

Strengthening eSanjeevani Telemedicine services in Jharkhand: Summary

Approaches, impact & lessons learned



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eSanjeevani is being deployed in health and wellness centers (HWCs) under the Ayushman Bharat scheme of Government of India (Gol).

Intelehealth is a tech-nonprofit that works to improve access to quality healthcare where there is no doctor through telemedicine. We help governments, NGOs and hospitals with technology and implementation services to set up telemedicine programs that improve health access for hard-to-reach communities.

Transform Rural India Foundation (TRIF) has partnered with National Health Mission Jharkhand to support the efforts Government of Jharkhand in COVID-19 and strengthening the RMNCHA+ services in order to facilitate the reach of specialized healthcare services through masses in rural Jharkhand and isolated communities besides enhancing quality of medical services. Together, TRIF and Intelehealth are providing technical assistance to the Government of Jharkhand for strengthening the implementation of eSanjeevani in the state.

Published by:

Intelehealth (Telehealth Innovations Foundation) 14A Shreeji Arcade, Opp Nitin Company, Panchpakhadi, Thane (w) 400602 Maharashtra, India www.intelehealth.org

Implementation Partners:

Ministry of Health and Family Welfare (MoHFW) Statement Government of Jharkhand (SGoJ) & National Rural Health Mission (NRHM) Center for Development of Advanced Computing (CDAC) Transforming Rural India Foundation (TRIF)

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eSanjeevani Jharkhand Impact report – Executive Summary

In the state of Jharkhand, 40% of the state's population continues to live under the poverty line and a significant population resides in remote areas which are underserved in terms of access, availability, and affordability of good quality health services. In the rural context of Jharkhand, telemedicine solutions present an opportunity to enhance the access and quality of health services available to providers by connecting patients to providers through virtual consultation. The government of Jharkhand has adopted a web-based comprehensive telemedicine solution – eSanjeevani - to extend the reach of specialized healthcare services to masses in both rural areas and isolated communities. eSanjeevani Jharkhand is supported by two models of implementation – eSanjeevani OPD and eSanjeevani AB-HWC (Ayushman Bharat - Health and Wellness Center).

eSanjeevani HWC

The Doctor-to-Doctor telemedicine service through which the patient visiting an HWC can virtually connect with doctors and specialists and receive primary health services via a Community Health Officer (CHO).

eSanjeevani OPD

This platform provides healthcare services to patients from the confines of their homes. eSanjeevani OPD enables free of cost, and safe video-based medical consultations between a doctor and a patient.

Intelehealth, in collaboration with Transforming Rural India Foundation (TRIF) and Jharkhand State Government's Health Department, is the key implementation agency for eSanjeevani Jharkhand with a focus on strengthening the **eSanjeevani AB-HWC model** with the following activities:



In February 2021, the project was launched in 5 pilot districts of Jharkhand - Gumla, Khunti, Simdega, Lohardaga and Ranchi. Based on the pilot success, implementation support was initiated and expanded pan – Jharkhand in August 2021.

Total teleconsultations enabled during the evaluation period for this report was 1,75,490 with a 1000x increase in teleconsultations from 50 teleconsultations per month to 50,000 teleconsultations per month.

Overall, we estimate that the presence of the telemedicine facility saved 21.59 km in distance traveled and INR 941.51 on money saved on average per visit per health visit.

Implementation Progress: The results presented are for the duration on May 2021 – June 2022.

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#	Inputs	Activities Conducted	Summary of outcomes
1	Teleconsultations enabled	Population covered – 86,40,000 Population reached – 1,78,000	Total consultations completed: 175,490 Month on month growth rate (May 2021 – June 2022): 66.5% Baseline to endline growth: 175,448 added consultations since May 2021
2	Registration, activation and monitoring of hubs and spokes	Interdepartmental coordination to ensure facility readiness to initiate teleconsultations	Target no. of spokes (Health and Wellness Centres): 1788 No. of spokes/HWC created: 1494 (83.6% of target) No. of spokes/HWC actively providing consultations: 944 (84.2% of registered spokes) Target no. of hubs (backend doctor units): 6
			No. of hubs/ backend doctor units created: 6 (100% of target) No. of hubs/ backend doctor units actively providing consultations: 6 (100% of target)
3	Capacity Building of CHOs (community health officers) and doctors	41 Induction & 21 refresher trainings, 8 advocacy workshops, 5 video conferences, 7 monitoring visits	 1381 of 1788 CHOs trained 574 doctors trained
4	Post training support to the health workers (doctors/CHOs)	Troubleshooting, login issues, resolving issues with navigating the app	Health provider acceptability – reporting a score of 4/5 for CHOs and 3.9/5 for doctors
5	Provider Engagement	Health provider achievements through leader-boards, messages, etc	Mobilizing the health providers to initiate and continue teleconsultations
6	External doctor support – PPP model	5 doctor team as an external hub to catalyse teleconsultations	8.3% of total teleconsultations (approx. 14,000 of 175,490)
7	Advocacy, review and timely reporting	Led by TRIF with government officials, reporting on trends and relevant recommendations	7 advocacy/review meetings conducted with the government

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In April – May 2022, an Outcome Evaluation, was conducted in the initial 5 baseline districts, with 500 patients/clients, 200 health providers (116 CHOs, and 13 doctors) to assess patient satisfaction, user perception, and acceptability toward telemedicine.

Patient Survey

Sociodemographic data:

- Age 3% (0-1 year), 6% (2-5 years), 7% (6 -17 years), 29.2% (18 -35 years), 45.4% (35-40 years), 9.4% (>60 years)
- Caste 45% OBC, 43% ST and 5% SC
- Income 55% below 30,000/- and 91% were below poverty line
- Primary occupation Daily wage labor (35%, n=177); Seasonal labor (22%, n=111); Agricultural wage labor (20%, n=100)

Key successes:

- Treatment compliance was 96.5% among those with a prescription or medical advice
- 87.61% clients received medicine at the health and wellness center (HWC)
- 60% patients reported having entirely recovered from their health problems, 25% reported partial recovery
- The CHO was the main driver for opting into the teleconsultation with 36.2% clients choosing to do so on advice of the CHO

Distance saved:

- We developed a model for estimating distance saved in travel, for clients having used telemedicine services at an HWC. Through the quantitative survey we enquired from clients the distance to their nearest community health center (CHC), district hospital (DH), private tertiary facilities, and private clinic. The average distance saved was calculated based on the estimated percentage on non-specialist and specialist cases, and the average distance to be travelled to access specialist or non-specialist consultation. The model was estimated under the assumption that the alternative to teleconsultation would have been an in-person consultation i.e. nonspecialist cases would receive a consultation at the CHC or private provider's clinic, and specialist cases would receive a consultation at the DH or private tertiary facility.
- Across all facilities, the presence of a telemedicine center can save the clients, between 15-37 kms in distance traveled to and from the facility.
- Overall, we estimate that the presence of the telemedicine facility saved 21.59 km on average per visit.

Money saved:

- We developed a model for estimating distance saved in travel, for clients having used telemedicine services at an HWC. Through the qualitative surveys we documented costs of receiving health services including consultation fees, cost of travel (including food and stay), lost wages for a day (Assuming clients have to forego their wages for the day), and cost of travel companion. We assume that that consultation at government facilities bears no cost. The average cost of consultation was calculated based on the estimated percentage on non-specialist and specialist cases, proportion of female and male clients (proportions calculated from consultation history of eSanjeevani for the year 2021-22), and the average costs associated with specialist or non-specialist consultation. The model was estimated under the assumption that female clients will require a travel companion, and the alternative to teleconsultation would have been free.
- On average presence of an eSanjeevani center saves INR 500 600 for consultations with a general physician and INR 1150 – INR 2500 for specialist consultations.
- Overall, we estimate that the presence of a telemedicine facility saved an average of INR 941.51 per health visit.
- In addition, women spend 1.5 times more than men to access in-person healthcare services. eSanjeevani helps overcome the access barriers faced by women gender equity in health access

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Key challenges:

- 437 (87.4%) patients were advised for an in-person referral after the teleconsultation. This
 indicates a high level of over-referral in the system which needs to be corrected due to doctor's
 medico legal concerns, lack of clinical protocols.
 - Of those referred n=258 (59%) actually went for an in-person consultation. This low compliance rate indicates that telemedicine could improve health access and that 40% of patients do not follow through on referrals
 - However, establishing clinical guidelines for what can be treated over telemedicine and what needs to be referred is important
 - 54% of patients also consulted with an alternate health provider. This may indicate a lack of trust in the teleconsultation model

Provider Survey

Acceptability among Community Health Officers (CHOs):

- Overall score of 4.01 toward the acceptability of eSanjeevani HWC
- 64% (n=75) of the CHOs gave an average score of four on a scale from one to five to the questions addressing the perceived usefulness of the telemedicine platform
- \sim 73% (n=85) of the respondents scored over 4 for perceived ease of use
- ~80% (n=93) scored above 4 for attitude towards the use of technology
- ~93%(n=108) of the CHOs scoring 4 and above towards wanting to continuing to use the application in their HWC

Acceptability among Doctors:

- Overall score of 3.9 toward the acceptability of the telemedicine platform
- 9/13 doctors scored 4 or above on perceived usefulness
- 8/13 doctors scored over 4 for ease of use
- 10/13 doctors scored over 4 for the availability of organization and technical infrastructure

Challenges and barriers identified:

For community health workers (CHOs)	For doctors	For patients
 Lack of community demand and behavior change towards eSanjeevani teleconsultations Lack of digital infrastructure to enable effective teleconsultations: Poor internet connectivity Time-consuming in updating patients' case history Need for increased availability of doctors across the platform Availability of tablets 	 Incomplete case history for patients leading to longer consultation time Overburdened with cases due to a shortage of doctors on the platform Adoption of telemedicine is poor amongst doctors due to the already existing patient load at the health facility Need for a telemedicine cadre of doctors (possibly through PPP Model) Need for advocacy to increase uptake by doctors Over-referrals due to lack of clinical protocols and medicolegal concerns 	 Poor internet connectivity causes increased waiting time Poor infrastructure at some facilities Cyclical shortage of medicines at HWCs leading to need for local purchasing Need for SBCC regarding telemedicine to increase utilization by the communities

Recommendations:

Demand side sustainability recommendations:

- A. Community demand generation through the following activities within the system:
 - Home visits by **frontline health workers** (FLHWs) ASHAs and Anganwadi workers to create awareness about eSanjeevani while conducting home visits
 - Inclusion of **Panchayati Raj Institutions** (PRIs), **traditional tribal leaders** and **SHGs** to include the eSanjeevani agenda
 - Local civil society organizations (CSOs) engaged in creating awareness on patient to doctor app (OPD)

B. Social and Behavior Change Communication (SBCC)

- **Develop IEC resources and communication material** on "About eSanjeevani" for the health service providers and community
- Conduct mass level campaign at block and district level on eSanjeevani using various IEC tools
- Promote services available at HWC to increase footfall and increase uptake of telemedicine
- To increase avenues for interaction between CHOs and clients beyond OPD at HWCs
- Develop posters clearly outlining weekly schedule for different specialist consultation

• **Digital Literacy** – special focus on our clients' digital literacy training so that the use of patient to doctor model and utilization of the app will be improved

Supply Side recommendations:

- A. Resolving for shortage of doctors on the platform and improving the availability of currently active doctors
 - Establishing a cadre of doctors for telemedicine
 - Create caveat for a budget in PIP to engage doctors through a PPP model
 - Engagement of fresh graduates or those doing rural practice/internship can also be designated on eSanjeevani
 - Financial and non-financial incentives for existing doctors
- B. Continued engagement & capacity building of health providers on eSanjeevani
 - **Continued medical education** of doctors both in government service as well as in-training
 - Developing training modules for capacity building of CHOs and Doctors specifically for clinical, legal, and technical training to update them on the latest versions and changes made to the platform

C. Improving Infrastructure at HWC Level and in communities

- Need to invest more in upgrading infrastructure at health facilities including but not limited to – improved availability of electricity, availability of internet connection- Wi-fi or mobile, waiting area for patients, availability of printers to print prescriptions and consultation report. A separate device (laptop or a tablet) is required for teleconsultations for providers
- The state should focus on **improving penetration of internet services across rural areas**
- **Providing local purchasing budget to CHOs** to upgrade and maintain infrastructure and ensure medicines available during periods of shortage

D. Improving Quality of Services

- Establishing a **quality assurance mechanism through monitoring and medical audits** for the teleconsultations provided to the clients to **ensure patient trust**
- **Strengthening the continuum of care cycle** with MNCH, NCD and communicable diseases through telemedicine.
- Focus on improving monitoring and triage of telehealth patients, further detailing the telemedicine activity on patient record system and developing an MIS and evaluation framework for program improvements.
- **Developing Standard Operating Protocols** for follow-up to teleconsultation to increase repeat usage and track recovery of clients. There is a need to establish a telemedicine pathway that lays down clearly referrals criteria, follow-up process, and tracking recovery of clients

Way forward:

 This report focuses on overall activities and achievements of the implementation support provided by Intelehealth – TRIF partnership to the government of Jharkhand to strengthen teleconsultation services in Jharkhand.

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- The report presents the inputs and the outputs and outcomes and supports our implementation strategy to further strengthen eSanjeevani teleconsultations.
- Further health impact and outcome evaluation studies need to be planned to better understand and overcome existing biases and/or limitations.
- Special focus on conducting a study with a larger sample size pan Jharkhand to generate robust evidence for health outcomes and the time, distance and money saved by patients/clients.
- Current limitation is a lack of data on inputs from the state government to assess the social return on investments made towards eSanjeevani telemedicine platform.



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