Telemedicine/radiology system brings advanced medicine to world’s most remote inhabited island

November 15, 2007

The world’s most remote inhabited island can now access advanced telemedical care, thanks to pro bono services and support from a high-technology team led by IBM and Beacon Equity Partners, according to the companies.

The world's most remote inhabited island can now access advanced telemedical care, thanks to pro bono services and support from a high-technology team led by IBM and Beacon Equity Partners, according to the companies. Tristan da Cunha is located more than 1665 miles west of Cape Town, South Africa, and is accessible only by a boat trip lasting a week or more. Some 270 British citizens call the island home. IBM and Beacon Equity Partners today joined Medweb, the University of Pittsburgh Medical Center (UPMC), and the government of Tristan da Cunha in announcing the successful implementation of Project Tristan. The project combines medical equipment, satellite communications, and remotely supported electronic health record technology, allowing medical experts from anywhere in the world to assist island clinicians in their daily practices with medical diagnoses and emergency support. Until recently, the island's only physician, Dr. Carel Van der Merwe, has had to rely on minimal technology and limited medical support. Working from a hospital without so much as its own telephone, he has often performed life-saving diagnoses and procedures without proper equipment or specialized expertise. Van der Merwe has lacked a communications system that could accept e-mail attachments and help in interpreting x-rays or ECGs. He has depended on digital images scanned, printed, and faxed to specialists thousands of miles away, delaying diagnoses by days. With no airstrip on the island, emergency evacuation or outside medical intervention has been and remains today virtually impossible. Project Tristan was conceived by Edward Mullen, chairman of Beacon Equity Partners, and Dr. Paul Grundy, IBM's director of healthcare technology and strategic initiatives, as a way to honor the memory of a close friend, Thomas Wiese. Grundy is IBM's executive sponsor for Project Tristan. It was implemented with the guidance and support of UPMC, as well as of Dr. Richard Bakalar, chief medical officer for IBM, who established the U.S. Navy’s first integrated telemedicine office at the National Naval Medical Center in Bethesda, MD, prior to joining IBM. Bakalar is also president of the American Telemedicine Association. Project Tristan, based on open standards and runs on the Linux operating system, is expected to greatly enhance the island's level of medical care and standard of living. The island's physician is now able to electronically capture and share medical data and information, including x-rays and ECGs as well as pulmonary function evaluations and video camera examinations, with physician consultants. Satellite communications will enable clinicians to provide real-time diagnostic advice and suggested treatments to the attending physician. "The ability to share medical data quickly and easily will be a lifesaver for our residents," Van der Merwe said. "By joining forces, IBM, Beacon Equity Partners, Medweb, and UPMC have not only created the capability to bring critical, patient-centric care to our remote island, but also to other distant locations around the world -- on land or sea -- that require constant connection to expert medical resources."

Each team member brought its individual expertise:

- **IBM.** Solution codevelopment, integration, and project management for the telemedicine system provided to Tristan da Cunha. Products and services included staffing, onsite installation of the system (requiring a 25-day service call because of the limited means of getting to the island), and financial resources IBM xSeries servers provided to Medweb and high-resolution monitors.
- **Beacon Equity Partners.** Codevelopment of the concept and and funding for the project.
- **Medweb.** Medweb servers and software and additional medical input devices included a computed radiography system for digital x-ray; integration of ECG, digital cameras, spirometry, and video conferencing capabilities; configuration and testing, remote installation, training, and sustained support services on an ongoing basis, including primary technical and help desk services.
University of Pittsburgh Medical Center. With its widely recognized experience in telemedicine in the U.S. and abroad, UPMC volunteered to help plan and implement Project Tristan. UPMC offered clinical professional service to the island, including medical consultations on request, secure and reliable access to robust and comprehensive multimedia medical data on Tristan patients from the Medweb Telemedicine solution, and ongoing remote training to support Project Tristan as needed.

SOAPware. Project Tristan features cutting-edge, remotely supported electronic health record technology courtesy of SOAPware. This solution has more installed sites and in use in more nations than any other.

"Connecting the most remote inhabited spot on the face of the earth to advanced medical care in real-time and over the Internet is a big step toward providing everyone access to centers of healthcare excellence regardless of geographical location," Grundy said. "It's now possible to monitor a patient's heart and remotely change the setting on a pacemaker or make a complex fracture diagnoses over a satellite Internet connection in an environment where the closest advanced care via a ship would otherwise have taken a week to reach the island and another to return to the mainland for care."

Disclosures:

Source URL:
http://www.diagnosticimaging.com/articles/telemedicineradiology-system-brings-advanced-medicine-world%E2%80%99s-most-remote-inhabited-island