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Army Medicine uses virtual health to care for patients worldwide

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Army Medicine is harnessing the power of 21st century tools to transform and exponentially improve both capacity and capability; not only for Army Medicine, but for the Total Force as well. They are using virtual healthcare, also known as telemedicine, to connect patients in even the most remote regions of the world with healthcare providers.

“We are facing dynamic challenges that demand our collective and immediate actions,” said Maj. Gen. Robert D. Tenhet, the Army’s Deputy Surgeon General. “Future forces, ranging from small units to traditional military formations, may be widely dispersed with minimal, if any, pre-established health care infrastructure. [This] is the reason why Army Medicine is accelerating and fully investing in virtual health.”

The Army’s virtual health plan is centered on two major goals: deliver virtual health solutions to support mission readiness and operational medical capabilities; and enable providers to deliver the right care at the right place at the right time. The first goal is being accomplished by using teleconsultations, as providers in garrison or theater settings across the globe can connect to one another in support of patients. For the second goal providers are able to extend their reach beyond traditional geographic and time boundaries, creating a shift in how patients receive their medical care.

A form of virtual health has been used by military and civilian providers via audio and video conferencing, as well as other technology, to share patient information and make collaborative care decisions for years.

In April 2004, the Army began the Telemedicine Teleconsultation Programs Project, which had more than 13,000 consults in the first 12 years.

Teleconsultations are frequently a joint mission with providers at hospitals lending their medical expertise to locations where specialized doctors are not

available, such on U.S. Navy ships, Egypt, Kuwait and Afghanistan. The most requested teleconsultations were dermatology, orthopedics and radiology.

Virtual healthcare decreases the need for evacuation because the providers, based on the recommendations of the consultant, are often able to treat or manage the medical issue at the deployed location. Also, consultants provide recommendations of whether or not to evacuate a patient.

“Since the sun never sets on Army Medicine, someone is always awake and ready to support the mission; virtual health can leverage clinical expertise across all time zones to provide vital medical capability at the point of need,” said Tenhet. “Enhanced Army virtual health capabilities will create a virtual cloud of provider expertise that our clinicians and medics can reach into whenever and wherever they need it to support the full spectrum of military operations.”

“Army virtual health provides clinical services across 18 time zones in over 30 countries and territories,” said Lt. Gen. Nadja Y. West, Army Surgeon General and commander of the U.S. Army Medical Command. “In FY15, Army clinicians provided over 40,000 provider-patient encounters and provider-provider consultations in garrison and operational environments in over 30 specialties via virtual health.”

Besides teleconsultations, Army virtual health includes a mobile application system supporting warriors in transition, tele-mentoring programs in Pain Management and a research program looking at ways to create deployable virtual health systems.

At Fort Carson, Evans Army Community Hospital began using Virtual Behavioral Health in 2011 to screen troops returning from combat, families separated by deployment and retirement assessments.

“We now have a lot of programs in place and have several others that are scheduled to begin this year,” said Col. Irene Rosen, Evans Army Community Hospital’s deputy commanding officer and chief medical officer. “We have a fantastic, evolving telemedicine program that is moving our hospital and patients to the forefront of the virtual health initiative.”

The Tele-Disease Management program was created after the Disease Management Clinic moved to the community-based Premier Medical Home. Through virtual health gestational diabetic patients (those with high blood sugar levels due to pregnancy) do not have to make the 15-mile trip between the hospital and Premier. They are able to have a “group” provider

appointment with their nutrition counselor, obstetrician and Disease Management Clinic provider.

Evans is preparing to implement an extension of this program. Diabetics and Coumadin patients will be provided home health care monitoring equipment that transmits their vital signs, body weight, glucose or prothrombin results into a database.

Currently the hospital is using virtual health for cardiology, dermatology and radiology teleconsultations. Later this year, the hospital hopes to acquire a Tele-ICU (Intensive Care Unit). This will involve a contracted monitoring center that will provide Evans' ICU providers real-time access to critical care nurses, pharmacists, pulmonologists and physicians who are actively monitoring patients 24 hours a day, and are able to advise EACH hospitalists on complicated patients.

"From battlefield to bedside, providers will be able to access specialty expertise from their colleagues – wherever in the world they are working," said West. "This enables patients to receive the best specialty expertise Army Medicine has to offer no matter where they are stationed."

EDITOR'S NOTE: Future articles in this series will provide more details on the three areas of virtual health provided by the U.S. Army Medical Department Activity – Fort Carson.



A medic utilizes a man-portable physiological monitoring device with streaming video, voice and photo capability to send medical information to doctors for real-time communication and decision making. (Photo by Edric Thompson)