

Case Study

How ImTeCHO's ASHA field worker could save the life of a newborn infant using mobile phone technology powered by Argusoft



It was raining heavily on a gloomy monsoon day in August 2013 when Kusumben, ASHA outreach worker associated with Jhagadia village, logged into ImTeCHO's mobile phone application as she does every day and checked her work-plan (generated by the software system designed by Argusoft based on predefined logic/rules). Patient Sunita Vasava (name changed to safeguard confidentiality) was there on the list of beneficiaries to be visited that day. Kusumben went to Sunita's home carrying her ASHA medicine-kit.

Sunita's home consisted of a single room hut with roof covered with plastic and large holes in the walls with a makeshift bathroom few meters away from the home. The Mud floor was filled with water as rain-water was flowing inside the house from all directions. Cold wind was blowing into the hut from the holes in the wall and a *small chulha (coal fire)* was burning which was filling the room with black smoke. In there was a newborn baby girl who was delivered few days back, quietly sleeping with her tired mother Sunita on a small cot. The baby was born preterm at SEWA Rural hospital and weighed only 4 lbs at the time of birth.

Kusumben showed the mother a short 2 minute video which gave information about how mother and family should take care of the baby. She explained that the baby should be kept in a clean and warm place.



Kusumben started filling out the digital form on the mobile phone which allowed her to ask questions and perform critical examination of the baby and mother to detect any sickness (decision tree based triaging). The menu reminded her to take vitals like temperature and weight of the baby and asked her to check for signs of serious infection which are common among newborn babies. It was like a guide As she completed filling the form (decision tree), mobile phone automatically came up with the diagnosis, showing that the baby

was too cold (medical terminology - hypothermia) which put it at risk of sudden death. Kusumben was relieved to find instructions in the mobile phone about how to take care of such a cold baby, as if there was a doctor with her! Based on the instructions, she took appropriate corrective actions to provide warmth to the baby that included Kangaroo Mother Care (KMC), more frequent breast feeding and avoiding bath. She showed a video to the family on how to use a *Kangaroo-jholi* (sling) to be used by family-members to provide body/skin contact to the baby for providing warmth. Kusumben explained to the mother about what family needs to do for taking care of a baby who is cold. Satisfied that she had done her best, she packed-up and left. In the absence of a doctor this was the best care that Sunita and her baby could get that would save her life.

The mobile phone software immediately alerted SEWA Rural headquarters office about Sunita's baby who was diagnosed with hypothermia. A senior health-worker (from the Emergency Response Team) visited the baby the next day along with Kusumben. The baby was still cold because of the extreme exposure to cold due to the large holes in the wall of the small hut. The baby was also not gaining weight. Because baby's condition was still serious, the ERT recommended the family to refer the baby to SEWA Rural hospital. The family agreed and the baby was brought to SEWA Rural hospital where the pediatrician decided to admit the baby in the neonate intensive care unit. The baby was in critical condition, but now it was in the right place, thanks to Kusumben's onsite efforts and the help she received from ImTeCHO/Argusoft's mobile phone application. Fortunately, the baby's condition improved and it gained enough weight to be discharged after a few days. Kusumben recently visited her for a follow up visit and the mother was now doing all the right things to keep the baby warm and healthy. Kusumben is proud of herself to have been able to save the life of this baby. Kusumben was aided by the ImTeCHO/Argusoft application, which reminded her to visit this baby, instructed her on taking the vitals and following a diagnosis path and provided a diagnosis and steps to be taken along with alerting the hospital/doctor/ERT about the at risk baby so that hospitalization could be arranged.

This is one of the many examples where ImTeCHO/Argusoft's mobile phone based system has helped ASHA outreach workers (not medically trained nurses), to save lives and improve the pre and post pregnancy nutrition and health of mothers and children in remote/rural areas where access to doctors and facilities do not exist.