

A close-up photograph of a doctor's torso. The doctor is wearing a white lab coat over a purple top. A stethoscope is visible around their neck. They are holding a large tablet computer with both hands. The tablet screen is white and contains the main text of the page. The background is a soft, out-of-focus blue.

the doctor is in & **ONLINE**

Telemedicine connects patients and physicians to streamline care, cut costs, and enhance outcomes.

With the proliferation of smartphones, information and entertainment are available at the touch of a button. And as more physicians incorporate telemedicine into their practice, on-demand resources now include healthcare.

In the broadest definition of the term, telemedicine refers to exchanging medical information—between patients and their doctors, or among physicians—through electronic communications. In practice, telemedicine includes a wide spectrum of tools and tasks ranging from the simple to the complex; digital photos, emails, online patient portals, nursing call centers, remote vital sign monitoring technology, and continuing medical education are just a few examples of telemedicine in action. What they all have in common, though, is a dedication to efficiently enhancing care.

According to the American Telemedicine Association (ATA), the use of telemedicine began over 40 years ago, when hospitals sought to bring healthcare to patients living in rural or otherwise remote areas. Even today, access remains an important benefit of telemedicine, but is one that extends to all patients, regardless of location. Through live video conferencing and digital transmission of diagnostic imaging and other data, telemedicine allows patients to connect with a facility or specialist anywhere in the world.

When used in tandem with in-person care, telemedicine yields a more streamlined response than conventional approaches, said Ronald A. Turck, Jr., MD, RUSM '01, a Florida-based, board certified neurologist. "If a patient comes into a hospital suffering from a stroke, I would be contacted urgently.

Being able to make a quick decision on treatment can greatly improve the patient's outcome," he explained. "Instead of waiting for me to travel to the hospital, telemedicine allows me to make a decision remotely and quickly."

Telemedicine can also enhance satisfaction in chronically ill or injured patients, since technologies such as remote monitoring can work in tandem with visiting nurses to provide ongoing care without requiring frequent travel to a doctor's office. Peer support groups become more attractive when patients don't have to travel, and online health

portals can ensure they're receiving the right information. And as remote monitoring, shared physician staffing, reduced travel times, and shorter hospital stays drive costs down, care becomes a more affordable option across the board.

But the benefits don't end with the patient. Physicians incorporating telemedicine into their practice gain access to a worldwide network of colleagues and specialists for consultation and collaboration that may not have been possible otherwise. Online seminars also allow for remote access to continuing medical education. "Telemedicine can be used in many different practices from hospitals to primary care offices to nursing homes to patients' homes," explained Turck. "If used efficiently, it could certainly have the opportunity to connect communities nationwide and worldwide." ■

outcomes by the numbers

98.3%

Overall patient satisfaction with telemedicine¹

850,000

Number of emergency room transports hybrid technologies would be avoid each year in the US, amounting to a savings of \$537 million³

Approximate number of Americans currently using remote cardiac monitors, according to the ATA

1,000,000

19%

Cost savings home care delivers, derived from shorter hospital stays and fewer tests ordered, over similar hospital inpatients⁴

Resources:

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2. Leggett, P.F., Graham, L., Steele, K., Gilliland, A., Stevenson, M., O'Reilly, D., Wootton, R., and Taggart, A. [2001]. Telerheumatology: Diagnostic accuracy and acceptability to patient, specialist, and general practitioner. *British Journal of General Practice*, 51(470): 746-8.
3. The Value of Provider-to-Provider Telehealth Technologies. Center for Information Technology Leadership Partners HealthCare System, Inc., 2007.
4. Cryer, L., Shannon, S.B., Van Amsterdam, M., Leff, B. [2012]. Costs For 'Hospital At Home' Patients Were 19 Percent Lower, With Equal Or Better Outcomes Compared To Similar Inpatients. *Health Affairs*. 31:61237-1243. doi:10.1377/hlthaff.2011.1132