

# Telemedicine in Urology and Nephrology

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## Opinion

Telemedicine is the greatest advance in the US to improving access to care. The use of this technology in urology and nephrology has allowed tens of thousands of patients to gain consultations regardless of whether they are in urban or rural areas.

Connected health is the umbrella term that includes telehealth, e-health, m-health, and telemedicine. The technology is quite simple: using video-conferencing, email, smart phones, handheld wireless technology such as tablets, or any other devices that allow instant communication. Tele-urology and tele-nephrology bring expert consultations to patients otherwise unable to get them. In addition, specialists can remotely consult with colleagues to obtain information to improve the quality of care for their patients.

The technology that is available today is helping bring about a fundamental change in U.S. health care. The current system of bringing patients to health care is changing because of technology. With innovations such as videoconferencing, telephone-based care management, and automated symptom monitoring, high-quality health care is becoming much more convenient and much more affordable, and providing greater access to care. Now, it is possible to bring health care to the patient instead of bringing the patient to health care. There is no scenario of the future of health care without connected health.

### Better access to care

Interactive videoconferencing and Internet-based technologies are allowing physicians from a variety of specialties, including oncology, cardiology, urology, nephrology, dermatology, and neurology, to provide access to medical care to larger segments of the population, regardless of where patients are located. Currently, while a large number of people in the U.S. receive outstanding health care, it is often very expensive and inconvenient to access. And there are still tens of millions more Americans who don't have access to the best specialists. Telemedicine provides patients with urologic and renal diseases greater access to better care.

For example, there is substantial evidence that outcomes are worse in rural or remote areas of the country. Telemedicine can decrease the travel burden on these patients thus giving them the opportunity to access state-of-the-art care.

In addition, Internet-based technologies, such as patient Web portals, will enable patients to learn more about their disease and

treatment and how to manage their care, connect with providers, and receive social support through online support groups.

### Remote Services

If a person is worried about a possible prostate cancer, for example, and can't get a urologist for a diagnosis, he can upload any data points such as lab or images to his doctor's office, and the physician and consulting urologist may make a decision about whether the patient needs to come to the office for an in-person consultation.

For patients with renal insufficiency who need to be monitored by their nephrologist, but either live long distances from their medical center or don't need or cannot be physically in the nephrologist's office, the nephrology team is able to virtually visit the patient in the patient's home.

### Alleviating the workforce shortage

Telemedicine has reduced the shortage of primary care physicians, where the workforce shortage is even greater than specialists. Currently, there is a disconnect between where the physician is located and where the patient is located. That disconnect can be reversed through telemedicine, through videoconferencing or telephone-based care management.

The technology of connected health increases the number of available time slots a doctor may use to care for patients. One of the great inefficiencies in medicine is that the doctor and the patient are disconnected through time or physical distance. Each appointment slot in a doctor's office calendar that is not filled due to cancellations or inefficient scheduling results in another patient not receiving medical care. If these empty appointment slots can be filled with a virtual office visit, the doctor's time is efficiently used and patients receive care.

In addition, the technology allows other populations of physicians, such as retired, disabled, or stay-at-home moms and dads, to continue to use their medical expertise by practicing medicine as virtual consultants as long as they maintain their board certification and keep current through CME courses.

### Growth potential

The application is just beginning in urology and nephrology. I have a tele-urology practice that is located at the West Los



Angeles Veterans Hospital. I have a greater than 95% satisfaction rate because the patients receive a consultation without having to be transported 3-5 hours in each direction for a 20 minute consultation. In primary care practice, there are about 200,000 telemedicine consultations a month in the U.S. vs 80 million in-person medical consultations each month, so the sky is the limit in terms of telemedicine growth potential.

In urology and nephrology, the use of communications technology can facilitate second opinions for patients seeking confirmation of their diagnosis or proposed treatment plan. There are companies specializing in obtaining remote second opinions. Patients upload their medical data to the company's server, the company contacts and pays a world-class consulting specialists, and then the patients have a videoconferencing or telephonic interaction within a couple of days of their request. Individual or group practices of specialists can easily form their own telemedicine practice that generates income and referrals.

Both public and private insurance pays for telemedicine consultations. Careful documentation is, as always in medical practice, required.

The opportunities for any urologist or nephrologist to offer first or second opinions are nearly endless. In the near future every medical office, especially medical specialists' offices, will have a dedicated room for virtual consults.

### Supplementary care

Telemedicine is not meant to replace the physical interaction between the patient and doctor. The first interaction between a patient and the specialist does not necessarily always in-person. However, the patient must see a primary care physician prior to receiving a specialist consultation. The use of telecommunications technologies is reserved for follow-up, initial specialty (but followed up by in-person visit, second opinion, and supportive care.

Specialists commonly have nurse practitioners, physician assistants, nutritionists, various therapists, social workers, and other professionals on their oncology team. Any of these professionals could perform virtual patient care, but the initial interaction must be by the specialist.

### Cost Issues

Bringing virtual health care to the patient reduces brick-and-mortar overhead and increases efficiencies for improved access to care. Everyone wins in the connected health scenario. Patients receive rapid access to appropriate care, more doctors are immediately introduced into the system, and potentially reversing the dire predictions of workforce shortages, and physicians are better compensated for improved efficiencies.