

Health gets an ally in ANMOL Tab!



TRANSFORMING HARYANA THROUGH SDG IMPLEMENTATION

SDG 3: Good Health & Well Being



SDGCC

SUSTAINABLE DEVELOPMENT GOALS
COORDINATION CENTRE

BETTER HEALTH CARE WITH TECHNOLOGY IN THE 21ST CENTURY

An Abstract

Suman, one of more than 2,000 Auxiliary Nurse Midwives or ANMs in Haryana, walks miles each day to attend to expecting mothers and newborns. However, instead of an unwieldy bundle of papers, she carries a remarkably simple piece of technology called ANMOL.

ANMOL is a tablet that helps ANMs like Suman with not only data capture and record-keeping, but also a range of other tasks including beneficiary validation, health monitoring, and even counseling.

Today, 3 years since its inception, ANMOL has proven its mettle and has become an indispensable part of the ANM's life. It has given a new fillip to health-workers' efficiency and revolutionized the state of pre- and post-natal care in rural Haryana.

The Haryana government's focus on infusing technology into otherwise manpower-intensive healthcare activities has already started showing results with a drastic reduction in data errors and improved quality and timeliness of various healthcare services from preconception to postnatal stages.

This case study charts the progress made with ANMOL, its impact on the state of healthcare, and various strategies adopted by the state government to further improve the program's efficacy.



USING TECHNOLOGY FOR BETTER HEALTHCARE

In 2017, the Government of Haryana launched ANMOL (ANM Online), a tablet-based software built to eliminate redundancy, automate data processing, and empower healthcare personnel for improved throughput.

An auxiliary nurse midwife is a village-level healthcare functionary, each catering to between 3,000 and 5,000 mothers and newborns. ANMs play a crucial role in rural Haryana's maternal healthcare, and data collection plays a crucial role in their activities. Gathering and recording data on around 200 key indicators involved a mountain of paperwork, and was prone to human error.

This is the niche ANMOL was conceived to fill. Putting the power of technology in the hands of grassroots-level healthcare workers was key to making them not only more efficient and accurate but also free for other allied activities such as counseling and education on subjects like family planning, nutrition, immunization, etc.

An initiative with such a direct positive impact on the health and longevity of millions of mothers and infants all over the state was no mere luxury, it was a moral imperative. With the diligence and incredible policy will of the Ministry of Health for Haryana, this initiative wasn't just conceived but also executed. The result was ANMOL.

This case study endeavors to map out the inspiring journey of ANMOL from idea to implementation, the multiple ways it's benefitted the state of maternal healthcare in rural Haryana, and the impact it's had on

the typical ANM's daily life. It also lays out how the interface has been carefully designed for quick adoption with minimal training.

OBJECTIVES

The core objective of the ANMOL initiative in Haryana is to improve the quality of pre- and postnatal healthcare in rural populations by empowering first-line functionaries with technology.

The program aims to streamline ANM activities by:

1. Reducing redundancy — The centralized nature of digital technology enables us to reduce, rather eliminate, all kinds of data capture at all levels. There simply isn't any need to copy the same pieces of health information for different stakeholders because everything is available for perusal off a central server with the click of a few links.
2. Reducing paperwork — Digital storage of data also means elimination of heavy, unwieldy paperwork that weighs down an ANM the most. Reduced redundancy further eliminates paperwork that would've been involved in multiple photocopies and manual copying of data. Essentially, the system takes most recordkeeping overheads off the ANM's and other personnel's shoulders. This also means near-instant data update and retrieval for a more time-critical action.
3. Minimising input errors — Elimination of redundancy in data capture also improves data integrity because fewer the steps, fewer the input errors. And even if errors do creep in, they're easier to fix due to a single point of entry.

KEY STAKEHOLDERS

Funding agencies



Govt. of Haryana



UNICEF



SWASTHYA



PHFI

Beneficiaries



ANMs



Ministry of Health



Pregnant women



Newborns & mothers

KEY STAKEHOLDERS



ANMOL is an ambitious project, with close hardware-software integration being key to its success. Being a major paradigm shift, the program necessitated a comprehensive training campaign to ensure wider adoption.

To begin with, the government huddled with the various functionaries of the Ministry of Health and Family Welfare, UNICEF, SWASTHYA, and the Public Health Foundation of India (PHFI) under the flagship program of the Chief Minister of Haryana.

The program was jointly funded by the state government, UNICEF, SWASTHYA, and PHFI for two key beneficiaries: the ANMs, and women and children of Haryana. The collective endeavor of all these stakeholders lent the program a smooth streamlined implementation in some of the most vulnerable communities across the state.

IMPLEMENTATION STRATEGY



The campaign is the result of convergent action between the Ministry of Health and Family Welfare, UNICEF, SWASTHYA, the Public Health Foundation of India (PHFI), and more than 2,000 Auxiliary Nurse Midwives across Haryana. The initiative was jointly funded by the state government and UNICEF.

The entire operation - including device provisioning, troubleshooting, training, and maintenance - was outsourced via an open tender to Datamini Technologies, a fully Make-in-India compliant business. Per the agreement, Datamini manufactures the proprietary hardware (officially named Jannuti Pad) which is then rented out to the Haryana Government for ₹1,800 a month. Datamini is also entrusted with ensuring the seamless availability of these devices in every ANM's area of work.

To that end, Datamini has appointed several Block Data Officers whose job includes on-ground support and maintenance services for all Jannuti Pads in their respective areas. These tablets run the ANMOL app and come pre-installed with state-of-the-art security features such as barcode and magnetic card readers, along with an Aadhaar-approved fingerprint scanner. Jannuti Pads sport an ergonomic rugged form factor with extensive field use in mind.

Approximately 2,735 Jannuti Pads were distributed to the ANMs in 60 locations across 22 districts statewide in 2 phases. Of these, 600 were distributed in the first phase while the remaining 2,135 in the second phase. In total, this comes to a gross annual expenditure of about ₹6 crore towards rentals. On-site Block Data Officers provide training on these tabs and also answer troubleshooting calls from ANMs in case of any problems.

The initial product training was extensive and lasted as long as 18 months in order to ensure thorough absorption and comprehensive practice.

Before first use, the Jannuti Pad needs to be installed with the ANMOL app, the heart and brain of the entire workflow. Once installed, the tablet is ready for field use. Before each use, the ANM needs to login to their account using their login credentials.

Each Jannuti Pad comes with setup helpline numbers printed on the back. ANMs can call these numbers for any emergency or servicing issues. These calls are answered by Datamini's Block Data Officers who provide not only repair and replacement services but also training and refreshers for existing and new ANMs. All BDOs work under close government supervision to ensure smooth and lapse-free functioning.

IMPLEMENTATION



IMPACT



The impact of ANMOL has been immense and lasting. ANMOL is only one in a series of initiatives reflecting the Haryana Government's commitment to digitization. And it certainly isn't the last.

The most striking impact of this initiative is visual and emotional. An ANM handles multiple villages and had to carry around a dozen data registers to record more than 200 health indicators along with other administrative paperwork. Not only was this a lot of weight to carry around (ANMs walk miles across villages each day), it was also a tedious job involving a lot of duplication and redundancy, not to mention room for manual errors.

With ANMOL, the ANMs now not only feel modern and empowered, but they're motivated to deliver more, better, and with a lot more motivation. With continued adoption, this program has the potential to further revolutionize the way healthcare is delivered in rural India — reduced maternal mortality rates, improved postnatal care, intensive counselling, and better immunization adherence are just a few positives.

These tabs also help greatly cut down on administrative overheads. Now, things like ANM's attendance, schedule, activity plans, etc. can all be monitored with better oversight and much less paperwork.

Major impact areas are in control of both data entry and planning. Previously, the ANM was dependent on Block Entry Officers (BEOs) for this work. Now she has complete control over data entry and rectification. No more physically rushing to the center to submit data written on pieces of paper, no more making copies and

introducing unexpected errors, no more wasting time tracking the individual responsible for errors, and no more carrying around heavy registers and misplacing key documents. The ALM is accountable for everything recorded by her as there's no tampering of data once uploaded to the server.

RESOURCES UTILIZED



There are a total of 2,735 ANMs in the state of Haryana. The program stipulates one ANMOL device (Jannuti Pad) for each ANM across the state. For now, these devices are being procured on rent rather than outright purchase. The state government has commissioned a fully Indian hardware company, Datamini Technologies for the job.

These tablets have been distributed in two phases, both complete, with phase 1 accounting for 600. Each device comes at a monthly rental of ₹1,794 which translates into ₹21,528 annually. All 2,735 devices put together, the budget comes to slightly below ₹6 crore.



"Direct uploading of data saves us time by reducing our workload. It also auto-generates a list of pending jobs helping us provide timely services. ANMOL also helps provide audio/video counselling for pregnant women."

— Suman Kumari, ANM, Sub Center Mallah, PHC Pinjore



"OUR ANM AND ASHA WORKING TO IMPROVE
HEALTHCARE BECAUSE THESE ARE THE BEST
CONTACT WITH THE COMMUNITY"

— Dr. Sunita Mangal



"ANMOL tab is the solution to our problems."

— Sunita, ANM, Sub Center Rathpur, PHC Pinjore



“The tab has helped the ANMs immensely. It has simplified reporting at district level, enhanced data accuracy, and enabled timely action.”

— Harsh Kumar, District Program Manager, Panchkula

WORKERS ARE THE BACKBONE OF
WE ARE THE FIRST PEOPLE TO MAKE
FAR-FLUNG AREAS.”

, Doctor, PHC Pinjore



Anmol can also do Aadhar enabled identification of beneficiaries – anytime/anywhere

KEY CHALLENGES



Every new piece of technology that aims to so drastically change the way things have traditionally been done comes with its own set of challenges. ANMOL was no different. Grassroot-level functionaries are used to doing things manually, even if at the cost of efficiency. Yes there's tedium, but there's also confidence in knowing every aspect of the process that's ingrained in them with years and years of repetition. Any change to this is bound to face mental resistance.

The first challenge to ANMOL came from training. There's over 2,000 ANMs spread across some of the most far-flung parts of the state. These ANMs are not always as tech-savvy or even computer-literate as we'd like them to be. Hence training them on the new process was a work of patience and perseverance. Given the distances, it was also a logistical challenge.

However, with smartphones becoming more ubiquitous by the day, the task turned out to be significantly more doable than we had initially thought. The training and servicing expertise of Datamini also played a key role in streamlining the process. One important step in that direction was ensuring the user-interface is as noob-friendly as practically possible.

REPLICABILITY & SUSTAINABILITY



The ANMOL app is easy to replicate and scale as is the case with any software-driven program. The installation process is quick, easy, intuitive, and straightforward. With a robust 18-month training program in place, the program can expect wide adoption without glitch. Age does seem to play a role

in the learning process too as younger ANMs, being more comfortable with newer technologies, can make the switch relatively quicker. With good language capabilities, the program can be easily replicated in other states as well.

The benefits of this program are not easy to dismiss and as more ANMs start getting comfortable with this new way of doing things, their counterparts in other states will also start demanding similar upgrades from their respective governments. Portability alone is the most compelling argument in favor of wider adoption. Carrying a lightweight device that fits in one's palm is always preferable to a mountain of registers and papers that are not only bulky but also prone to errors and being misplaced.

The benefits aren't limited to front-line functionaries and ANMs alone. The state benefits too. The most direct advantage is improved logistics as data is all centralized and accessible from anywhere anytime. Not just accessed but also processed and analyzed, thanks to almost real-time updates.

Given the Haryana State Government's impetus, Digital Haryana is an idea that isn't going anywhere anytime soon. While the rest of the country is coming to terms with this new 21st century reality under the Indian government's strong leadership, Haryana is striving to spearhead the campaign and ANMOL is just one step in that direction.

Not only does this program streamline healthcare administration, it also improves the quality of training and awareness being imparted to our mothers thanks to the meticulously crafted IEC materials that come loaded on each ANMOL device. These and many other advantages make ANMOL a highly scalable, highly sustainable program with immense potential.

IN CONCLUSION

Healthcare is time-critical where there is no room for errors. Even the most insignificant of lapses here could translate into far-reaching potentially unpleasant implications. That's why this area of governance warrants more vigorous modernization than any other. There is one challenge though. While technology is an enabler, many fear and resist it.

This case study illustrates the need to

- Consistently scan the environment for innovations that improve the health workers' output
- Upgrade/Embrace technology, if it helps to achieve (1)
- Get a buy-in from the user (ANMs).
- Innovative financing of such technology

As a pioneering project of Digital Haryana, ANMOL is the state's first in a series of steps towards healthcare optimization and is set to transform the rural healthcare landscape in the most radical manner. Not only does this place Haryana at the forefront of India's digital revolution, it also ensures visible improvement in the community's overall health and well-being.



Theme

Technology to assist in health care

Nodal Implementing Agency

Ministry of Health & Family Welfare

Geographical Coverage

All Districts of Haryana

Target Group

ANMs, Pregnant women, Newborns & mothers

Year of Implementation

2017 – Present