

**Internship
at
Kush Baby Inc,
Udaipur**

***By*
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*MBA Hospital and Health Management
2014-2016*

The logo for IIHMR University, featuring the letters 'IIHMR' in a large, bold, serif font, with 'UNIVERSITY' in a smaller, sans-serif font to the right. The text is white on a dark red background.
**The IIHMR University, Jaipur
2016**

INTERNSHIP REPORT

INTRODUCTION

About the organization:

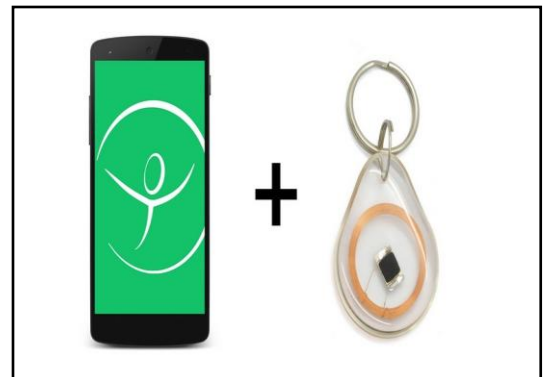
Khushi Baby (Happy Child) is an innovation developed in April 2014 out of the Yale Center for Engineering and Design's course on Appropriate Technology, Yale University for the Developing World. It was at this juncture that *Khushi Baby*'s project team decided on a pilot study to address the persistent problem of child immunization and its documentation in Rajasthan with the aim to digitize and decentralize patient medical records at the point of care and as a result *Khushi Baby* partnered with Seva Mandir, a leading grass roots NGO in Udaipur, Rajasthan to conduct its Randomization Control trials through their vaccination outreach program.

Mission: To track each pregnant woman and child's immunization to the last mile so that children do not continue to die from vaccine preventable diseases.

About *Khushi Baby* System

Figure1: *Khushi Baby* system- The mobile app and Necklace.

The *Khushi Baby* system presents an ecosystem attempting to address the challenges of effective vaccination delivery at the last mile, where the patient population is mostly illiterate and below poverty line.



The KB system consists of:

1. An NFC necklace for patients, which stores their immunization MCH and RI records for mothers and then their children. The necklace decentralizes data and allows for streamlined patient identification.
2. An Android mobile app for health workers, allowing them to digitally access and edit patient records without mobile connectivity or consistent syncing to a central server - unlike any other mHealth app. The app provides important standards and in-field clinical decision making to help health workers give the due vaccines for a given child.
3. A cloud-based dashboard or resource management tool for health managers, allowing them to manage stock and logistics with the support of real-time, granular data on patients, health workers, and immunization camps.

More than just another approach to digitize the record keeping process, the KB system presents a novel community engagement platform. The KB necklace with black thread is grounded with anthropological relevance of protecting the child from *nazar* (evil maladies) in the villages within our catchment area, as well as throughout South Asia. As a result, this wearable serves as a potential educational tool for health workers, a potential symbol for MCH health awareness, and a potential talking point for recruitment of non-compliant mothers. The KB system also looks to build on other approaches to connect the data back to the community in the form of voice call reminders and education. In this case, the approach is unique in utilizing locally-specific dialects. Currently, the KB intervention is being evaluated in a 96 camp, 3 arm RCT, with Seva Mandir as the implementing NGO in the Udaipur district of Rajasthan, IIHMR Jaipur acting as evaluator, and JHSPH acting as the funder. The purpose of the ongoing RCT is to measure the independent effects of the social symbol and voice calls on on-time vaccination adherence from DTP1 through DTP3 and overall camp attendance.

The technology: KB app is a like any other mobile application that can easily be downloaded in a near field communication (NFC) supporting android phone, NFC is a form of short-range communication that enables the wireless transfer of data. The KB necklace has a small NFC chip that stores patients records, the chip is embodied in a plastic body and tied to a black thread for the child. Via cellular service, it uploads all vaccine data to the cloud database that can then be monitored via the Dashboard that provides real time analytics of the vaccination rates.

Timeline:

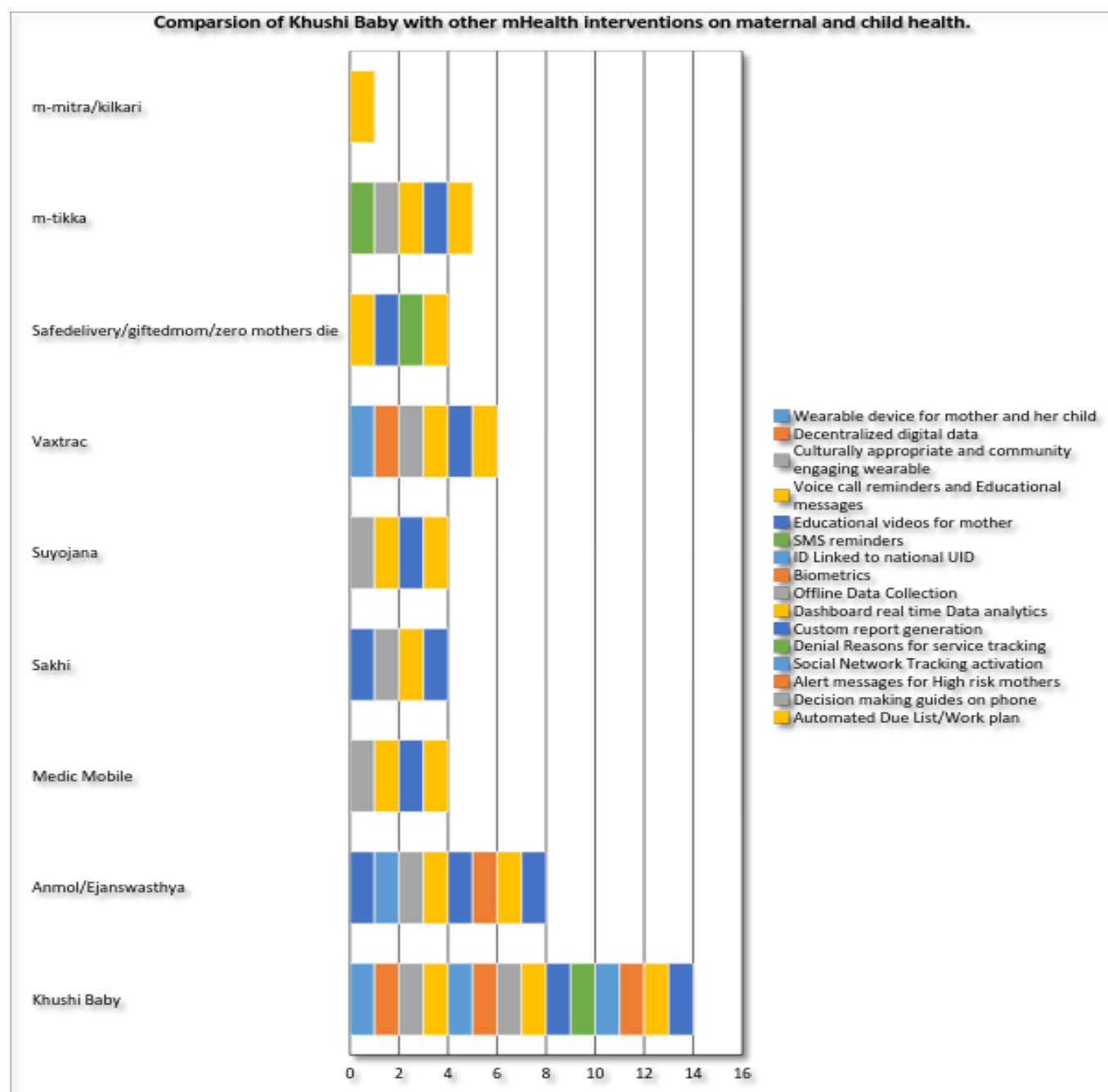
2015-2016

Beginning July 1 2015, KB Inc. conducted a 9 month, 100-camp randomized controlled trial and nested observational study to validate the efficacy of KB system and its particular features in partnership with Johns Hopkins University, Yale University, and Indian Institute of Health Management Research University, Jaipur. Funding was provided from Thorne prize award, yale university, Future health systems, Kickstarter crowd funding.

2016-2020

A second round of randomized controlled trial will be conducted late 2016 onwards to reach up to 316 government organized camps. Funding for this study will be provided by 3ie Initiative.

Figure 2: How is KB different from other m-Health:



How to use KB app?

The health worker can feed in the child personal and vaccination data in the app and simply scan the necklace to retrieve, edit and update information. As soon as the phone enters an area with

Organization Profile:

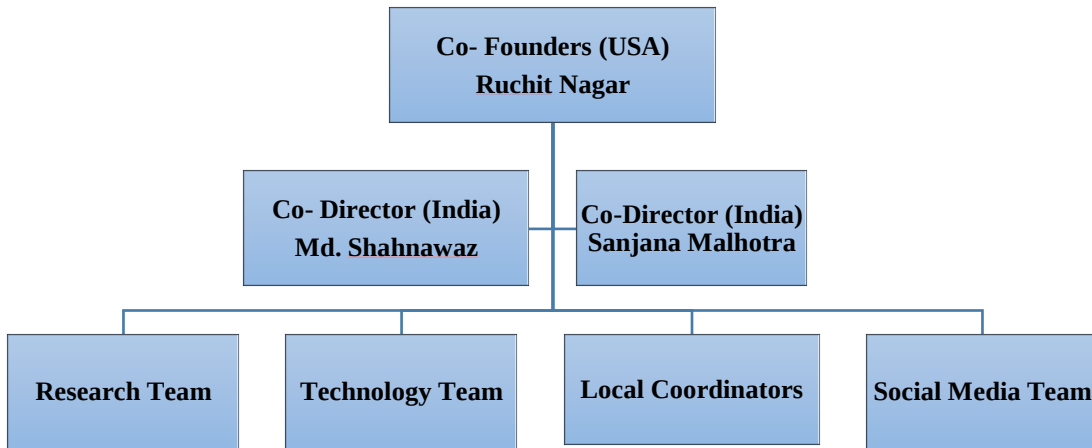


Figure3: A representation of Khushi Baby Inc. Organogram