Telemedicine involves the use of telecommunication and IT (using the Internet, wireless, satellite and telephone media) to provide health care services from a distance. Its use can help eliminate location or time-based patient barriers while improving overall cost and effectiveness of care. More than 40 years ago, hospitals practiced telemedicine when they offered care to patients in remote areas. Today, telemedicine has spread rapidly within specialty departments, home health care and private practices, as well as with consumer engagement through the use of advanced technology.

Patient demand has also increased the need for telemedicine. According to the American Telemedicine Association (ATA), over half of all U.S. hospitals use some form of telemedicine, including nearly one million Americans who currently use remote cardiac monitors.

**Telemedicine clarified**

The ATA states that telemedicine is not a separate medical specialty. Rather, health care institutions have been investing in telemedicine and related technologies in recent years in order to improve their overall delivery of care. Currently, insurance providers make no distinction between on-site care and that provided through telemedicine with regard to the reimbursement fee structure, and billing of remote services usually requires no separate coding. As part of the new payment and care delivery model, the Centers for Medicare and Medicaid Services (CMS) have recently extended care coverage to include telemedicine, and private insurers also continue to expand their coverage of telemedicine, with half of the states requiring equal coverage versus in-person services.

*What is the difference between telehealth, telemedicine and health IT?*

According to the ATA, the term telehealth is a broader term that defines some type of remote healthcare that does not always include clinical services. Telemedicine, by definition, refers to the actual delivery of remote clinical services using technology. Health IT (HIT) speaks of electronic medical records and related information systems used to store and send health data.

**Benefits of telemedicine:**
For physicians, telemedicine can increase reach, lower costs and improve overall patient care. Patients gain greater flexibility in care and diagnosis, as well as improved self-care and outcomes. Here are some of the many benefits that telemedicine offers:

- 24/7 patient access to health professionals from any remote location
- Safe and effective method of care
- Flexibility of schedule and reduction of time-related stress on the patient
- Patients avoid germs and wait time of the physician waiting room
- Faster diagnosis and interpretation of patient conditions
- Supplemented care for patients recovering at home and/or using in-home care
- Provides remote care for patients in nursing homes or assisted living facilities
- Better management of chronic diseases
- Improved patient outcomes
- Offers patient care between appointments
- Can feed into an EHR system to provide needed information to physicians
- Reduces patient hospitalization, emergency room visits and re-admission for those with chronic conditions
- Increases patient flexibility with work or school schedules
- Improves patient knowledge and management of his/her health
- Allows physicians to expand their reach
- Links hospitals in outlying areas with a major network
- Lowers overall cost of patient care
- Remote monitoring data analysis can increase population health

Telemedicine in practice:

While there are many potential applications for health services via telemedicine, here are a few examples of telemedicine in action:

- Virtual video conferencing with physicians or on-call specialists
- Image or lab result transmission
- E-Health patient portals
- Remote monitoring of vital signs (blood pressure, heart rate, blood glucose, etc.) via portable and/or wearable devices
- Medication management and dosage monitoring
- Continuing education and training for medical professionals
- Consumer health and wellness mobile applications
- Call centers (dial-a-nurse, etc.)
- School-based health centers
- Online physician or nurse chat sessions
- Mental health support via telepsychiatry (chat, phone or text)
- Online discussion groups for peer-to-peer support

Telemedicine and interoperability

The recent trends in telemedicine all point back to increasing the overall interoperability within a local facility, its regional area and the nation’s health care system as a whole. Telemedicine encourages health data portability through the use of electronic records and health care data exchange. While hospitals are eager to implement new telemedicine programs, they face many challenges, including seeking funding to implement these services through grant monies. Another challenge involves a lack of return on investment for providing such services, due to the lack of structure in place for encouraging the use of telemedicine and providing incentives and reimbursement for reducing readmissions.

The future of telemedicine

As more physician practices and institutions begin using telemedicine and begin to realize the benefits of telehealth, its rollout and prevalence will likely increase, along with reimbursements and incentives for using it. With improving technology and increased patient demand for telemedicine as a more efficient and practical way to receive health care services, particularly in rural and remote areas, we will truly start to see an integrated, electronically-dependent health care community without borders.