



# Chikitsa Sahayta Kendra Odisha, India



## *Comprehensive primary health care to the last mile*

**Implementation started: December 2017 | Project status: Active**

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The WHO estimates that over 3.8 billion people, or half the world's population, lack access to essential medical care. With about 75% doctors, 60% hospitals and 80% pharmacies located in urban areas, existing primary health care (PHC) programs in rural India struggle to meet the needs of their beneficiaries and face hurdles in providing high-quality care. Patients also find it hard to navigate a fractured PHC system - they not only experience difficulties in accessing medicines, diagnostic tests, referrals, and financing but even reaching the health care facility is a challenge. 8% of doctor posts at government PHCs (serving 65 million people) are vacant, and those that are filled see high rates of doctor absenteeism. Community Health Workers (CHWs) are a vital resource for providing primary health care, but lack the training and capacity to manage a wide variety of conditions.

The Chikitsa Sahayta Kendra project (Health Outreach Center) in tribal villages of Odisha is using a comprehensive care delivery model to identify, treat and manage patients with high-quality care for primary health conditions through technology. The project, implemented by Arogya Foundation of India, aims at improving geographic and financial access to health care services for marginalized tribal communities. The intervention is implemented in 44 remote villages in Pallahara block, in Angul District, Odisha covering a population of ~45,000. Three community health workers called Arogya Sanyojikas are provided with mobiles and telemedicine kits to facilitate teleconsults, counseling and referrals with 2 remote doctors. These CHWs are supported by 44 community volunteers, called Arogya Sevikas, who support them in screening, follow-up and tracking patient health improvement.

### **Chikitsa Sahayta Kendra**

The comprehensive care delivery model enables CHWs to provide essential services that patients require at the first point of contact with the health system - access to doctors, basic diagnostics, a treatment plan, access to medicines, appropriate referrals, health education & awareness and financing support. This model is delivered through an intelligent mobile technology platform, Intelhealth. The app assists CHWs with a digital health assistant, called Ayu, that guides them to provide quality health services.

**Geographic coverage:** 44 villages in Pallahara block, Angul district, Odisha, India

**Implementing org:** Arogya Foundation of India (Ekal Abhiyan), Odisha

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Ayu has in-built evidence-based protocols for clinical decision support. Ayu guides CHWs in eliciting detailed signs & symptoms to generate a high-quality clinical note. It supports CHWs in collaborating with a remote doctor for decision-making, diagnosis and management of cases that are beyond their level of training. Remote doctors may be based in the nearest town or city and access the patient record through a secure cloud-based electronic health record system. Patient care is managed by the health worker who helps them to navigate the fragmented health system to access medicines and referrals as needed. The platform works on low cost mobile devices, can be contextualized to local languages & can work in very low bandwidth or offline settings.



The pilot study aimed to measure the impact of the health care project on beneficiaries and the community and to understand community experiences and perceptions towards health care through technology. The study was conducted across 44 villages in the intervention area using both qualitative and quantitative methodologies for a careful assessment of the project. Quantitative data was analyzed for 2445 patients from analysis of electronic health records and 340 patients were randomly sampled to receive a post-treatment follow-up survey.

## Outcomes and results

- On average a patient saved 6.5 hours, travelled 30 kms lesser and saved Rs.734 (approximately \$10.5 which includes the cost of travel, lost wages) to access primary health care per health visit.
- Cumulatively, this project has saved the community a total of 16115 hours, 74370 kms and 18 lakhs (~\$25000) of expenditure on health access.
- 89% of patients were able to access the CSK clinic within a walking distance.
- Patients have reported an average satisfaction score of 4.38 out of 5 with a consultation. 99% said they would recommend the service to others.
- 61% of patients reported complete adherence to medications/treatment prescribed, 37% reported partial adherence. 95% of the patients who followed the full medication course reported improvement in health status.
- Patients are being seen for a large variety of health issues like infectious diseases, chronic conditions like upper respiratory tract infections, fever, hypertension, back pain, malaria, gastroesophageal reflux disease (GERD), spondylitis, ear problems, vertigo, osteoarthritis, eczema making this a very comprehensive model.
- 41% of patients received a doctor's response within an hour, 64% within 3 hours and 99% of patients received a doctor's response within 24 hours.
- 71.5% of the beneficiaries are women, 14.2% patients are elderly (60+ years)
- Of those who provided the data, 97.1% of patients belong to scheduled caste, scheduled tribes and other backward castes. (70% patients provided their caste)
- Of those who provided the data, 96.8% are below the poverty line. (64% patients provided economic status)
- Increase in the patients visit by 104% as compared to 2018 which is indicative of the increasing penetration of our services and the trust in the community.
- The remote doctors reported that history notes and physical examination information received through the software platform were sufficient to arrive at a treatment plan. The health workers reported ease of use of the software
- Patients from 31 non-intervention villages traveled to the intervention villages to also avail of health care services.



## Lessons learned

- With the increased capacity building of Health workers, they can provide comprehensive primary health care services for communicable diseases and non-communicable diseases than just targeting maternal and child health care. A large range of conditions covering geriatric care, respiratory illnesses, gastro-intestinal diseases, neurological conditions, cardiovascular conditions, besides others, can also be managed. CHWs supported by telemedicine can provide both preventative & curative services.
- Doctors reported that they were able to diagnose and treat 80% patients remotely using telemedicine.
- CHWs can successfully maintain Electronic Health Records of patients through technology and this enables to provide high quality of care.
- As CHWs and community volunteers can improve health seeking behavior through screening, health education and preventative care.
- Using CHWs equipped with phones, a digital assistant and a telemedicine kit can help bridge the healthcare access gap services in remote areas with low-income groups. However, adequate ongoing resources need to be allocated to maintain phones and medical equipment and volunteer motivation in order for the strategy to remain effective over time.
- A guided protocol has helped task-shift history taking, vitals and physical examinations from doctor to health worker thus allowing doctor to have more efficient consultation time while maintaining a high quality of care. The task-shifting enables a more comprehensive check-up through CHWs which doctors usually do not have time for in an over-burdened health system.
- Access to proper health care services and health awareness results into positive changes in health-seeking behavior.

## Conclusion

The intervention has significantly improved the geographic and financial accessibility by reducing the time, distance and cost to travel to primary health care facility. The technology has empowered the CHW to perform more clinical functions and allows the remote doctor to manage the patient case efficiently, thus bridging the gap of doctors' shortage. The tracking of patient health status right from identification to getting better has ensured health condition improvements through continuous medical care. It can improve accessibility and availability of high-quality health care services.

*"Anywhere else the doctor checks the patients only for 5 minute, but at Chikitsa Sahayta Kendra, the Sanyogikas (CHW) do a full check up giving every patient enough time."*

*- Binita Sahoo (name changed), Magarmohan*

*"We face a lot of problem to reach the government primary health clinic. If we start by morning 7-8 am, we return only by 4-5pm in evening. Sometime it costs 100 rupees (one way) and sometime even more. When I go with friends or neighbors, the expense increases."*

*- Meena Pradhan (name changed), Khantaposi*

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