TELEMEDICINE AND ITS IMPACTS ON HEALTHCARE

INTRODUCTION

The use of electronic information and communications technology to deliver and assist medical care when participants are separated by distance is known as telemedicine.

Convenience and health are enhanced via telemedicine, allowing for phone or video consultations between patients and their physicians. More medical professionals now provide their patients with computer and smartphone "seeing" services.

Telemedicine has become simpler because of technological advancements, even for people who don't think they are computer literate. Through the MyChart mobile app or online platform, patients can request a virtual visit with various Johns Hopkins physicians, practitioners, and therapists.

History and development of telemedicine

[Around 500 BC](#), telemedicine was still in its infancy and was first observed in Greece and Rome. Human messengers carried messages between cities during this period, delivering essential medications or medical advice. Among other mediums, medical information was transmitted by smoke signals and light reflections. These signify health events such as births, deaths, and illness outbreaks, particularly over large distances.

The earliest known use of telemedicine dates back to [Pennsylvania in the 1940s](#) when radiological pictures were transmitted 24 miles apart between two towns over a telephone connection. This was the first electronic medical record transfer ever. In the 1950s, a Canadian physician improved it even more by creating a teleradiology system.

 The University of Nebraska installed a two-way television in 1959 to provide medical students with information. Later, the system was connected to a state hospital to provide video consultations. In 1967, the University of Miami School of Medicine collaborated with the local fire department to radio transmit ECG rhythms to Jackson Memorial Hospital during emergency scenarios.

Milestones are significant because they signal clear advancement, honour an industry's history, and help us envision its future. Cloudbreak celebrated last month's delivery of more than a million minutes of telemedicine services nationwide. Although we're happy with our accomplishment, it's even more significant because it shows telehealth is increasingly demanding.

Telemedicine has put the healthcare sector on the verge of a revolution in innovation. Astute and innovative healthcare and technology firms have recognized recalcitrant problems in our industry and are working to solve enduring problems with teamwork, communication, and culture.

Impacts of telemedicine on healthcare

The National Center for Health Statistics estimates [that 31.6 million individuals](#) of all ages lacked health insurance in 2020. These folks, who number 3.7 million uninsured children, are primarily working adults or the dependents of working adults.

This expanding tendency has numerous causes. Many businesses need help to afford to provide insurance to their employees as a reward due to rising costs. When purchasing insurance on the private market, consumers frequently wind up with pricey policies with hefty deductibles. Some people can't afford this expense at all.

Historically, lacking the need for large hospital systems and affluent populations has discouraged providers from opening offices in small, rural communities. Even those with clinics in tiny rural towns might need the newest equipment necessary to provide the best possible service. This implies that to receive medical care, people must travel outside their hometowns.

Thanks to telehealth, patients without a physical clinic nearby can access doctors and other medical professionals remotely. Doctors can interact over great geographic distances to better coordinate patient care with videoconferencing and cloud-based data. Telehealth enables small-town doctors in rural locations to link their patients with specialists and deliver better overall care.

It's also a more economical choice for those concerned about costs once the technology is in place. It can allow patients to connect remotely for routine checkups, removing the need to travel to the doctor.

Many people can now receive care at mobile clinics closer to their homes and places of employment rather than driving to a hospital. For instance, several states set up mobile clinics inside vans and trailers to serve rural people with limited medical care during the COVID-19 pandemic. These clinics offered resources for testing and treatment. Patients might stay in their cars and drive to these clinics to receive care.

A further illustration would be the growth of independent emergency rooms. These offer emergency services, enabling residents of towns without hospitals to receive prompt medical attention when needed.

Challenges and barriers to telemedicine adoption

1. **Exorbitant medical expenses**

Exorbitant out-of-pocket expenses pose a significant obstacle to healthcare access, especially for insured individuals. Many choose to avoid getting health care when forced to pick between paying for food, rent, and other expenses. People from low-income families are disproportionately forced to make this terrible decision.

According to a December 2021 West Health and Gallup study, about 30% of Americans say they are prevented from receiving treatment because of their high out-of-pocket medical expenses.

The United States faces a severe issue with high healthcare expenses compared to other nations. Compared to other industrialized countries, the United States has the most pronounced income-based health inequities, according to a 2020 Commonwealth Fund analysis published in Health Affairs. According to the report, 38% of Americans had postponed getting medical care in the previous year (such as a test, treatment, visit, or prescription) because of financial difficulties.

People who live above the poverty line and even in the middle class may not be able to afford health care, even if they can get it, while others who are below the poverty line may be able to obtain free or inexpensive health care choices. Many people can no longer afford the rising costs of medical treatment. When you combine this with the rising popularity of high-deductible plans, which demand substantial out-of-pocket payments from customers before the insurance takes effect, you have a financial scenario that forces many individuals to forgo necessary medical care due to cost.

2. Obstacles to Transportation

Transportation-related obstacles greatly influence people's ability to get to their doctor's appointments and obtain health care in the United States. It may be necessary for residents of rural locations to travel great distances for medical care because there may be limited access to public transit and the Internet.

According to data published in The Journal of Rural Health, cancer patients requiring radiation treatments travelled 40.8 miles on average from rural areas compared to 15.4 miles on average from urban areas. To receive therapy and care, those who can drive must take time off work and pay for gas. For people who require ongoing care due to chronic conditions, this can quickly become difficult.

According to the USDA-funded Economic Research Service program, 46 million Americans reside in these rural locations; consequently, many need more access. People in suburban and urban areas are impacted by transportation concerns as well. Individuals with limited mobility may find it difficult to leave their homes to receive care, and patients with lower incomes or those without cars may need help accessing providers in locations with poor public transit.
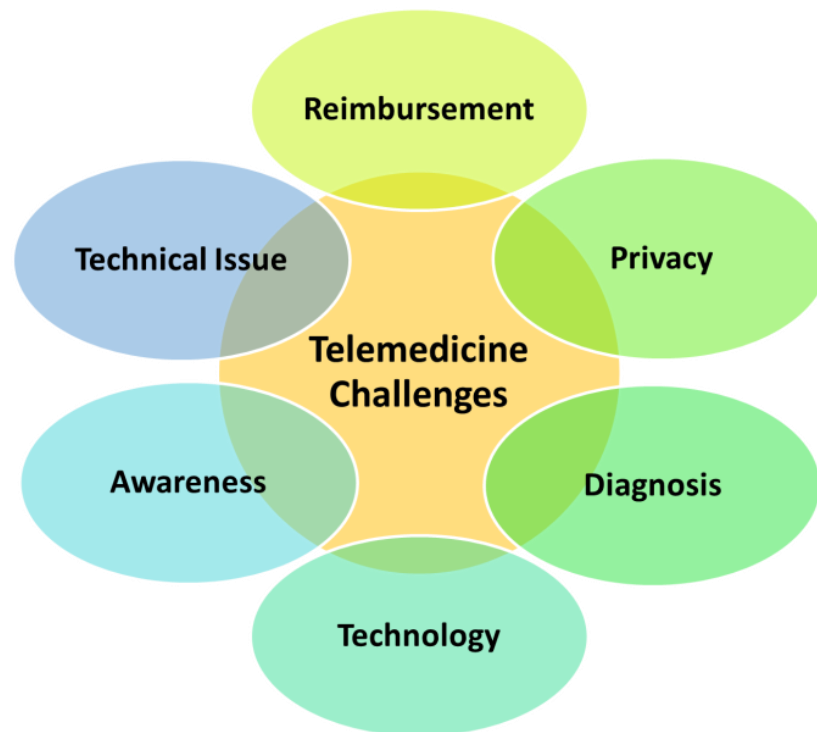
3. Implicit Bias and Avoidance of Health Care

The social determinants of health, a framework for comprehending how external factors like a person's residence and level of education affect their health outcomes, show that living as a person of colour in the United States is associated with worse health outcomes. For instance;

The U.S. Department of Health and Human Services reports that Black infants have infant mortality rates that are 2.3 times greater than those of White infants.

Per the Centers for Disease Control and Prevention, the rates of diabetes among American Indian, Alaska Native, Hispanic, and Black people are much higher than those of non-Hispanic white people (14.5%, 11.8%, 12.1%, and 7.4%, respectively).

The Centers for Disease Control and Prevention report that compared to white persons, people of colour have a greater incidence of COVID-19 infection and worse outcomes. Many variables, including people's tendency to avoid encounters with healthcare providers if they anticipate facing prejudice and racial bias, contribute to these disproportionately poor consequences.

As an illustration, [10% of Black patients](#) reported experiencing discrimination when receiving medical care; per statistics from the Foundation Robert Wood Johnson and Urban Institute, stories of racially prejudiced interactions with healthcare professionals spread by word of mouth, creating dread and anxiety in entire communities. The lack of cultural competency and respect that a person of colour may encounter when seeking medical services can discourage entire communities from pursuing health care.

CONCLUSION

Telemedicine uses electronic information and communications technology to deliver and assist medical care when participants are separated by distance. Through telemedicine, patients without a physical clinic nearby can access doctors and other medical professionals remotely; doctors can also interact over great geographic distances to help coordinate patient care with videoconferencing and cloud-based data. Telemedicine also enables small-town doctors in rural locations to link their patients with specialists and deliver better overall care.

Medicare has to include a permanent telehealth benefit. We must move forward with an evidence-based payment structure that prioritizes value, accessibility, and affordability to make this a reality. As we negotiate the evolving needs of the healthcare system, stakeholders and industry partners must join in this commitment.

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