



TECHNOLOGY FOR TRANSFORMATION

Bihar Technical Support Program

Innovation Brief No. 6

Innovating Digital Job Aids for Scale



THE CHALLENGE: IMPROVING FLW TOOLS

Frontline health workers (FLWs) in India have important job responsibilities. FLWs such as Anganwadi Workers (AWWs) are expected to visit families in their homes to provide health and nutrition-related counseling and services. At the village level, they register and track pregnant women, identify, track and provide meals to malnourished children, and schedule and plan future visits, among other activities. The FLWs would record all this information on paper forms and registers and then send to the block level management to have the information digitized. This process was very time consuming and often resulted in inaccurate information. Too many registers to fill and too many reports to generate often left FLWs with low levels of motivation.

In addition to cumbersome reporting and tracking mechanisms, AWWs who are part of Bihar's Integrated Child Development Services, were also overloaded with job responsibilities and given numerous additional tasks, without access to effective support and efficient training. Supervisors managing AWWs were often not able to help AWWs problem-solve in real time, since they had no access to real-time monitoring data to enable coordination and critical decision-making when the AWWs needed it.

THE INNOVATION: DIGITAL JOB AIDS

Recognizing the need to support FLWs in their day to day work, CARE's Bihar Technical Support Program identified Information and Communications Technology (ICT) as an important lever to increase data-driven decision-making in the public health system. One of the key solutions developed to accelerate decision-making at the last mile of services was the Information Communication Technology Continuum of Care Services (CCS) application. CCS, originally launched in 2012, was a transformative innovation that leveraged the use of mobile phones and related technologies to enhance the capacity of FLWs to deliver key health and nutrition services to communities.

CCS was intended for use with AWW and their supervisors (Lady Supervisors). A dashboard was included to aggregate data input by AWW and Lady Supervisors for use as real-time monitoring at the block, district, state and national levels in India. Through a range of modules available on their mobile phone, FLWs were able to provide personalized counseling and were able to advise pregnant women and mothers in a logical step-by-step manner.

One critical insight that informed the design of CCS was that 86% of FLWs personally owned mobile phones¹ prior to the implementation of CCS. Capitalizing on this, the BTSP team designed CCS as an end-to-end mobile solution that included a suite of applications for FLWs (AWWs and ASHAs) to use when providing health and nutrition-related counseling and services to women and children. In addition to modules for FLWs, CCS also included modules for supervisors to allow them to see compiled, real time data and health worker performance dashboards. CCS also improved coordination and integration of services provided by different cadres of FLWs (AWWs and ASHAs) as details about individual clients would be accessible on the application, no matter which cadre registered or updated those details.

Testing and Evaluation

The CCS application had been tested and its scale and success evaluated, including an evaluation conducted in 2015² and a quasi- experimental in 2016.³ The 2015 evaluation documented results from a randomized control trial of this ICT component to examine the impacts of its use on provider and client behaviors.⁴ It is one of the first evaluations to examine the changes in health behaviors based on an ICT tool. Other evaluations look at how often health workers use a tool, but few studies had examined if tools were making a difference for the women and children reached by health workers.

The 2016 evaluation noted that the first phase of the innovation (2012-2015) showed significant improvements in quality and reporting of service delivery, time efficiency of data collection and equity in delivery of services. FLWs using the CCS application were found to be better in tracking and reaching families with multiple services and information from pregnancy through children aged two. Notable improvements included:

Coordination among health workers: health workers were 30% more likely to coordinate with each other to improve services and coverage when they had the phone than when they were without it.

Confidence levels: FLWs reported an increase in confidence in their ability to perform their jobs and feeling more effective in the delivery of health services and the community and their supervisors recognize their contribution.

Access to care, information and behaviors by women visited by FLWs: Overall, 49.8% of pregnant women who were visited by a FLW using the app attended 3 antenatal care visits vs. 28.8% in the control.

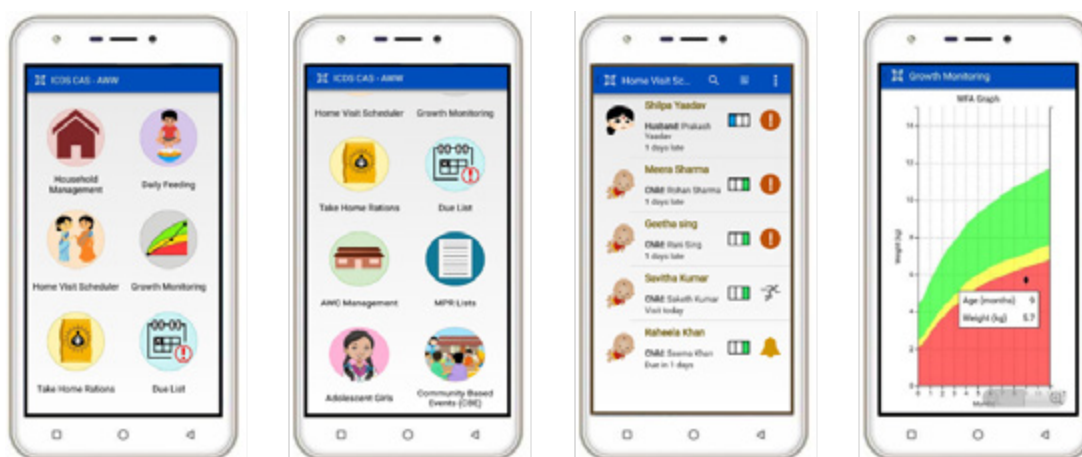
As a result of this robust evidence and positive use experience of FLWs, CARE was able to present this information to the Government of Bihar as well as the Government of India. CCS was redesigned and upgraded for use in Android smart phones in 2015. Adapted and scaled by the Government of India, CCS became the go-to Digital Application for FLWs (see Figure 1).

RESULTS

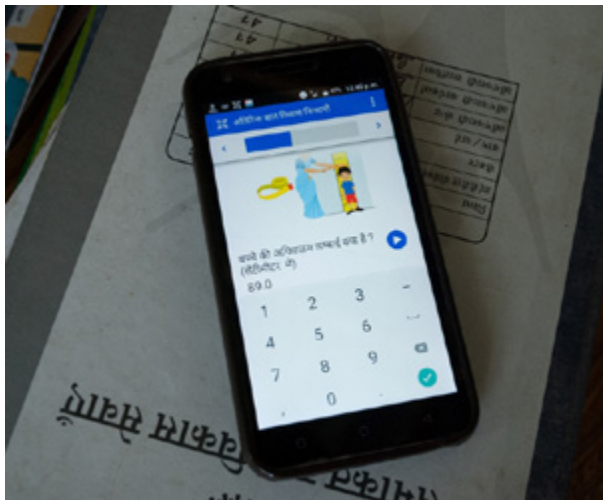
The newly adapted and scaled digital job aid has solved many of the challenges that previously affected FLWs. FLWs are now able to digitize data at the village level, improving the accuracy and timeliness of the information. Due to the real-time data entry, supervisors can access information from FLWs more quickly, allowing them to provide timely feedback and support to FLWs. The application also integrates many of the tools that health workers were needing, including calendars, videos, checklists, and reporting requirements. The Digital Application for FLWs has made FLWs jobs easier, which in turn has motivated many of them to use it consistently.

The application has been used for decision-making by stakeholders at various levels including village, block, district, state and national. The dashboard feature of the application enables decision-makers to understand the realities of the communities, specifically the women and children, reached by FLWs. The application's dashboard has also enabled stakeholders to recognize issues and adapt care and services based on data. For example, in Andhra Pradesh, FLWs were able to identify what percentage of deliveries resulted in weak newborns. This data enabled FLWs to follow up appropriately on home visits and continue monitoring households with weak newborns. Data was leveraged for capacity building of FLWs to recognize this data and make changes or adaptations as necessary.

Figure 1: Interface of Digital Application for FLWs



Through the Digital Application for FLWs, more than **480 MILLION** of the population are registered and **57 million** mothers and children are being tracked by name.



?? WHATS NEXT:

Included in the Government of India's \$1.38 billion investment in health and nutrition nationwide, the digital job aid was aimed to be scaled to 1.4M FLWs. Prior to the COVID-19 pandemic, 50% of FLWs had been using the application; however with the onset of COVID-19 in 2020, there have been delays in training and reaching the remaining 700,000 health workers with the application.

CARE India is leading the central training agency that is not only training FLWs in the application, but it is also monitoring the quality of further trainings and ensuring effective usage of the digital job aid with FLWs. As a key partner with the Government, CARE is supporting the quality and implementation of this innovation to reach transformative scale.

Based on the experience with CCS and the upgraded digital job aid, CARE is developing its own open-source platform and new digital job aid, e-ASHA. While the application is being piloted in Bihar, the aim of the application is for global scale, with the ability of any frontline health worker to utilize it. Leveraging the lessons from recent experience, CARE continues to innovate digital tools that can transform health systems and the lives of health workers everywhere.

This brief is part of the Bihar Innovation Series, which highlights some of the innovations and models that make up the Bihar Technical Support Program. In partnership with the Government of Bihar, CARE has developed innovative solutions that are increasing access to high quality health services in Bihar.

The Bihar Technical Support Program is helping the Health and Social Welfare Departments of Bihar to achieve their goals of reducing rates of maternal, newborn, and child mortality and malnutrition, and of improving immunization and reproductive health services statewide.

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Endnotes

- 1 Mhealth experiences: from Rigorous Research to Transformative Scale. PowerPoint Presentation. CARE India.
- 2 Borkum et al. Mathematica Policy Research. Evaluation of the Information and Communication Technology Continuum of Care Services Intervention in Bihar. Final Reort. May 8, 2015
- 3 Balakrishnan et al. BMC Medical Informatics and Decision Making (2016) 16:84
- 4 Borkum et al. Mathematica Policy Research. Evaluation of the Information and Communication Technology Continuum of Care Services Intervention in Bihar. Final Reort. May 8, 2015