

# Long-distance diagnosis

## Robot means neurosurgical patients don't have to travel for consultations

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Staff Reporters

SYDNEY — Cape Breton Regional Hospital staff can now page Dr. Robot for emergency neurosurgical consultations rather than sending patients to Halifax.

The region's district health authority unveiled a telepresence robot Wednesday that will connect neurosurgeons at the Queen Elizabeth II Health Sciences Centre in Halifax with a patient in bed in Sydney. The robot and another in Halifax are the only two in Canada.

Only one neurosurgeon is on staff at Cape Breton Regional Hospital. The facility has neither the patients nor the resources to sustain another, so this technology will give the hospital another set of "eyes and ears," said John Malcom, CEO of the Cape Breton district health authority.

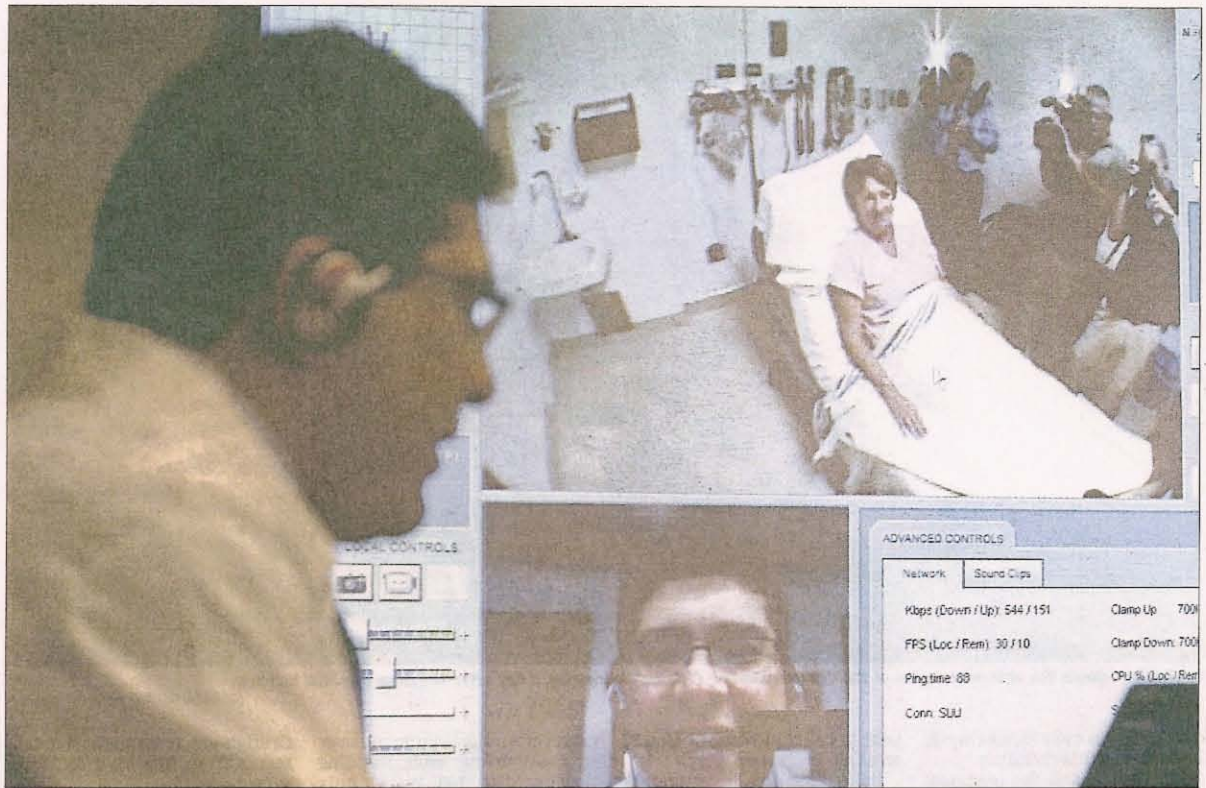
"It sort of looks like one of those science-fiction robots," Mr. Malcom said, grinning. "To have the neurosurgical capabilities with Capital (Health) is a real plus because it's an area where we rely on them a lot."

While the technology will not fill the role of a doctor, hospital staff say it will speed up patient care and cut unnecessary travel to the mainland. The virtual face-to-face contact between patient and doctor helps staff in Halifax make a diagnosis and determine if local treatment might be the best option.

About 100 neurosurgical cases are seen at the hospital each year, a spokeswoman for Cape Breton Regional Hospital said. About 50 of those patients are transferred to Halifax.

"In the past, we (might) send someone (there) just to be safe," Mr. Malcom said. "Now, I expect we're going to see quicker referrals where referrals are required."

A neurosurgeon controls the robot with a computer and joystick. In Halifax, Dr. Ivar Mendez, head of neurosurgery at the QEII, took the robot for a test drive Wednesday along the halls of an emergency ward more than 400 kilometres away. The robot unplugged itself from the wall and manoeuvred its way to a bed in Cape Breton Regional Hospital where a nurse acted



Dr. Ivar Mendez, head of neurosurgery at the Queen Elizabeth II Health Sciences Centre in Halifax, speaks via telepresence robot with a "patient" named Valerie and journalists at a news conference Wednesday at Cape Breton Regional Hospital. (TIM KROCHAK / Staff)

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JOHN MALCOLM  
C.B. health authority

the part of a patient.

Dr. Mendez used a camera at the top of the robot to zoom in on her pupils. An off-site neurosurgeon can also read the dials on a blood-pressure cuff or heart monitor and view or display digital images, such as a CT scan.

Cape Breton businessman Joe Shannon donated the funds for the \$375,000 piece of equipment.

"It's an opportunity for this community, and this hospital, to become a real leader in this area of medicine," Mr. Shannon said.

Consultants used to have to make a diagnosis based on second-hand information provided by the emergency room physicians.

"They're receiving (information) through a telephone line and . . . making some decisions of a very sensitive nature without actually setting eyes on the patient," said the head of the emergency department at Cape Breton Regional Hospital. "You can't underestimate (the importance of) the ability to actually look at a patient and see what



Gerry Gray, with his wife Florence at his side, shows that his hand tremors have stopped. Mr. Gray took part in a news conference Wednesday at the QEII in Halifax. (TIM KROCHAK / Staff)

kind of state they're in," Dr. Tom Currie said.

Nor can you underestimate the effect that speaking with a doctor has on a patient, Gerry Gray said.

While he was in Toronto last Monday, Dr. Mendez used the robot to check on Mr. Gray, who was scheduled for brain surgery in Halifax the next day to correct a tremor.

Mr. Gray's wife, Florence, said Dr. Mendez was able to answer their questions and allay their fears in the conversation held through the robot.

"It's an absolute miracle that

couldn't see; and seeing it makes a difference."

In Halifax, Dr. Mendez said the robot is a tool that will help make health care truly universal. "The notion is that everybody in Canada has the same access to health care, but that's not true," he said Wednesday. "If you are in a small community and you need a neurosurgeon immediately, you won't be able to do that because the neurosurgeons are all located in the bigger centres.

"(This) will allow us to actually do what we always preach: be able to deliver the care of the highest calibre to anybody in the country."

Dr. Mendez and his research team are also working on a robotic arm. An operation could take place at one site, while the surgeon might be anywhere else in the world, Bill Bean said. The president and CEO of the QEII Foundation could not say exactly when that piece of equipment would be up and running.

In Cape Breton, however, staff are eager to use the new robot on a real patient.

"It could be tonight," Mr. Malcom said. "It all depends on who comes in the door — but we're ready to roll."

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