

“The success of the AFHCP’s nationally recognized home telehealth monitoring program could not have been possible without Critical Signal Technologies, the leader in 24x7 emergency response and in-home health monitoring solutions...our partnership with CST has helped up realize the value and potential of actively monitored telehealth, especially in rural or remote areas.”

- Samuel C. Johnson III, Executive Director AFHCP

BACKGROUND

The Alaska Federal Health Care Partnership (AFHCP) is a formalized, voluntary partnership of several federal healthcare agencies focused on leveraging resources, optimizing capabilities and promoting innovation to improve patient care for Alaskan federal beneficiaries. The federal healthcare agencies making up the AFHCP include U.S. Army, U.S. Air Force, U.S. Coast Guard, Indian Health Service, Alaska Native Tribal Health Consortium, Alaska Native Medical Center and Veterans Affairs.

The AFHCP is focused on mitigating a significant health care deficiency in Alaska - a geographically isolated and medically underserved area. With a population of nearly 687,000 and a landmass of 590,000 square miles, Alaska averages a little more than one person per square mile. In addition, over 70% of Alaska is not accessible by road. Alaska’s sheer size, rugged terrain and rural areas make it difficult to deliver cost effective, preventive, and quality health care. If preventative care cannot be provided, the cost of emergency care can become exorbitant. For example, average cost of a fixed wing evacuation is over \$22,000. The challenge of providing health care is compounded by the fact that Alaska ranks nearly last in the nation in terms of the number of providers compared to the number of patients. Finally, the AFHCP estimates that 10% of federal healthcare beneficiaries in Alaska suffer from chronic disease.

The number of patients dealing with chronic diseases, the limited number of healthcare providers and the state’s climate and geographical barriers challenge the AFHCP’s ability to deliver cost-effective, quality healthcare to federal beneficiaries. The AFHCP is focused on exploring how technology can be used to increase efficiency and address the challenge. AFHCP’s largest current technology initiative is the home telehealth monitoring (HTM) program.

OVERVIEW OF AFHCP’S HOME TELEHEALTH MONITORING PROGRAM

The AFHCP began the HTM initiative in September 2007 and now has 150 telehealth monitors deployed. Through the program, AFHCP placed a simple-to-use, touch screen home monitors in patient homes across Alaska. In May 2009, the AFHCP established a partnership with Critical Signal Technologies (CST) and added CST’s 24x7 call center monitoring and the Care Plan Solutions suite of services to the HTM program. CST, the AFHCP and the primary care providers established protocols and parameters for each patient participating in the HTM project. The protocols define how CST would manage the transmission and reporting of vital sign data – i.e., who to call if a vital sign is outside of a defined parameter, etc. The

parameters were established by the primary care provider and defined the high and low values for each vital sign monitored – blood pressure, weight, blood glucose, pulse, SpO2, and some PT-INR.

CST, via the Care Plan Solutions products and services, makes proactive coaching and wellness calls to ensure the patient understands the purpose of the program, gain a better appreciation for managing their chronic disease, and is an active participant in the program. The daily vital sign data is transmitted from the telehealth equipment electronically to a web interface. CST Care Center operators monitor the signals for red flags, and evaluate the data to the pre-determined vital sign parameters ordered by the doctor, nurse practitioner, or PA. Using established, customized per patient protocols, the CST Care Center serves as a first level of triage for out-of-parameter readings. CST follows the protocols to disseminate all out-of-parameter data back to the care providers. Protocols include who to call during business hours and after hours, rules that are as important as the parameters to ensure effective care. CST delivers vital sign information in “real time”, if necessary, and helps transfer information to caregivers early. This early communication provides opportunity for the patient to get the right care, at the right time, in the right place. Many patients can be treated in the clinic, or orders can be changed and medication changes made while the patient is in the privacy of their own homes. This capability reduces unnecessary emergency room visits and hospitalizations.

The HTM program provides numerous benefits to all stakeholders. The healthcare provider receives detailed data on a per patient basis and can focus on managing patient performance (actual and predictive analysis) to provide more cost-effective, proactive care. The patients benefit through regular feedback and interaction with education through the CST Care Center and confidence knowing that vital signs are being monitored 100% of the time. Proactive, remote patient monitoring helps the AFHCP increase access to high quality, cost effective care for federal beneficiaries who live in the remote and rural areas of Alaska.

KEY CONCLUSIONS

- Compliance in taking and submitting vital signs has increased from 23% to 65% among the participating patients
- Annual costs of care for the participating group have reduced from \$676,782 to \$42,417 through reductions in Medivacs, emergency room visits and hospital re-admissions since the start of the program – a return on investment of nearly 1500%

- Vital signs have improved since 2009; glucose levels on a linear basis are down 15 points, A1C levels have decreased .7 points, weight levels have also decreased – participant are more empowered and understand the cause and effect of health decisions
- AFHCP has received several accolades for the HTM program the past several years, including:
 - 2011 Outstanding Rural Health Program Award from National Rural Health Association
 - 2009 National Indian Health Board Award for Regional Impact
 - 2008 Disease Management Association Award for Outstanding Government Program

"The AFHCP's HTM program is increasing access to high quality care, improving quality of life, empowering patients, improving compliance and outcomes, while reducing overall health care system cost. HTM has the potential to revolutionize health care delivery in Alaska and other rural areas of the country."

– Samuel C. Johnson III, AFHCP Executive Director