TATRC Aids in Pandemic with Tele-ICUs, Remote Capabilities

The Army's telehealth resource center applied remote health technologies used on the battlefield to address COVID-19.

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The Army's Telemedicine & Advanced Technology Research Center (TATRC) has applied operational telemedicine to battlefields long before COVID-19 became a national issue. Recently, it brought those advancements to medical facilities across America to help address the pandemic.

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At the start of the pandemic, many medical facilities didn’t have adequate amounts of ICU beds and therefore lacked the amount of critical care clinicians needed to treat hospitalized patients with COVID-19 who were suffering from severe symptoms.

Although this was an unprecedented problem that affected hospital capacities and also supply chain early on, the Army was able to assist due to it's standard practice of implementing tele-ICU and telemedical capabilities meant for austere environments to treat deployed soldiers. Early on, TATRC pivoted resources and best practices in telemedicine to help American medical facilities that did not have proper ICUs or critical care personnel amid viral outbreaks.

“We wanted to apply what we’ve learned in terms of operational medicine for people on the battlefield to solving a big problem,” the organization’s Science Director Matt Quinn said during a GovExec virtual event Tuesday. “This was really the genesis of our NETCCN, our National Emergency Telecritical Care Network Project.”

Although NETCCN has provided the country mobile telehealth platforms that enable remote patient monitoring for quarantined patients and in-patient telemedical capabilities for providers, the effort has also worked as a two-way street in helping TATRC learn how to improve its telehealth solutions.

“This works both ways,” Quinn said. “What we can learn from putting together and developing a response for COVID has great application to military medicine, large-scale combat operation and combat casualty care.”

As TATRC has scaled up the prototyped NETCCN framework to operationalization, Quinn said NETCCN technical and clinical teams are currently delivering "tele-critical" care to Guam, South Dakota and Minnesota, among other places, and will soon include Puerto Rico and Texas.
Quinn’s team, as well as other organizations delivering telehealth and telemedical capabilities, is aiming to make remote care and in-person care as indistinguishable as possible. Quinn considers a measure of quality telehealth to be care outcomes for patients and providers. NETCCN has kept track of these metrics through a data commons, which collects data from the project’s care delivery and system performance.

“What aspects of technology are key to better process, better outcomes?” Quinn said. “You’ve got to think about the data for research from the start, or it’s going to get lost in the operations today.”

As NETCCN continues to operationalize, Quinn added that one of the project’s next focuses is in overcoming the challenges of providing tele-critical care in regions that lack broadband, mainly by creating solutions that are accessible through smartphones or cellphone networks.

“Being able to support those people through an app that they can download, or in the equipment that they already have, is far more preferable to needing to mail them something or for them needing to have full connection to the internet,” Quinn said. "There are going to be a lot of people, unfortunately, who for reasons of connectivity or financing ... where they’re going to be left out."

Quinn stressed that to make greater strides in telehealth and its accessibility, the U.S. needs to make greater strides in remote health policy standards, as well as provide effective solutions and broadband connectivity to the public at large.

“We’ve got to harmonize policy so the rules across the nation are the same, limited, not confusing,” Quinn said. "We’ve got to develop solutions that solve real problems for real people. ... We need people from underserved communities, rural communities, communities of color, designing and building these apps. Last but not least, you can’t use this stuff if you’re not connected in some way, somehow.”

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