How Hackathons are Helping VA Innovate Patient Care

The agency is merging IT developments with patient outcomes and bridging the interoperability gap.

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The Department of Veterans Affairs is using hackathons to better tie technical developments to health care outcomes.
Speaking at the COVID-19 Veterans Health Summit, medical informatician at the VA Innovation Center Dr. Jorge Ferrer outlined the agency’s focus on merging the forward-looking work of its respective IT and health research teams. Ferrer noted this has been an organizing principle of the VA’s hackathons that bring together developers with health care experts and practitioners.

“To succeed, you really need a bottom-up innovation in health care, you really have a multidisciplinary strategy that tackles specific health care problems. Normally in a hackathon you have some developers and architects, and pair them up with people that actually know that domain space. I always use the example that if you're trying to innovate in surgery and you don't know what a surgical room looks like, it's going to be very difficult for you to get anything done properly,” he said.

Developers and physicians are often trained in separate domains of knowledge, with their work oriented toward producing computational efficiency and positive health outcomes respectively. Ensuring there is a consilience of understanding is vital for helping physicians apply the innovative products tested and produced by their technical partners.

The VA organized these development sprints around solving particular clinical issues. For instance, in its April "Beat the Pandemic" hackathon event, VA partnered with Massachusetts Institute of Technology and other organizations to address the most pressing problems facing vulnerable populations. Some of the solutions that came out of that event include a telehealth platform to monitor COVID-19 patients at home and a way for multiple patients to use one ventilator, among others.

“What I saw was a group of very highly motivated individuals that would break down the various technical elements so the developers and the architects are able to build the innovation technologies, then clinicians and scientists will bring in their deep understanding of the domain to solve a specific clinical problem,” Ferrer said.

This has led to a particular focus on health care informatics as the bridge between more abstract technical developments and the flesh-and-blood concerns of patient care.
“Informatics is the divider between the people that make the electrons move and the people you're affecting. To me it's a perfect example of how you merge these disciplines together in real, tangible ways,” he said.

The COVID-19 pandemic has only further enforced the need to bridge data processing and analysis with both patient care and public health management, an imperative that has further encouraged the VA to bridge the interoperability gap.

“Interoperability continues to be a problem within health IT," he said. "I think most Americans are very aware that data could be the difference between life and death in many ways. Not just clinically speaking, but also from an epidemiological standpoint and from a proactive view."

Nevertheless, Ferrer emphasized the importance of recognizing that the ultimate goal of any health IT innovation should be to improve the outcomes and overall quality of life for patients seeking care.

“Patients are not data, patients are humans that are filled with data points. And you need to understand all that data,” he said.