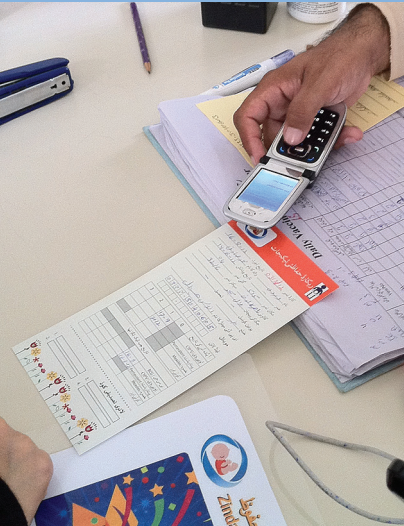


Small incentives improve vaccine coverage in Pakistan

IRD's Interactive Alerts



Vaccine-preventable deaths account for an estimated 17% of the 8.8 million deaths worldwide each year in children under five years of age (1). In Pakistan, despite major efforts to improve immunization coverage through the Expanded Programme on Immunization (EPI), low uptake and delayed immunizations leave children vulnerable to vaccine-preventable diseases. Full immunization coverage remains modest, varying by province from below 40% up to 80% (2,3). In addition, limited programmatic data are available on age-appropriate immunization coverage, which assesses whether these critical vaccines have been administered at the right time points during infancy.

Information and small incentives can make a huge difference. Through SMS reminders and a lottery system with cash prizes for participants, IRD (Interactive Research & Development) seeks to eliminate vaccine-preventable illnesses by increasing the timely completion of the EPI schedule among children throughout Pakistan.

How Interactive Alerts works

To encourage timely vaccinations, IRD's Interactive Alerts application sends SMS reminders about vaccination appointments to caregivers who enrol in a lottery system during an EPI centre visit. As shown in the diagram, the amount of cash that caregivers are eligible to win in the lottery increases for each subsequent vaccine their children complete and for vaccinations completed on time. Each time a lottery prize is won, the health worker who administered the vaccination also receives a payment equivalent to 40% of the lottery prize, which acts as an incentive for health workers to provide efficient vaccination services. Finally, Interactive Alerts enables health workers to track individual children enrolled in the programme using a phone-based radio frequency identification (RFID) system supported by near field communication (NFC) Nokia 6131 phones, to make sure that each child completes the scheduled vaccines on time. Together, these innovative strategies work to help prevent needless childhood deaths and illnesses associated with vaccine-preventable diseases.

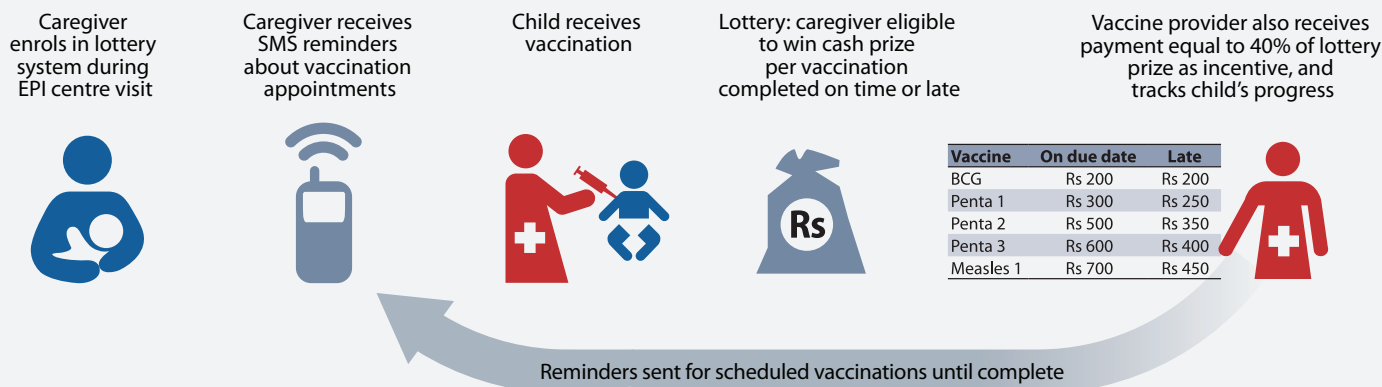
Supporting national public health programming

The Government of Pakistan has recently affirmed its commitment to immunizations for childhood illnesses by becoming the first country in South Asia to introduce the pneumococcal vaccine, and UNICEF has appointed Asifa Bhutto Zardari, the president's daughter, as Ambassador for Polio Eradication. IRD is collaborating with the Department of Health in Sindh Province to increase the efficiency of vaccine services and to aid EPI staff with real-time data-driven decision-making by streamlining the reporting systems. IRD works collaboratively with EPI staff to develop creative solutions for improving the coverage and timeliness of all required vaccines, and to tailor the Interactive Alerts mHealth solution to the needs of the local health system and community.

Partnerships for support and sustainability

The Interactive Alerts mobile phone application aims to bring widespread benefits to diverse communities in Pakistan, including improvements in vaccination coverage, reductions in the need for outreach services and outbreak control, decreased numbers of children defaulting on vaccines and





prevention of vaccine stock-outs. To achieve these benefits and increase the longevity and sustainability of the programme, IRD will be integrating activities across several projects with the aim of setting up a social enterprise focusing on child health and lung health services that can generate sufficient revenue to continue supporting core activities of the programme. Current partners include mobile network operators that generously provide reduced fees to keep programme costs down. With additional programme investments from a diverse range of partners, Interactive Alerts aims to bring significant improvements in health outcomes and substantial cost savings to the health system.

IWG catalytic grant for mHealth programme scale-up

IRD was awarded a grant to scale up the use of the Interactive Alerts programme in Pakistan, by the United Nations Innovation Working Group's (IWG's) catalytic grant competition for maternal, newborn and child mobile health (mHealth), managed by the mHealth Alliance. Interactive Alerts was successful in the grant competition because it employs an effective delivery strategy for an evidence-based child health intervention, combined with creative financing strategies to promote sustainability – elements that are critical for mHealth tools to contribute to Millennium Development Goals 4 and 5.¹ Through IWG, IRD is receiving assistance from WHO RHR to optimize scale-up of Interactive Alerts while also contributing to the mHealth evidence base and best practices on implementation and scale-up.

Assistance: The project receives a grant from the mHealth Alliance; and specialized research assistance from WHO's Department of Reproductive Health and Research.

¹ MDG 4 is to reduce child mortality; MDG 5 is to improve maternal health (www.unmillenniumproject.org/goals/gti.htm)

References:

1. *Global immunization data*. WHO and UNICEF, October 2012 (www.who.int/entity/immunization_monitoring/Global_Immunization_Data.pdf).
2. *Pakistan Demographic and Health Survey 2006–2007*. Islamabad, Pakistan, National Institute of Population Studies and Macro International Inc., 2008.
3. Hasan Q, Bosan AH, Bile KM. A review of EPI progress in Pakistan towards achieving coverage targets: present situation and the way forward. *East Mediterranean Health Journal*, 2010, 16 Supplement:S31–S38 (www.emro.who.int/emhj/V16/supp/16_S_2010_031_038.pdf).

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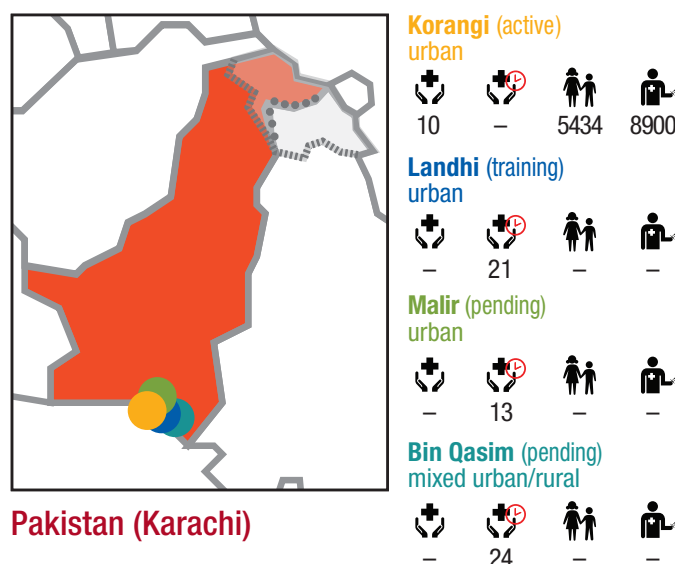
✉: Luis Prado, from The Noun Project; all other icons adapted from The Noun Project
Editing, design and layout: Green Ink (www.greenink.co.uk)

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Pakistan (Karachi)

- ✚ Number of immunization service providers active
- ✚ Number of immunization service providers pending
- 👤 Number of children enrolled (up to January 2013)*
- 👤 Number of vaccinations (up to January 2013)

*The target number of children by 2014 is 15 000.

Partners: Expanded Programme on Immunization (EPI), Sindh Province, Government of Pakistan; openXdata.org (Bergen, Norway); Indus Hospital (Karachi, Pakistan); Johns Hopkins Bloomberg School of Public Health (Baltimore, United States)

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