolve standards of care. The group expressed that this an important time for value-based care. The discussion centered on two primary topics: long-term sustainability of telehealth and the value and measurement of telehealth.

Download summary ebook

Top of Mind Exchange:
AI

Derek Angus, MD
Chief Healthcare Innovation Officer, UPMC

Robert M. Califf, MD
Head of Clinical Policy and Strategy, Verily and Google Health

Leo Anthony Celi, MD
Principal Research Scientist, MIT Institute for Medical Engineering and Science, Massachusetts Institute of Technology

Judy Wawira Gichoya, MD
Assistant Professor, Department of Radiology, Emory University School of Medicine

Erich S. Huang, MD, PhD
Director, Duke Forge

Yubin Kim, PhD
Technology Director, UPMC Enterprises

Pamela Peele, PhD
Chief Analytics Officer, UPMC Health Plan and UPMC Enterprises

Eliseo J. Pérez-Stable, MD
Director of the National Institute on Minority Health and Health Disparities, National Institutes of Health

Neil Powe, MD
Chief of Medicine, Zuckerberg San Francisco General Hospital, Constance B. Wofsy Distinguished Professor, University of California San Francisco

Hojjat Salmasian, MD, PhD
Medical Director of Data Science and Analytics, Brigham and Women's Hospital, Instructor of Medicine, Harvard Medical School

Suchi Saria, PhD
CEO, Bayesian Health and John C. Malone Associate Professor of Engineering and Public Health, Johns Hopkins University

Executives share vision for role of AI and machine learning in improving health disparities

Top of Mind Exchange: AI/ML and Structural Bias in Health Care was held in November 2020 and facilitated by Robert M. Califf, MD, Head of Clinical Policy and Strategy for Verily and Google Health. The virtual roundtable convened senior leaders in health care data science and artificial intelligence for a private discussion on the ability of AI and ML to improve health disparities.

There is significant excitement about the potential for AI and ML to benefit health care. But while scientists and researchers see great promise in AI's potential role in advancing diagnostics, treatment pathways, and clinical workflows, recent studies and reports also have highlighted challenges related to bias.

> **"We're starting with an uneven playing field in the U.S. that greatly advantages people who have money and education and preferentially advantages white people and in which rural people are at a tremendous disadvantage."**
>
> **"So, the question for us is, are we going to build algorithms that correct this or are we going to further segment the population?"**

Against the backdrop of social justice issues that received significant attention during 2020, the discussion took on greater significance. As roundtable participants pointed out, not only are there issues with bias in algorithms but there are also serious problems with disparities in health and outcomes across the medical industry. A pivotal question was, will advanced technology be a force for correcting or perpetuating long-standing inequities in society generally and medicine specifically?

***eBook summary will be published here in Spring 2021**


GIF
Top of Mind™
ONLINE

Introduction

The Top of Mind program culminated in December 2020 with *Top of Mind Online*, a virtual summit featuring a mix of on-demand and live sessions. The event's six sessions included nearly 20 expert speakers who delivered actionable insights and unvarnished discussion on the following topics:

- How health system leadership are managing in a time of uncertainty and evolving political, economic, and social conditions.
- Insights into the future of digital health and innovation priorities.
- Deep dives into how telehealth and AI will advance in the coming year.
- Outlooks for reimbursement and new models of care in a changing health care landscape.

Continue reading for summaries of each session and to watch videos from the event.

Keynote:

The Future of the Health Care Marketplace

Diane Holder
President and CEO, UPMC Health Plan

Ian Morrison, PhD
health care futurist and author

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What Is the Future of Health Care? Health Systems Should Focus on Health Disparities, Value, Innovation

Health systems' response to the COVID-19 pandemic hasn't been the only challenge in 2020. The pandemic highlighted longstanding health and economic disparities in communities across the country.

"There is no doubt that we have seen a hammering both of the economy because of the pandemic and the related impact on disparities in the country, which amplified the gaps in between rich and poor; and they're amplified by race," Ian Morrison, PhD, a health care futurist and author, said during a keynote fireside chat with UPMC Health Plan President and CEO Diane Holder.

The working poor also were more likely to be infected by COVID-19 because they were unable to work from home and traveled by public transit. Many have inadequate access to health care services or insurance, and there is also a greater prevalence of comorbid and preexisting conditions in communities of color, which can lead to more severe COVID illness.

"All of those I think, contributed both to the spread and the severity of the impact of the pandemic on communities of color in particular," Dr. Morrison said.

Telehealth's benefit on access not evenly distributed

Holder added that the disparities in race extended to the use of technology in accessing health services during the pandemic. While the rise of telehealth during the pandemic has been lauded for improving access to health care, Holder pointed out that not all communities used telehealth.

"We saw telehealth go right through the roof so quickly. Unfortunately, we still saw some health equity problems in telehealth. I know in our own populations that we serve here we saw a significant difference in the number of our Black members in our health plan versus our white members that use telehealth," Holder said.

"We saw telehealth go right through the roof so quickly. Unfortunately, we still saw some health equity problems in telehealth. I know in our own populations that we serve here we saw a significant difference in the number of our Black members in our health plan versus our white members that use telehealth"

Reducing health, economic, and technological disparities by having strategies for boosting technology use across all populations and communities is "the big opportunity, the big promise," Holder said.

Dr. Morrison agreed. "Certainly, there has been a digital divide that's been documented by income and race. One of the things we better think about is how do we address that imbalance and that digital divide," he said.

In addition to health and economic disparities, "The Future of the Health Care Marketplace" covered other vital topics that are top of mind for health leaders across the country. Holder and Dr. Morrison discussed the importance of moving the health system toward value-based care, improving data sharing to spur innovation, and the role of technology companies and other non-traditional health care players in the future, among other topics.

Keynote:

The Disruptive Potential of 5G

Karl Bream
Vice President of Strategy, Portfolio, and Alliances, Nokia Enterprise

IT Networks of the Future Can Help Health Systems Deliver Better Care and More Value

The higher capacity, greater reliability, better performance and security, and low latency of 5G enabled networks will allow hospitals of the future to deliver better patient care more efficiently.

That was message of Karl Bream, Vice President of Strategy, Portfolio, and Alliances, Nokia Enterprise, during his keynote, "The Disruptive Potential of 5G." The presentation shared examples of how IT networks of the future can help health systems better manage their assets, collaborate on care more effectively and deliver value.

Click below to watch the video on this page or watch it on our website.

A 5G network can deliver 10 times greater capacity, a reliable and secure wireless network indoors and outdoors across a larger area.

While MRI and CT scanners, infusion pumps, surgical tools, wheelchairs, and other devices within a hospital can't be replaced with digital copies, Bream said, "we can create significant value and better outcomes by taking digital control of those physical assets."

"To achieve that level of control, we need to elevate the level of reliability, performance, and predictability of the network across all of the assets in the ecosystem," Bream said.

The advantages of 5G for the future of health care

A 5G enabled network is expected to provide better capacity, reliability and performance, security, and latency. A 5G network can deliver 10 times greater capacity, a reliable and secure wireless network indoors and outdoors across a larger area, and an order of magnitude improvement in latency over other forms of wireless communication, Bream said.

"It can reach below 10 milliseconds of latency to as little as one millisecond," he said. "That happens to be the latency required for autonomous remote-controlled vehicles and drones."

With 5G, it should be possible for health care to fully realize connected health care that benefits patient care and operations.

For example, with 5G it's possible to imagine a real-time virtual collaboration space in which remote providers support care for emergency room patients and updates to electronic medical records occur automatically because medical systems, devices and tools are all connected to the network.

Patients would also receive care quickly because facilities of the future monitor patient flow with high accuracy indoor positioning that relieves bottlenecks to increase patient flow and experience.

"The personnel supporting our patient were able to deliver services efficiently because they were no longer spending time looking for missing wheelchairs or misplaced infusion pumps. In fact, leveraging data and AI about the patient, the health system predicted the wheelchair would be required, located it, and scheduled delivery through an automated workflow," Bream said.

Panel:

Leading and Learning Through Crisis

Joanne M. Conroy, MD
President and CEO of Dartmouth-Hitchcock and Dartmouth-Hitchcock Health

Matt Cook
Chief Strategy Officer at Indiana University Health and President of Riley Hospital for Children at IU Health

Mark Sevco
President of UPMC Children's Hospital of Pittsburgh

Health System Leaders Discuss an Unprecedented Year in Health Care

Health systems had prepared to respond to public health emergencies but there was nothing in their crisis plans to ready them for a pandemic like what the United States has experienced with COVID-19.

That was the consensus from leaders from three prominent health systems who came together to discuss their trials, tribulations, and lessons learned from an unprecedented year in health care at Top of Mind Online.

"As we came into the pandemic, we knew we had these plans we created for Ebola. But the reality was, they were not helpful," said Matt Cook, Chief Strategy Officer at Indiana University Health and President of Riley Hospital for Children at IU Health. "We had to go back and completely rethink our surge plans for the volumes we were expecting."

Joanne M. Conroy, MD, President and CEO of Dartmouth-Hitchcock and Dartmouth-Hitchcock Health, agreed that earlier pandemic plans were not transferrable to the COVID-19 response.

> **As we came into the pandemic, we knew we had these plans we created for Ebola. But the reality was, they were not helpful.**
>
> **We had to go back and completely rethink our surge plans for the volumes we were expecting."**

But the leaders, which also included Mark Sevco, President of UPMC Children's Hospital of Pittsburgh, credited the quick formation of incident command teams for leading their responses.

Focus of response shifts from PPE to staffing

Despite their success in quickly responding to the demands of COVID-19 in spring of 2020, health systems have had to remain nimble as new challenges surfaced.

Health systems have faced several different waves of challenges over the course of pandemic. Early on the response was focused on preparing for an onslaught of sick patients and making sure hospitals had enough supplies and ICU capacity. By the summer, the response involved bringing in-person services back and resuming routine medical care. And by fall, it has become a balance of keeping medical services running while keeping staff and patients safe amid resurgent infections.

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Panel:
Leading and Learning Through Crisis

"We talk about these different waves," Sevco said. "In the spring it was very different. Wave two in the summer we were relaunching, and now it's wave three where we're open and ready."

At IU Health, Cook said the early focus was on preserving personal protective equipment (PPE) and stockpiling other supplies to ensure systems were prepared for a potential rise in severely sick patients. But this fall, the focus has shifted to managing staffing as infection rates have surged across the country.

"In the spring, it was really about preserving PPE and making sure that we had an adequate stock," Cook said. "As we've moved into the fall, it's really much more about staffing and making sure we have enough staff to take care of our patients."

Yet after months of planning, Cook said IU Health has been better prepared to handle the situation. "Now, even though our volumes are higher, and we had these issues with enormous numbers of team members being quarantined, it doesn't feel as devastating as the spring did."

> "The first wave was all about stuff versus the second wave, which is really all about staff."

Harnessing the lessons of incident command

Dr. Conroy agreed that Dartmouth-Hitchcock has experienced a similar shift: "The first wave was all about stuff versus the second wave, which is really all about staff."

She credited her organization's incident command and its quick decision-making for the New Hampshire medical center's ability to handle everything COVID-19 has thrown at them. Her biggest lesson from this fast-paced response is to carry that mindset forward to other challenges facing health care.

"I want to bottle incident command — meaning, they got a lot of stuff done fast. We set up incident commands to get around the bureaucracy when we needed to move quickly," Dr. Conroy said. "I'm not saying that everything we do should move that quickly. But I'd like to bottle a little of that and use it in our normal operations because sometimes we do just get stuck in our bureaucracy."

UPMC experienced a similar acceleration in operations in its response, which was no easy task considering the health system has 40 hospital and more than 90,000 employees, Sevco said. "We've seen that here, too, and it's really been quite amazing," he said.

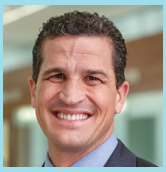
"I love the challenge that you put to all of us, which is how can we bottle that up?" Sevco said. "How can we move quicker and be stronger and provide access quicker for patients?"

Keynote:

Modeling Health Care

Aneesh Chopra
President of CareJourney

Pamela Peele, PhD
Chief Analytics Officer, UPMC Health Plan and UPMC Enterprises



Jim Sheets
Chief Operating Officer, Specialty Based Care, Intermountain Healthcare

Nick Uehlecke
Advisor, Immediate Office of the Secretary, Department of Health and Human Services

More Can Be Done to Reach Patients and Improve Access with Telehealth Services

"Modeling Health Care" explored the impact of COVID-19 on business operations, policy, and financial modeling across the industry and how leaders are planning to carry the momentum forward. Aneesh Chopra, President of CareJourney and former Chief Technology Officer of the United States, discussed these issues with three experts representing payer-provider organizations and the government.

The panel discussed the explosion of telehealth and the industry's responsibility to ask: Are providers and health systems getting to the right patients with telehealth services? Were the most chronically ill, most fragile, and those in greatest need of care accessing it online in the absence of the traditional in-person office visit?

Panelists agreed more must be done to reach those patients and others who may have technological access issues.

> **We saw telehealth go right through the roof so quickly. Unfortunately, we still saw some health equity problems in telehealth. I know in our own populations that we serve here we saw a significant difference in the number of our Black members in our health plan versus our white members that use telehealth"**

"What about the percentage of patients that were at risk and not accessing the system effectively?" said Chopra, who moderated the panel.

"The risk-bearing entities need to play a more active role, not only in the economics of delivering value-based care, but also thinking about outreach strategies," Chopra said.

Focus on patients who benefit the most

Telemedicine can be very effective in helping providers manage the health of people with chronic conditions such as congestive heart failure. However, patients with the most severe conditions don't always want to use telehealth service, commented Pamela Peele, PhD, Chief Analytics Officer, UPMC Health Plan and UPMC Enterprises.

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Keynote:
Modeling Health Care

"It's the younger, healthier, more educated patients who say yes to telemedicine, but it has a less marginal impact on them than the older, frailer, more severe patients," Dr. Peele said. Health systems can do more to identify those patients, connect them to a physician, and make the technology easy to use. "We have to work hard to get it in the hands of the people who will have the highest marginal benefit from it."

And who should be responsible for doing the work of reaching out to the patients and setting them up for successful telehealth visits, Chopra asked.

In a perfect world, both the payer and the provider would be aligned and share the responsibility because it is in the best interest of their community and the economy. "But in reality, it really comes down to who's holding the financial risk," Dr. Peele said.

Reducing unnecessary utilization

Nick Uehlecke, Advisor, Immediate Office of the Secretary, Department

"It's the younger, healthier, more educated patients who say yes to telemedicine, but it has a less marginal impact on them than the older, frailer, more severe patients."

of Health and Human Services, added telehealth could help to drive a reduction in unnecessary utilization of hospital services, such as entering an emergency department when what is needed are dental or mental health care, for example.

"But imagine immediate referrals to telehealth in those settings," Uehlecke said. "I think there are many areas for which we can move forward and do it at a cost savings."

There are few impediments to using telehealth to reach more people. Patients trust telehealth as a mode for discussing health concerns with their doctors. Many providers have come around to the benefits of virtual care. Reimbursement for telehealth has increased, which was long a stumbling block.

"The things that we should never go backwards on, and hopefully never will, are provider and consumer trust and reimbursement," Uehlecke said.

Importance of the digital front door

Regular and consistent use of telehealth, including remote monitoring, texting, asynchronous tools, and video visits, that moves care beyond episodic treatment will allow health systems to better manage the health of patients with chronic conditions. Jim Sheets, Chief Operating Officer, Specialty Based Care at Intermountain Healthcare, commented that better management should lead to reduced overutilization, "because people are going to get what they need when they need it in a regular, synergistic fashion."

Another important component of this strategy, which both Intermountain and UPMC are investing in, is the health system's digital front door, which leverages technology at the consumer's fingertips to schedule appointments, view their health records, and receive other health information.

"We need all of that easy access technology that helps you manage your life, and we need to bring that into health care," Sheets said.

Breakout: Telehealth

Claus Jensen, PhD
Chief Digital and Technology Officer, Memorial Sloan Kettering Cancer Center

Alissa Meade
President, Technology, Arkos Health

Lee H. Schwamm, MD
Vice President, Virtual Care, Mass General Brigham Health System

Katie Scott
Vice President, Digital Strategy & Innovation, UPMC Enterprises

Sara Vaezy
Chief Digital Strategy & Business Development Officer, Providence

Experts Say Patient-Provider Connection and Empathy Can Be Maintained in Virtual Care

Telehealth has many advantages for patients and health systems. It's convenient for patients and efficient for providers. It can lower costs and open up access to care for people who may be far away from specialists.

But is the personal connection between patient and physician lost when an in-person visit is replaced with a telemedicine visit?

The question of maintaining empathy and connection was one of many telehealth topics discussed and debated by a panel of digital health experts during a live breakout session Top of Mind Online. The panel, moderated by Katie Scott, Vice President of Digital Strategy & Innovation at UPMC Enterprises, also discussed reimbursement, volumes and utilization, and the regulatory environment.

> **There are certainly important circumstances where a hand on their shoulder or just being in physical proximity allows someone to share something they wouldn't otherwise share"**

'Web-side manner' can be taught

Lee H. Schwamm, MD, Vice President of Virtual Care at Mass General Brigham Health System made two points in response to the question about maintaining a personal connection during a telehealth appointment. The first was that physicians can learn a new bedside manner for the digital age – what some people are calling a "web-side" manner.

"It's teachable," Dr. Schwamm said. "Focused attention, no distractions, good lighting, making sure the patient understands and is comfortable with the rules of the road."

And while some of that connection between patient and provider can be replicated online, Dr. Schwamm said there also are circumstances where the benefits of telehealth outweigh what might be lost from not having the traditional in-person visit.

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Breakout:
Telehealth

"There are certainly important circumstances where a hand on their shoulder or just being in physical proximity allows someone to share something they wouldn't otherwise share," he said. "But there are other people for whom sharing over a computer screen is more comfortable, particularly about sensitive matters."

And while some clinicians may assume that patients would prefer to receive bad news such as a terminal cancer diagnosis in-person, it might actually be better for the patient to receive the news at home and with family. "Maybe that's more humane than giving it to them in-person but alone in your office," he said.

Less can be more with virtual care

Alissa Meade, President of Technology at Arkos Health, agreed and added that it might be easier for some patients to have their family and other support networks with them if they meet with a physician virtually. "If I'm at home I have a lot more sources of comfort around me," she said.

And even for more routine care, it's often much easier and more convenient for patients to handle these visits virtually – and even via asynchronous modes of telehealth. For example, Meade said, if the patient just needs a prescription for conjunctivitis, it's a transaction that doesn't require a face-to-face or synchronous interaction.

"Let's recognize when less is more," she said.

Empathy extends to product development

Sara Vaezy, Chief Digital Strategy & Business Development Officer at Providence, pointed out that empathy for patients should also extend to product development in telehealth. While it might be ideal for physicians to perfect their web-side manner for a video visit, what does it matter if some patients don't have a broadband internet connection?

"If we're expecting everyone to engage via video, but they don't have a private place to go, and we haven't taken into account discretion and privacy," Vaezy said. "Empathy can manifest itself and be reflected in how we deliver care, how we build products, how we build services, and how we make them available to folks."

> “Empathy can manifest itself and be reflected in how we deliver care, how we build products, how we build services, and how we make them available to folks.”

Breakout: AI

Derek C. Angus, MD
Chief Healthcare Innovation Officer, UPMC

Taha Kass-Hout, MD
Director, Machine Learning and Chief Medical Officer, Amazon Web Services

Shiv Rao, MD
Co-founder and CEO, Abridge

Suchi Saria, PhD
John C. Malone Professor of Computer Science, Bloomberg School of Public Health, Johns Hopkins University

Experts Debate What It Will Take to Accelerate Adoption of Artificial Intelligence

Health system leaders identified artificial intelligence (AI) as the most exciting emerging technology in health care, according to the Top of Mind for Top Health Systems research. And while many agree there is tremendous potential for AI to have a positive impact on health care, deployment of the technology in health systems remains modest.

How to accelerate AI's use in health care was one of the topics of discussion for a panel of experts in the second live breakout session at Top of Mind Online. The panel — Breakout AI — was moderated by Derek C. Angus, MD, Chief Healthcare Innovation Officer at UPMC.

Building on momentum and trust

Expansion of AI in health care requires that leaders build on momentum already behind AI and continue to create trust in the technology, said Shiv Rao, MD, Co-founder and CEO, Abridge.

When it comes to trust, providers and health systems gain trust in AI applications when those systems are transparent, reliable, and credible.

A way momentum is building for AI is through efforts to give patients more control over and access to their health data, which they can share with AI-enabled applications. For example, the Blue Button API, which the Centers for Medicare and Medicaid Services (CMS) has released, allows Medicare beneficiaries to share their claims data with applications.

Greater availability of data and increasing alignment of incentives between payers and providers thanks to value-based care are coming together at the right time to spur AI adoption, Dr. Rao said. "That is the moment that we're in right now."

When it comes to trust, providers and health systems gain trust in AI applications when those systems are transparent, reliable, and credible, Dr. Rao said. "Over the last couple of years, trust has been building with scientific papers being published showing the effectiveness of AI. I think those have done wonders in terms of starting to build trust in the clinical community," he said.

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Breakout: AI

Platforms can simplify adoption

Platforms that simplify machine learning and provide data solutions for users in health care will also be important – which is something that Amazon Web Services is working on, said Taha Kass-Hout, MD, Director, Machine Learning and Chief Medical Officer, Amazon Web Services. "How do we demystify the entire stack of machine learning end to end so that we give the right tool to the right customer to do the right job," he said.

AI and machine learning can help to bring structure to the vast amount of data in health care, such as using natural language processing to read and analyze physician notes and other unstructured data in electronic health records.

> "Let's take advantage of the last decade of digitization that started with the medical record, which was a great start. We have the right tools to bring understanding to the data."

"Let's take advantage of the last decade of digitization that started with the medical record, which was a great start," Dr. Kass-Hout said. "We have the right tools to bring understanding to the data."

User experience will be key to advancing AI

Despite the positive trends of greater availability of data, empowered consumers, and growing trust, Dr. Angus questioned whether that was enough for health systems to adopt AI at scale.

"It's not entirely clear to me that the hospital CEOs or the physicians in those hospitals lie in bed in the middle of the night thinking, 'if I don't get this machine learning algorithm implemented, I'm going to lose market share,'" Dr. Angus said.

Suchi Saria, PhD, John C. Malone Professor of Computer Science, Bloomberg School of Public Health, Johns Hopkins University, suggested that the slow uptake and skepticism among health systems was natural and healthy. "Medicine as a field is risk averse, as it should be, because at the end of the day human lives are involved and mistakes are very costly," she said. "And so, the skepticism towards anything new is warranted."

But despite the aversion to risk, health systems are likely to be pushed to adopt AI and other technology for competitive reasons, Dr. Saria said. In every other industry, as more data about consumers became available, "it's fundamentally changed how businesses operate," she said.

Both Dr. Rao and Dr. Saria agreed that user experience will be essential with AI and machine learning applications.

"User experience is going to be really key," Dr. Rao said. "When we're building machine learning centered solutions for a doctor or a nurse, I think those solutions will live and die by how well they can integrate into the workflow."

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