

# CHAPTER - 10

## STUDY ON CHALLENGES AND ACCEPTANCE OF HEALTH ATM IN 10 DISTRICTS OF RAJASTHAN

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### INTRODUCTION

Health ATM represents a technological advancement aimed at offering a straightforward and cost-efficient solution to rural communities. It integrates diagnostic hardware and software, enabling the measurement of various vital parameters that can be transmitted to a remote physician. This innovative system facilitates point-of-care diagnostic testing and remote consultations via video conferencing. Among the parameters it can measure are body temperature, pulse rate, blood pressure, blood sugar levels, urine analysis, blood differential count, and ECG readings [3]. Additionally, it can conduct tests for malaria and tuberculosis. Furthermore, the system includes a medication vending machine controlled by the doctor during teleconferencing sessions. Following the teleconsultation, the doctor can instruct the machine to dispense the necessary medication. The health ATM system comprises four key components: knowledge management for analyzing patterns of ailments and disease outbreaks, electronic health records for

maintaining patient histories and transferring data, workflow management to oversee consultations, doctor workflows, referrals, and patient registration, and a medicine dispensing mechanism [1,2].

Telemedicine can be defined as the practice of medicine conducted remotely, encompassing diagnosis, treatment, and medical education. Its benefits include the facilitation of access to healthcare services and medical information without limitations of time or location. While there is considerable literature on telemedicine applications in rural areas, there is limited evidence supporting its clinical and cost effectiveness compared to traditional services. However, there are reports of successful telemedicine services, such as in the state of Maine, USA, where statewide telemedicine systems have rapidly expanded in rural and economically disadvantaged areas. Despite the growing interest in telemedicine, particularly in some individual programs, the field of e-health remains relatively new in low- and middle-income countries. Implementation has often been fragmented and uncoordinated, with few programs achieving scale [2].

## **RESEARCH OBJECTIVES**

1. To examine the viewpoint of healthcare providers to recognize the obstacles encountered in implementing Health ATM.
2. To evaluate the hurdles in the acceptance of Health ATM among recipients of healthcare services.

## **RESEARCH METHODOLOGY**

The study employed a qualitative approach, specifically an exploratory study, to investigate the implementation of Health

ATM facilities in ten districts of Rajasthan, namely Baran, Bundi, Jhalawar, Kota, Churu, Chittorgarh, Sawai Madhopur, Rajsamand, Pratapgarh, and Udaipur, which were designated as high-focus districts by the government. The study subjects included service providers such as innovators, Auxiliary Nurse Midwives (ANMs), doctors, and district coordinators, as well as beneficiaries residing in these districts who would utilize the health ATM services. The sample design utilized non-probability convenience sampling. All ten districts selected for the health ATM establishment were included in the sample. From each district, one high-focus block was randomly chosen for inclusion. Within these blocks, one Primary Health Centre (PHC) and its associated Sub Centre were randomly selected, resulting in a sample of ten PHCs and seventy Sub Centres. All doctors from the selected PHCs, as well as all ANMs from both the PHCs and their attached Sub Centres, were included in the sample. Additionally, one district coordinator from each district and the innovator of the health ATM were included. However, due to time constraints, facility assessments were conducted for only one district. Beneficiaries were selected at random, with five beneficiaries chosen from each district, totalling fifty beneficiaries overall.

## **RESULTS & DISCUSSION**

The urban poor face challenges in accessing healthcare, but the situation is even more dire for the rural poor, who often find healthcare services inaccessible and financially burdensome. With this in mind, WISH collaborated with the Government of Rajasthan and its partners to address the shortcomings of the healthcare system. Leveraging technology provided by WISH, its partners aim to overcome the barriers of rural environments and provide essential healthcare services to those in need. One such

initiative is the health ATM, although it requires a shift in mindset. However, WISH remains optimistic about the positive impact this initiative can bring. While there is limited published literature on Health ATMs due to its novelty, there is anticipation that its success stories and the development of a sustainable model will drive its dynamic growth in the future.

Stakeholder interviews reveal a multitude of challenges, each varying depending on individual perspectives. Therefore, implementing an urban Health ATM model directly into rural settings is not feasible. Instead, a customized version tailored to the specific needs and resource availability of the local community is necessary. To gain a deeper understanding of these challenges, both technological and personnel-related, the WISH Foundation plans to conduct a pilot prototype of the health ATM in rural Rajasthan. This approach will allow for the development of a tailored model that is not only acceptable but also sustainable and scalable.

## **CONCLUSION**

Aligned with the study's objectives, various challenges have been identified that must be addressed during the implementation of this technological innovation. In addition to technical considerations, effective personnel management by the implementers will be crucial for the success of this pilot project. A significant insight gained from the study is the delineation of workflow responsibilities from innovators to ANMs to district coordinators, highlighting their respective roles in ensuring the innovation's successful implementation. This exploratory study serves as a foundation for future research, which will be conducted in the following months to validate the suitability of the on-ground implementation plan.

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