

## CIOs weigh in on the most useful tools for the COVID-19 vaccine rollout

Healthcare IT News asked chief information officers from around the country about which technologies have proved most instrumental in the vaccines' early days – and what improvements might be helpful moving forward.

By [Kat Jercich](#) January 28, 2021

As the COVID-19 vaccination efforts have continued throughout the United States, hospitals and health systems have often been on the front lines of scheduling and allocating inoculations for staff members and, increasingly, eligible members of the public.

A number of vendors have [joined new innovation collaboratives](#), [launched new tools](#) or [modified existing ones](#) to help [make the vaccine rollout more efficient](#).

*Healthcare IT News* asked chief information officers from around the country about the technologies they've been using for scheduling appointments, tracking doses and keeping engaged with patients. And we asked what improvements would be helpful as the vaccination effort gains steam.

"This pandemic is unprecedented and our response has had to rise to the occasion," said Mike Mistretta, CIO at Virginia Hospital Center. "We continue to challenge our vendor partners to keep pace with the dynamic workflows as they work with us hand-in-hand to advance our capabilities and improve access and service for the patient."

Mistretta explained that digital technologies have been instrumental for the health system's COVID-19 response, including its paperless vaccination clinics.

"We scheduled and administered thousands of vaccines, both internally and to the community, using online scheduling. First and second doses were automatically scheduled based on the slot chosen and the vaccine manufacturer," Mistretta said.

"The website allowed patients to complete requisite paperwork digitally in advance to help maintain flow and efficiency at the vaccination site," with the VHC team using tablets and laptops to check people in and complete registration.

"The use of digital technologies significantly improved the patient flow and experience, once at the vaccine clinic, and allowed us to easily gauge volume in real time, flexing the number of available appointments up and down to reflect vaccine availability simply by opening/closing more 'appointment slots' on the website to feed the schedule," Mistretta said – noting that the hospital also relied on chatbots to send appointment reminders to patients.

"There have been a few bumps and bruises along the way as we learn and adapt to the new environment, but the amplification of our digital presence has been key to delivering effective and patient-focused services to the community," he said.



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Laura Smith, CIO at Iowa-based UnityPoint Health, pointed to accommodation, communication and automation as crucial tenets of COVID-19 vaccination deployment tools.

"For example, we've found great success using technology to text patients who meet specific eligibility criteria for the COVID vaccine, directing them to a seamless digital scheduling experience," said Smith.

"This technology has been critical for us as we continue to work to administer vaccines in our communities as efficiently as possible, keeping in mind our goal of providing a great patient experience," she added.

Some hospital systems pointed to specific vendors as being particularly helpful.

"I am incredibly proud of our information technology professionals at HCA Healthcare for their dedicated efforts to assemble a platform of industry standard technologies (primarily Pegasystems) along with our own creative internal development capability to streamline vaccine communication, coordination and administration tracking for all those involved," said Marty Paslick, CIO at HCA Healthcare.

"Our COVID-19 vaccine tracking tool, to date, has helped close to 200,000 frontline caregivers receive the COVID-19 vaccine. We are grateful we could help and give back to frontline caregivers, and we hope the vaccine-tracking tool has made life a little easier for them," Paslick continued.



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Pam McNutt, Methodist Health System

"For Methodist Health System, our Epic EHR has been the instrumental tool for keeping our vaccine clinics running smoothly," said Pam McNutt, longtime CIO of Dallas-based Methodist. "It allowed us to create registries of employees, physicians and other vaccine recipients to aid in scheduling their first dose and to auto-schedule the second dose. We can determine who hasn't been vaccinated yet to reach out to them.

"Further using Epic's ability to chart vaccine administration, electronically transmit to the state's immunization-tracking system and to create dashboards on vaccinations helped us comply with mandatory reporting requirements," McNutt said.

"If I had to choose one piece of technology that is most instrumental during the pandemic, it would be REDCap," said Renee Fosberg, CIO at Emerson Hospital in Concord, Massachusetts.

The hospital has relied on that online database and survey-management platform "since early in the pandemic," she said, "to enable our staff to self-attest for COVID-19 symptoms and display their Cleared for Work pass on their phones and devices, so they can access work at the hospital and all of our offsite locations."

Fosberg noted that when the vaccine became available for staff in December, the system turned to REDCap again.

"Staff [members] self-schedule their vaccine appointments through REDCap, making it an efficient and convenient process for all of our staff, and significantly streamlining the back end of what is a critical, complex and time-sensitive program," she explained.

"With REDCap we have successfully vaccinated more than 75% of our workforce, managing thousands of vaccine doses and scheduling appointments. We programmed algorithms to determine the correct schedule

timeline for staff to receive their second dose of the vaccine, based on the specific vaccine's manufacturer guidelines.

"Simply put, REDCap remains a critical tool that we rely on 24/7 to manage the logistics of our response to COVID-19. We continue to evaluate ways we can leverage REDCap for other essential internal processes within our health system," Fosberg continued.



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Many executives flagged the importance of technology when it comes to keeping patients as informed, engaged and reassured as possible.

"During COVID-19 and now with the mass vaccinations underway, the most instrumental tools we have are the Internet and our web real-time communications (Web-RTC) capabilities," noted Wake Forest Baptist Health CIO William Showalter.

"In this period of individual and organizational isolation, it has been the Internet that has been [a] backbone for restoring the human connection, and the Web-RTC [is] putting a human appearance to the connection," Showalter went on. "It has eased the anxiety energy exchange that individuals have had as they have attempted to navigate access, timing and health services (vaccinations and visits).

"It has restored the contact that helps us all cope with stress and major life changes that have resulted from the isolation. It has allowed our patients and staff to know that we care about them [and] value them, and that they can get needed services," Showalter continued.

Of course, as the COVID-19 landscape shifts, so too will many hospitals' strategies.

"Our electronic medical record and inventory platform has been instrumental in gathering and sending data to agencies, tracking of vaccine information for patients and providers and tracking inventory for our pharmacists," said Kristin Myers, chief information officer and dean for information technology at the Mount Sinai Health System. "One tool that would be helpful in vaccinating the public is a national patient identifier number/system."



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"We chose to use some temporary technology for just a web form for a request process. We've had 36,000 people request vaccines and on a daily basis. Depending on the doses we get, there's an ethics committee that's approving them," said Tressa Springmann, CIO at LifeBridge Health.

"This week we just opened to age 65 and above. As you know, much of that's being driven by state-based decisions. So we decided to not go crazy on the ability to make appointments, but to allow people to request. ... We've used some temporary technology, but also some scheduling front ends that we have through our core EHR environment."

"If it hadn't been for the innovation and the nimbleness of the IT team and our virtual hospital team here, we definitely would be moving at a much slower pace. Our core systems are absolutely catching up," Springmann continued.

*HITN Executive Editor Mike Miliard contributed to this story.*