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The immunization programme in Liberia celebrates its longest serving female vaccinator

Adolphus T. Clarke, Ministry of Health, Liberia



Carolyn Bing, born in 1961 in Montserrado County, Liberia, is a 57 year old widow and mother of seven children. For 32 years Carolyn has served as a vaccinator, contributing to the survival of approximately one hundred thousand children within the Bushrod community outside the capital Monrovia.

Carolyn began her medical profession as a Nurse Aid at the former Swedish Relief Hospital, operated in the 90s during the country's Civil War that killed tens of thousands of people and caused massive destruction. After the end of the hostilities, following the General and Presidential Election which ushered in Africa's first female President Ellen Johnson Sirleaf, Carolyn gained employment with the Bishop Collins Clinic, run by the Catholic Secretariat, where she is currently serving as the key vaccinator and sometimes helps with other health services.

Throughout her lifetime, Carolyn has always had one philosophy, "The health of the children guarantees the future of any nation". It is based on this conviction that Carolyn has grown her passion for immunization. "I love children all along and want to see them healthy". She continued: "I think I have fulfilled my calling for children if at all I decide to retire now".

Carolyn lives 10 minutes walk from her work place, has cultivated an abounding relationship over the years with many parents and caregivers, mainly babies mothers to the extent that they do not take their children for vaccine if she was not on duty on that day. "Sometimes when they come, the parents would ask me, do you remember this child and often I would reply in the negative, because the child had grown older and the parents would say that's the child you vaccinated years ago".

Throughout the 32 years that Carolyn spent administering vaccines to children, all has not been rosy. She had recorded some difficult moments but those difficult times were never enough to erode her commitment and dedication in the discharge of her duties as she was always keen on meeting her targets. "There was always delay for supervision, lack of transportation for outreach activities and above all the discontinuation of the 25 United States dollar incentive previously provided by GAVI.

Carolyn's commitment and dedication to service is an example worth emulating by other healthcare providers including vaccinators serving in the government's run health facilities, where there must be what she called a "Whole Package" of incentive.

"We must begin to incentivize our healthcare workers and further provide periodic training for them," says the 57-year-old female vaccinator. Carolyn demonstrates to have a hands on approach on her specialty. She proves to perfectly understand accurate data collection, plotting and interpretation of the monitoring chart, and the final submission of a comprehensive report, following the administration of the vaccine.

The immunization programme has expressed delight over the long years of service by this female vaccinator. The EPI thought to tell Carolyn's story as an inspiration for other vaccinators and service providers in general so as to motivate young vaccinators and healthcare workers on the importance of commitment and dedication to service towards immunization.

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Challenges in the last mile distribution of bundled vaccines in South-Eastern Liberia

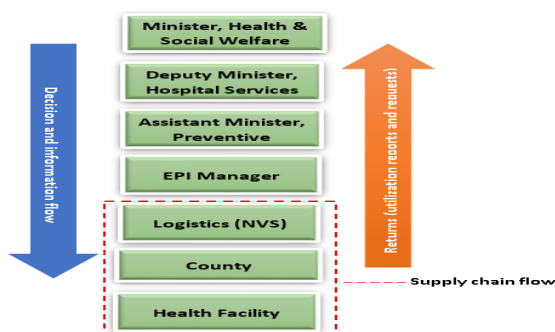
Adolphus T. Clarke, Ministry of Health, Liberia

Overview of the Immunization Supply Chain

The national vaccine store (NVS) receive all vaccines and devices twice a year from international manufacturers through UNICEF supply division for vaccine procurement like most other Gavi-supported countries.

Collection of vaccines and immunization supplies in Liberia is by road for all 15 counties of the Republic. The distribution system is technically a pull system where the counties (LD levels)

Supply chain Information Flow



and HFs (SP level) estimate their demand for vaccines based on target population of children aged 0-11 months and consumption. The counties then send their request to the NVS along with their vehicles to pick the vaccines with 'bundling' from the national level each quarter based on these estimates. A maximum stock level of four months has been set for the county depots. These requests are made through the County Health Officer.

South-Eastern Liberia consists of five counties (Grand Gedeh, Grand Kru, Maryland, River Gee and Sinoe) which accounts for approximately 14% of the country's total population making it one of the smallest health regions in Liberia. Historically, during

the period of the rainy season, travelling to this part of Liberia becomes extremely challenging. This is due to the bad road conditions and overflowing of major rivers (e.g. Cavalla) thereby making it difficult to deliver vaccines and other supplies.

The risk of exposure to vaccines preventable diseases, poor wellbeing or health conditions associated with poor sanitary conditions, water borne diseases due to drinking of unsafe water and poor quality of care are key contributing factors to high death rates especially among children.

The EPI programme manager, colleagues and partners are often concerned about the current situation and strategies skew toward preventing stock-outs and increasing vaccination coverage rates. In Liberia, there is one region that is consistently cut-off during the rainy season thereby making geographic access very difficult if not impossible at certain periods in time. To ensure that the last child gets vaccinated, vaccinators and other service providers go through extreme difficulties to take services to the people, while taking personal risks to save the lives of children irrespective of their background. Some of the challenges they encounter include but are not limited to bad roads, overflowing rivers, and general inaccessibility.

For example, during the rainy season, vehicles and motorcycles find it very difficult or impossible to navigate certain routes. This sometimes has the tendency to create situations of

artificial stock out of vaccines and other supplies. To prevent this from occurring, vaccinators and other service providers go through challenging situations to avert stock-outs. Even rivers that are not historically known to overflow now sometimes experience such events, making it difficult to cross. But service providers are not deterred, and will literally walk or swim through the water to deliver vaccines.



IPV introduced in Togo

[Ado Mpia Bwaka](#) and [Crépin Hilaire Dadjio](#), WHO/Inter-country Support Team for West Africa; [Dadja Essoya Landoh](#), WHO Country office, Togo

On 4 October 2018, Togo officially introduced the inactivated vaccine (IPV) into its routine immunization in a bid to strengthen immunity in children and maximize their protection against polio. The event took place at Kemerida, Binah heath district and was presided over by the Secretary General of the Ministry of Health, on behalf of the Minister of Health in the presence of major health partners including WHO, UNICEF, Rotary International, civil society organizations (CSOs), administrative and religious leaders.



First shot of IPV by Dr Sossinou Awoussi, Secretary General of the MoH – Credit: WHO/Togo

Some 117,050 IPV doses as a first endowment were delivered in the country for an annual target audience of 311,908 children. The new vaccine will be administered at the 14th week of birth concurrently with OPV3, DTC 3 and PCV 13-3. The coverage objective for year one has been set to 90% and 92% for year two.

Togo was certified polio-free in 2007 but confirmed three Wild Polio Virus (WPVs) in November 2008 and six in 2009. Nine polio response campaigns were subsequently implemented from December 2008 to November 2014. The country maintained its polio-free status and successfully performed the switch from using trivalent to bivalent oral polio vaccines in 2016.

IPV has now been introduced in all but a few countries in West Africa. Everywhere the vaccine is available free of charge for families at the health facilities alongside the oral vaccines and other antigens depending on the vaccination schedule in each country.

Senegal becomes the first country to introduce HPV vaccine nationwide in West Africa

[José Biey](#) and [Crépin Hilaire Dadjio](#), WHO/Inter-country Support Team for West Africa; [Aliou Diallo](#), WHO Country Office, Senegal

On 31 October 2018, Senegal officially introduced the HPV vaccine into its routine immunization schedule. The first shot was administered by the Expanded Programme on Immunization (EPI) Manager to a nine-year-old school girl from Dakar.



Head of State, President Macky Sall (in the middle), with Prime Minister (on left, blue tie) and WHO Rep. (black suit, grey hair) standing just next to him, attends an improvised school class on HPV - Credit Photo (WHO/Senegal)

At least 200,000 girls, in school and out of school, aged from nine to 14 years have been targeted for the first year of introduction to receive two doses of the antigen with a six-month interval time.

According to the World Cancer Research Fund, some 12,000 women die every year of cervical cancer in Senegal, one of the 20 most affected countries in the world.

In his speech, the President who presided over the official ceremony held at Diamniadio, about 30 kms away from Dakar alongside an international conference of First Ladies on infertility and female cancers said: "When a society wants to put the human being at the heart of its concerns, it is neither fair nor humane for some of its members to be exposed to the risk of a fatal disease even though there are means of

prevention".

For the WHO Representative to Senegal, Dr Lucile Imboua, speaking at the ceremony, prevention of cervical cancer, which accounts for 84% of all HPV-related cancers, must remain the main objective of HPV vaccination. The best way to achieve this goal is to vaccinate young girls before their first sexual intercourse.

The national introduction of HPV vaccine in Senegal has been facilitated by many partners including Gavi, the Vaccine Alliance. Its CEO, Dr Seth Berkeley said at the ceremony that "Gavi has helped vaccinate more than 1.5 million pre-adolescent and adolescent girls against cervical cancer in the past three years, but this is only the beginning because most girls in developing countries still do not benefit from this protection. The entire global health community must mobilize to accelerate the universal adoption of this life-saving vaccine."



EPI focal point supervises a fixed vaccination team– Credit: WHO/Togo



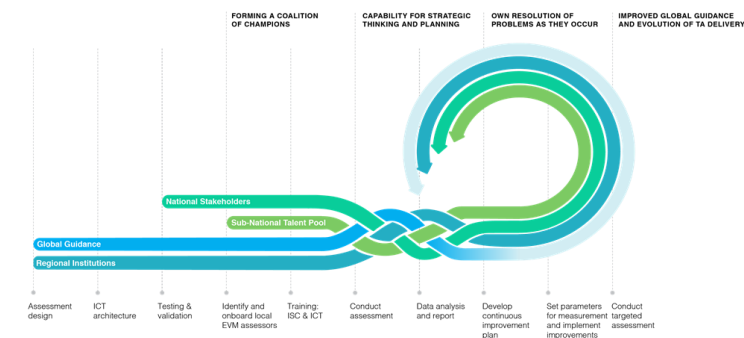
First shot of the HPV by Senegalese EPI Manager, Dr Ousseynou Badiane – Credit Photo (WHO/Senegal)

Transformation of technical assistance to strengthening national Immunization Supply Chains

[Dmitri Davydov](#), UNICEF Programme Division, New York

Effective Vaccine Management (EVM) is a [national immunization planning and improvement process](#) supported by WHO, UNICEF and Gavi, the Vaccine Alliance, to benchmark performance and prioritize improvements of the immunization supply chain (ISC).

Since 2009 the initiative has sought to achieve two sets of outcomes: (a) build local results through national ISC improvement processes, and (b) enable national EPI programmes to systematically compare themselves against other countries and attract funding for ISC fundamentals.



Leveraging EVM process to strengthen national ownership of immunization supply chain systems

As UNICEF and WHO embarked on the development of a new mobile device-based design of the EVM assessment tool (EVM 2.0), they took stock on how the initiative was tracking against the desired outcomes. This revealed that traditional models of technical assistance (TA) have struggled to deliver national ownership and sustainable local results. This meant that capabilities and improvements often lived in global reports instead of local actions.

The release of EVM 2.0 offers innovative ways to engage and continuously support a critical mass of talent in ISC and information & communication technologies (ICT) at subnational level. Regional institutional networks specializing in developing such capabilities offer a powerful TA model to refocus investments into systems building, and have the potential for systematic region-specific impact beyond ISC.

In September 2018, UNICEF and WHO convened a group of 10 partners to design the implementation of EVM 2.0 so as to build sustained capabilities for local problem-solving. Anuradha Gupta, Deputy CEO of Gavi, stressed the momentum for the EVM initiative to strengthen immunization and primary health care. Partners aligned on a roadmap to resource and implement the transition that will promote the tool's more systematic and frequent use — driving change and delivering results in vaccine availability, service delivery, and equity.

New global commitment to primary health care for all at Astana conference

Hayatee Hasan, WHO Headquarters

Countries around the globe today signed the Declaration of Astana, vowing to strengthen their primary health care systems as an essential step toward achieving universal health coverage. The Declaration of Astana reaffirms the historic 1978 Declaration of Alma-Ata, the first time world leaders committed to primary health care.

“Today, instead of health for all, we have health for some,” said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. “We all have a solemn responsibility to ensure that today’s declaration on primary health care enables every person, everywhere, to exercise their fundamental right to health.”

[Read](#) the news release

[Read](#) the declaration



SAGE October 2018 meeting summary report

Hayatee Hasan, WHO Headquarters

The Strategic Advisory Group of Experts (SAGE) on Immunization met on 23–25 October 2018 in Geneva. SAGE is tasked with providing WHO with independent, expert guidance on wide-ranging issues relating to vaccines.

Key issues discussed include a review of Global Vaccine Action Plan progress; the current status of the polio eradication programme; guidance on the impact and use of HPV vaccine for cervical cancer elimination, and revised guidance on the use of Ebola and other unlicensed vaccines in emergencies.

To read the summary of the discussions, conclusions and recommendations, click [here](#). The full report will be published on 7 December 2018 in the [Weekly Epidemiological Record](#).



Global health organizations commit to new ways of working together for greater impact

Hayatee Hasan, WHO Headquarters



Eleven heads of the world's leading health and development organizations signed a landmark commitment to find new ways of working together to accelerate progress towards achieving the United Nations' Sustainable Development Goals.

Coordinated by WHO, the initiative unites the work of 11 organizations, with others set to join in the next phase.

The commitment follows a request from Chancellor Angela Merkel of Germany, President Nana Addo Dankwa Akufo-Addo of Ghana, and Prime Minister Erna Solberg of Norway, with support from United Nations Secretary-General Antonio Guterres, to develop a global action plan to define how global actors can better collaborate to accelerate progress towards the health-related targets of the 2030 Sustainable Development Agenda.

The group has agreed to develop new ways of working together to maximize resources and measure progress in a more transparent and engaging way. The first phase of the plan's development is organized under three strategic approaches: align, accelerate and account.

[Read the news release](#)

HH Pope Francis and WHO Director-General: Health is a right and not a privilege

Hayatee Hasan, WHO Headquarters

Dr Tedros Adhanom Ghebreyesus has met with His Holiness Pope Francis to discuss ways to ensure that all people can obtain the healthcare they need, whoever they are, wherever they live. His Holiness Pope Francis and Dr Tedros have both reiterated that health is a right, and should not be a privilege, and share a commitment to improving the health and wellbeing of the most vulnerable and marginalized – in both rich and poor countries.

"I particularly welcome the Pope's emphasis on the welfare of children. I am encouraged to hear him say that he is beside us and all those working with us in the attempt to bring health to all, especially the many people, including children, who live on the periphery of society, and who suffer ill health and hunger."



[Read the news release](#)

Health workers in Yemen vaccinated over 306 000 people against cholera during 4-day pause in fighting

Hayatee Hasan, WHO Headquarters

More than 306,000 people in Yemen, including over 164 000 children under the age of 15, were vaccinated against cholera as part of a joint WHO-UNICEF campaign. The six-day vaccination effort, carried out by 3,000 health workers in three districts in Hudaydah and Ibb, was made possible by a pause in fighting – known as ‘Days of Tranquility’ – agreed by parties to the conflict.

“It is unacceptable for people to die from preventable diseases,” said WHO Director-General Dr Tedros Adhanom Ghebreyesus. “We are grateful for the pause in fighting which enabled us to complete the cholera vaccination campaign. Vaccination is one of many health services people need. Ultimately, peace is the only road to health.”

Since April 2017, there have been over 1.2 million suspected cholera cases and 2,515 associated deaths in the country – one of the worst outbreaks in recent history. The vaccination is critical to preventing further spread of the disease. This campaign aimed to reach 540,000 in the three districts.

[Read the news release](#)

Zimbabwe to vaccinate 1.4 million people against cholera in Harare

Hayatee Hasan, WHO Headquarters

The Government of Zimbabwe with support from WHO and partners launched an oral cholera vaccination (OCV) campaign to protect 1.4 million people at high risk of cholera in Harare.

The immunization drive is part of efforts to control a cholera outbreak, which was declared by the health authorities on 6 September 2018. The vaccines were sourced from the global stockpile, which is funded by Gavi, the Vaccine Alliance. Gavi is also funding operational costs for the campaign.

The government, with the support of WHO and partners, has moved quickly to implement key control efforts, including enhanced surveillance, the provision of clean water and hygiene promotion, cleaning of blocked drains and setting up dedicated treatment centres. The cholera vaccination campaign will complement these ongoing efforts.

“The current cholera outbreak is geographically concentrated in the densely populated suburbs of Harare,” said Dr Matshidiso Moeti, WHO’s Regional Director for Africa. “We have a window of opportunity to strike back with the oral cholera vaccine now, which along with other efforts will help keep the current outbreak in check and may prevent it from spreading further into the country and becoming more difficult to control.”

[Read the news release](#)

WHO prequalifies a thermostable rotavirus vaccine from India

Hayatee Hasan, WHO Headquarters

WHO has prequalified the thermostable rotavirus vaccine, ROTASIL® manufactured by Serum Institute of India.

The vaccine – which prevents severe rotavirus-induced diarrhea in infants – provides an innovative and affordable option to the global market as it is the first rotavirus vaccine that does not require constant refrigeration and will help meet the critical public health goal of improving vaccine supply worldwide.

The vaccine will now be available for procurement by United Nations agencies and Gavi, the Vaccine Alliance for use in low- and middle-income countries. This will help accelerate availability of the vaccine in countries experiencing the highest burden of rotavirus-induced diarrhea by providing a practical and affordable option for vaccine introduction.

Rotavirus is the most common cause of severe diarrheal disease in children worldwide, and vaccination is the best way to prevent severe rotavirus illness.

[List of WHO prequalified vaccine](#)

[More about WHO prequalification of vaccines](#)



Credit: WHO

Caribbean health officers are ready to respond quickly to an imported measles outbreak

Pamela Bravo, Karen Lewis-Bell and Desiree Pastor, PAHO

From 1 to 3 October 2018, a total of 35 health officers from the fields of immunization and epidemiology in 25 Caribbean islands and territories were trained in the preparedness of a rapid response to imported cases of measles and rubella.

Following a newly developed methodology and case study by PAHO's Comprehensive Family Immunization Unit, health officers learned to implement procedures and methods for the timely reporting and high-quality epidemiological investigation of a measles outbreak; implement aggressive outbreak response measures guided by a thorough field investigation; differentiate the diagnosis of measles and rubella from arboviral diseases (e.g. Zika, Dengue and Chikungunya); and interpret laboratory results for an adequate diagnostic confirmation.

Working as members of a rapid response team, health officers were assigned to the investigation and control of a measles outbreak, in the context of an arbovirus outbreak (Zika) and mass gathering event (sporting event), which posed critical challenges to organize the investigation and response to prevent further spread of the virus. At the end of the case study, the rapid response teams were immersed in a simulation exercise, aimed to put the recently acquired knowledge and skills into practice to respond quickly to an outbreak resulting from an imported case and conduct an organized response.

The case study concluded with a simulation exercise that re-created two hypothetical measles outbreak situations, one involving an international traveler and another in a public hospital. The simulation was aimed at helping participants learn how to organize as a rapid response team, conduct an epidemiological investigation of the outbreak, analyze and interpret investigation findings, and plan a rapid response to the outbreak.

Participants indicated that the training including the case study and simulation exercise was timely and quite effective in preparing them to manage an outbreak should there be an importation.



Participants from the training on rapid responses to measles outbreaks in the Caribbean, held in Jamaica, October 2018. Credit: PAHO/WHO.

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Celebration of World Polio Day in the Dominican Republic: “Protect Children, Take Action!”

Zacarias Garib, Director of the Expanded Programme on Immunization (EPI); Yenny Rocio Neira and Gabriela Rodriguez, PAHO

The Dominican Republic led the celebration of World Polio Day in the Region of the Americas with a special event organized by the EPI, under coordination by the Ministry of Health and with support from PAHO/WHO.

The ceremony was held at the School of Special Education of the Asociación de Rehabilitación Dominicana-ADR (Dominican Rehabilitation Association), and was presided by the Minister of Health, Dr Rafael Sánchez Cárdenas, accompanied by PAHO/WHO Representative (PWR), Dr Alma Morales; President of the Regional Certification Commission for the Final Phase of Polio Eradication, Dr Arlene King and Dr Jaqueline Medina from Rotary International.



World Polio Day celebration, 24 October 2018, Dominican Republic. Credit: Ministry of Health and PAHO/WHO.

During his speech, Dr Sánchez Cárdenas indicated that the mission of health authorities is to eradicate the disease and



World Polio Day celebration, 24 October 2018, Dominican Republic. Credit: Ministry of Health and PAHO/WHO.

not allow one more child to die of polio. He proceeded to explain that just one case of polio, registered in any country in the world, is enough to keep us alert and continue to fight against this disease that has caused so much damage upon humanity. He also stated that the Ministry will continue to support all strategic plans that strengthen vaccination coverage, in addition to maintaining a strict epidemiological surveillance.

Dr Alma Morales, PWR in the Dominican Republic, stated: "If we intensify efforts, maintain commitment and take action, very soon polio will be the first disease to be eradicated in the 21st century." She also specified that the last polio case in the Dominican Republic

was registered in the year 1985, six years before the last case was recorded in the Region of the Americas, which happened in Peru in 1991.

Finally, Dr Arlene King, President of the RCC, recalled that "the difficult experience of the Dominican Republic in the years 2000 and 2001, is a lesson learned that should not be forgotten. Cases of poliovirus derived from the vaccine should be a constant reminder and a motivation to overcome low coverage, avoid complacency and set



World Polio Day celebration, 24 October 2018, Dominican Republic. Credit: Ministry of Health and PAHO/WHO.

increasingly ambitious goals. Dominican children, children of the Americas and children of the world deserve the opportunity to grow up in a polio free world."



World Polio Day celebration, 24 October 2018, Dominican Republic. Credit: Ministry of Health and PAHO/WHO.

During the ceremony, the Minister and doctors Juan Santoni Mendoza, researcher in the field of polio, and Zacarias Garib, director of the EPI, were recognized along with Rotary International for their contributions to local eradication programmes.

In addition to this special event, the World Polio Day celebration in the Americas was accompanied by a video message from Dr Jarbas Barbosa, PAHO's Assistant Director, social media post cards and messages, and multiple activities organized by partners throughout the continent.

Haiti prepares for polio and measles campaign

Paule-Andrée Byron, National Immunization Programme; Edmond Gue, Ana Elena Chevez, Desiree Pastor, Pamela Bravo, Jennifer Sanwogou, Eduardo Rivero, PAHO

To maintain its status as a measles and polio-free country and avoid the risk of their potential reintroduction, the Haitian Ministry of Health, through its National Immunization Programme, with support from PAHO/WHO, initiated the planning process for an integrated vaccination campaign, planned to begin during Vaccination Week in the Americas in April 2019.

The campaign will aim to conduct an integrated supplemental immunization activity with the measles/rubella and bivalent oral polio vaccine (bOPV) vaccines, reaching more than 1.5 million children, whom will also receive a dose of vitamin A. To achieve this goal, the country plans to mobilize 2,339 vaccination teams that will be deployed throughout the country.

National authorities expressed their concern regarding the current low vaccination coverage in country, and the risks associated with circulation of the measles virus in some countries of the Region of the Americas. For this reason, national authorities, together with PAHO colleagues from the Comprehensive Family Immunization Unit and the Revolving Fund for Vaccine Procurement, began discussions aiming to guarantee technical and financial viability for the campaign.

The immediate tasks that must be carried out include: a) consolidation of the campaign budget, b) resource mobilization to diminish the financial gaps, c) development of technical tools, and d) coordination with the national and international institutions for their involvement.

Dr Paule-Andrée Byron, coordinator of the National Immunization Programme in Haiti, together with representatives from the Epidemiology and Laboratories Directorate, expressed their intention to take the necessary steps to achieve a quality campaign.

Currently, Haiti is facing a diphtheria epidemic and authorities have expressed their wish to avoid new outbreaks of vaccine-preventable diseases.



Haiti team plans for 2019 measles and bOPV campaign.
Credit: Eduardo Rivero.

Past Meetings/Workshops

Immunization workshop for health journalists: "Strengthening Alliances with Media"

Franklin Castillo, Zacarias Garib and Antolina Rodriguez, Expanded Programme on Immunization (EPI); Yenny Rocio Neira, Gabriela Rodriguez, PAHO

Location: Dominican Republic

Date: June-October 2018

Participants: Representatives from the Dominican Republic's Ministry of Health, PAHO/WHO, The Circle of Journalists covering Health (CIPESA, per its acronym in Spanish), Journalists-Barahona, Santo Domingo, La Romana, Santiago.

Purpose: - Strengthen health journalist knowledge on vaccines and their impact on the health and well-being of the population.
- Establish alliances with media to increase population knowledge of vaccination and encourage demand for vaccination posts in the country.

Details: The Dominican Republic's EPI, The Circle of Health Journalists (CIPESA), with support from PAHO/WHO, carried out four immunization workshops during the second semester of 2018 aimed at strengthening the knowledge of journalists, with an emphasis on those who cover health issues. The workshops have been held in four provinces of the country.

These workshops address issues such as the importance of vaccines and their inclusion in the basic immunization scheme, media responsibility when developing messages aimed at the population, potentially affecting the percentage of coverage in a country and instigate a positive or negative result. Additionally, journalists were urged to use scientific sources to validate their reports, reports and news.

On behalf of PAHO/WHO, the local immunization advisor, Dr Yenny Neira, highlighted the advances in immunization within the Region of the Americas and mentioned the current challenges affecting vaccination coverage, with all biologicals and at all levels. The importance of the human papillomavirus (HPV) vaccine, which was introduced in the country in 2017, was also mentioned.

This initiative aims to stimulate awareness of the importance of immunization and the accuracy of facts received by communication professionals, who through their work can provide timely information to the public, especially in times of crisis.

During this training session, the following areas were also addressed: global and regional impact of the EPI, the history of vaccines and their background, as well as the correct communication approach for issues related to this topic.

The first of these workshops was held in the city of Santo Domingo and has since expanded to other parts of the country, after a spark of interest from journalists across the Dominican Republic. Thus far, over 130 journalists have participated in this initiative.



Participants in the workshop for health journalists, Dominican Republic, June-October 2018. Credit: PAHO/WHO.

Grenada gets ready to introduce the HPV vaccine

Kathy-Ann George Swan, Community Health Nurse, Ministry of Health, Social Security and International Business, Government of Grenada

Location: Ministerial Complex, St. George's, Grenada

Date: 10 September 2018

Participants: Ten private and public media houses throughout Grenada, Carriacou and Petite Martinique (including radio, newspaper, television and online digital news media).

Purpose:

- Raise awareness on the global/local situation of cervical cancer and cancers in general; discuss the main types of human papillomavirus (HPV) that are known to cause cervical cancer and the role of media in promoting the vaccine as cancer-preventive;
- Develop partnership and collaboration with media and the Ministry of Health to motivate parents/caregivers, girls and other target audiences to accept the vaccine;
- Provide scientific information to dispel myths and rumors about the vaccine, as well as general information on the HPV vaccine and the planned introduction into the Expanded Programme on Immunization in Grenada.

Details: The Ministry of Health, Social Security and International Business facilitated a sensitization workshop for media houses to inform and educate media personnel on the cervical cancer strengthening project. This project involves introducing the HPV vaccine as primary prevention to reduce the incidence and prevalence of cervical cancer, which had a mortality rate of 16.7 % during 2000-2010, almost twice the WHO estimated rate for the Region.

Adapting experiences from other countries that introduced the HPV vaccine and negative reviews that resulted in low uptake of the vaccine, the purpose was to ensure that Grenada does not suffer the same fate. The media is one of the most influential platforms in the tri-island state (Grenada, Carriacou and Petite Martinique), hence as a key stakeholder it was imperative that the media was adequately informed.

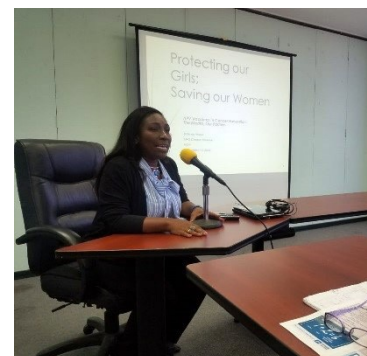
Introduction of the HPV vaccine is scheduled for November 2018 utilizing a school-based approach with an official launch of the programme in October 2018.

Technical presentations were followed by a question and answer segment, where many of the frequently asked questions were addressed.

This allowed the media personnel the opportunity to address their concerns and those of the public so that they would be better informed to share the knowledge with the public. Having been sensitized, the media now acts as one of the Ministry of Health's key partners in helping to dispel myths and reporting positive messages about the strengthening of the cervical cancer prevention programme with the HPV vaccine.



Hon. Nicholas Steele, Minister of Health, Social Security and International Business, addressing participants on the importance of having a national HPV immunization programme together with an effective programme with regular checkups for women, with Pauline Peters, Permanent Secretary w.r.f Ministry of Health, Social Security and International Business on his left. Credit: Ministry of Health, Grenada



Dr Darlene Omeir Taylor, (PAHO's Family and Community Health Advisor) addressing media participants on the rationale for administering the vaccine at the recommended age. Credit: Ministry of Health, Grenada.

Workshop on data analysis with information from electronic immunization registries (EIRs)

Robin Mowson, Marcela Contreras, Martha Velandia, and Daniel Oztzy García, PAHO

Location: Mexico City, Mexico

Date: 12-13 September 2018

Participants: Nineteen participants representing the Expanded Programme on Immunization (EPI) from six countries who have already implemented EIRs or are in the process of implementation and improvement (Argentina, Brazil, Chile, Honduras, Mexico, and Uruguay), as well as representatives from PATH and PAHO/WHO.



Participants from the workshop on data analysis with EIRs. Credit: PAHO/WHO.

Purpose: The main objective of the workshop was to learn good practices from countries in relation to monitoring and evaluating vaccination indicators from the EPIs using information coming from EIRs. Another objective was to establish and document a catalogue of analyses and indicators that respond to the performance monitoring needs of the country EPIs using information coming from the EIRs. Specific objectives included:

1. Generating a methodological document related to the different analyses that countries are developing and that could be developed in the future;
2. Reviewing different experiences from the countries and generating a variety of analyses that can be extended to other countries of the Americas Region.
3. Incorporating results from this workshop into a document of practical considerations for a nominal immunization registry system developed by PAHO.

Details: At the end of the workshop, next steps were defined for the development of a document on analysis and data quality that can be added to the existing guide. Overall, the workshop was very productive, and the discussion sessions inspired a rich brainstorming. PAHO plans to continue the discussion with countries on the dimensions analyzed during the workshop, including:

- EIR users
- Traditional and non-traditional reports and indicators in an EIR
- Indicators of an EIR implementation
- Data quality indicators in an EIR
- Alternative and innovative analyses

Due to the success of this workshop and the quality of the gathered information, it is proposed to continue convening meetings with a small group of participants who have the necessary experience on the topics under discussion.

The opportunity for future sessions hosted by PAHO was discussed and is considered a good next step to discuss any or all the following topics, which were raised by the group: Discussion on the use of EIRs in vaccination campaigns; construction of indicators; new studies or other potential analyses to be performed with an EIR.

Seventh meeting of the Global Vaccine Safety Initiative (GVSI)

Christine Guillard Maure and Patrick Zuber, WHO HQ

Location: Santiago, Chile

Date: 7-8 October 2018

Participants: Immunization programme managers, national regulatory authorities, pharmacovigilance staff from more than 30 Member States from all WHO regions, representatives from UN agencies, academic institutions, pharmaceutical companies umbrella organizations, partners and funding agencies.



Participants in the 7th meeting of the GVSI

Purpose: The overall objective of the meeting was for Member States and partners to interact and exchange information on progress with implementation of national and global vaccine pharmacovigilance activities, and plan for further development. The 2018 theme of the GVSI was Moving Towards Sustainable Development, providing an opportunity to work toward sustainable and integrated vaccine pharmacovigilance, in the context of the post-2020 global immunization strategy and Sustainable Development Goal 3 to “ensure healthy lives and promote wellbeing for all at all ages”.

Details: The 7th GVSI meeting gathered more than 100 participants from immunization programmes and regulatory agencies from all WHO regions, technical agencies, donors and industry. The meeting was organized for the first time in the Pan American Health Organization (PAHO) region, in collaboration with the Ministry of Health (MoH) Chile. The meeting agenda included nine sessions in addition to a keynote address by the SAGE chair. The meeting was geared towards innovations in vaccine pharmacovigilance in preparation for the post-2020 WHO immunization strategy.

Highlights included understanding global transitions that will affect public health programmes, immunization and vigilance. It also took stock of progress with global vaccine pharmacovigilance since the GVSI was established in 2012 with enhanced reporting and management of safety events, active surveillance networks for rotavirus vaccines in all WHO regions, management of the safety profile of complex vaccines and collaborative models between public and private sectors.

Several new frontiers were identified and enthusiastically discussed. Those include: the development of a global observatory, hosted in regional nodes by collaborating institutions; evolving strategies and methods for safety communication including educational approaches; and pregnancy vigilance with emphasis on lower income countries that will require broadly harmonized approaches.

Meeting on global immunization data collection, and improving the availability, quality and use of those data

Sebastien Antoni, Carolina Danovaro, Laure Dumolard, Marta Gacic-Dobo, Randie Gibson, Jan Grevendonk, WHO HQ; Mamadou Diallo, UNICEF HQ

Location: Budapest, Hungary

Date: 08-12 October 2018

Participants: WHO HQ/RO/CO; UNICEF HQ/RO/CO; SAGE Working Group on Quality and Use of Global Immunization and Surveillance Data

Ministry of Health representatives from Germany, Hungary, Lebanon, Philippines

American Red Cross, Bill & Melinda Gates Foundation (BMGF); Centers for Disease Control and Prevention (CDC); European Centre for Disease Prevention and Control (ECDC); Gavi, The Vaccine Alliance; Gobe Group; Institute for Health Metrics and Evaluation (IHME); Learning Strategies International; PATH; Swiss Tropical and Public Health Institute; John Snow Inc. (JSI)



World Health Organization
Immunization, Vaccines and Biological (IVB)

[Meeting report](#)

- Purpose:
- Review and agree on the core questions for the 2018-2019 WHO & UNICEF Joint Reporting Form (JRF) on immunization performance.
 - Discuss the use of data collected at the global level, and align strategies and investments for improving the availability, quality, and use of immunization and vaccine-preventable disease (VPD) data.
 - Provide an update on the WHO Immunization Information System (WIISE) and gather system requirements and expectations from Member States, WHO RO/CO's and partners.

Details: To improve the availability, quality, and use of immunization data, three meetings were hosted during the week.

"8th WHO & UNICEF Meeting on Monitoring National Immunization Systems"

WHO and UNICEF collect and disseminate annual information through the JRF process on the structure, policies, performance and impact of national immunization systems. The meeting served as a platform to facilitate continued collaboration between WHO and UNICEF, coordinate the joint data collection, and ensure all relevant data to monitor immunization systems performance and VPD prevalence are captured.

"Partners' Meeting on Improving the availability, quality and use of data"

Data use for decision-making is a global priority. Meeting participants shared progress and experiences at global and country level, brainstormed about future priorities, and coordinated joint efforts. Interactive working groups focused on: 1) Workforce development, 2) Improving global coverage estimation, 3) Data for equity, 4) Data triangulation, 5) Electronic immunization registry, 6) Evidence, 7) DHIS2, 8) Local population estimate for programming, and 9) Data analysis and visualization. All material can be found at this [link](#).

"Meeting on the WHO Immunization Information System (WIISE)"

An update on the development, progress, and upcoming timeline of the WIISE project was presented at the meeting. Demonstrations of the dashboards and system technologies were given to meeting participants. The feedback gathered at the meeting will be critical for developing a flexible and robust system.

In parallel, the [SAGE Working Group on Quality and Use of Global Immunization and Surveillance Data](#), met to continue their work towards preparing a report that will be shared with SAGE for their April session.

15th Annual Meeting on Surveillance, Preparedness and Response to Meningitis Outbreaks in Africa

[Crépin Hilaire Dadjé](#), WHO/Inter-country Support Team for West Africa

Location: Dakar, Senegal

Date: 16-18 October, 2018

Participants: WHO, CDC, AMP, UNICEF, Gavi, MRC, WAHO, MRC, MSF/international, NIPH/Oslo, SII, CSSI, Cermes, Epicentre, Davycas int., Univ. of Nebraska/IFAIN, Institut Pasteur, SANOFI Pasteur, MRF, Univ. of Cambridge, HID, Centre Muraz, Path, MCSP/JSI

Purpose:

- To review the meningitis epidemiological situation, the surveillance and the response to meningitis outbreaks in Africa in 2018 and to set the perspective and priorities for future interventions
- To assess the progress and define a way forward for the introduction of MenAfriVac® through preventive vaccination campaigns and routine immunization
- To assess the performance of the implementation of MenAfriNet project.

Details: The meeting gathered nearly 160 participants from 16 countries of the meningitis belt and partner organizations. About 30 presentations were made with perspectives from both implementing countries and partners. Topics discussed at the meeting included the global call for action to defeat meningitis by 2030; meningitis surveillance; data management; laboratory confirmation and procurement of supplies; vaccine evaluation, special studies and technical assistance; lessons learned from MenA introduction; the epidemic response in 2018 and preparedness for 2019; and finally, the future vaccine supply with updates provided on the Gavi Vaccine Investment Strategy and the development of a pentavalent meningitis conjugate vaccine.

Some side meetings were also organized to deepen some specific issues related to the external quality assessment for laboratory activities, surveillance and data management.

It should be recalled that in 2018, a total number of 15,574 suspected meningitis cases were reported with 1074 deaths from weeks 1-35. Most affected countries included DRC, Burkina Faso, Cameroon, Ghana, Niger and Nigeria. The bacteriological profile of the notified outbreaks indicates a predominance of non NmA: S.p (33%); NmC (24%); NmX (23%) NmW (5.6%). In preparation of the 2019 epidemic season, all countries have been urged, among other things, to develop/update their preparedness and response plans.

At the closure of the gathering, about 15 recommendations were adopted. They are mainly pertaining to preparedness, surveillance, communication, vaccination, monitoring and evaluation, data management and laboratory activities.



Group photo of the participants

Joint WHO/Europe and ECDC exercise on poliovirus containment breach preparedness and risk communication: Polio Outbreak Simulation Exercise (POSE)

[Catharina de Kat](#), WHO/Europe

Location: Copenhagen, Denmark

Date: 24-25 October, 2018

Participants: Representatives of the: National Authority on Containment (NAC) in accordance with the poliovirus Containment Certification Scheme (CCS); National focal points (NFPs) for International Health Regulations (IHR); National health risk communication experts; Poliovirus Essential Facilities PEF(s); European Centre for Disease Prevention and Control (ECDC) WHO; international technical partners.

Purpose: POSE addresses communication, coordination and collaboration at international and national levels with a purpose to further improve preparedness and response mechanisms. The aim of this exercise for Member States from the Region is to critically review and update their respective national plans for responding to a potential containment breach in PEFs.

Details: To help prepare for PEF certification, representatives from all countries with planned PEFs participated in a 2-day POSE organized by WHO/Europe and the ECDC in October 2018. The scenario of the simulation exercise was based on the accidental spill and exposure of two laboratory workers to poliovirus type 2 in a vaccine manufacturing plant in the Netherlands in 2017.

By simulating the occurrence of a containment breach in their own countries, participants could critically review and update their respective national plans for responding to such an event in a PEF. They could also identify potential deficiencies in their countries' overall emergency response and contingency planning systems, including aspects related to legislation, communication, coordination and collaboration at international and national levels.

"The trend of training through simulation exercises is great. The scenario we used was real – it did happen. The simulation made us think of possible gaps and what could be improved in our own country," said Francesco Vairo, a participant representing the National Institute for Infectious Diseases L.Spallanzani, Italy,

At the end of the two-day exercise, each participating country made a gap- analysis of their preparedness and response plans, including a concrete proposal for national improvements. In reflecting on lessons learned through the simulation exercise, participants noted that legislative frameworks must be reviewed and if necessary revised to enable a rapid response to a potential containment breach.

Regional Certification Commission for the Polio Endgame in the Region of the Americas (RCC) invites countries to increase their efforts to advance towards global certification

Ana Elena Chevez, Gloria Rey-Benito, Andrea Villalobos, Paola Ojeda, Elizabeth Thrush, PAHO

Location: Santo Domingo, Dominican Republic

Date: 23-26 October 2018

Participants: RCC members: Dr Arlene King, President; Dr José Luis Díaz-Ortega; Dr José Félix Sánchez Largaespada; Dr Mark Pallansch; and Dr Angela Gentile. The other two RCC members, Dr Rosa Alba Salas and Dr Eliseu Waldman (teleconference)

Purpose: Review the updated progress reports on poliovirus containment, annual reports on polio eradication status, and the methodology and results from the regional risk assessment tool proposed by the Secretariat

Details: One of the aspects that demanded special attention from the Commission was analyzing the methodological design of the risk assessment tool that was used to classify countries as high, medium or low risk of polio and their conceptual consistency with the definition of risk, established by the Technical Advisory Group (TAG) for Vaccine-preventable Diseases in 2011. Additionally, the RCC held two meetings with the Ministries of Health and Chairs of the National Certification Commissions of the Dominican Republic and Haiti.



RCC Members at their 10th annual meeting. Credit: Eduardo Rivero.

The RCC congratulated PAHO Member States for submitting the updated containment reports, and for the first time in many years, annual reports on the state of polio eradication in their countries.

Regarding poliovirus containment, the RCC recognizes advances from the countries with the implementation of the Regional-GAPIII, as well as guidance on minimizing the risk for facilities collecting, handling or storing potentially infectious poliovirus materials; efforts should however continue to finalize Phase I and advance with the process of containment certification.

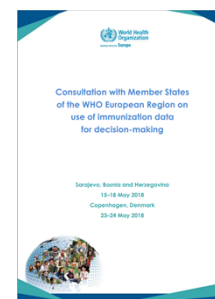
Additional recommendations that came from this meeting include the need to update the polio field guide, the importance of countries increasing their efforts to strengthen the knowledge of health personnel regarding detecting, classifying and reporting AFP cases; and, finally, the importance of conducting risk assessment at subnational levels.

Resources

Meeting report: Consultation with Member States of the WHO European Region on use of immunization data for decision-making

[Catharina de Kat](#), WHO/Europe

A consultation with and workshop for Member States of the WHO European Region on the use of immunization data for decision-making took place in Sarajevo, Bosnia and Herzegovina and in Copenhagen, Denmark in May 2018. The goal of this consultation and workshop was to facilitate the exchange of practices, challenges and solutions between participants and for WHO/Europe to develop ways of supporting countries in the Region in the collection, analysis and usage of data for awareness-raising and decision-making.



A new WHO E-Learning course on Investigation of Adverse Event Following Immunization

[Christine Guillard Maure](#), WHO Headquarters

The ultimate goal of an adverse event following immunization (AEFI) investigation is to find the cause of the event and to implement follow-up actions when required. Investigation should identify any immunization error-related reactions because these are preventable. If coincidental events are recognized, proving them will be important to maintain public confidence in the immunization programme.

Acknowledging that the cause of a large proportion of AEFI cannot be established by AEFI causality assessment committees due to incomplete AEFI investigation, WHO is launching an E-learning course on AEFI investigation to contribute to building capacity in: 1) when to launch an investigation 2) what information is required to successfully complete an investigation 3) how to successfully manage inter-personal communication with relevant stakeholders.

Learn at your own pace with a [highly interactive course](#), with combination of informative content and immersive scenarios where you will be called upon to investigate serious AEFI in different parts of the world. Following successful course completion, you would download a course certificate.

Launch of the WHO Manual for the Laboratory-based Surveillance of Measles, Rubella, and Congenital Rubella Syndrome

[Mick Mulders](#), WHO Headquarters

In June 2018, the [3rd edition of the WHO Manual for the Laboratory-based Surveillance of Measles, Rubella, and Congenital Rubella Syndrome](#) was launched. Its primary objective is to provide a resource for the WHO Global Measles Rubella Laboratory Network (GMRLN) to accurately diagnose these diseases. Over the recent years, new methods for diagnosis and analysis of measles and rubella have been developed. The manual provides protocols for these methods. There are new approaches and challenges for the laboratory to provide increased diagnostic and analytic support for case classification in elimination settings, to accurately measure and interpret data for population immunity studies, and to meet the growing workload generated by the integration of measles and rubella surveillance. While expanding capacity, the laboratory network must maintain high quality data and provide standardized documentation of activities, records, and laboratory results to meet the requirements for verification of elimination.

Topics covered in this manual address these challenges by:

- Describing the activities of the network laboratories in support of immunization and surveillance programmes and goals, including the verification of disease elimination
- Outlining the accreditation programmes and quality assurance programmes that reduce the likelihood of errors and improve all aspects of laboratory performance
- Providing guidelines and best practices for collecting suitable clinical specimens and the laboratory confirmation of measles and rubella infection in different settings
- Providing guidelines, tools, forms, and protocols for diagnosis of measles and rubella infection and molecular characterization of circulating viruses

The information provided in this manual, while primarily intended as a resource for those directly responsible for laboratory support, can be valuable for other public health personnel and programme managers. The collection of adequate clinical samples and reliable testing to achieve accurate interpretation of test results are essential for coordination of case investigations among epidemiologists, immunization programme and field staff, and the laboratory.

This manual has been developed by Jennifer Rota with support from many representatives from the GMRLN network.

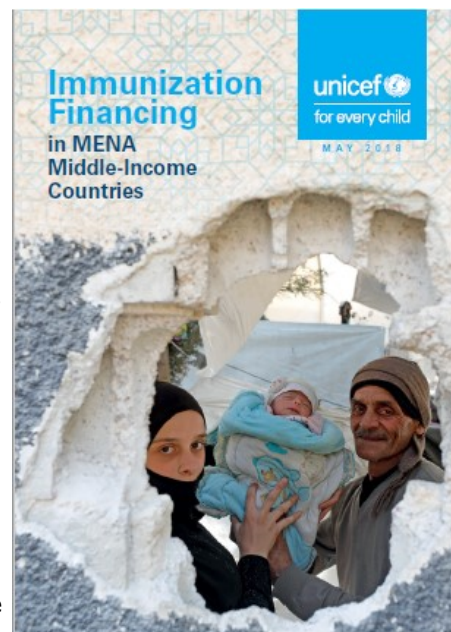
Report on immunization financing in middle-income countries in the Middle East and North African Region (MENA)

[Nahad Sadr-Azodi](#), UNICEF MENARO

Although immunization is an excellent investment, yielding one of the highest returns in health, MENA governments' budgets have not fully addressed immunization programmes' challenges and opportunities, such as new vaccine introductions, and reaching coverage and equity targets. It is to help governments uphold their commitments to the right of every child to be immunized against preventable diseases that UNICEF undertook this immunization financing landscape analysis. Based on data, research, interviews, lessons learned and good practices in the MENA region, the study provides policymakers, senior officials in ministries of finance and health, and parliamentarians or equivalents with a set of key recommendations to secure necessary domestic financing for this critical childhood intervention.

This [report](#) concludes that in most of MENA's middle-income countries, prioritizing immunization and making it more efficient is the best way to create room in budgets and to secure more resources. Many of the recommended first steps are information-related: generating and sharing knowledge, equipping policymakers with evidence, and determining the role of social insurance.

It is our hope that this report and its recommendations will help UNICEF and partners in the region strengthen their advocacy and support to governments so they live up to their commitments to the Convention on the Rights of the Child and build high-performing immunization systems that are accessible and appealing to all.



Calendar

November

12-13	Annual meeting of the European Technical Advisory Group of Experts (ETAGE)	Copenhagen, Denmark
13-16	Meeting of the measles/ rubella laboratory network (LabNet) of the western and central European countries and of the Russian Federation and Newly Independent States of the WHO European Region	Copenhagen, Denmark
21-23	AFRO Regional Working Group East and South Africa meeting	Harare, Zimbabwe
26-30	Global Rotavirus and Pediatric Diarrhea and Invasive Bacterial Disease Surveillance Meeting	Cape Town, South Africa
27-29	MNTE Partners' meeting	New York, USA

December

5-6	Global Advisory Committee on Vaccine Safety	Geneva, Switzerland
6-7	Global NITAG Network meeting	Ottawa, Canada
11-12	SEARO/WPRO Bi-Regional Rotavirus meeting	Manila, Philippines
11-14	AFRO West and Central Sub-Regional Working Group Meeting	Abuja, Nigeria

2019

January

15-17	RITAG Meeting	Brazzaville, Congo
18	Immunization Stakeholders' meeting	Brazzaville, Congo
24Jan-1Feb	WHO Executive Board	Geneva, Switzerland
29-31	Gavi High Level Review Panel (HLRP)	Geneva, Switzerland

March

26-28	11th International Conference on Typhoid and Other Invasive Salmonellosis	Hanoi, Vietnam
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April

2-4	Strategic Advisory Group of Experts (SAGE) on Immunization	Geneva, Switzerland
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Links

Organizations and Initiatives

American Red Cross

[Child Survival](#)

Centers for Disease Control and Prevention

[Polio](#)

[Global Vaccines and Immunization](#)

Johns Hopkins

[International Vaccine Access Center](#)

[Value of Immunization Compendium of Evidence \(VoICE\)](#)

[VIEW-hub](#)

JSI

[IMMUNIZATIONbasics](#)

[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

[Better Immunization Data \(BID\) Initiative](#)

[Center for Vaccine Innovation and Access](#)

[Defeat Diarrheal Disease Initiative](#)

[Vaccine Resource Library](#)

[Malaria Vaccine Initiative](#)

[RHO Cervical Cancer](#)

Sabin Vaccine Institute

[Sustainable Immunization Financing](#)

UNICEF

[Immunization](#)

[Supplies and Logistics](#)

USAID

[USAID Immunization](#)

[USAID Maternal and Child Survival Program](#)

WHO

[Department of Immunization, Vaccines & Biologicals](#)

[ICO Information Centre on HPV and Cancer](#)

[National programmes and systems](#)

[Immunization planning and financing](#)

[Immunization monitoring and surveillance](#)

[National Immunization Technical Advisory Groups Resource Center](#)

[SIGN Alliance](#)

Other

[Coalition Against Typhoid](#)

[Confederation of Meningitis Organizations](#)

[Dengue Vaccine Initiative](#)

[European Vaccine Initiative](#)

[Gardasil Access Program](#)

[Gavi the Vaccine Alliance](#)

[Immunization Economics resource](#)

[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](#)

[Vaccine Safety Net](#)

[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 \(Johns Hopkins Bloomberg School of Public Health\)](#)

[Immunization Economics Community of Practice](#)