



# The role of telemedicine in postoperative care

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## ABSTRACT:

*Telemedicine has become one of the most rapidly-expanding components of the health care system. Its adoption has afforded improved access to care, greater resource efficiency, and decreased costs associated with traditional office visits and has been well established in a wide array of fields. Telemedicine has been adopted in several domains of surgical care. In recent years, the role of telemedicine in postoperative care has caught attention as it has demonstrated excellent clinical outcomes, enhanced patient satisfaction, increased accessibility along with reduced wait times, and cost savings for patients and health care systems.*

**KEYWORDS:** Telemedicine, postoperative care, surgery, clinical outcomes, patient cost and time savings, mobile health, telehealth.

## INTRODUCTION:

Telemedicine uses electronic and telecommunication technology to provide an exchange of medical information, despite a person and their doctor not being in the same room. It can be as simple as text messaging medical care to as advanced as remotely controlled surgery. Experts have used telemedicine in clinical settings for decades, with its first reference in a clinical setting recorded in medical literature in the late 1950–1960s. The telemedicine market is expected to reach the value of \$30 billion dollars by 2019, which is anticipated to grow by 20–50% each year.

## HISTORY OF TELEMEDICINE:

We are living in the age of high information and communication technology, and have long-standing problem of improving human health in healthcare systems. *The History of Telemedicine* provides a comprehensive and in-depth historical view of telemedicine from ancient Greece to the present time. The authors started the task of writing the book with open mind and put aside whatever preconceived notion or information about telemedicine. Bashshur and Shannon really give historical insight to us on telemedicine. It would be a good guide and rationale for the telemedicine.

## ADOPTION OF TELEMEDICINE AND USE IN POSTOPERATIVE CARE:

Although initially viewed as a futuristic concept through its early adoption and implementation by NASA, the telemedicine industry has rapidly grown and gained acceptance by both patients and providers. For the last two decades, the United States (U.S.) Department of Veterans Affairs (VA) has been at the forefront of telemedicine. In 2014, 1.2 million telemedicine visits were conducted for approximately 700,000 Veterans across 44 different medical specialties.

## TELEMEDICINE MODALITIES:

Evolution in technology has effectuated a systemic change in the ways health care is delivered to patients. A robust and reliable broadband connection is preemptive to provision of efficient care over long distances. A comprehensive broadband signal transmission system, or the “pipe,” comprises elaborate infrastructure that enables flow of data at modest speeds. Overall, both SMS messaging and m-Health applications have emerged as a great avenue to shorten length of hospital stay and improve quality of care delivered to patients by potentially identifying complications earlier, and therefore decreasing 30-day readmission, improving recovery, and reducing health care costs in post-operative patients.

## CLINICAL OUTCOMES OF TELEMEDICINE:

Telemedicine has shown promise in improving outcomes for patients in the postoperative setting. It is imperative to say that in the absence of excellent clinical outcomes, all the secondary benefits of any healthcare intervention become of limited use. Recent literature contains growing evidence for excellent clinical outcomes following the introduction of telemedicine in the postoperative setting. Studies report that clinical outcomes are comparable to the outcomes in the setting of traditional clinic follow-up.

**PATIENT SATISFACTION OF TELEMEDICINE:**

Long-term sustainability of telemedicine for all socioeconomic classes requires closer scrutiny of issues such as technology, training, reimbursement, data privacy, legal guidelines, and framework. Telemedicine must be adopted as a proactive strategy and scaled-up even beyond emergency usage due to its immense potential in complementing conventional health care services, such as diagnosis, treatment, follow-up, surveillance, and infection control. Patient satisfaction is an integral component of good surgical care. The use of telemedicine in postoperative care should therefore entail high patient satisfaction and willingness for participation. general,patient willingness towards telemedicine.

**TELEMEDICINE FOR RURAL SETTINGS AND PATIENT WITH TRANSPORTATION BARRIERS:**

In rural communities, there are gaps in describing the design and effectiveness of technology interventions for treating diseases and addressing determinants of health. A primary barrier to both patient and clinician adoption is lack of health insurance coverage and equitable reimbursement for telehealth services. 25, 26 Telemedicine uptake grew at somewhat glacial rates until the COVID-19 global pandemic emerged. Telemedicine has been applied to these patient populations in under-developed countries, with rudimentary transport systems, with success. If surgeons continue to adopt these practices for providing postoperative care, profoundly more patients will be able to follow up and receive excellent care.

**HEALTHCARE SYSTEM SAVINGS AND REVENUE GENERATION:**

The use of telemedicine in delivering postoperative care is still in its infancy and its implications on healthcare system cost savings and revenue generation are largely to be determined. However, early reports and projections are promising. Daily telephone calls to postoperative ileostomy patients facilitated decreased readmission rates and a savings of \$63,821 for the total hospital cost of a dehydration-specific readmission. Overall, it appears that the post-operative use of telemedicine should not only generate cost savings for healthcare system, but it also should spawn a substantial amount of additional revenue if the added elective surgeries are conducted secondary to additional new patient evaluations.

**ETHICAL CONSERIDATIONS OF TELEMEDICINE:**

Reports on breaches in critical data have been on the rise in the past decade . In the U.S. alone, data breaches were reported for 29 million patient health information (PHI) records by HIPAA-covered entities between 2010 and 2013. As telemedicine applications continue to evolve, the current focus on protecting and maintaining PHI on secure systems with minimal data leakage remains crucial to both providers and patients.

**CURRENT BARRIES TO FURTHER ADOPTION OF TELEMEDICINE USE:**

Excellent clinical outcomes, high patient satisfaction, time and cost savings, healthcare cost savings and revenue generation, and improved access to care are among the numerous benefits of telemedicine application in the postoperative setting. However, there are several barriers, both at federal and state level, that hinder its adoption Overall, such interventions will help introduce change and make telemedicine a much more feasible option to provide and receive healthcare. Given such efforts and enthusiasm for the Medicare program, many anticipate that surgeons will greatly adopt telemedicine for postoperative care for patients located at home within the next five years .

**CONCLUSIONS:**

Telemedicine has become one of the most rapidly-expanding components of the health care system. In recent years, the role of telemedicine in postoperative care has received significance as it has demonstrated excellent clinical outcomes, a high degree of patient satisfaction, decreased driving distance and wait times, and cost savings to both the patient and health care systems. The evolution of surgical care should continue to focus on providing the highest quality patient care with a high degree of patient and provider satisfaction, meanwhile allowing the greatest access to surgical care. Telemedicine in postoperative care appears to attain these goals and should be considered as a viable option for healthcare centers. Future work focusing on patient confidentiality and widespread dissemination and implementation of telemedicine in surgery is on the go.

**REFERENCE:**

- 1.Armstrong DG, Giovinco N, Mills JL, et al.FaceTime for Physicians: Using Real Time Mobile Phone-Based Videoconferencing to Augment Diagnosis and Care in Telemedicine.(2011)
- 2.Collins J, Dasgupta P, Kirby R, et al. Globalization of surgical expertise without losing the human touch: utilising the network, old and new. BJU Int 2012
- 3.Khurana KK, Rong R, Wang D, et al. Dynamic telecytopathology for on-site preliminary diagnosis of endoscopic ultrasound-guided fine needle aspiration of pancreatic masses. J Telemed Telecare 2012
- 4.Platts-Mills TF, Hendey GW, Ferguson B. Teleradiology interpretations of emergency department computed tomography scans. J Emerg Med 2014
5. Zennaro F, Grosso D, Fascetta R, et al. Teleradiology for remote consultation using iPad improves the use of health system human resources for paediatric fractures: prospective controlled study in a tertiary care hospital in Italy. BMC Health Serv Res 2014