









# PAPUA NEW GUINEA POLIO OUTBREAK RESPONSE First 100 Days

30 September 2018

## PAPUA NEW GUINEA POLIO OUTBREAK RESPONSE

First 100 Days

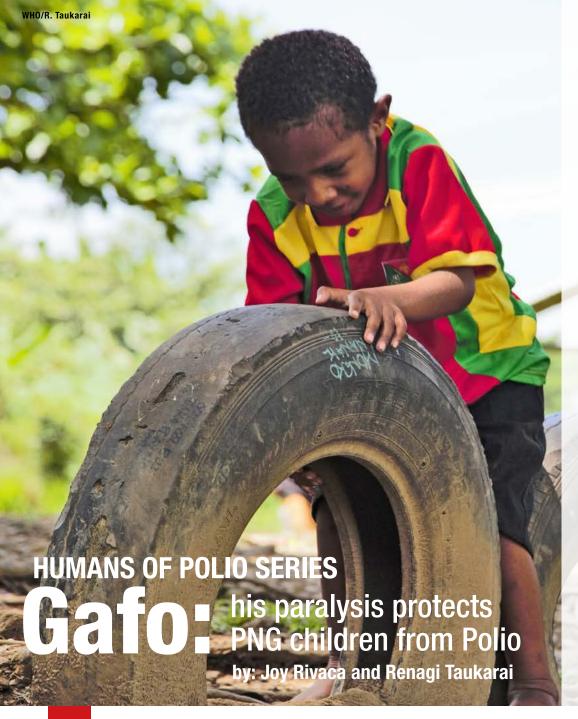
22 June - 30 September 2018

## A Dedication to the Frontline Polio Workers of Papua New Guinea

The polio outbreak response in Papua New Guinea is led by the National Department of Health of Papua New Guinea, with support from the World Health Organization (WHO), United Nations Children's Fund (UNICEF), the Global Polio Eradication Initiative (GPEI), Rotary International, Bill & Melinda Gates Foundation and many other partners.

The outbreak response operations had been made possible through the tireless commitment, dedication and hard work of the thousands of frontline polio workers who braved challenges to ensure children are protected from polio.





#### **A Profile**

It was early morning in late April 2018 when a six-year-old boy named Gafo woke up with hurting legs. He was excited to play with his friends so he ignored the pain. But he fell as soon as he got up from his bed – his legs were so weak that he could barely move.

In the next two days, Gafo's pain got worse, even with his mother Soya's constant massaging. On the third day, the family decided to bring Gafo to Angau Memorial General Hospital in Lae, Morobe, in the central northern coast of Papua New Guinea. After a series of tests, it was confirmed that polio was the cause of Gafo's paralysis. It was later discovered that the virus was circulating in the community.

For many weeks, Gafo was the nameless and faceless "first polio case in Papua New Guinea in 18 years" that was reported in the national and international media.

Gafo's parents have started to understand that his paralysis will never be cured, but they are determined to minimize Gafo's difficulty of movement with the regular therapy he is receiving from his doctor, Dr Winnie Sadua, at Angau Memorial General Hospital.

Gafo's parents believe that his paralysis was instrumental in raising awareness of polio in Papua New Guinea. His story paved the way for more children trooping to vaccination sites when the government launched mass polio vaccinations as part of the outbreak response.

"My son may not have the normal life we prayed for, but he will always be a special boy," said Gafo's mother, Soya. "What happened to my son has increased awareness of polio and many mothers are having their children vaccinated, saving these children from lifelong paralysis."

Morobe Provincial Polio Response Coordinator,
Mr Micah Yawing, echoed the sentiment: "This boy is a
gift to the children of Papua New Guinea. Because of him,
we are able to vaccinate and protect many children in
Morobe Province. If it wasn't for this kid, we probably still
wouldn't know that we have an outbreak on our hands.
I hope that we can find the support he needs, especially
for his education."

Two weeks ago, Gafo was unable to walk and had to be carried everywhere. However, with help from the Morobe Provincial Health Office and Angau Memorial General Hospital, Gafo receives regular check-ups and therapy. He still cannot run, but has developed his own unique gait, moving rapidly to keep up with his friends and his sister Sola.

Next year, Gafo will start going to school – an idea that lights him up with excitement: "I want to become a doctor -- giving injections to children and making them feel better when they are sick." His parents hope that, with support from the Government and others, Gafo will receive a good education so that his dreams can come true.



## The First 100 Days of the Polio Outbreak Response in Papua New Guinea: A Summary

Papua New Guinea confirmed a polio outbreak on 22 June 2018 when a vaccine-derived poliovirus type 1 (VDPV1), first detected in a 6-year old boy from Morobe Province, was also isolated in two healthy children from the same community, indicating that the virus was circulating.

On the same day, Papua New Guinea notified the World Health Organization as per required under the International Health Regulations (IHR, 2005). A public announcement was made on 25 June 2018.

On 26 June, a National Emergency was declared by the Government of Papua New Guinea. The National Emergency Operations Centre for Polio Response was activated the day after.

Since the confirmation of the outbreak, two rounds of the polio vaccination campaign have been implemented to protect children under 5 years old against polio.

- The first round covered the three high-risk provinces of Morobe, Madang and Eastern Highlands where 303,907 children under 5 years old were vaccinated.
- The second round covered nine provinces of Morobe, Madang, Eastern Highlands, Western Highlands, Southern Highlands, Jiwaka, Enga, Chimbu and Hela where 690,953 were vaccinated.

A total of 1.6 million doses of vaccines have been shipped to the country for use in the first two rounds of the vaccination.

A system was put in place to rapidly detect and identify cases of polio through enhanced surveillance for acute flaccid paralysis (AFP). Since the confirmation of the outbreak, Papua New





Guinea has reported 14 cases of polio: five in Eastern Highlands, three in Morobe, two in Enga, two in Madang, one in the National Capital District and one in Jiwaka.

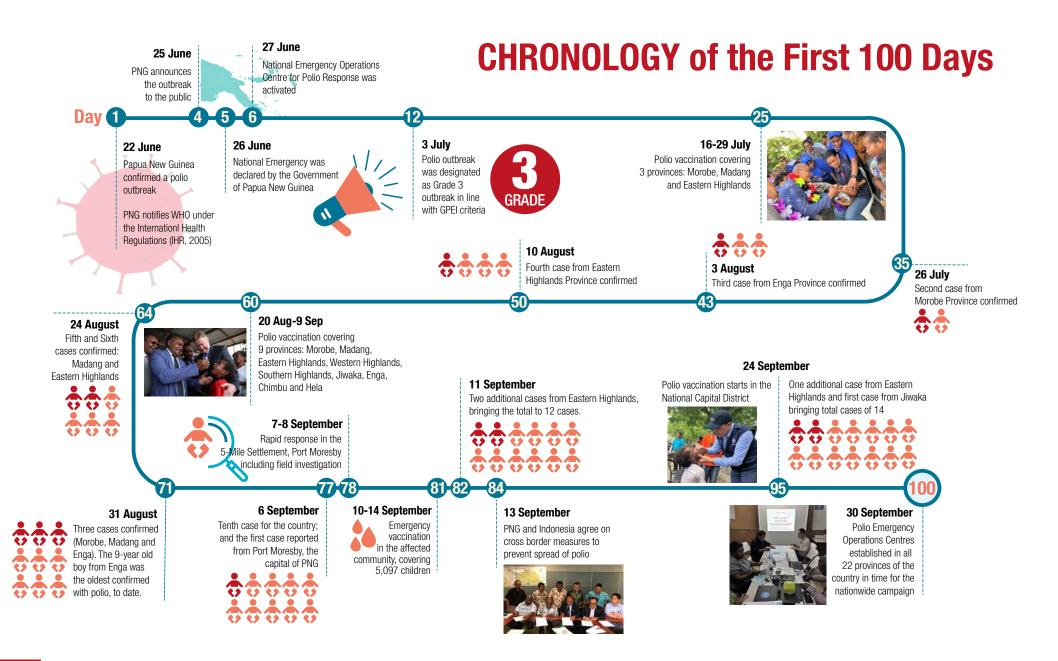
Communication and community engagement had been a key pillar of the response operations. A multi-media approach was used to create demand for polio vaccination, maximizing both traditional media (newspapers, TV, radio, posters, flyers), social media engagement (Facebook, text messaging) and interpersonal communication (community meetings, use of loud hailers). Regular media conferences were held.

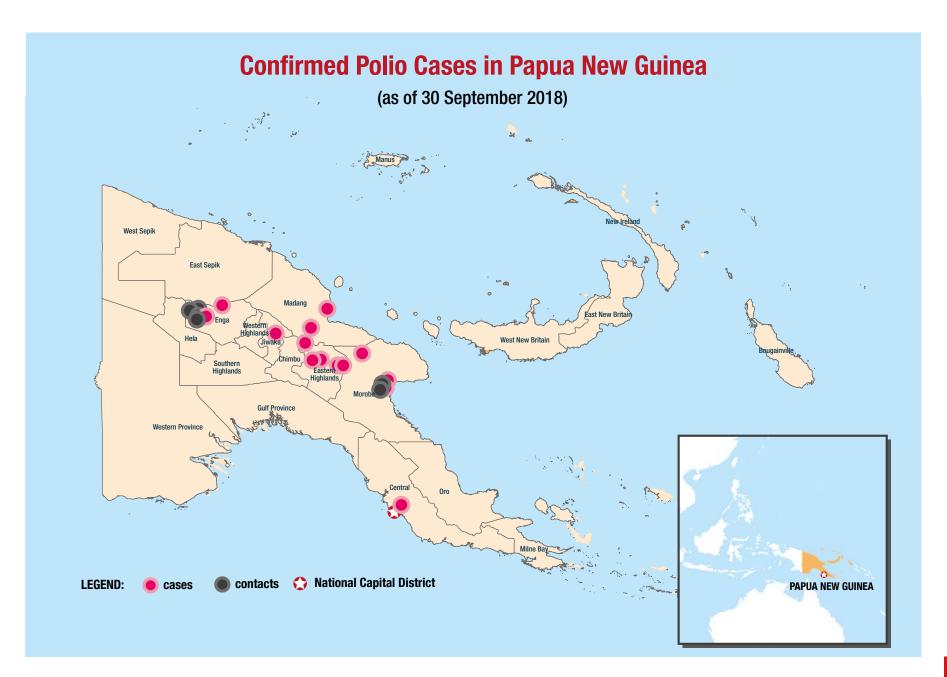
There have been more than 90 international polio workers from the World Health Organization (WHO), United Nations Children's Fund (UNICEF) and the US Centers for Disease Control and Prevention (CDC) that have been deployed to the country, covering the expertise: coordination, outbreak management, surveillance, immunization, risk communication, vaccine management, communication for development, health operations and logistics, finance, administration and others.

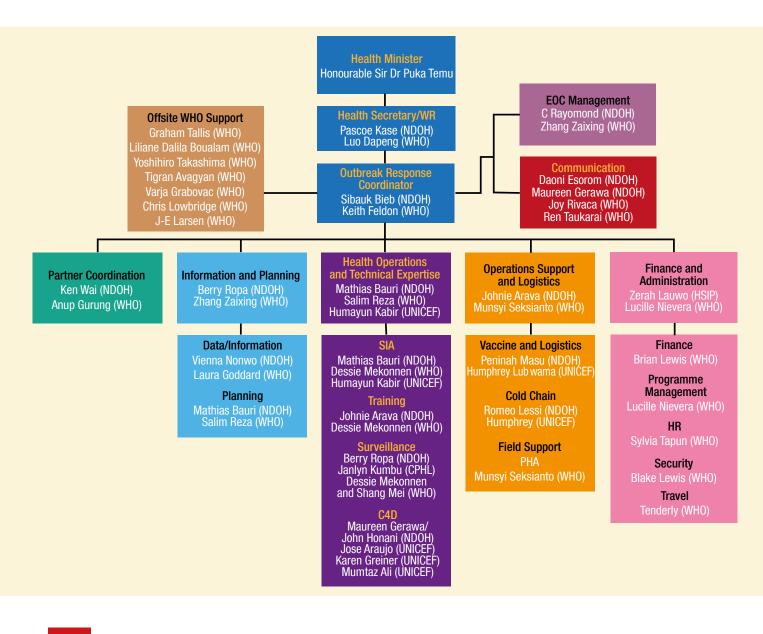
Advisory to travelers on polio vaccination have been issued, as per required under the IHR (2005). Public health measures between Papua New Guinea and Indonesia have been agreed during the cross-border meeting on 13 September 2018.

The outbreak response plan of Papua New Guinea includes three main components: (1) supplementary immunization activities (four sub-national and national vaccination rounds); (2) enhanced surveillance; and (3) communication. The total estimated budget for the plan is US\$ 18 million, against which the Government has committed approximately US\$ 2.2 million (PNG Kina 6.7 million), releasing PNG Kina 2 million for the first and second rounds of the vaccination campaigns.

Financial support for the outbreak response includes the Bill & Melinda Gates Foundation, Rotary International, United States Agency for International Development (USAID), Canada, the Republic of Korea, United Kingdom and Australia. The Global Polio Eradication Initiative (GPEI) partners, in partnership with the Government, will continue to work with donors to secure the urgently required outbreak response funding.







#### **Outbreak Management**

The overall management of the polio outbreak response is led by the Government of Papua New Guinea, through the National Department Health at the national level and the Provincial Health Authorities/ Offices at the provincial level. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) provide technical and financial support to the response operations. The key functions in the outbreak management are identified in the Organogram.

#### Managing Information for Decision, Action and Dissemination

The National EOC receives reports from multiple sources on a daily basis. Key sources of information are the Provincial EOCs, technical team leaders, surveillance officers, health workers, stakeholders, media organizations and the general public. Key updates are synthesized for presentation in daily morning meetings and are used in decision making, risk assessment, agreement on action points and for dissemination to the partners and the public.

Weekly situation reports are issued to summarize highlights of the polio response operations. Since the start of the outbreak, 19 internal situation reports have been produced. These reports have been circulated to the senior management and technical teams for use in risk assessment and have also become basis for the development of external communication products such as media releases, web updates and social media posts.



#### **Information Sources**

Provincial Emergency Operations Centers
Surveillance officers
Hospitals, health facilities and health workers
Doctors and clinicians
Laboratories
Social mobilizers and vaccinators
Local NGOs
Media monitoring results
Inquiries from the public

## National Emergency Operation Center in Port Moresby collates the information on a daily basis for:

Decision-making on issues

Management of operations (financing and deployment
of personnel, supplies and materials)

Policy guidance such as issuance of advisories

Development of communication products

#### **Situation Reports**

19 internal situation reports issued) – distributed to all levels of the implementing organizations

#### **Communication Products**

media releases, media conferences, partner updates, web products, social media posts, etc.







WHO/R. Taukarai

#### **High-Level Support to the Polio Outbreak Response**

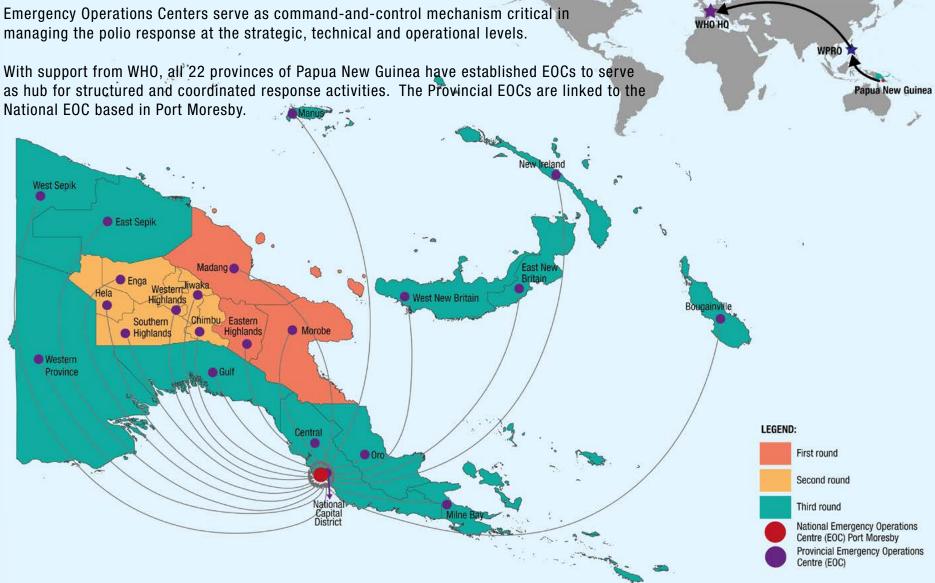
Dr Shin Young-soo, Regional Director of the World Health Organization for the Western Pacific visited Morobe Province to support the polio vaccination campaign in Lae. He talked to parents to explain the risk of polio and the importance of vaccination. He commended the polio workers for their commitment and sacrifice in the response operations.

Dr Shin also re-affirmed WHO's commitment to the Government of Papua New Guinea during his meeting with the Prime Minister Peter O'Neill and Sir Dr Puka Temu, Minister for Health & HIV/AIDS.

#### **EMERGENCY OPERATIONS CENTER:**

Connecting People for Coordinated Polio Outbreak Response

managing the polio response at the strategic, technical and operational levels.





The National Emergency Operations Center based in Port Moresby provides strategic and technical guidance to the Provincial Emergency Operations Center.



The National EOC meets daily at 8:30am to get updates from the operations, discuss issues and agree on courses of action. These meetings are co-chaired by NDOH (Dr Sibauk Bieb) and WHO (Mr Keith Feldon). The EOC meeting is also open to partners and stakeholders.



WHO/J. Rivaca

## NATIONAL Emergency Operations Center: central hub for response operations

The National Emergency Operations Center (NEOC) was activated on 27 June 2018, a day after the Public Health Emergency was declared. The National EOC serves as the nerve center that connects and supports the functionality of the provincial EOCs. It connects people and expertise to deliver the key functions in the Incident Management System (IMS).

"The EOCs were instrumental in the success of the polio campaign. The EOCs ensured effective planning, monitoring, reporting and making mid-course corrections in the campaign strategies."

Feedback from the Provinces Campaign Review Meeting, 10 August 2018

## **PROVINCIAL Emergency Operations Center: Bringing the Operations to the Field Level**



Sir Dr Puka Temu, Minister for Health & HIV/AIDS led the handover of the Emergency Operations Center to the Governor of Morobe Province on 16 July 2018.



Morobe Province

"The Emergency Operations Center enabled us to work together as a team in a more systematic way. The EOC was where we planned our activities, agreed on our strategies, reported our progress, assessed our actions and shared our daily challenges. This was where people came when they wanted to know what was happening with our response. I thank WHO and partners for helping us not only with equipment, materials and supplies, but for installing a management system to better manage our work."









Polio Public Health Emergency Operations Center of Hela



Polio Public Health Emergency

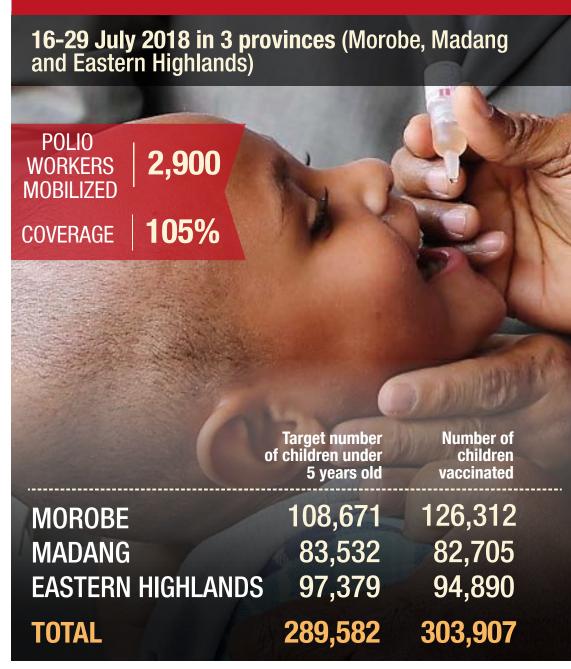
**Operations Center of Morobe** 

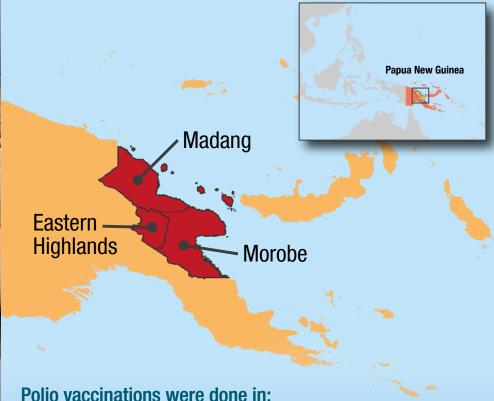
Polio Public Health Emergency
Operations Center of Southern Highlands



Polio Public Health Emergency Operations Center of Western Highlands

## **Polio Vaccination Coverage: ROUND 1**



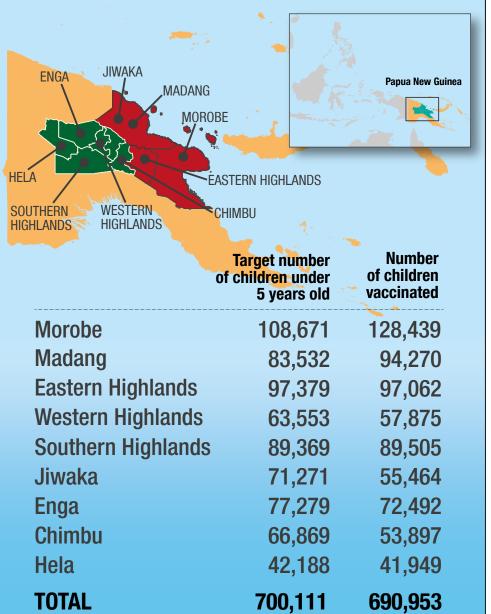


- fixed sites (aid posts, health centres, hospitals and markets)
- mobile sessions (house-to-house and roadside services)
- outreach activities (travelling to remote places by walking; taking a boat or chopper and staying overnight in villages
- special session in markets, bus stops, beach areas and other major community gatherings

There were more children vaccinated than the target populations, especially in urban areas due to migration and inclusion of transit populations.

## **Polio Vaccination Coverage: ROUND 2**







## Detecting Polio Cases: Enhancing Surveillance for Acute Flaccid Paralysis

One of the key interventions for the outbreak response is to put in place a system for enhanced surveillance for acute flaccid paralysis (AFP) or "suspected polio cases". Surveillance officers, graduates of field epidemiology training programme (FETP), pediatricians, clinicians and surveillance focal persons have been trained to identify and investigate AFP cases in the field, collect stool specimen for laboratory testing, actively search for cases and conduct medical record review.

Since the start of the outbreak in June, there have been 140 reported AFP cases. Of these AFP cases, Papua New Guinea has confirmed a total of 14 cases of polio as of 30 September in six provinces: five in Eastern Highlands, three in Morobe, two in Enga, two in Madang, one in the National Capital District and one in Jiwaka.

#### **Polio Outbreak Response in the Capital City**

Port Moresby reported its first case of polio on 6 September in a 6-year old boy from 5-Mile Settlement in Port Moresby. Rapid response operations were immediately conducted on 7-8 September that included field and clinical investigations, identification of close contacts and collection of stool samples. Based on risk assessment, an emergency vaccination was implemented on 10-14 September, covering 5,097 children in the settlement.

The province-wide polio vaccination campaign in the National Capital District was started on 24 September until 8 October 2018 – a week ahead of the nationwide campaign on 1 October. Teams of polio workers are set to vaccinate 170,195 children under 15 years old during the two-week period.

5.097 children

#### **Timeline for the Emergency Response in Port Moresby**

of Papua New Guinea





Integrating Polio Vaccine in the Human Papillomavirus (HPV) Vaccination for Girls in Schools

To integrate to the ongoing health service delivery activities, polio vaccine was also given to school-age girls who were receiving human papillomavirus (HPV) vaccines in some schools in Port Moresby.





#### **Environmental Surveillance**

To supplement AFP surveillance system, a team from NDOH and WHO is also monitoring poliovirus in human populations. A national plan for environmental surveillance has been developed and five sites from two cities, Lae and Port Moresby, have been selected for environmental sampling.

The first environmental samples were taken from Port Moresby on 5 September, by water and sanitation service provider Eda Ranu and National Capital District Commission (NCDC) Health. The environmental samples from Lae will be taken on 1 October, by water and sanitation service provider Water PNG, and Lae Urban Authority, Lae District, and Morobe Province.

The Central Public Health Laboratory (CPHL) Surveillance unit, the WHO accredited National Reference Laboratory based in Port Moresby assists in sending environmental samples (sewage) to the Philippines for polio culture.

Papua New Guinea is the fourth country in the Western Pacific region to establish environmental surveillance. To build capacity in-county, WHO conducted laboratory training with participants from Central Public Health Laboratory and Angau General Memorial Hospital laboratory, in Manila, Philippines on 24-26 September 2018.



#### **Laboratory Testing of Polio Cases**

For every case of acute flaccid paralysis, stool specimens are collected at the provincial level and shipped to the Central Public Health Laboratory (CPHL) Surveillance Unit, the WHO accredited National Reference Laboratory based in Port Moresby.

The CPHL ensures that the stool samples collected by clinicians around Papua New Guinea are properly labelled, packed and shipped to Victorian Infectious Diseases Reference Laboratory (VIRDL), a WHO Polio Regional Reference Laboratory located at the Doherty Institute, Melbourne, Australia.

More than 400 stool specimens have been received at the Doherty Institute from AFP cases and contacts of AFP cases since the polio outbreak was declared in Papua New Guinea in June 2018. It usually takes 14 days for the laboratory to test every sample they receive.

Once the poliovirus is confirmed, further genetic analysis is made at the United States Centers for Disease Control and Prevention (US-CDC).





## Communicating risk of polio: being first, frequent and factual

Risk communication for the polio outbreak response was anchored on trust building and engaging with communities, demand creation for polio vaccine, evidence-based messaging, and coordinated public engagement.

A multi-platform approach was used, maximizing both traditional media (radio, posters, flyers), social media engagement (Facebook, text messaging) and interpersonal communication (community meetings, use of loud hailers). Weekly media conferences were held and news updates were consistently issued.

Rumors and sporadic reports of vaccine misinformation were immediately addressed.



#### **Mobilizing communities into action**



Social mobilizers were trained and embedded in polio teams —both in fixed sites and mobile units that conducted house-to-house vaccinations. Most of the mobilizers were volunteers from communities, church workers and students and were instrumental in gathering feedback on community perceptions. Posters, banners, loud hailers and talking points were provided to mobilizers to support community engagement.

To heighten awareness in villages, the National Broadcasting Corporation provided free air time in the first two rounds of the campaign. Key messages focused on the country being in the midst of the outbreak, that young children are at risk, no treatment for polio and prevention through vaccination.



Increasing people's awareness on vaccination: when, who, why and where to go to get vaccinated

#### **Managing Rumors**

A number of reported rumors and misconceptions have been documented, and these were quickly managed either through an influential person/group, dialogue with church groups and getting media support. Some examples below:

- A religious group in Western Highlands was reported to be preaching that everyone can be healed by faith, including polio, implying that vaccination is not necessary. A meeting with 160 leaders led to eventual acceptance of vaccination.
- There was also a rumor that vaccination is the mark of the devil ("666"). This was countered by going through the leaders of churches and congregations who called on their priests and pastors to correct the rumor using the churches and media.
- Some of the other documented rumors were: vaccination decreases intelligence levels and fertility. A family that initially refused vaccination due to an influence by a relative was visited by a health worker/doctor to explain the benefits of vaccines and the family eventually agreed to be vaccinated.





#### Reaching Every Child: by land, sea and air

Frontline polio workers in Papua New Guinea, in order to reach every child for polio vaccination, spent long hours in the field, took small boats to cross rivers and seas, navigated mountains for days and flew in helicopters in order reach every child and protect them from polio.

In Morobe, there were 76 helicopter trips made to carry polio workers, vaccines and other supplies to mountainous and hard-to-reach Districts of the province during the first round of the campaign in July 2018. Health workers stayed in those districts for days, walked long distances to reach mountainous villages, conducted house-to-house vaccinations, and then waited for the helicopter to come back to pick them up.



#### WHO/J. Rivaca

## POLIO VACCINATION

#### FOR TRAVELLERS TO/FROM PAPUA NEW GUINEA

There is currently an outbreak of poliovirus in Papua New Guinea.

#### For those travelling out of Papua New Guinea

- If you are a resident or long-term visitor (stays of >4 weeks in any part of Papua New Guinea), get a dose of polio vaccine before leaving the country.
- Get an International Certificate of Vaccination (yellow booklet) to record and serve as proof of your polio vaccination.

#### When to get the vaccine

- Ideally, you should get vaccinated between 4 weeks and 12 months before leaving Papua New Guinea.
- If you have not had a documented dose of polio vaccine within the past 12 months and need to travel last minute, get 1 dose of polio vaccine prior to departure.

#### For those travelling to Papua New Guinea

- Check with your national health authority on polio vaccination requirements and schedules.
- If you are an adult who previously received 3 or more doses of polio vaccine, you should get another one-time booster dose.
- If you previously only had inactivated polio vaccine (IPV, injectable vaccine), your booster dose should be oral polio vaccine (OPV), if available and feasible.

FOR MORE INFORMATION, VISI

http://polioeradication.org/polio-today/polio-now/public-health-emergency-status http://www.who.int/mediacentre/news/statements/2018/16th-ihr-polio/en/





#### **Preventing Polio from Crossing Borders**

Representatives from Papua New Guinea and the Republic of Indonesia agreed on cross border measures to prevent the spread of polio, measles, rubella and other vaccine-preventable diseases between two countries during its meeting on 13 September in Port Moresby.

The cross border meeting aimed to enhance coordination and collaboration between countries and strengthen surveillance across the border through regular exchange of surveillance and immunization information.



"The meeting was critical as Indonesia is our strategic neighbor. The collaboration between our countries will enable us to jointly protect both our citizens from infectious diseases. Working together ensures our public health measures are coordinated as per recommendations of the International Health Regulations (IHR, 2005)."

Dr Sibauk Vivaldo Bieb Acting Deputy Secretary and National Polio Response Coordinator of NDOH Papua New Guinea



#### **Polio Vaccines and Logistics**

To date, more than 5.7 million doses of oral polio vaccines have been procured for use in the first two rounds of the campaign and pre-positioned for the nationwide vaccination campaign in October. These vaccines arrived in the following schedules:

Schedule	Doses of Polio Vaccine		
4 July 2018	611,000		
6 August 2018	998,000		
4 September 2018	1,582,000		
18 September 2018	1,582,000		
30 September 2018	976,300		
TOTAL Vaccines in country	5,749,300		

To ensure proper storage and handling of vaccines to remain effective, faulty vaccine refrigerators in the provinces were repaired and new refrigerators were installed.

Finger markers, supplies and other materials were also distributed to the provinces for use in the campaign.

#### **Human Resources**

There have been more than 90 international polio workers from WHO, UNICEF and the US-CDC that have been deployed to the country, covering the following expertise: coordination, outbreak management, surveillance, immunization, risk communication, vaccine management, communication for development, health operations and logistics, finance, administration and others.

#### 70 international experts from WHO

(coordination, outbreak management, surveillance, immunization, vaccine management, risk communication, health operations, logistics, finance, administration, procurement, etc.)

#### 12 international experts from UNICEF

(immunization, vaccine management, communication for development, logistics, administration, procurement, etc)

11 international experts from US-CDC (surveillance)

National experts and administrative staff of the WHO Country Office in Papua New Guinea provide day-to-day logistical and administrative support such as transport, procurement, etc.







#### The Voice Behind the Polio Radio Spots

The National Broadcasting Corporation (NBC) contributed significant amount of airtime in its radio and TV channels to promote the polio vaccination campaign during the first two rounds -- from July to September. Kevin Marai was the voice behind all the radio and TV spots broadcasted on polio campaign for the NBC.

#### **Public-Private Partnership on Polio**

The National Department of Health, co-chaired by WHO, convened the Health Cluster partners on the polio outbreak response plan and coordination. To date, three health cluster meetings have been conducted, and a number of side meetings with key stakeholder were also held.

United Nations agencies, embassies and international organizations were also provided an update on the polio campaign activities in July 2018.

The polio outbreak response in Papua New Guinea was supported by numerous international and local organizations. Some of them are as follows\*:

National Broadcasting Corporation of
Papua New Guinea (Radio and
TV Stations)
Council of Churches
International Federation of the Red Cross
Rotary International
Department of Foreign Affairs
and Trade of Australia
Yamana Mine
Barrick Mining Company
Binatang Research Centre and Ramu
Sugar
World Vision

Susu Mamas
Marie Stopes
YWAM Medical Ship
Wafi Gold Mine
Touching the Untouchables
Barola Haus Mama
CARE International
Oil Search Foundation
Susu Mamas
Digicell
ANZ Bank Staff Foundation

Eagle FM

\*The list is not comprehensive.

#### **Donor Contributions**

To date, the total estimated budget for the Papua New Guinea Polio Outbreak Response Plan is US\$ 18 million, against which the Government has committed approximately US\$ 2.2 million (PNG Kina 6.7 million), releasing PNG Kina 2 million for the first and second rounds of the vaccination campaigns.

Financial support for the outbreak response includes the Bill & Melinda Gates Foundation, Rotary International, United States Agency for International Development (USAID), Canada, the Republic of Korea, United Kingdom and Australia. The Global Polio Eradication Initiative (GPEI), spearheaded by national governments, WHO, Rotary International, the US Centers for Disease Control and Prevention and UNICEF, will continue to work with donors to secure the urgently required outbreak response funding.



## BILL & MELINDA GATES foundation

















#### **WAY FORWARD**

The polio outbreak response plan of Papua New Guinea focuses on three main components: (1) supplementary immunization activities (four sub-national and national vaccination rounds); (2) enhanced surveillance; and (3) communication.

For the supplementary immunization activities, two national immunization campaigns are planned targeting more than 3.26 million children under 15 years old across 22 provinces. The first national vaccination campaign starts 1 October 2018. Another round is scheduled two weeks after – from 22 October 2018.

In terms of enhanced surveillance, the priority would be in strengthening the capacity of the provincial health practitioners in detecting cases of acute flaccid paralysis, active case finding and maintaining a robust system to conduct case investigations and sample collection.

The risk communication and social mobilization approaches will transition into strategic communication strategies that would have long-term benefits to the affected communities beyond the emergency phase. This would include techniques that sustain people's and media interest on polio, promote long-term behavior changes and increase uptake of routine immunization.









