

A CROSS-SECTIONAL STUDY ON IMPLEMENTATION OF E-SANJEEVANI SERVICES IN RURAL AREAS OF KALABURAGI DISTRICT

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ABSTRACT

Objectives: India adopted national telemedicine service – “e-Sanjeevani” on November 2019, based on “Hub and Spoke Model” where Health and Wellness Centers under Ayushman Bharat (AB-HWCs) will be the spokes and MBBS/specialty doctors will be the hub. It aims to overcome the shortage of doctors/specialists at the ground level, reduce the burden at higher centers, and inculcate expert medical advice seeking behavior among rural people.

The objectives of the study are to assess the implementation of e-Sanjeevani services in rural Kalaburagi and to identify the challenges faced by the service providers of e-Sanjeevani in rural Kalaburagi.

Methods: A cross-sectional study was conducted across the AB-HWCs in the rural areas of Kalaburagi district over a period of 3 months. Multistage sampling was done, maintaining a constant of 50%. The total sample size was 75 HWCs. The implementation of e-Sanjeevani was assessed using a pre-designed, pre-tested, and semi-structured questionnaire. The data collected were entered into MS Excel and frequency, percentage, t-test, and Chi-square test were employed for analysis.

Results: e-Sanjeevani is implemented in all the selected subcenters (100%) whereas it was implemented only in 14 (58.35%) of the selected PHCs in Kalaburagi district. The service providers face multiple challenges such as unavailability of specialists online (52.3%), long waiting time (43.1%), network issues (41.5%), and unavailability of investigations/drugs prescribed by specialists (40%). Mean grading of e-Sanjeevani on a scale of 1-10 by service providers in subcenters (7.25±1.76) was also statistically significant than in PHCs (6.07±1.82).

Conclusion: Although e-Sanjeevani is implemented in all subcenters in Kalaburagi district, its smooth functioning is hampered by various factors which call for strengthening of specialist availability and other facilities.

Keywords: AB-HWCs, e-Sanjeevani, Telemedicine.

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INTRODUCTION

Telemedicine is the delivery of health-care services over distance using information technology through telecommunication [1,2]. The biggest challenge in health-care services in rural areas of India is the lack of doctors/specialists, inadequate capacities and the problem of prescription, and dispensing of drugs in rural areas [3].

As a cornerstone of Ayushman Bharat Scheme, e-Sanjeevani – the National Telemedicine Service of India was launched in November 2019. The word “Sanjeevani” inspired from the medicinal plant Sanjeevani that is mentioned in the Ramayana epic and is an appropriate metaphor to describe the delivery of health care at the place of need [2]. e-Sanjeevani has digitally brought health services to the masses in rural areas and remote communities in India. It has evolved into the world’s largest documented telemedicine implementation in the primary health-care serving over 241,304,053 patients at over 122,699 Health and Wellness Centers (renamed as Ayushman Arogya Mandirs in 2023) through over 15,460 higher centers serviced by more than 212,290 doctors, medical specialists, super-specialists, and health workers as telemedicine practitioners.

It is based on “Hub and Spoke Model” where HWCs/AAMs will be the spokes and doctors (MBBS/Specialty/Super-Specialty doctors) will be the hub. It is a cloud-based platform, implemented in two modes:

- e-Sanjeevani AB-HWC provides teleconsultations for patients who walk into HWCs/AAMs, assisted by community health officers (CHOs). Doctor–doctor consultation is also possible where doctors in primary health centers and rural hospitals can access specialized opinion from medical colleges and tertiary care hospitals, to deal with complicated cases in remote areas.
- e-Sanjeevani OPD empowers citizens to access teleconsultation from their homes through smartphones or laptops, etc. [4].

Within months of its launch, e-Sanjeevani faced an unprecedented challenge with the onset of COVID-19 pandemic. However, it swiftly evolved into a vital tool amidst the crisis, showcasing its immense potential in addressing health-care needs. As the pandemic unfolded, e-Sanjeevani emerged as a beacon of hope, providing essential medical consultations and support to individuals across the nation, thereby demonstrating its adaptability and significance during times of crisis.

e-Sanjeevani can play a great role in overcoming the shortage of doctors and specialists at the ground level, reducing the burden of secondary and tertiary level hospitals, and encouraging rural people to seek medical advice, reduced exposure to contagious patients and reduced incidence of hospital acquired infections, enhanced privacy, easier patient follow-up, flexible working hours, reduce the time and costs of patient transportation. It can contribute to medical education, clinical research, public awareness, disaster management, tele-mentored

Table 3: Grading of e-Sanjeevani by the service providers, for patient care, on a scale of 1–10

Grade	PHC (N=14) N (%)	SC (N=51) N (%)
<5	3 (27.3%)	9 (17.6%)
>5	11 (78.6%)	42 (82.4%)

Table 4. Comparison of mean grading of e-Sanjeevani by the service providers in PHCs and SCs

???	Grading (mean±SD)	p-value
PHC (N=14)	6.0±1.82	0.05
SC (N=51)	7.2±1.76	

In spite of implementation of e-Sanjeevani, only around 50% subcenters were equipped with the facilities that are essential for its smooth functioning whereas better availability of facilities was found in the study conducted by Panda *et al.* in Odhisha [6].

The PHCs in our study area had better availability of equipments than subcenters probably due to better overall infrastructure and facilities at a PHC, compared to a subcenter.

The service providers face multiple challenges such as unavailability of specialists, network issue, and long waiting time. These findings are comparable to the study done by Bajpai and Wadhwa [8] whereas Kanwar *et al.* [7] reported inadequate training, resistance to change, negative attitude toward telemedicine and high workload, digital illiteracy among population, and poor network as the challenges faced by service providers in Himachal Pradesh. Kapoor reported lack of bandwidth (network issues), lack of infrastructure, and unavailability of timely information (unavailability of specialists/long waiting time) as challenges in digital health in India [9].

The mean grading of e-Sanjeevani by service providers was higher in SCs than in the PHCs, probably due to higher dependence of subcenter on e-Sanjeevani for patient care due to the absence of doctor at subcenter level.

CONCLUSION AND RECOMMENDATIONS

- Digital gap in telemedicine in rural areas is bridged by e-Sanjeevani being fully implemented at the subcenters.

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- Challenges faced by HWCs can be well taken care by increasing specialist doctors, fixing the timings for specialists, addressing network issues and availability of higher drugs at HWCs.
- If done successfully, people in the remote areas will get access to health consultations thereby saving their time and money.

CONFLICT OF INTEREST

All authors declare that they do not have any conflicts of interest.

ETHICAL APPROVAL

Approved.

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Nil

AUTHORS CONTRIBUTION

Dr Taniya, Dr. Prashant Kumar, Dr. I. Amruta Swati, and Dr. Poonam P Shingade designed, extracted, analyzed, and interpreted the data. Dr Taniya conceived the study; Dr Prashant Kumar, Dr. Poonam P Shingade, Dr. I. Amruta Swati guided the design and supervised the whole research. Dr Taniya, Dr Prashant Kumar, Dr. Poonam P Shingade, Dr. I. Amruta Swati prepared the manuscript. All the authors read and approved the final manuscript.

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