Mobile Data to Monitor Performance of Active Surveillance in Tanzania’s Immunization Programme

Bhavin Jani and Christopher Kamugisha, WHO Country Office, Tanzania

For nearly a decade, Tanzania has been conducting Acute Flaccid Paralysis (AFP) surveillance and achieving standard indicators. Nevertheless, the Technical Advisory Group (TAG) has been recommending an intensified integrated surveillance plan to address gaps at sub-national levels. As a response, the country has been deploying National Stop Transmission Of Polio (NSTOP) members twice a year in low performing and high risk districts since 2012. The subsequent challenge was to monitor the performance of the NSTOP members.

With the support of WHO Nigeria, a mobile data performance monitoring tool was developed. The tool underscores the importance of having real time data to monitor active surveillance and related activities. Out of the 13 NSTOP team members, eight were trained on using the tool and deployed for two weeks. The tool was used together with the active surveillance line list and the management tool.

Among several important variables, the tool captures the location of the active search, the time spent at each facility and the people met at the facility. The tool also indicates if the facilities are visited according to the level of prioritization or if the selection is by convenience. Upon submission of data, the national database is automatically updated. Data were analyzed on a daily basis and feedback shared on a timely basis with members for action. In 31 districts visited by NSTOP 8, a total of nine suspected Acute Flaccid Paralysis (AFP) and 104 suspected Measles cases were found unreported and investigations were initiated. Furthermore 1,902 Health Workers and 54 traditional healers were sensitized on AFP surveillance.

Despite being used for the first time, the tool has significantly improved the quality of data reported and enhances daily performance monitoring. Additionally, there is increase in the accountability of members to conduct good quality active searches, as the system also enforces verification through images as a proof of work. Feedback received from the deployed NSTOP team members was very positive on the user friendliness of the tool, as it helps in self-monitoring and allows for offline data entry.
VaxiChol Project Supports an OCV Campaign in Nampula Region, Mozambique

Federica Joele, Agence de Médecine Préventive (AMP)

Despite progress made in recent years, cholera still represents a threat in Mozambique, particularly in the high-risk northern regions. To prevent a cholera outbreak, the Ministry of Health of Mozambique’s National Institute of Health (NIH) requested that the Agence de Médecine Préventive (AMP) VaxiChol team provide technical input to help prepare a request for oral cholera vaccine (OCV) to the International Coordination Group. The request was submitted on 9 August 2016 and accepted on 11 August 2016. In October 2016, the Ministry of Health implemented an immunization campaign in Nampula, the third largest city in the country.

The other component of the technical support provided by the VaxiChol team in collaboration with INS and the World Health Organization (WHO) is a set of monitoring and evaluation activities related to the roll out of the vaccine in Nampula region. Specifically the team is conducting:

- An immunization coverage survey
- A review and evaluation of adverse events following immunization (AEFI)
- A vaccine acceptability study
- An economics assessment to evaluate the cost of the disease and to compare it to the cost of the campaign
- A vaccine effectiveness study.

Vaccine acceptability and economic impact data were collected in the field between from late October 2016 until early November 2016. The results of these studies will complement data on vaccine effectiveness to provide a broader perspective on the value of OCV campaigns.

Strengthening Peruvian Immunization Records through Mobile Data Collection Using the ODK App

Marcela Lazo Escalante¹, Maria Valderrama Calderón¹, José Perez Lu¹, Jhon Garcia Ruiz¹, Jorge Ruiz Cabrejos², Fabiana Michel³, Patricia Garcia Funegra¹, ¹Ministry of Health, Peru, ²Cayetano Heredia University, ³Pan American Health Organization

In Peru, traditional vaccination records are registered on paper forms before being entered into databases. This represents a challenge to obtaining timely immunization information. Moreover, the status of yellow fever vaccination coverage in population over two years old is unknown.

Peru’s Ministry of Health and Junin’s regional government, as well as the Pan American Health Organization (PAHO), joined efforts to improve the quality of vaccination records in the campaign against yellow fever, oriented to protect susceptible populations in the provinces of Chanchamayo and Satipo, where an outbreak had occurred, using an application (app) in Open Data Kit (ODK) on Android mobile devices running Android OS 1.6 or newer. Once installed, a form is loaded.

In Peru, every person has a national identification card (DNI) that includes their name, date of birth, gender, address and bar coding. The cellular app automatically recorded the vaccination date and GPS location and scanned the DNI bar code for the remaining data. The vaccine batch expiration date and health network information was also recorded. If the person being vaccinated did not have a DNI on hand, it was also possible to register the information using a questionnaire included in the app.

The data was not only recorded on each mobile, but also submitted automatically to an online server using the internet. If locations did not have internet connectivity, the recorded data was sent when an internet access point was available. A total of 650 health workers in four health networks were trained to use the device. The vaccination campaign was performed door-to-door in urban and rural areas.

More than 180,000 people in the region were vaccinated and all vaccinations were registered using the mobile and app, reaching 87% of coverage in the area. Most importantly, real-time data and immediate reports were available. The system was very well accepted by health workers who reported, “cell phones and the app are simple to handle” and the “DNI scan is more practical since it contains all of the person’s data.”
The Switch in the Americas: a Video-Documentary
Cristina Pedreira, Gloria Rey-Benito, Harold Ruiz, Cuauhtémoc Ruiz Matus, Elizabeth Thrush and Lauren Vulanovic, Pan American Health Organization

In 2016, 155 countries and territories from around the world made history in a coordinated global health effort that took us one step closer to achieving polio eradication.

During a two-week time period in April, the health sector swapped out one type of polio vaccine for another, in what is known as “the switch.” Since this was a monumental event in global health history, PAHO/WHO created a documentary video that will contribute to the polio legacy in the Americas. This video explains the fundamentals of why the world embarked on the switch journey, and how the countries in the Americas planned, implemented, and supervised this process.

QUOTES:

“The primary heroes of this effort are the countries, the immunization programmes in the countries, and the thousands of health workers, that every day go out to look for children that are missing the vaccine or that we need the ensure have the vaccine.” – Cuauhtémoc Ruiz Matus, Immunization Unit Chief, PAHO

“I think that the Switch was a milestone for global public health. There has not been any similar experience in public health history. One moment where 155 countries unite and in a coordinated and synchronized manner, withdrew one vaccine, and started to use another.” – Cristina Pedreira, Regional Advisor on Immunization, PAHO

“If we want to guarantee a world free of polio … we must ensure that the containment of poliovirus really is indeed achievable”.
– Gloria Rey, Regional Advisor FGL/IM, VPD Laboratory Network

“We are writing the final chapter of polio history, and this is a chance that happens only once, I believe, in a lifetime.” – Patricia Arce Guzman, Sub-secretary Bogotá, Colombia
Past Meetings/Workshops

Implementation of Tools to Monitor and Analyze the Data Quality of Vaccination Coverage

Marcela Contreras, Carmelita Pacis Tirso and Martha Velandia, PAHO-Washington, DC

Location: Santa Cruz, Chile
Date: 7 – 9 November 2016

Participants:
- Martha Velandia, Carmelita Pacis and Marcela Contreras from the Pan American Health Organization
- Samia Samad, International Consultant
- Antonia Teixeira from Brazil’s Ministry of Health
- 70 participants representing the National Immunization and Statistics Programmes from the national and subnational levels

Purpose:
- Train the National Immunization Programme team and the network of statisticians from the Regional Secretariat from the Ministry of Health and Health Services in the country to manage the concepts and tools to monitor vaccination coverage.
- Apply steps for rapid coverage monitoring through door-to-door visits.
- Learn the concepts and tools utilized to analyze the data quality of Vaccination coverage.
- Identify the actions to improve vaccination coverage monitoring tools in Chile.

Details:
PAHO’s Immunization Unit and Neglected Diseases Unit have developed a Toolkit for Monitoring the Coverage of Integrated Public Health Interventions, which includes modules on topics including the analysis of administrative coverage, rapid coverage monitoring and the evaluation of data quality, among others. The tools can be applied in an integrated way or individually, facilitating coverage analysis and monitoring for any health programme.

PAHO, together with the Department of Immunization and Vaccines and the Department of Statistics within Chile’s Ministry of Health, developed a training workshop, in which 70 representatives from the National Immunization Programme and the network of statisticians from the Regional Secretariat of the Ministry of Health, health services and national level participated. The main objective of this training was to provide concepts and tools to monitor and analyze the vaccination coverage exposed in the toolkit.

During the training workshop, participants used a combined methodology with conceptual presentations, working groups and field visits to seven municipalities, where the door-to-door rapid coverage monitoring tools could be applied and data quality evaluations among health establishments could be done. The training was very well received by the participants, especially the field exercise according to the course evaluation and the progress reached during this evaluation.
Informing Vaccine Decision-making and Introduction: a Focus on Rotavirus Vaccines

Clint Pecenka, PATH

Location: Bangkok, Thailand
Date: 8-10 November 2016
Participants: Thirty-six participants representing EPI staff, researchers, and other partners from five countries (Afghanistan, Bangladesh, Bhutan, Myanmar and Nepal); the World Health Organization (WHO); UNICEF; John Snow, Inc. (JSI); Center for Disease Control and Prevention (CDC); Sabin Vaccine Institute; Pan American Health Organization (PAHO); the International Vaccine Access Center (IVAC) at Johns Hopkins Bloomberg School of Public Health; and PATH.

Purpose: The meeting provided national public health and immunization experts from the South-East Asia region with the opportunity to learn and share knowledge on rotavirus disease, available interventions, vaccine introduction and planning, advocacy, and economic evaluation.

Details: PATH and IVAC (through the Rotavirus Accelerated Vaccine Introduction Network, RAVIN) co-hosted this workshop to provide details for programme staff, partners, and decision-makers from Asian countries on how to use health economics evaluations to inform rotavirus vaccine introduction decisions.

Presenters provided evidence on rotavirus disease and vaccines as well as an overview of cost-effectiveness methods and tools, such as the updated and enhanced UNIVAC model from the ProVac Initiative, and their application in generating needed evidence on rotavirus vaccination.

After the workshop, participants expressed increased confidence in advocating for new vaccine introduction to key decision-makers in their country and in interpreting and communicating cost-effectiveness results. PATH is offering follow-on support to help participants undertake their own rotavirus vaccination cost-effectiveness analyses in order to illustrate the potential benefits of rotavirus vaccine and prepare for introduction in their country. RAVIN will continue to provide technical support as countries make critical decisions on the introduction of rotavirus in their immunization programmes. These analyses also help build local capacity and inform neighboring countries and the global community through publication.

A second rotavirus health economics workshop is planned for the Eastern European region in 2017.
22nd meeting of the Regional Certification Commission on polio eradication in Western Pacific Region

Tigran Avagyan, Santosh Gurung, W. William Schluter and Zhang Yan, World Health Organization Western Pacific Regional Office, Manila, Philippines

Location: Sydney, Australia
Date: 15-17 November 2016
Participants: Thirty-three participants including the members of the Regional Certification Commission (RCC), National Certification Committee (NCC) Chairs or secretariat, representatives, and staff from the World Health Organization headquarters and Regional offices.

Purpose: To update the Regional Certification Commission and National Certification Committees on the global and regional status of poliomyelitis eradication and recent activities in other regions; and to review and evaluate NCC progress reports, including implementation status of 2015 RCC recommendations, and to recommend actions for countries to sustain polio-free status and for the timely implementation of polio endgame activities.

Details: The three-day meeting progressed with presentations followed by discussions of the NCC reports.

The RCC concluded that the region had retained its polio-free status in 2015 with overall high quality surveillance for acute flaccid paralysis (AFP) and coverage with polio vaccines. The RCC made general and country-specific conclusions and recommendations. The RCC commended countries and areas with progress on IPV introduction and successful implementation of the switch from trivalent oral polio vaccine (tOPV) to bivalent (bOPV). The ongoing and proposed effort in the region with the supply situation with IPV was noted. The RCC also made commendations on the considerable progress made on containment of poliovirus type 2.

The RCC urged Member States immediately report to WHO on any type 2 polioviruses, wild polioviruses (WPVs), or vaccine-derived polioviruses (VDPVs) from any source (AFP surveillance, environmental surveillance, stool surveys) and for countries and areas to give consideration to the use of fractional IPV to mitigate global supply constraints where programmatically feasible.

The RCC recommended that WHO work with IPV manufacturers that would allow labelling for the use of fractional dose administration and requested WHO to summarize existing data from serosurveys on the immunogenicity and duration of protection provided from OPV and IPV for presentation to SAGE. The need to develop clear guidance on containment of potentially infectious materials was also recommended to WHO.

The meeting report with complete conclusions and recommendations will be available shortly online, under featured publications.
Regional consultation on viral hepatitis control in the WHO African Region

Carol Tevi Benissan, WHO Regional office for Africa (AFRO) and Karen Hennesey and Stephanie Shendale, WHO Headquarters

Location: Brazzaville, Congo

Date: 23-25 November 2016

Participants: Immunization and viral hepatitis and/or HIV focal points from 18 WHO Country Offices in the African Region (Botswana, Cameroon, Congo, Cote d'Ivoire, DRC, Ethiopia, the Gambia, Guinea, Ghana, Mauritania, Namibia, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Uganda, and Zimbabwe), focal points from WHO AFRO Immunization, Vaccines and Development (IVD), Communicable Diseases Department (CDS) and Maternal Newborn and Child Health (MNCH) clusters, the three Inter-country Support Teams (East and Southern, West, and Central), WHO HQ colleagues from EPI and the Global Hepatitis Programme (GHP), the US Centres for Disease Control and Prevention (CDC), UNICEF, CHAI, and the World Hepatitis Alliance.

Purpose: At the World Health Assembly, in May 2016, a global health sector strategy on viral hepatitis, 2016-2021, was adopted. The African Regional Immunization Strategic Plan for 2014-2020 also recognizes viral hepatitis as a serious global public health problem by establishing a goal of reducing hepatitis B infection rates in children to less than 2% and a target for at least 25 countries to introduce nationwide hepatitis B birth dose vaccination by 2020.

Considering the cross-cutting nature of the disease and required interventions, the technical consultation was jointly organized and led by the Communicable Diseases Cluster (CDS) and the Immunization and Vaccine Development (IVD) team of the Family and Reproductive Health Cluster. The purpose of the joint consultation was to provide an opportunity to strengthen inter-cluster collaboration and build country capacity to develop comprehensive viral hepatitis control plans with particular emphasis on preventing hepatitis B infection through immunization.

Details: The joint consultation provided an opportunity to bring together the countries that have expressed interest in establishing national viral hepatitis programmes and introducing birth dose vaccination to share experiences and for WHO to provide an update on recent developments in the surveillance, prevention and treatment of viral hepatitis. The workshop also emphasized considerations for conducting hepatitis B serosurveys to collect representative data on the burden of viral hepatitis in the region.

Rwanda, Uganda, Nigeria and Senegal were invited to share their hepatitis control experiences so that other countries could learn how they have dealt with challenges as they implement various aspects of their programmes.

Participating countries identified priority actions for viral hepatitis control and gave timelines for their implementation. They also highlighted the support they would require in order for them to achieve hepatitis control. There was strong agreement by all for the need to build the capacity for health workers on preventing, control and treatment of viral hepatitis, conducting serosurveys and developing hepatitis plans.

Momentum for viral hepatitis control is building in the Region but strong coordination and collaboration across sectors is critical. It is expected that, with support from WHO and CDC, a number of the countries present will conduct serosurveys and/or introduce hepatitis B birth dose in 2017-2018.
32nd Caribbean EPI Managers Meeting
Marcela Contreras, Cara Janusz, Cuauhtemoc Ruiz, Carmelita Tirso and Martha Velandia, PAHO Washington, DC; Karen Lewis-Bell, PAHO-Jamaica

Location: St. George’s, Grenada
Date: 28-30 November 2016
Participants: EPI managers, as well as other public health professionals from the Ministries of Health for the Caribbean countries, PAHO representatives from Comprehensive Family Immunization and PAHO country representatives.

Purpose: To review the status of the EPI programme in the Caribbean specifically, with a focus on the following objectives:
• Update information on topics related to immunization programmes
• Develop country action plans to achieve goals set for 2017
• Discuss the sustainability of measles/rubella/congenital rubella syndrome (CRS) elimination in the region
• Discuss implementation of the switch from tOPV to bOPV as well as polio virus containment
• Discuss the status of surveillance and management of vaccine preventable diseases in the time of Zika
• Assess strategies for new vaccine introduction in countries

Details: The overall goal of the meeting was to analyze achievements from 2016, as well as plan country activities for 2017. Regional achievements included measles elimination and the switch from tOPV to bOPV. In response to these achievements, emerging new challenges, such as strengthening acute flaccid paralysis (AFP) surveillance as part of polio eradication endgame and the sustainability of measles/rubella/CRS elimination, were also discussed. In planning for country activities in 2017, workshops were held to develop country action plans, plan for new vaccine introduction, and review the Joint Reporting Form (JRF).

Experts presented updated information on a variety of topics, including fever/rash surveillance in the time of Zika, communication strategies for HPV, and budgeting for vaccines procured through the Revolving Fund. Country representatives subsequently shared experiences from their respective immunization programmes. With a motto of “Go for the Gold” and featuring Jamaican Olympian Usain Bolt, Vaccination Week in the Americas (VWA) was highlighted by many countries, with an emphasis on the concurrent timing with the successful switch from tOPV to bOPV. Even with the continued success of the EPI, country managers were reminded not to become complacent and focus on a vision for even stronger immunization programmes for the future.
Regional Immunization Action Plan Workshop

Cuauhtemoc Ruiz, Martha Velandia, Carmelita Tirso, Cara Janusz and Marcela Contreras, PAHO Washington, DC;
Karen Lewis-Bell, PAHO-Jamaica

Location: Saint George, Grenada
Date: 2 December 2016
Participants: Cuauhtemoc Ruiz, Karen Lewis-Bell, Martha Velandia, Carmelita Tirso, Cara Janusz and Marcela Contreras from the Pan American Health Organization
29 representatives from the Caribbean countries’ Expanded Programmes on Immunization

Purpose:
• To review as a group the process of filling out the questions and/or indicators of the JRF, as well as the data validation process.
• To check the quality of the data submitted in the 2016 JRF
• To review the status of the indicators for the GVAP and RIAP reports.
• To discuss with the EPI managers the format and the existing indicators in the JRF in order to better understand the indicators and the completion of the forms.

Details:
The Regional Immunization Action Plan (RIAP) of the Region of the Americas was approved during the 54th Directing Council in September 2015 and it is immunization’s roadmap for 2016-2020. The RIAP provides Member States with the main principles, strategic lines of action, objectives, and indicators that align the Region of the Americas with the Global Vaccine Action Plan. The RIAP also encourages countries to have an active role in reaching universal health coverage, as well as establishing activities to identify and approach inequities with the goal of ensuring that populations are protected against vaccine-preventable diseases.

According to the framework for monitoring RIAP objectives and goals, a workshop was conducted for the subregion of the Caribbean countries, where 29 representatives from the Expanded Programme on Immunization (EPI) participated. The RIAP principles, objectives and indicators were reviewed during this workshop and the importance of fulfilling these objectives and current challenges was underlined. The methodology for RIAP/GVAP accountability and monitoring was reviewed, where the Joint Reporting Form (JRF) serves as the main source of information for reporting the indicators considered in both plans. Consequently, the importance of JRF data quality was emphasized, considering the current challenges faced at the national and regional levels.

This meeting aimed at facilitating continued collaboration between PAHO and country offices, to minimize the reporting burden on countries while ensuring that all relevant data to monitor immunization systems and vaccine-preventable diseases is systematically collected and results in having consistent data at all levels.

The workshop was organized around two different sessions, which permitted the meeting to maintain a high involvement of all participants and a very positive dynamic:
1. One traditional session of presentations focusing on highlighting the importance of the RIAP and GVAP, global and regional indicators, and opportunities as reported in the JRF and on responding to the monitoring needs of the GVAP and RIAP.
2. A final session was dedicated to group brainstorming to review the process of completing the forms, and to run data validation rules to check the consistency and coherence of data reported. The countries conducted a review of their own JRF so that they can note the data quality of the JRF data. Simultaneously, the representatives of the countries provided feedback on how to improve the JRF in order to diminish the risk of reporting inconsistent or incoherent data.
6th Meeting of the Regional Certification Commission (RCC) for the Polio Endgame

Cristina Pedreira, Gloria Rey-Benito, Liz Thrush and Andrea Villalobos, Pan American Health Organization

Location:

Date: 5-6 December 2016

Participants: Participants at this meeting included RCC members, the World Health Organization (WHO), US Centers for Disease Control and Prevention (CDC), and PAHO (FGL/IM) staff.

Purpose: 1. Review the advances of country reporting on the containment of wild poliovirus (WPV), vaccine-derived polio virus (VDPV) and Sabin type 2; and 2. Review the final country reports on the supervision of the switch from the trivalent oral polio vaccine (tOPV) to the bivalent vaccine (bOPV).

Details: Summary of Revision of WPV/VDPV/Sabin2 Containment Reports:
17 of the 23 expected reports on the containment of WPV, VDPV and Sabin2 were reviewed during the meeting.

Reports were shared with the RCC members prior to the meeting. The analysis of the reports included the verification of the content and the clarity of the information requested in the model report template.

As of December 2016, the RCC had received at least one report of 23 expected reports of poliovirus containment, Phase I of GAP III, corresponding to 22 countries and one sub-regional report for the Caribbean (includes 13 countries, 6 UK territories and 3 associate member states).

The main outcome of the 17 reports reviewed were as follows:
- **Infectious material of WPV2/VDPV2**: thirteen reports approved without modifications; four reports not approved.
- **Infectious material of Sabin2**: thirteen reports approved without modifications; four reports not approved.
- **Potentially infectious WPV2/VDPV2 material**: nine countries approved without modifications; one country approved with modifications and seven countries not approved.
- **Potentially infectious Sabin2 material**: seventeen countries not approved.

Brazil, Canada, Cuba, Mexico and USA have notified interest in designating 20 Poliovirus Essential Facilities (PEF).

The RCC noted significant improvements in the quality of containment reports. The RCC also recognizes that the containment process is a challenge for all member states and that additional efforts are needed to meet all requirements defined in the GAP III.

PAHO will continue working with the countries of the Region of the Americas to finalize Phase I of GAPIII, as well as facilitating Phase II as has been defined by the Containment Certification Scheme (CCS) and GAPIII.

Summary of the Revision of the Country Switch Reports
36 countries in the Americas participated in the globally synchronized switch from tOPV to bOPV in April 2016. All countries did an independent monitoring of the switch in the two-week period following their national switch date and continued supervision of the switch in 100% of the warehouses and vaccination service points in the three months following the switch.

The RCC recognizes the extraordinary effort made by countries to complete the switch. In this meeting, the RCC reviewed 12 reports where additional information was required. By 6 December 2016, the RCC approved 32/36 switch reports. Four country reports are pending complementary information.
4th Regional Polio Meeting: Polio Eradication and Endgame Progress
Cristina Pedreira, Gloria Rey-Benito, Liz Thrush and Andrea Villalobos, Pan American Health Organization

Location: Bogota, Colombia
Date: 7-8 December 2016

Participants: Representatives from 26 countries of the Region, members of the Regional Commission for the Certification of the Final Phase of Polio Eradication in the Region of the Americas (RCC), as well as representatives of the Centers for Disease Control and Prevention (CDC), UNICEF, the World Health Organization (WHO), and the Pan American Health Organization (PAHO).

Purpose:
1. Review progress on implementation of the Polio Eradication and Endgame Strategic Plan.
2. Review the current status of IPV supply and the recommendations to address the limited supply or possible stock outs.
3. Review progress and identify challenges for the containment of poliovirus in laboratories.
4. Strengthen the capacity of countries to develop a response plan for the detection of poliovirus and polio outbreaks, as well as identify the measures to be implemented immediately, to be prepared for a rapid and effective response.

Details: During the first day, all meeting participants received updates and had time to discuss the following topics:

- Global and regional implementation of the Polio Eradication and Endgame Plan
- Status of the Regional Polio Laboratory Network
- Environmental surveillance of poliovirus in Mexico and Haiti
- Results of a survey on the experience of IPV introduction and the switch in the Americas
- Status of the current global and regional IPV supply situation and TAG recommendations on how to address the limited supply or possible stock outs.
- Argentina’s experience on the detection and investigation of an iVDPV2 case.

On the second day, participants split into a containment group or polio outbreak response group:

- The containment group discussed the next steps for completing Phase I of GAPIII, including challenges that need to be overcome.
- The outbreak response group split into smaller working groups where they reviewed the advances on the elaboration of their national plans.

The final report with a summary of the topics discussed with final conclusions and recommendations will be circulated to all PAHO countries soon.
Resources

Outsourcing Transport to Improve Health at the Last Mile: A Case Study
Anna Shaw, Village Reach

At the end of 2015, the provincial government of Tete, Mozambique – with support from VillageReach and Médecins Sans Frontières (MSF) – contracted with a local third-party logistics provider to test a new model of transporting vaccines, antiretroviral therapies (ARVs) and essential medicines to rural health facilities. At the end of the first six months of operation, an assessment was conducted by Imperial Health Sciences to understand the impact, costs and management requirements of an outsourced distribution project.

A new case study provides more details on this programme, including findings from the six-month assessment and the steps that the province is taking to scale up and finance the programme in the long-term. It presents the potential benefits of outsourcing in terms of 1) improved availability, 2) increased efficiency, 3) better data collection and reporting, and 4) enhanced trust in the system. It also outlines next steps and considerations for government authorities interested in outsourcing as a way to improve transport for vaccines and other essential medicines.

State of Inequality: Childhood Immunization
Hayatee Hasan, WHO Headquarters

The “State of inequality: childhood immunization” report is now available.

The report addresses two overarching questions: What inequalities in childhood immunization coverage exist in low- and middle-income countries? And how have childhood immunization inequalities changed over the last 10 years?

In answering these questions, this report draws on data about five childhood immunization indicators, disaggregated by four dimensions of inequality, and covering 69 countries.

The findings of this report indicate that there is less inequality now than 10 years ago. Global improvements have been realized with variable patterns of change across countries and by indicator and dimension of inequality. The current situation in many countries shows that further improvement is needed to lessen inequalities; in particular, inequalities related to household economic status and mother’s education were the most prominent.

The report is accompanied by electronic interactive visuals, which facilitates thorough and customizable exploration of the data.

Immunization Summary Tablet/Smartphone App is Updated
Olivier Beauvais, WHO Headquarters

The WHO immunization summary application has been updated with the latest figures as they appear on the web.

The update is available on the two app stores whose icons and links are just below, so there is no excuse not to download the app and have the world’s immunization data at your fingertips.
## Calendar

### 2017

#### January

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<th>Date</th>
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<tr>
<td>10-11</td>
<td>Scientific Consultation on Zika Vaccine Development</td>
<td>Rockvill, MD USA</td>
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<tr>
<td>17-20</td>
<td>Technical consultation meeting on post SIA coverage surveys</td>
<td>Geneva, Switzerland</td>
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<td>16 Jan-1 Feb</td>
<td>140th Executive Board</td>
<td>Geneva, Switzerland</td>
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<tr>
<td>24-26</td>
<td>Gavi Joint SEARO and WPRO Regional Working Group Meeting</td>
<td>Bangkok, Thailand</td>
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#### February

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<tr>
<td>20-24</td>
<td>Practical training on survey analysis</td>
<td>Thailand ?</td>
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#### April

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<tr>
<td>18-21</td>
<td>Sharing lessons learned on Vaccination Coverage Surveys and defining a survey-related Research agenda</td>
<td>Geneva, Switzerland</td>
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<tr>
<td>25-27</td>
<td>Meeting of the Strategic Advisory Group of Experts (SAGE) on Immunization</td>
<td>Geneva, Switzerland</td>
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<tr>
<td>15-31</td>
<td>70th World Health Assembly</td>
<td>Geneva, Switzerland</td>
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#### June

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<tr>
<td>23-24</td>
<td>Fifth Measles Virus mini symposium</td>
<td>Rochester, MN USA</td>
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<tr>
<td>27-29</td>
<td>Fifteenth Global Measles and Rubella Laboratory Network Meeting</td>
<td>TBD</td>
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Links

Organizations and Initiatives

American Red Cross
   Child Survival

Agence de Médecine Préventive
   Africhol
   EpivacPlus
   LOGIVAC Project
   National Immunization Technical Advisory Groups Resource Center
   SIVAC

Centers for Disease Control and Prevention
   Polio
   Global Vaccines and Immunization

Johns Hopkins
   International Vaccine Access Center
   VIEW-hub

JSI
   IMMUNIZATION basics
   Immunization Center
   Maternal and Child Health Integrated Program (MCHIP)
   Publications and Resources
   Universal Immunization through Improving Family Health Services (UI-FHS) Project in Ethiopia

PAHO
   ProVac Initiative

PATH
   Vaccine Resource Library
   Rotavirus Vaccine Access and Delivery
   Malaria Vaccine Initiative
   Meningitis Vaccine Project
   RHO Cervical Cancer

Sabin Vaccine Institute
   Sustainable Immunization Financing

UNICEF
   Immunization
   Supplies and Logistics

USAID
   Maternal and Child Health Integrated Program

WHO
   Department of Immunization, Vaccines & Biologicals
   New and Under-utilized Vaccines Implementation
   ICO Information Centre on HPV and Cancer
   Immunization financing
   Immunization service delivery
   Immunization surveillance, assessment and monitoring
   SIGN Alliance

Other
   Coalition Against Typhoid
   Dengue Vaccine Initiative
   European Vaccine Initiative
   Gardasil Access Program
   Gavi the Vaccine Alliance
   International Association of Public Health Logisticians
   International Vaccine Institute
   Measles & Rubella Initiative
   Multinational Influenza Seasonal Mortality Study
   Network for Education and Support in Immunisation (NESI)
   TechNet-21
   Vaccines Today

WHO Regional Websites

Routine Immunization and New Vaccines (AFRO)
   Immunization (PAHO)
   Vaccine-preventable diseases and immunization (EMRO)
   Vaccines and immunization (EURO)
   Immunization (SEARO)
   Immunization (WPRO)

UNICEF Regional Websites

Immunization (Central and Eastern Europe)
   Immunization (Eastern and Southern Africa)
   Immunization (South Asia)
   Immunization (West and Central Africa)
   Child survival (Middle East and Northern Africa)
   Health and nutrition (East Asia and Pacific)
   Health and nutrition (Americas)

Newsletters

Immunization Monthly update in the African Region (AFRO)

Immunization Newsletter (PAHO)

The Civil Society Dose (GAVI CSO Constituency)

TechNet Digest

RotaFlash (PATH)

Vaccine Delivery Research Digest (Uni of Washington)

Gavi Programme Bulletin (Gavi)

The Pneumonia Newsletter (Johns Hopkins Bloomberg School of Public Health)