

# Improving government health services and data collection in Rajasthan, India

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## Highlights

### Evidence impact

- Positive impacts on immunisation rates as a result of the Khushi Baby system of digital health records led the government to partner with the research and implementation team for the new Nirogi Rajasthan ('Disease-free Rajasthan') scheme.
- The new scheme includes features of the evaluated Khushi Baby system, including mobile application-based health (mHealth) information collection and portable digital health records.

### Factors that contributed to impact

- The researchers piloted a novel mHealth innovation – digital health records stored in amulets with microchips – that had already won several recognitions, including the UNICEF Wearables for Good challenge.
- The pilot was implemented through the government health system via frontline health workers and supervising officials, thereby involving them in the process from the outset and building interest in the findings.
- A senior health department official highlighted the acceptability of the digital amulets amongst caregivers and the promise of improving administrative monitoring, while reducing the burden of paperwork as reasons for the government's continued interest in Khushi Baby's mHealth intervention.

## Impact evaluation details

Title: [A mixed-methods evaluation to determine the effects of a novel mHealth platform...](#)

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## Context

**Vaccine-preventable conditions put 9.4 million children across India at risk of death or disease each year, making expanding and deepening immunisation an urgent priority. According to the 2015–2016 National Family Health Survey, less than half of the children in Rajasthan’s Udaipur district got all of their vaccine shots.**

**In response, 3ie supported US-based non-profit Khushi Baby to implement and evaluate a new mHealth system in five rural blocks in Rajasthan’s Udaipur district, in partnership with the state’s health department. Treatment areas were the catchment areas of the rural health outposts or sub-centres where the Khushi Baby system was implemented.**

The Khushi Baby system included multiple components aimed at frontline workers and caregivers. Mothers who had just delivered a child received a wearable digital health record for infants, designed to resemble a traditional amulet. Frontline health workers received tablets with biometric verification and an Android application for scanning the pendants and entering data on immunisations and other health indicators for mothers and children.

The system sent automated voice-call reminders in the local dialect about the immunisation schedule to the participant caregivers. It also enabled the Khushi Baby team and health officials to track maternal and child health data through online dashboards.

## Evidence

The cluster randomised trial of the Khushi Baby system found that it had a significant positive impact on the immunisation rates of infants. By the end of the two-year evaluation in 2018, children in the treatment areas were 1.66 times more likely to be fully immunised than those in the control areas, which used only the existing paper-based maternal and child health tracking systems. The cost per 10 percentage point increase in the likelihood of full immunisation was US\$0.68 (INR 50) per child.

Testimonies from frontline health workers in the treatment arm indicated they were satisfied with the intervention and perceived it to be the cause of improved beneficiary attendance at health camps. However, the evaluation found no decreases in hospitalisation, decreases in infant mortality rates or increases in the retention of children's health records.

‘... if we work in collaboration with the health structure and we try to understand the requirement of that system. and then we make our process and formulate the things, and then after identifying those gaps we put in our evidence to fulfil those gaps, then I think it is very promising ...’ — Dr Sanjeev Tak, deputy director medical and health services, Department of Medical and Health Services, Udaipur division, Government of Rajasthan

## Evidence impacts

### **Catalysed collaboration on a new government programme**

The Rajasthan government appointed the Khushi Baby team as a technical partner for the government's new Nirogi Rajasthan scheme, based on discussions of evaluations. Under the scheme, frontline workers were to conduct a state-wide health census, collecting health information using a customised mobile application. Similar to the digital pendants under the evaluated programme, the scheme also envisaged portable digital health record cards for all residents. The government aimed to leverage the data and link health records to improve monitoring and delivery of government health services.

## Suggested citation

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