UCLA Healthcare

March 09, 2005 06:30 AM US Pacific Timezone

UCLA Medical Center Becomes World's First Hospital to Introduce Remote Presence Robots in ICU; Clinical Testing for Remote Monitoring of Intensive Care Unit Patients Begins

Dr. Neil Martin beams in via the RP-6 Robot to check up on a patient recovering in UCLA's neurosurgery ICU. The patient mimics hand movements as instructed by Dr. Martin as part of the clinical assessment. (Photo: Business Wire)

UCLA Healthcare

LOS ANGELES--March 9, 2005--UCLA Medical Center announced initial clinical tests of the RP-6 mobile robot system in its neurosurgery intensive care unit (ICU). The RP-6(TM) robot, made by InTouch Health, Inc. in Santa Barbara, Calif., allows doctors to "virtually" consult with patients, family members, and health care staff at a moment's notice, even if miles away from the hospital.

Intensivists in the neurosurgery department at UCLA are using RP-6 to provide additional monitoring from their homes and offices of ICU patients in response to studies showing that intensivist presence in the ICU can decrease morbidity, mortality, length of stay, and cost of care(1). The project, to be funded through an assistance agreement with the U.S. Army Medical Research and Materiel Command's (USAMRMC), Telemedicine and Advanced Technology Research Center (TATRC), located at Ft. Detrick, MD, will be led by Professor and Chief of Neurosurgery, Dr. Neil Martin, Associate Professor Dr. Paul Vespa, and Associate Professor Valeriy Nenov, Ph.D., all of the David Geffen School of Medicine at UCLA.

There is a nationwide shortage of intensivists, the physicians who specialize in the care of critically ill patients. There are less than 6,000 practicing intensivists in the United States today and more than 5 million patients admitted to ICUs annually(2). Therefore, only about 37 percent of ICU patients receive intensivist care(3), yet having trained intensivists in the ICU results in better outcomes and decreased length of stay in the ICU and hospital(1). These specialists are familiar with complications that may occur and are therefore better able to minimize errors.

UCLA will test the RP-6 robot as a way to extend the reach of the intensivist. The patient sees, hears and interacts with the doctor through the nearly 5.5 foot tall robot, which displays a live video image of the physician's face on its monitor/head. The physician, seated at a computer console called a ControlStation(TM), also sees and hears the patient through a live video image projected on a monitor. The ControlStation comes equipped with a joystick, which allows the physician to drive the robot to the patient's bedside, control movements of the robot's head, and even zoom in to take a closer look at the patient or bedside monitors.

"The RP-6 robot will increase doctor access for patients, their families, and hospital staff, and UCLA is excited to test the newest addition to our intensive care team," said Martin. "We recognize that leveraging the health care expert's time offers the possibility of improved patient care, reduced length of stay, and cost savings. UCLA has combined our in-house electronic medical information system, GCQ, with the RP-6 remote presence system and we are able to monitor and access our patients anytime from our homes and offices in a way not previously possible." Global Care Quest, or GCQ, founded by Martin, Nenov and Farzad Buxey, is a commercially available, remote wireless mobile patient data system developed at UCLA Medical Center.

Patient and family reaction to the robot has been very positive. In a study done by Johns Hopkins Hospital in Baltimore, Md., half the patients preferred a tele-rounding visit by their own doctor over a 'real' visit by another physician. And 80 percent of the patients felt that the robot increased physician accessibility(4). Dr. Louis Kavoussi, vice-chairman of urology at Johns Hopkins Hospital said, "Patients love it! I was very surprised at how much our patients enjoy remote video interactions via the robot."

UCLA is the first hospital to test the RP-6 robot in the ICU, though more than a dozen other institutions are using the robot to provide remote medical expertise in areas such as emergency rooms and patient wards.

UCLA Medical Center ranks as one of the best hospital in the Western United States for the 15th consecutive year according to a U.S. News & World Report survey of 2,550 board-certified physicians from across the country. UCLA Medical Center is a nonprofit, self-supporting 668-bed hospital providing patient care in all medical specialties. It is the primary teaching hospital for the David Geffen School of Medicine at UCLA. For information about clinical programs or help in choosing a personal physician, call (800) UCLA-MD1 or visit http://www.healthcare.ucla.edu/.

InTouch Health(TM) is a privately held company based in Santa Barbara, Calif. InTouch Health provides technology solutions which dramatically increase the effectiveness of health care professionals. The company is addressing the impending demographic crisis in acute care by pioneering the use of Remote Presence(TM) in health care with its RP-6(TM) robotic system. Through a proprietary communications and mobile robotic platform, skilled medical professionals are projected to other settings where a patient or caregiver is located to provide care, coach and train staff, or monitor health care services. The InTouch Health solution leverages the time and expertise of healthcare professionals across multiple care facilities, improving the efficiency and effectiveness of care delivery.

Global Care Quest is a privately held medical software company based in Torrance, Calif. This state-of-the-art software solution allows clinicians to view medical data remotely, including patient monitors, imaging systems and medical lab results and reports. Data can be accessed through WiFi and cellular wireless networks on the latest, most popular handheld devices and smart phones. With functions far beyond pagers and cell phones, GCQ represents the next generation of wireless medical communication and remote patient monitoring. The company has plans to commercialize the technology through a license agreement with UCLA. More information is available online at: http://www.globalcarequest.com/.

NOTE TO EDITORS: Video with interviews and still photos available. A preview of 15 minutes of B-roll footage is available online at: http://sinapse.arc2.ucla.edu/streaming/healthcare/robotvnr-rm8-300k.ram

1. Pronovost PJ, Angus DC,, Dorman T, et al. Physician Staffing patterns and clinical outcomes in critically ill patients: A systematic review. JAMA 2002; 288(17):2151-2162. ASA

2. Berenholtz S and Dorman T. Anesthesiologist-Intensivists: improving quality of care and safety in the intensive care unit. ASA Newsletter. Feb 2004, vol. 68, no. 2.

3. Angus, DC, Kelley, MA, Schmitz, RJ, et al Current and projected workforce requirements for care of the critically ill and patients with pulmonary disease: can we meet the requirements of an aging population? JAMA 2000;284,2762-2770

4. Ellison L, Pinto P, Kim F, et al. Telerounding and patient satisfaction after surgery. J Am Coll Surg 2004: 199:523-530