

OPINION

How telemedicine technology can reduce healthcare costs

Studies have highlighted the multiple benefits that telemedicine lends to screening, including TB detection, PAP smear for cervical cancer and mammogram analysis for breast cancer.

By **ARJUN KALYANPUR**, Dec 20, 2018

5 min read



Almost a decade ago, one of the highlights of U.S. President Barack Obama's term of office was his driving through the Healthcare Affordability Act in an effort to curtail skyrocketing healthcare costs in the country. It is encouraging that today our leaders in India are similarly prioritizing this hugely critical endeavour, as indicated by the recent adoption and roll-out of the ambitious Ayushman Bharat National Health Protection Scheme, which aims to cap healthcare costs through a sweeping comprehensive national health insurance program.

This is clearly a timely intervention.

It is tragic that despite all of the many medical advances over the last century, countries around the world continue to reel under the impact of healthcare costs. The U.S. spends a whopping \$3 trillion a year on healthcare, or 17% of its GDP, or \$8233 per citizen per year. Other developed

countries such as France, the UK and the Netherlands, spend close to 10% of their GDP on health.

In India, healthcare costs have risen dramatically in recent years. In the 10 most expensive states for hospitalization in rural areas, costs have grown by between 83% and 265% over the past decade. Today, non-communicable diseases such as hypertension and diabetes constitute the cause of half the deaths in India. These are chronic illnesses that typically require multiple doctor visits, tests, procedures and/or hospitalizations, and therefore the cost burden of such diseases is massive. At the same time infectious diseases such as Tuberculosis continue to present a major public health problem. In 2006, TB caused India to lose an estimated \$23.7 billion. Can anything be done to tackle this?

One technology based solution that elegantly addresses healthcare costs at many levels simultaneously is telemedicine, aka Telehealth. How?

No doctor downtime - One of the major costs in any healthcare system, especially in a time of physician shortages, is physician time. Utilizing physician time optimally is therefore of paramount importance. It is this precious resource that telemedicine seeks to optimize. Technology allows physicians to simultaneously provide their services to multiple locations, presenting them with a consistently populated work list of consultations, and thereby avoiding expensive downtime.

Leveraging access to specialists - At a time of physician shortages, the costs of specialist care are particularly high as such physicians are few and far between. For instance there are 4,000 cardiologists in India, but the requirement is of 88,000. The U.S. is stated to be facing a shortage of neurologists with areas of the country being identified as “neurology deserts” and India is no exception. Apart from radiology, in critical areas such as acute coronary care, stroke treatment and Intensive care, which are heavily specialist-dependent, telemedicine programs such as telecardiology, telestroke and tele-ICU have been scientifically validated in a number of studies to reduce healthcare costs, apart from being lifesaving in their impact.

No patient travel time - Based on a recent study, 89% of rural patients have to travel 8 kms to access any kind of healthcare. 700 million people living in rural India have to travel a distance of 75 to 100 kms for a tertiary consultation. Studies have shown that between 33% and 50% of patient transfers can be avoided by the use of telemedicine. A U.S. study estimated cost savings of \$ 500,000 in terms of transfer costs saved by deploying telemedicine. This approach is effective in reducing the burden of healthcare costs, as well as significantly reducing the inconvenience to patients’ families.

Night to day conversion – Once the physician is removed from the immediate proximity of the patient by the use of telemedicine, the distance separating them becomes immaterial. With technology innovations, the ability to move large amounts of data rapidly across massive

networks, allows for the physician to be stationed diametrically across the globe. This immediately converts the night shift to a day shift. While numerous studies have shown that this is more physiologic and better for physician health, this also has a major impact on costs. Consider a radiologist reimbursed at \$300,000 dollars/year who works night shifts. Typically such a radiologist in the U.S. works one week in two (to allow for recovery) or 180 days a year. However, if transported to a location across the world where night is converted to day, the same radiologist can work a regular daytime schedule (where allowing for weekends and vacation time, he/she can work approximately 220 days a year). This translates into cost savings for the healthcare system as a whole.

Assistance in screening programs - Screening programs for diseases such as TB or cancer need to be conducted in the field to have maximal impact. In such situations building a telemedicine component into the program can result in major cost savings, as it avoids the need for transporting physicians into the field. Studies have highlighted the multiple benefits that telemedicine lends to screening, including TB detection, PAP smear for cervical cancer and mammogram analysis for breast cancer.

Telemedicine is no longer a pipe dream. A study by the consulting firm Towers Watson estimates that telehealth could save the U.S. as much as \$6 billion annually in healthcare costs. A Deloitte study estimates that half of the roughly 600 million in-person visits to general practitioners that Americans and Canadians make each year could be conducted via telemedicine. As a hub both of technology and high-quality healthcare, there is no reason why similar impact cannot be achieved in India as well. By appropriately using technology such as telemedicine in India, the rising costs of healthcare can be effectively reigned in.



Views are personal.

Dr. Kalyanpur is CEO & co-founder of Teleradiology Solutions, a global healthcare company headquartered in Bengaluru.

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