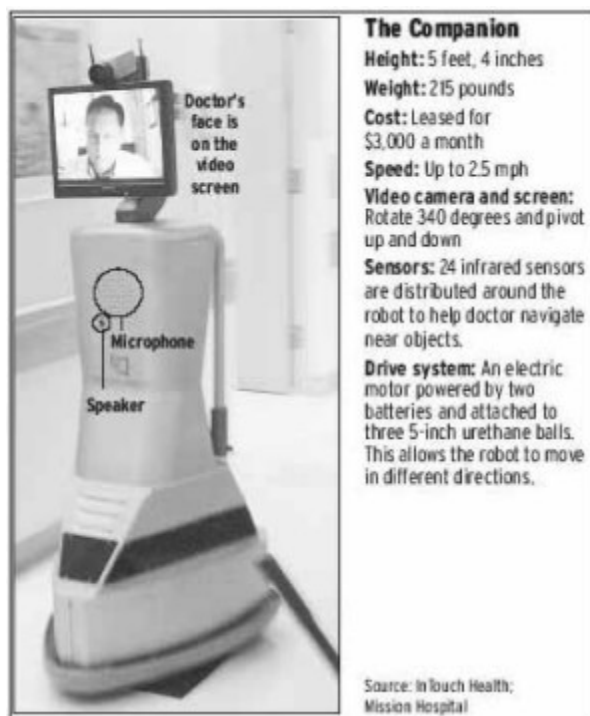




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Mechanical M.D.

By LISA LIDDANE

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MISSION VIEJO – There's a new "doctor" visiting some patients on the third floor at Mission Hospital. As the doctor glides along the hallways, passersby do a double-take. Heads swivel. Mouths drop open.

And it's not just because the doctor has one eye and makes the rounds without clothes.

The doctor is a remote-controlled robot.

Its official tour of duty began last week when Dr. John Shaver, a surgeon, started using it to visit his patients. The adult-size

robo-doc, named the Companion and made by InTouch Health in Goleta, is the latest in the hospital's efforts to embrace technology that can improve patient care. The hospital is the first on the West Coast to use the robot, said Michael Chan, vice president of InTouch.



Doctor and patient converse via microphone in the videocamera and speaker in the robot's midsection. Doctor can use videocamera to take pictures of patient or patient's surgical area for analysis.

The robot is not meant to replace personal visits by physicians, Shaver said. It enables doctors to have more frequent contact with their patients.

Shaver usually makes his rounds once daily, usually midday, but now he can check on patients more often and can quickly address some problems without having to be physically there. His face appears on the screen, and patients can hear his voice.

While it's too early to tell whether the robo-doc has improved patient care at the hospital, Shaver and some of his patients seem to like the added convenience of the robo-doc. Shaver, the test pilot for the project, spent several weeks practicing at his office to

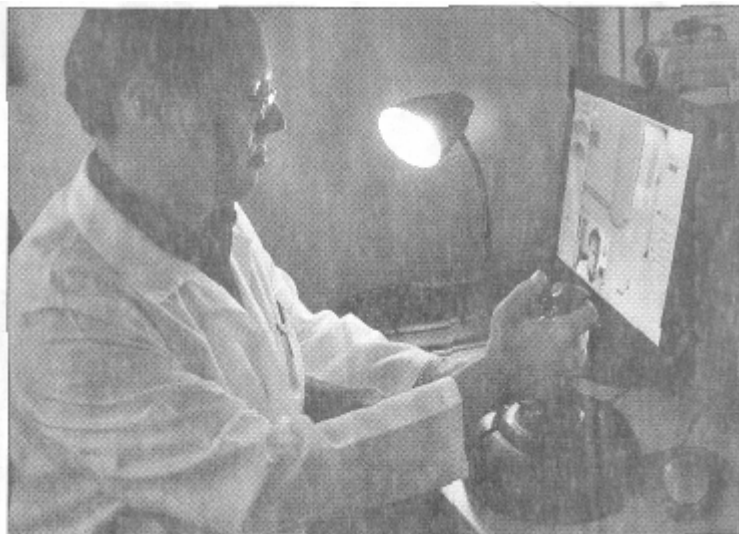
remotely control the robot. An identical computer station has been installed on the operating floor so Shaver can check on his patients between surgeries.

Before he consults with patients at his clinic, Shaver logs on to the computer in his office at 8:30 a.m. and clicks on the icon that connects him to the robot plugged into the wall in the hospital.

He uses the joystick to rotate and pivot the robot's head. When the hallway looks clear, he moves the robot away from the wall, unplugging it from the socket. He checks in with nurses to make sure that patients are ready, and then maneuvers to the patient's room.

At 9 a.m. Tuesday morning, the robo-doc rolls up next to Gloria De Maggio, who has had abdominal surgery. De Maggio, who has never met the robot, is reclining in bed, having just finished breakfast.

"Good morning!" Shaver says, his smiling face on the screen. "How are you today? I see you have a lot of food on your table."



Doctor uses joystick to maneuver robot. He makes rounds by sending the robot through hallways and into patients rooms.

"I'm having my tea and yellow Jell-O," De Maggio replies. "I'm anxious to get some mashed potatoes and pudding."

"I'll see what we can do about that," Shaver replies.

De Maggio tells Shaver she has a mild fever, and he says he'll check to find the cause. She tells him she lacks energy, and he suggests that getting up and walking might help.

Meanwhile, he wants to see how De Maggio's surgical wound is healing. He moves the robot closer to her. "I'm going to come in a little closer," he says, as the camera zooms in on the wound. Seconds later, the screen tilts back toward De Maggio's face.

"It looks good," he says. "There appears to be no evidence of infection."

Five minutes later Shaver says goodbye and navigates the robot toward another patient's room.

Later, he says the major advantage of the robotic visit is immediate access to the patient. He was able to give the nursing staff instructions on De Maggio's medications and discharge another patient. "Typically, I would not have been able to do those until the middle of the day when I make my rounds (in person)," he says.

There's a benefit to doctors, too. They see their patients more often, and they might even be able to make additional visits without leaving home.

"I don't mind the robot as long as I get the results I want and my doctor answers my questions," De Maggio says. "Seeing Dr. Shaver's face on the screen gave it a more personal feeling. I felt like he was right there with me."

De Maggio says she thinks the robot will be a hit with many patients, especially kids. She had heard about the robot from her 8-year-old granddaughter, Jamie, a few weeks ago, when Shaver was testing it. "I heard my doctor talking to my granddaughter down the hallway," she says. "I asked her who it was and she said, 'It's a robot.' She was fascinated by it."

Researchers at Johns Hopkins medical institutions completed a small study on what post-surgery patients think about follow-up visits using the robo-doc and presented it at the American Urological Association this month.

Most patients in the study said that virtual visits would improve their access to their doctors and that they would prefer a virtual visit from their own doctor to a visit by another doctor. The study was conducted by Dr. Louis Kavoussi, who owns InTouch stock.

De Maggio agrees. "When I looked at the robot, I saw a doctor, not a robot," she says.

More surgeons at Mission Hospital will be trained in the coming months to use the robot. Their training will include "driving tests." They'll practice controlling the robot's functions and maneuvering the 215-pound machine through an obstacle course.

The robot can be operated only on the east wing of the hospital. The west wing of the hospital's third floor, which houses surgical patients, will soon be equipped with wireless technology so robo-doc can visit patients there.

The machine has limitations. The doctor can't feel or touch the patient through the robot. The machine can't put a stethoscope to hear the patient's lungs. So the robo-doc can only supplement a physical visit from a doctor.

Now InTouch is working on "autonomous navigation," a Jetsons-like technology that would let the doctor send the robot from one patient to another without having to maneuver it with a joystick.