

PORTLAND BUSINESS JOURNAL

Goodbye guesswork

Bought a couch that didn't fit? SpaceView has an app to help avoid those mistake purchases. **THE PITCH, 15**



BIG PAYCHECK

GOODWILL CEO'S SALARY CLIMBS



Eight years after the Department of Justice declared his salary "unreasonable," Goodwill

Industries of the Columbia Willamette CEO Michael Miller's pay last year once again reached north of \$850,000. The nonprofit juggernaut explains why Miller's big payday is more than warranted.

MATT KISH, 10



DOCTORS IN A

Ten years ago, the idea of receiving medical treatment through a video screen was an impractical, Space Age fantasy — doctors in a box. Today, Portland physicians like **Oregon Health & Science University's Dr. Miles Ellenby** are using telemedicine to remotely treat patients at dozens of hospitals across Oregon. In doing so, they're creating a new standard of emergency care while saving the lives of the most time-sensitive patients, and millions in transportation costs.

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DON'T BE LATE MEETING HER. IT COULD COST YOU. 39

THE LIST

THE BIGGEST HOSPITALS IN OREGON 24

REAL ESTATE DAILY



PDC loan defines the art of the deal

The Portland Development Commission's \$20.3 million loan to an art college is one of the biggest it's ever given. We have all the facts about the deal that you need to know. **WENDY CULVERWELL, 6**

SUSTAINABLE BUSINESS OREGON



Incubator 'hatches' in N.E. Portland

Hatch, a new business accelerator focused on socially conscious startups, opened its doors this week in Northeast Portland. Find out which eggs it will crack first. **ANDY GIEGERICH, 13**



INNOVATION IN SUSTAINABILITY AWARDS

FIND OUT WHICH OREGON COMPANIES ARE, INDEED, CHANGING THE WORLD WITH SUSTAINABLE INNOVATION. INSIDE



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COVER STORY

Telemedicine expands reach of

TREATING PATIENTS REMOTELY IS SAVING LIVES AND SHAVING COSTS IN OREGON

BY ELIZABETH HAYES
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David DeNoma, a retired utility worker from Eureka, Calif., was visiting friends in Medford on Sept. 3, a few days before a planned fishing trip.

DeNoma, 64, went to bed at 10:45. Ten minutes later, he felt something odd happen.

"I heard a loud roar going off on the left side of my head and a whistle on the right side," he recalled. "I lost my balance. I sat up on the edge of the bed. I had to hold myself up. I woke my wife up and told her I thought I was in trouble."

Within 90 minutes, DeNoma – his left side weak, his eye and mouth drooping – was being attended to by an ER doctor at Asante Rogue Regional Medical Center. Then Dr. Kory Herrick, a stroke specialist from Oregon Health & Science University, entered the room.

He was 275 miles away.

"The tele-doctor and robot came in and I talked to him," Denoma said.

Herrick is among a legion of doctors treating patients in rural Oregon instantly using two-way audio-video technology from Portland hospitals.

With more patients than ever coming into the health care system as a result of health reform, the practice of telemedicine hits at reform's sweet spot. Delivering expert treatment remotely enables greater access in a more efficient, cost-effective way, while increasing quality of care.

While there are challenges – equipment is expensive and reimbursement rates aren't predictable – telemedicine is quickly becoming a new standard in health care as Portland-area hospitals expand its

use into new practice territories.

"Telemedicine helps eliminate time and geographic barriers to access to care," said Dr. Miles Ellenby, medical director of the OHSU Telemedicine Network and a pediatric intensivist at OHSU Doernbecher Children's Hospital.

Saving time, money

OHSU has 14 hospitals in its telemedicine network, while Providence Health & Services has 19, from Eastern Oregon to the coast and south to the California border. Legacy Health and PeaceHealth also provide telemedicine services.

A huge impetus behind telemedicine is the reality that smaller, rural hospitals don't have as many specialists on staff, so it makes sense to tap the expertise at larger health centers.

"We had a specific hole in the system, and this has plugged that hole," said Dr. Josh Cott, medical director of emergency services at Asante Rogue.

"Patients like it because they know they're getting direct access to the best specialists in the state."

It also means more standardized care.

"Because it gives you instant interface, you can deliver the same level of care whether you're 20 minutes away by car or across the state," said Dr. Ted Lowenkopf, medical director of the Providence Stroke Center in Portland.

For families, telemedicine not only allows patients to stay in their communities, but it can be a huge money saver as well.

Ground trans-

port to Portland can cost \$9,000, while a fixed-wing plane ride can reach as high as \$24,000. OHSU estimates that it has saved more than \$3 million in transportation costs since launching its Telemedicine Network in 2007.

Of the more than 600 acute care tele-consultations to date by OHSU, nearly a third were able to stay at their local hospital. At Asante alone, 70 percent of the 70 stroke consult patients were able to remain in Medford. It's partly because of this that Asante plans to expand the service to two other hospitals.

Distance resistance

OHSU began tele-psych outpatient visits in 2005, then two years later,

started a telemedicine pilot program for pediatric intensive care with Sacred Heart Medical Center in Eugene, which didn't have the volume to justify building its own pediatric ICU.

"Everyone was seeing the value of this and that it's the wave of the future," Ellenby said.

But there was also some resistance from some quarters when telemedicine first was introduced around the state.

"We thought patients might not trust it because they were looking at a doctor in a box, on a tiny TV screen," Cott said. "Patients really seem to like it."

Said Providence's Lowenkopf, "the culture of care in the ER did a 180 degree turn. Even though it's a robot, it's a physical presence and part of their team."

In the past, if Portland-based specialists were consulted, it was done on the phone, which doesn't give a complete picture of the situation.

"When you're on a phone call, there's anonymous interaction," Ellenby said. Now, he can beam to the patient's bedside on a robot-like device and see the patient for himself, pan or wheel the robot around the room, view the monitors or zoom in for a pupillary or other exam.

"That extra information makes a difference," Ellenby said.



CATHY CHENEY

Dr. Miles Ellenby, medical director of the OHSU Telemedicine Network.

1,840

The number of patients treated through Providence's telestroke system since 2010.

630

The number of patients treated by OHSU doctors using telemedicine since 2007.

\$30,000

The annual cost to lease each telemedicine mobile platform.

\$3M

The amount OHSU estimates has been saved in transportation costs since launching its Telemedicine Network in 2007.

COVER STORY

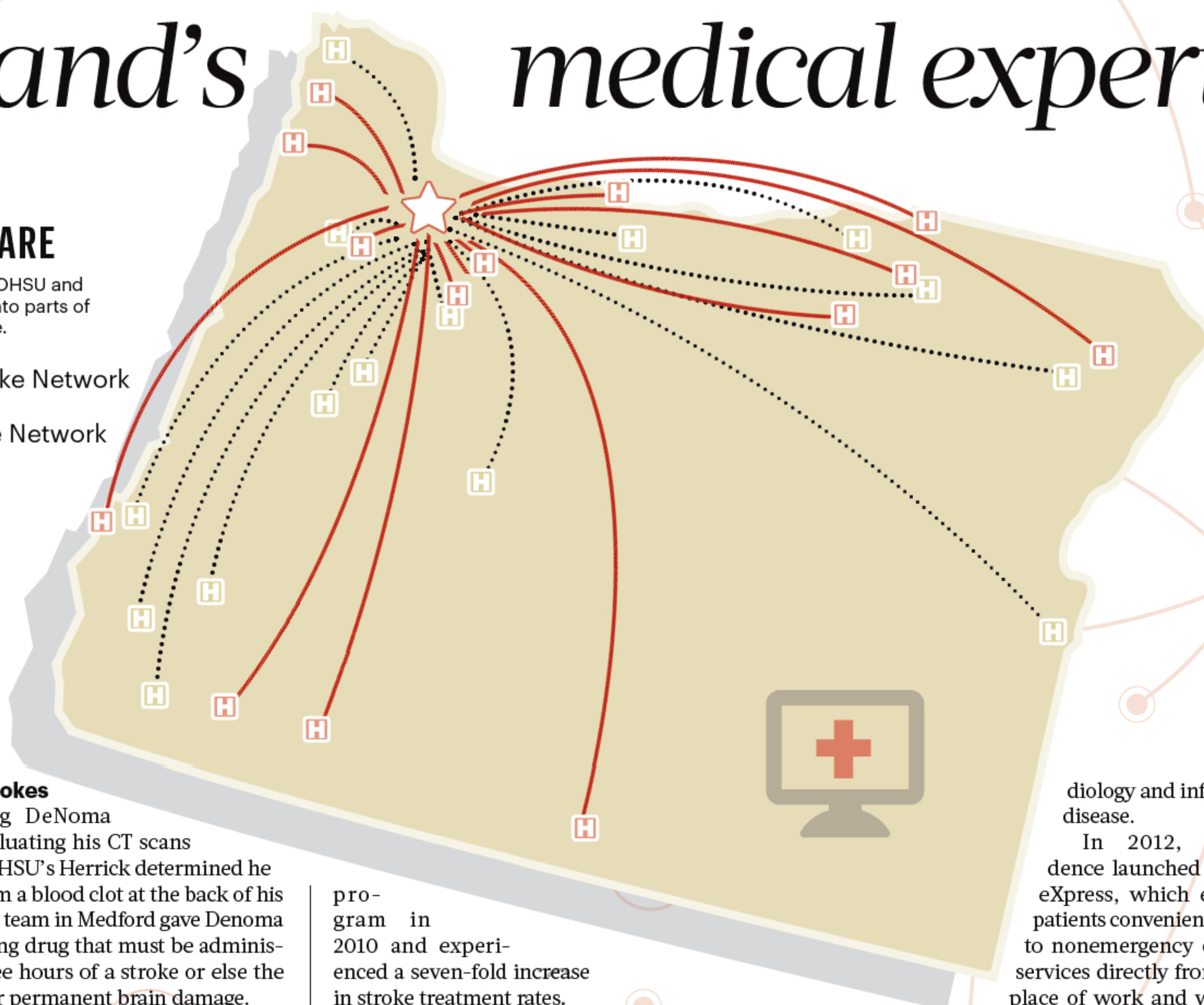
Portland's medical experts

LONG-DISTANCE CARE

Here's a look at exactly how far OHSU and Providence doctors can reach into parts of rural Oregon using telemedicine.

 Providence Telestroke Network

 OHSU Telemedicine Network



Valuable for strokes

After examining DeNoma virtually and evaluating his CT scans and vital signs, OHSU's Herrick determined he was suffering from a blood clot at the back of his brain. The Asante team in Medford gave Denoma t-PA, a clot-busting drug that must be administered within three hours of a stroke or else the patient will suffer permanent brain damage.

"I could tell right away it was working," DeNoma said.

Stroke cases – where "time is brain" – have been a huge thrust of telemedicine. Before, if an ER doctor was unsure whether to administer stroke medication, the patient would have been transported to Portland and a lot of critical time may have been lost on the road or in the air.

Since OHSU began using telemedicine, the medication has been given to 30 percent of patients who come in with stroke-like symptoms, far exceeding the national average of 3 percent.

Providence reduced patient transfers in stroke cases by 37 percent since starting its telestroke

program in 2010 and experienced a seven-fold increase in stroke treatment rates.

"When a stroke neurologist treats a stroke patient, the outcomes are better," said Valerie Mays, Providence's telestroke coordinator.

While the initial push was mostly in acute care, telemedicine is also making inroads in other areas. The OHSU Telemedicine Network also offers neonatal intensive care, trauma, psychiatry, neurosurgery, newborn medical genetics and pediatric palliative care.

Providence, which has treated more than 1,800 telestroke patients, also uses telemedicine for ICU and behavioral health assessments in ERs and has a pilot program to treat patients on the coast in such areas as chronic conditions, car-

diology and infectious disease.

In 2012, Providence launched Health eXpress, which enables patients convenient access to nonemergency clinical services directly from their place of work and with no co-pay.

With more people gaining access to the health system as health reform rolls out, tele-health may play an even more important role.

There are a few factors holding back telemedicine's expansion. One is cost. The monitors run about \$30,000 a year to lease. Some hospitals buy their own, but it's often cost prohibitive for smaller facilities.

Even for OHSU, telemedicine isn't a big revenue generator, and it's paying for most of the monitors in its own network.

"It fulfills our mission of allowing greater access to care," Ellenby said. "We would like to be in every hospital."

Credentialing poses another challenge, though the Centers for Medicare and Medicaid recently passed a rule to allow "credentialing by proxy" for a group of physicians. And Oregon just passed a law to standardize the credentialing process.


Reimbursement practices used to pose more of a challenge, but a state law, passed in 2010, mandates that telemedicine be compensated the same as an in-person visit.

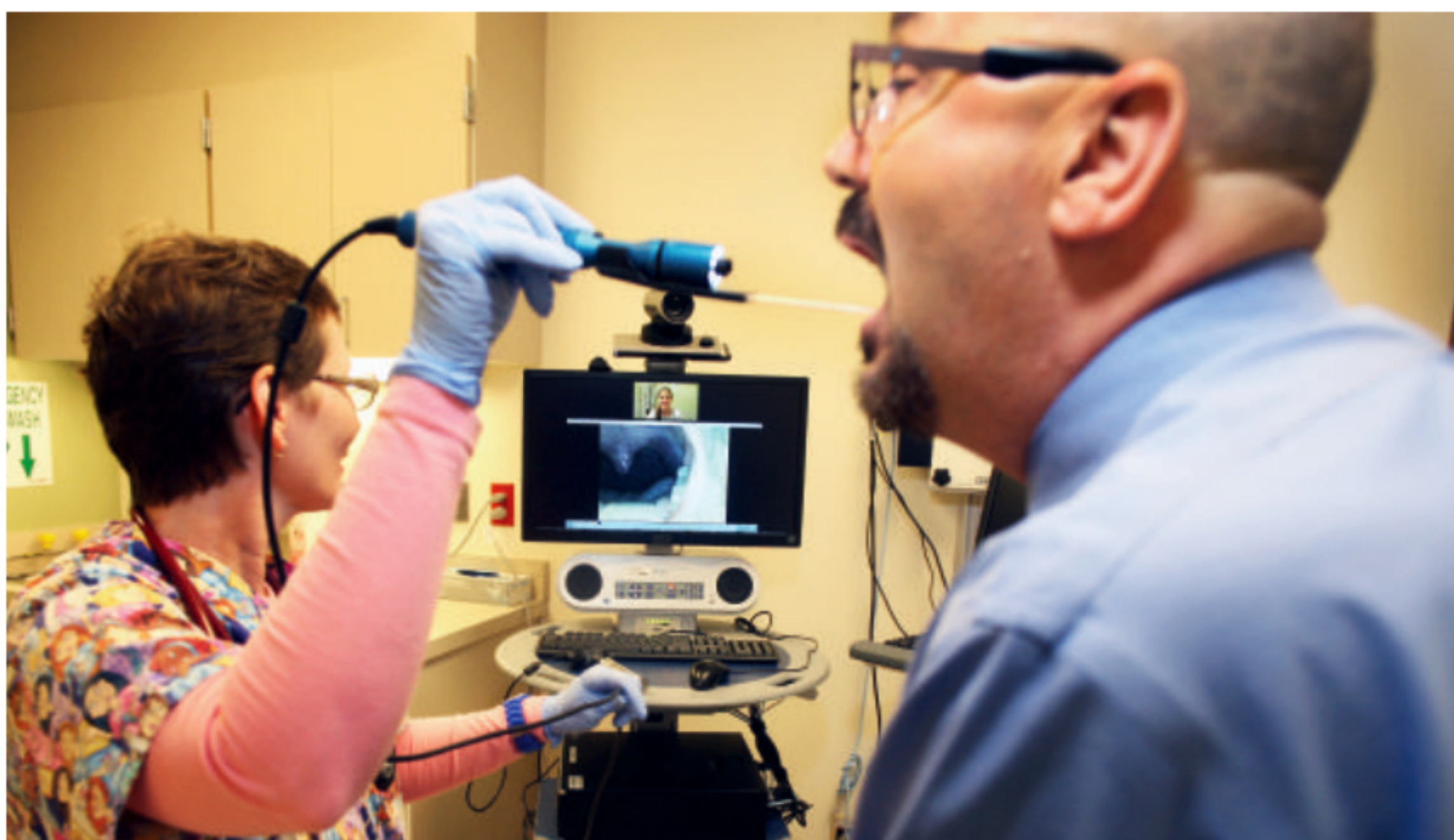
Saving a life

DeNoma was ultimately flown to Portland, where an OHSU team was waiting for him and his blood clot was removed via an artery in his groin.

He's had follow-up visits with a tele-doctor, and two months after his stroke, he was feeling well enough to take a vacation in Hawaii.

This week, DeNoma said he was enjoying his vacation without any complications.

"I didn't know whether I would make it or not at the start of this," DeNoma said two months after the experience, choking up midway through his story. "It's just a miracle." 



CATHY CHENEY

Pam Struder, a medical assistant and telepresenter for Providence Health & Services, demonstrates how telemedicine technology works on Barry Brown, Providence's telehealth program manager.