



System Safety in Healthcare

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Healthcare Reliability and Safety Improvements with Telemedicine

The field of telemedicine has transformed over the years. Its use has expanded beyond the care of patients in remote and rural areas to its many other current applications. It has allowed access to specialists who are not available otherwise. The telemedicine platform has expanded, and its impact is growing in the ever-evolving health care environment.

How Does Telemedicine Improve Patient Safety?

Telemedicine has improved access to medical services that often might not be available in rural communities — including even in the remote villages of Africa and Asia. A hospital in Morocco outlined a theoretical framework supported by a software application of a telemedicine management system. The proposed model was based on a detailed benchmarking of telecom environments, hardware environments and content management systems. This approach, which used open-source technologies, helped to create an interface between two entities: web and medical care [Ref. 1].

Telemedicine has been used in critical care and emergency situations. Surveys conducted on the topic have found that many patients prefer easy access to health care. One proposed solution has been to provide mobile, video-based service to patients, which allows them to go back and forth with their physicians in real time in order to ask them questions about their treatment [Ref. 2]. This provides additional opportunities to clarify their treatment regimen and have their questions answered outside the confines of a clinic visit.

Clinical and Non-Clinical Uses

Telemedicine provides speedy service, not only to patients, but also to physicians via electronic communication. Some telemedicine programs allow treatment of chronic conditions, emergencies and remote monitoring. Telemedicine is expected to grow rapidly. Many healthcare providers are innovating to solve these issues and improve their patients' access to quality care.

For example, a nurse in a rural Alaska facility can monitor up to 33 patients at a time from a single location using telemedicine services [Ref. 3].

These systems can store and forward medical information to remote physicians and allow review of lab results, as well as diagnostic results and patient follow up. Some treatments such as these are covered by Medicare and Medicaid.

Non-clinical uses include activities such as continuing medical education. Technology can be used for administrative and management meetings that do not necessarily involve specific patient health care decisions. Although set up costs may vary, if used and organized well, telemedicine has the potential to be cost effective.

Limitations of Telemedicine

Issues such as the frequency of teleconsultations, rate of patient complications and overall outcomes must be evaluated in future studies. Other areas that warrant further investigation include evolving legal and regulatory requirements around telemedicine, payment issues, standards for telemedicine, telecommunications infrastructure, privacy, security and confidentiality.

Legal Considerations

Telemedicine can present some unique legal situations for doctors. One of the top concerns is state licensing. If you're licensed to practice medicine in a certain state, you're limited to treating patients in that state. However, the rapid expansion of telemedicine has led to some changes in legal policy to address these licensing issues. Some state medical boards have provisions and special licensing permits that specify physician telemedicine privileges. Some of the larger consumer telemedicine companies avoid this issue by employing doctors from across the U.S. and connecting patients with a doctor who is already licensed in that state. Other proposed solutions include the *Interstate Medical Licensure Compact*



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[Ref. 4]. This Compact would make the application process for out-of-state providers easier (through providing expedited processing, discounted licensing fees and decreased paperwork requirements). It would require providers to follow all the rules and standards of the state where the patient lives. Some physicians in the U.S. are eligible for this expedited licensure and could become part of the program if their state joined.

Here are some the basic requirements physicians would need to meet to be eligible for the Compact:

- They would possess a medical license in one of the Compact states
- They would have a specialty certification
- They would practice in a state where the state legislature has enacted the Compact into state law

Nursing Regulatory Issues

Adoption of innovative new approaches to care in telemedicine has occurred at a rapid pace. An outgrowth of this is the proliferation of nursing call centers that

provide telephone triage, health information and referral services.

A number of home care providers have begun supplementing home care services with two-way interactive video encounters with patients. Early home care services have been provided via specially installed home monitoring and communication equipment. This 24-hour access to health care resources has proven so popular that many insurance providers provide members with access to a nurse via a toll-free telephone number. This process is called “Telephone Triage.”

The Bottom Line

Improved technology and internet capabilities have supported telemedicine growth. For patients and doctors, getting online is easier and less expensive with each passing year. The ability to communicate through video conferencing and send pertinent patient data in real time safely (while protecting patient confidentiality) is critical for telemedicine. As the world becomes a more connected place, the role telemedicine will play in the care of many holds a bright future. ●

References

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