# DIGITAL HEALTH TECHNOLOGY IN MANAGING HEALTH CARE OF COPD PATIENTS

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**Abstract**

***The use of digital technologies has become the key to the everyday operation of the welfare state in terms of accessing essential and life-sustaining entitlements in India.*** **The Indian government has launched the Ayushman Bharat Digital Health Mission to further the adoption of digital technologies for the treatment of chronic diseases, including COPD. Along with state authorities, the Government of India is continuously investing in efforts to advance the adoption of digital technologies for diagnosis and treatment, resulting in the growing adoption of telemedicine and teleconsultation for COPD.**

**Its use to provide quality healthcare at lower cost. The technological design of the programme illustrates the construction and politics of a digitalized public-private welfare policy intended to meet the health needs of the poorest. By examining data on digital access to healthcare in the RSBY programme, as propounded and sustained by public health policies and a public-private model of governance.**

**Keywords: Digital health technology, Teleconsultation, Telemonitoring**

## Introduction

COPD is a rising public health concern in India. Digital technology use is associated with reduced length of hospital stay and a decline in mortality. Several devices comes with telemonitoring technology and NIV devices for home ventilation is also in the foray. These connected devices can monitor patient parameters remotely and in certain circumstances remote clinical intervention is also possible. Devices like ResMed's Lumis is one such example with in built remote monitoring technology. Digital health apps have the potential to provide a range of solutions to COPD care needs, including real-time video conferencing, sending and receiving emails or notifications, tele health interventions, patient education programs, interactive self-management programs, and tools to record and communicate symptoms . However, there is a lack of evidence demonstrating the effectiveness of digital health technology for the management of COPD.

## Digital health applications, a potential opportunity for remodelling COPD care

Effective, safe, accessible, and engaging digital healthcare system which are able to be integrated into global healthcare systems may play a role in helping to meet this demand in COPD care needs. Digital interventions are unrestricted by individual practices or healthcare systems and come in a range of forms, that includes : synchronous applications (apps) which provide real-time video conferencing or telephone calls; asynchronous solutions such as emails, smartphone messages, or notifications; remote monitoring or recording devices, such as traditional telehealth interventions; information providing devices; and modern multi-tooled digital health apps which can facilitate behavioural changes and self-management. Digital health apps have the potential to provide a range of solutions, including: patient education programmes to support inhaler technique and modification of lifestyle factors; interactive self-management plans; systems to remote monitor; tools to record and communicate symptoms; and also integrating environmental and physiological data which helps to understand an individual's disease and modify risk factors, management and care.

## Materials & Methods

Digital health care apps, smart inhalers, and inhaler add-ons have demonstrated signs of being effective in teaching proper inhaler technique to patients with COPD. According to studies cited by the review authors, patients with Asthma who used these apps had no critical inhaler errors, improved CAT scores, and improved 6-minute walk test scores. Adherence rates also raised to 94.3% in one study. Other studies showed the benefit of Bluetooth inhalers and smart devices, with one showing decreased use of the inhaler after 6 months of using an inhaler that tracked usage and provided disease management information.

Artificial intelligence (AI) technology has also proven useful in identifying patients with COPD who need hospital admission. According to a study the researchers cited, AI has been used to predict hospital admissions with an area under the curve of 0.74. AI was also used to predicted advanced exacerbations of COPD in a different study.

## Conclusion

The successful incorporation of effective and engaging digital health innovations into healthcare systems to provide digitally augmented care has the potential to remodel global disease management and meet the great unmet clinical need of COPD.

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