In the world of neurology, doctors dealing with stroke victims have a saying: "Time is brain." When a person has a stroke, the next minutes are crucial. Doctors and nurses need to work fast before the brain is damaged.

Doctors in rural counties like Clatsop County have experience in just about everything, but may not feel confident in making certain calls during a medical emergency. It helps to have a specialist's opinion in the emergency room.

Clatsop County hospitals don't have resident neurologists or very many specialists, but they do have robots.

A mobile telemedicine unit provides two-way video and audio communication. It brings the eyes and ears of a specialist into emergency and exam rooms through what is, at its bare bones, a video conference-type of unit.

"It's like Skype on steroids," said Dr. Miles Ellenby, head of the Oregon Health & Sciences University telemedicine program, who helped recently introduce the technology to Columbia Memorial Hospital in Astoria.

**An extra pair of eyes**

Phone calls between doctors only go so far.

You have to rely on that doctor's ability to describe a condition, Ellenby said. And how exactly do you describe a facial droop? Or the exact sound an asthmatic child is making? How do you describe a complicated medical procedure over the phone?

With telemedicine, the specialist is basically right there in the room with the local doctors, able to provide an opinion based on what both of them are seeing and hearing, said CMH Pediatrician Katrina McPherson.

"It's an extra pair of eyes," she said.

While the local doctors work, a specialist can watch and keep track of vital levels or even how medication is administered.

In Astoria, and at Providence Seaside Hospital where the technology has been in place for almost a year, the telemedicine units have access to different medical records, providing the advising doctors with even more direct information about the patient.

**How it works**

Nicholas Okon, a stroke neurologist with Providence Health and Services, takes a look around the emergency room at the Seaside hospital.

*See UNIT, Page 12*
Unit: ‘All I have to do is open a program, put on headphones’

The new telemedicine equipment at Columbia Memorial Hospital includes high quality video camera lenses that enable doctors to view diagnostic images, such as x-rays. It allows a doctor at CMH to meet with specialists at Oregon Health & Sciences University via camera to help diagnose medical conditions, potentially saving a patient expensive transportation costs to a distant hospital.

Continued from Page 1

There's a gentle whirring sound as the monitor mounted on a long arching neck turns to peek down a hallway.

The doctor is in two places at once. His actual body is in a room in Montana where he is sitting in front of a laptop. But using a joystick, Okon is manipulating a mobile telemedicine machine hundreds of miles away in the Seaside Providence Hospital.

If a patient was wheeled into the room in Seaside, Okon could zoom in with the video unit to examine the patient's pupils.

'The technology itself is fairly fluid,' Okon said. 'All I have to do is open a program, put on headphones. We use laptops.'

Add a wireless internet connection, and you're in business.

A familiar face

Telemedicine isn't just useful in emergency room procedures, Ellenby said. It also can help reduce the possibility of a patient going through an expensive, risky and stressful transfer to another hospital.

In Clatsop County, patients who need specialists are often transported to larger facilities in the Portland area, Ellenby said.

But telemedicine brings the specialist to the patient and sometimes a chat with the other doctor gives local doctors enough information to be able to treat the patient in Seaside or Astoria.

Even if a patient still needs to be transported, telemedicine can speed up communication between a local hospital and the out-of-town hospital. Also, seeing the specialist face-to-face on video first and then in person after a patient is transported, helps calm families.

'It's one of those subtle things in medicine I don't think we realize all the time,' Ellenby said.

Many families who have had a child transported to his hospital tell Ellenby, "It was nice to see you before I came."

Fortunately, telemedicine is a highly adaptable technology, he said. OHSU piloted the robot in Eugene at the Sacred Heart Medical Center and has been seeking to expand the service ever since.

Telemedicine, Ellenby said, "can go where it needs to go."

And where it often needs to go is to rural hospitals, he said.

Okon, who lives and works out of Montana, primarily through telemedicine, doesn't just show up on a video screen in emergency rooms. He also talks with patients in recovery using the machine.

Providence Seaside Hospital plans to extend its telemedicine network in May, branching out to include the specialists at the Kodiak Island Medical Center and the Providence Alaska Medical Center in Alaska and adding an electronic intensive care unit.

"(Telemedicine) is another layer of safety and support," said Jackie Mossakowski, chief nursing executive with the Providence Alaska Medical Center. Echoing Okon and Ellenby, she said, "If you can go to your local hospital and stay at a local hospital, that really is an ideal situation."

A familiar face

Dr. Katrina McPherson, a pediatrician at Columbia Memorial Hospital, explains the telemedicine equipment will be used to help with pediatric intensive care and stroke victims.

The future

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