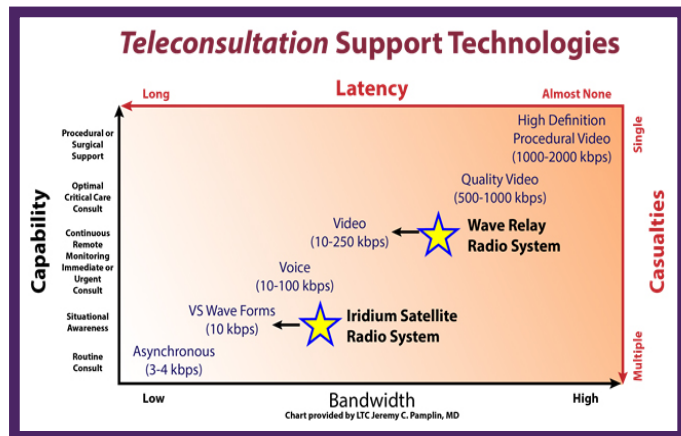


PEO Aviation Collaborates with TATRC, USAMMA & MAMC for Medical Information Exchange at Army NIE 17.2


Mr. James Beach and Mr. Larry Markins from TATRC's Operational Telemedicine Lab, along with LTC Jeremy Pamplin, MD from Madigan Army Medical Center (MAMC), supported the Program Executive Office Aviation, Project Manager Aviation Systems in the assessment of potential mission command capabilities during the Network Integration Evaluation (NIE) 17.2 at Fort Bliss, Texas in July. Additionally, Mr. Jay Wang from the US Army Medical Materiel Agency also participated to collect information to support technology surveillance activities for the MEDHUB program. The mission command capabilities enabled enhanced communication capabilities on board United States Army aviation assets. During this assessment, TATRC collected data to support the characterization of the Iridium Satellite Radio and the Wave Relay Radio systems for telemedicine and documentation exchanges. This assessment was important to determine if the target communication systems provide the capacity to support more advanced telemedicine capabilities.

The TATRC assessment of these communication capabilities was funded through the Defense Health Program 6.7 and is being executed in three phases. Phase I and II are now complete. During Phase I, the Tempus Pro™ Physiological Status Monitor was integrated into both the Iridium Satellite Radio Network and the Wave Relay Radio Network. This integration phase entailed obtaining limited Airworthiness Releases to enable testing onboard a UH-60 series MEDEVAC helicopter at the Network Integration Exercise. During Phase 2, data collection occurred during 4 MEDEVAC missions, and information was collected from ground-based exercises conducted with the 1/601st General Support Aviation Battalion Flight Surgeon and C/526th Brigade Support Battalion. During the ground-based exercises conduct-



ed in White Sands Missile Range and Fort Bliss Maneuver Areas, clinical personnel were able to connect to LTC Jeremy Pamplin, who was stationed remotely at MAMC, to perform a Disease Non-Battle Injury telemedicine scenario, consisting of a patient presenting with an unknown insect bite that was assessed as black widow spider bite through the use of telemedicine. The final phase of the project is to complete the analysis of the information collected at NIE 17.2 and previous reports from telemedicine threads conducted at earlier exercises to further characterize the capabilities of tactical radio systems, and to report findings to PM Aviation Systems, PEO Aviation, the US Army Medical Department & School Capabilities Development and Integration Directorate, and the US Army Medical Research and Materiel Command.

The results of the assessment demonstrate that the current Iridium Satellite Radio system supports teleconsultation with voice and real-time vital signs, but is too limited to allow consistent asynchronous images that might provide remote consultants additional contextual awareness. The Wave Relay Radio system supported more advanced capabilities to include transmission of images and low quality video. This radio system is Line of Sight; thus, moving vehicle platforms creates an unstable communications link. The Wave Relay system, by itself, will not provide an end-to-end solution for over the horizon communications. However, it is able to be integrated into long-haul communications networks to provide a robust communications link for data, audio, and images.

While these assessments conducted at NIE 17.2 were limited to two communication platforms, this data and information from previous exercises, such as TATRC's CERDEC Ground Activity Event at Fort Dix, will be compiled to provide a "Teleconsultation Support Technologies" chart with concise information on the required bandwidth and radio systems necessary to support specific Telemedicine capabilities. According to Mr. James Beach, one of TATRC's Project Managers, "This type of information would help support Medical Planners when conducting mission planning to determine what organic and non-organic communications requirements have to be met to provide a desired level of Telemedicine Capabilities." 



Mr. James Beach assists 2 Medics from the C/526th Brigade Support Battalion as they conduct a DNBI Telemedicine Scenario from "The Bridge to Nowhere" near McGregor Range on Fort Bliss with LTC Jeremy Pamplin on the remote end at MAMC.