

# The Rise of Telehealth: Opportunities and Challenges

## ALASKA: Ground Zero for Telehealth Innovation and Deployment

By Eric Wicklund, Senior Editor

ANCHORAGE, AK – Alaska's telehealth program is marching forward on the back of a device affectionately known as the "turtle."

Otherwise known as Bosch Healthcare's ViTelCare T400 Home Health Monitor, the device – about the size of a small microwave oven – is drawing rave reviews from healthcare providers and their patients. About 130 "turtles" have been distributed to 60 sites by the Alaska Federal Healthcare Partnership (AFHCP), with plans to bring that number up to about 300 by the end of the year.

In development for more than seven years, the "turtle" securely transmits patient data – either automatically or manually – several times a day, and offers a touchscreen interface and audio-enabled health assessment questions.

"This is an amazing technology," said Samuel C. Johnson III, executive director of the AFHCP, a voluntary partnership of the state's federally funded healthcare agencies, spanning six regional tribal hospitals, 39 independent native health agencies and 203 tribal health centers and clinics. "It's simple, it's reasonably inexpensive ... and it gives people the ability to manage their own healthcare," he said.

That's important, Johnson adds, in a state where people would just as often use a snowmobile, dog-sled, boat or helicopter as a motor vehicle to get to a hospital. Add to that the fact that more than 10



Providence Alaska Medical Center in Anchorage has been involved in several telemedicine programs, including Providence Emergency Stroke Care.

percent of the population suffers from some sort of chronic condition, and the need for continuous care is vital.

"Sometimes we have no contact with a patient unless there's an episode, and by then it's too late to do anything except get them to a hospital," he said.

The nation's largest state in terms of area, Alaska offers a number of factors that make it a hotbed for telehealth projects. Its small population (a little more than 710,000) is spread out over a challenging landscape, ranging from the rocky coast and Aleutian Islands to Denali's rugged interior

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Number of clinical telemedicine networks in the United States:  
200

Points connected via these networks: 3,500

(Does not include point-to-point systems for specialty services such as radiology, neurology, mental health, etc.; remote patient monitoring services; mHealth applications)



annual mid-year conference and exposition in Anchorage, drawing hundreds of healthcare executives and experts to a location normally thought to be on the fringes of the



**Samuel Johnson**

(ANTHC), which oversees much of the state's telehealth initiatives).

The ViTelCare T400 is one of two systems pioneered by Robert Bosch Healthcare, the Palo Alto, Calif.-based division of the international technology giant. Bosch has been working with the U.S. Department of Veterans Affairs for little more than a decade, first through the Health Buddy System and then the so-called "turtle." In Alaska, Bosch is partnering with Michigan-based Critical Signal Technologies, Inc., to deploy the "turtles" to AFHCP members.

"This is really an underserved rural population, one that could gain the most from the use of telehealth technology," said Melanie Schoenberger, a marketing specialist at Bosch, who pointed out that Bosch is the largest telehealth provider to the VA. "Providing them with the tools to manage their own health is very powerful – it's leading to some very impressive interventions. The cost is measured not just in (improved clinical outcomes) but a reduction in stress."

Tim Scheffel, medical director at the Dena'ina Health Clinic in Kenai, part of the Kenaitze Indian Tribes Health System, has been using the "turtle" for roughly four years, starting with an enrollment of six and now the largest clinic user of the devices.

"What we've found is that the patients that are using the monitors are more engaged in their care," he said. "Patients self-identify problems earlier, and it really provides a way for us to be more proactive in their management – and gets them involved as well."

"Patients have also indicated that they appreciate that there is somebody else monitoring them on a fairly continuous basis, receiving calls from the call center, which we've received positive feedback on as

out of the hospital and on the Medivac flight," Johnson said.

Scheffel said he sees similar results.

"Our team has been alerted to deteriorations in people's conditions that we may not have picked up on as early, and (we) were able to change their therapy and get them involved in other diagnostic tests," he said. "I can defiantly testify that, from a physician's perspective and having to work in some of the remoter areas of Alaska, it's tough to try and make the decision whether to Medivac someone out. If we can prevent that by picking up signs of stress at an earlier stage, then that's got to be a good thing."

Working alongside Johnson's AFHCP, the ANTHC administers the AFHCAN Telehealth Solutions program has recorded more than 100,000 telehealth encounters since its inception in 2001 – saving more than \$6 million annually in travel and healthcare expenses. The AFHCP's Alaska Native Medical Center in Anchorage is the state's only Level



**The ViTelCare T400 'Turtle.'**

II Trauma Center, receiving about 3,000 remote cases a year for telehealth consults, of which 20 percent are turned around in one hour and 75 percent are turned around in a day.

Aside from the home health monitoring program (of which the AFHCP's "turtles" play a large role), the state's telehealth initiatives include an extensive videoconferencing system. In addition, AFHCAN has lent its hardware, software and training expertise to other Indian Health Service projects in the lower 48 states, recently helped send 35 telemedicine carts to the Maldives, an island nation off the coast of India, and has seen its tConsult software used by the Canadian Space Agency.

"Alaskans can be proud that AFHCAN's cutting-edge telemedicine technology came out of our state," said Mandy Constantine, the organization's director of telehealth program development. "It was created to address unique issues that arise from being the biggest U.S. state, which is also 47th out of 50 states in road miles and 48th ... in doctors-to-people ratio."

Johnson hopes to draw on the "turtle's" success to push for more telehealth projects in the state, including an ambitious plan to push clinic-based behavioral health services out to the field through a telebehavioral health solution. With reimbursement being the biggest

impediment to physician adoption, he's looking at pilot projects in other parts of the country that have tried paying providers a set fee for each referred patient, or even creating an awards program.

"This technology isn't a cure for a bad patient, nor will it (entice) a physician who doesn't want to use it. We need to educate everyone about the benefits, and to find a little bit of reimbursement to help the providers move in this direction," Johnson said.

At the end of the day, he said, "communication is the key."

"Anytime you can touch a patient, help them along, motivate them to improve their health, that's what it's all about," Johnson said. ■




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