

# CASE STUDY 3: IRD — ZINDAGI MEHFOOZ

## Background

Pakistan is one of three countries across the globe where Polio remains endemic. Peshwar, Pakistan's northwest province, has been declared by the World Health Organization (WHO) as the city with the "largest reservoir of endemic poliovirus in the world," caused by open sewage channels and broken water pipes. Full immunization coverage in the country remains modest, with levels varying from below 40% up to 80% by province.

Pakistan's Ministry of Health (MoH) instituted the Expanded Program for Immunization (EPI) to combat the Polio endemic by vaccinating all children in the country. To support this initiative, Interactive Research for Development (IRD) launched Zindagi Mehfooz (meaning "Safe Life"), a mobile-phone based online immunization registry. In collaboration with the Department of Health in Sindh Province, IRD is using this registry to increase the efficiency of vaccine services and to aid EPI staff by providing real-time data through streamlined reporting systems.

**Type of program:** Mobile incentive payments to community health agents

**Health focus:** Vaccination

**Date launched:** June 2012

**Stage:** Scale up

**Size:** 300,000 children

**Countries:** Pakistan (Peshwar Province)

**Key partners:** MoH Expanded Program for Immunization (EPI); Sind Province, Government of Pakistan; openXdata.org; Indus Hospital; Johns Hopkins Bloomberg School of Public Health; WHO

**Mobile providers:** Telenor and Ufone  
**Funding:** United Nations Foundation and mHealth Alliance

## Mobile Money

Zindagi Mehfooz aims to benefit approximately two million children in one of Pakistan's most disadvantaged provinces, Kyber Pakhtunkhwa. The registry uses a combination strategy of reminders and incentives to encourage parents to vaccinate their newborn children against measles, hepatitis, and polio.

Lottery Incentive Payments		
Vaccine	On due date	Late
BCG	Rs 200	Rs 200
Penta 1	Rs 300	Rs 250
Penta 2	Rs 500	Rs 350
Penta 3	Rs 600	Rs 400
Measles	Rs 700	Rs 450

Every child enrolled in the program is assigned a radio frequency identification tag (RFID), which enables health workers to track them in the system using near field communication Nokia 6131 phones through IRD's Interactive Alerts application. RFIDs are placed on each child's EPI identification card to track their appointments in order to ensure they are receiving the appropriate vaccinations at the correct time intervals.

In addition, the RFID is linked to a lottery system, which distributes prizes to parents who vaccinate their children. The lottery system uses mobile money to transfer prize payments to caregivers. When the child receives vaccinations, their RFID is scanned. With each subsequent vaccination that a child completes and for all vaccinations that are completed on time, the potential prize amount increases. If a caregiver wins the lottery, they receive a code via their



mobile device which can later be redeemed at a local kiosk. Store owners verify the transaction by scanning the RFID on the child's EPI card.

As an additional incentive to encourage vaccination of children, each time a caregiver is awarded a prize, the health worker who was responsible for administering that vaccination or scheduling that appointment also receives a mobile money payment equivalent to 40 percent of the lottery prize. Mobile money is therefore used to incentivize health users to vaccinate children, as well as health providers to provide quality care.

## Results

Since launching Zindagi Mehfooz in 2012, over 35,000 newborns and infants have been enrolled in the program. Overall, the electronic registry and lottery incentive scheme have contributed to increased EPI enrolment of infants who otherwise would have been missed, improved uptake and timeliness of vaccinations, incentivized health workers, and generated real-time data for improved monitoring and evaluation.

### Mobile Money Payment Process

1. If prize is won, caregiver receives code via SMS
2. Caregiver visits kiosk to redeem code
3. Kiosk owner confirms transaction by scanning the RFID on the child's EPI card and provides cash to caregiver
4. Vaccine provider receives additional incentive payment equal to 40% of lottery prize
5. Providers cash out at local mobile money kiosk

## Lessons Learned

- *Tailoring solutions to meet local needs* – IRD has tailored Interactive Alerts to meet the expressed needs of the local health system and community. The Interactive Alerts application sends SMS reminders about vaccination appointments to caregivers who have previously enrolled in the Zindagi Mehfooz lottery system during their dependent's EPI center visit.
- *Power of performance-based incentives* – IRD has found that performance-based incentives can be a powerful tool for inducing extrinsic motivation among health workers to
- provide better healthcare services, most notably in situations where they have few avenues for vertical mobility and salaries are not tied to performance, which can lead to perverse behaviors. Mobile money provides a safe and efficient method for transferring these incentive payments.

## Challenges

- *Conflict environment* – Zindagi Mehfooz is being implemented in an environment racked by near-daily attacks by Taliban militants who have specifically targeted and condemned the work of polio vaccination teams in retaliation for US drone strikes in the region. This is further fueled by a general suspicion of programs backed by Western powers. As a result, attractive incentives and flexible, discrete payment mechanisms are necessary to generate local interest in programs such as this.

## Looking Forward

Based on the success of Zindagi Mehfooz, this comprehensive and evidence-based approach is now being incorporated into the WHO-led multi-site THRIVE study for the adaptation, validation, and institutionalization of the Open Smart Registration Platform (OpenSRP), an mHealth platform that allows health workers to electronically register, track, and monitor the health of their patients.

## Sources

- Inputs from Asad Zaidi, Epidemiologist/Manager, IRD, and Subhash Chandir, Director of Maternal and Child Health Programs, IRD
- [http://apps.who.int/iris/bitstream/10665/92806/1/WHO\\_RHR\\_13.16\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/92806/1/WHO_RHR_13.16_eng.pdf)
- <http://healthmarketinnovations.org/program/zindagi-mehfooz-safe-life-program>
- <http://www.theguardian.com/world/2014/mar/10/pakistan-pay-parents-polio-vaccination-drive>