

National Polio Outbreak Preparedness and Response Plan

Country: Republic Of Mauritius

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Acronyms

AFP	Acute Flaccid Paralysis
AHC	Area Health Centre
bOPV	bivalent Oral Polio Vaccine
CDCU	Communicable Disease Control Unit
CHL	Central Health Laboratory
cVDPV2	circulating Vaccine Derived PolioVirus type 2
DGHS	Director General Health Services
DHS	Director Health Services
EOC	Emergency Operation Centre or Polio Control Room (PCR)
EOMG	Eradication and Outbreak management Group (GPEI)
ERMC	Emergency Response and Monitoring Committee
GAP	Global Action Plan
GPEI	Global Polio Eradication Initiative
IHR	International Health Regulations (2005)
IPM	Institut Pasteur Madagascar
IPV	Inactivated Polio Vaccine
iVDPV	Immunodeficient Vaccine Derived PolioVirus
MOH	Ministry of Health
mOPV2	monovalent Oral Polio Vaccine
NCC	National Certification Committee
NPEC	National Polio Expert Committee
NTFLC	National Task Force for Laboratory Containment
NTFP	National Task Force on Poliomyelitis
RPHS	Regional Public Health Superintendent
RRRT	Regional Rapid Response Team
SIA	Supplementary Immunisation Activities
tOPV	trivalent Oral Polio Vaccine
VDPV	Vaccine Derived PolioVirus
VAPV	Vaccine Associated PolioVirus
WPV	Wild PolioVirus
WPV2	Wild PolioVirus type 2

Endorsed by:

Chairperson of National Certification Committee

Regional Public Health Superintendent, Communicable Disease Control Unit

Date: 28 April 2017

Distribution:

- MOHW
- IHR Focal point
- WHO
- UNICEF
- Other key partners

1. COUNTRY BACKGROUND

The Republic of Mauritius constitutes mainly of the island of Mauritius and Rodrigues.

Mauritius is about 2040 km² with a population density of 654 per sq.km and is situated 2000 km off the east coast of Africa in the Indian Ocean.

Rodrigues is situated 560 km North East of Mauritius.

In 2016, the per capita income for the Republic of Mauritius had attained \$ 9520 with a per capita public expenditure on health of \$ 236.9.

Mauritius is divided into 10 districts, with Rodrigues Island being the 10th district. The population of Mauritius in 2016 was 1,263,473 and that of Rodrigues was 42,058.

The whole Republic of Mauritius comprises of 6 Health Regions, designated specifically to cater for the implementation of a decentralized health service.

Each Health Region consists of two Districts in Mauritius. Rodrigues is the 6th Health Region by itself. The primary healthcare services are delivered through a satellite network of 126 (112 in Mauritius and 15 in the Island of Rodrigues) Community Health Centres, 22 Area Health Centres and 5 Mediclinics.

Vaccination is fully integrated in the primary healthcare system and is delivered mainly through AHCs and CHCs and is entirely financed by government and is free of charge.

There is a health centre within 3 km of residences of the population. In addition to this, Mauritius has good sanitation, safe drinking water and regular services for disposal of refuse.

According to the national population census in 2011, the number of households with electricity was 99.4%, with piped water supply on premises 99.4%, with flush toilet 96.4% and with a regular collection of garbage of 96.3%.

Mauritius has made considerable progress in the health status of the population.

In 2016 the maternal mortality rate was 0.46 per thousand live births and the Infant mortality rate was 11.8.

The country is now faced with an ageing population (14.8% above 60 years in 2016 compared to 5.9% in 1972).

At present the age group 0-14 yrs forms 19.6% of the population. The population aged less than 5 years amounted to 5.5% of population with 1.0% of population aged less than one year in 2016. The life expectancy in 2016 was 71 yrs for males and 78 yrs for females.

Demographic characteristics for 2016	Number	Source of Data
Number of districts	10	Statistics Mauritius 2016
Total population	1,263,473	Statistics Mauritius 2016
Number of live births	13,082	Statistics Mauritius 2016
Number of children <1 year	12,697	Statistics Mauritius 2016
Number of children <5 year	67,486	Statistics Mauritius 2016
Number of children <15 years	240,247	Statistics Mauritius 2016

Population of Mauritius 2016 per district

<i>DISTRICT</i>	<i>POPULATION ALL AGES</i>	<i>POPULATION LESS THAN 15 YEARS</i>
PORT- LOUIS	119,554	22,397
PAMPLEMOUSSES	140,279	26,280
RIVIERE DU REMPART	108,042	20,240
MOKA	83,346	15,614
FLACQ	138,543	25,955
PLAINES WILHEMS	368,558	69,044
GRAND PORT	112,985	21,167
SAVANNE	68,547	12,842
BLACK RIVER	81,359	15,242
RODRIGUES	42,260	11,466
REPUBLIC OF MAURITIUS (TOTAL)	1263,473	240,247

Mauritius is a country with an efficient and excellent immunization program reaching over 95% of the children immunized with all childhood vaccines (inclusive of both public and private sectors).

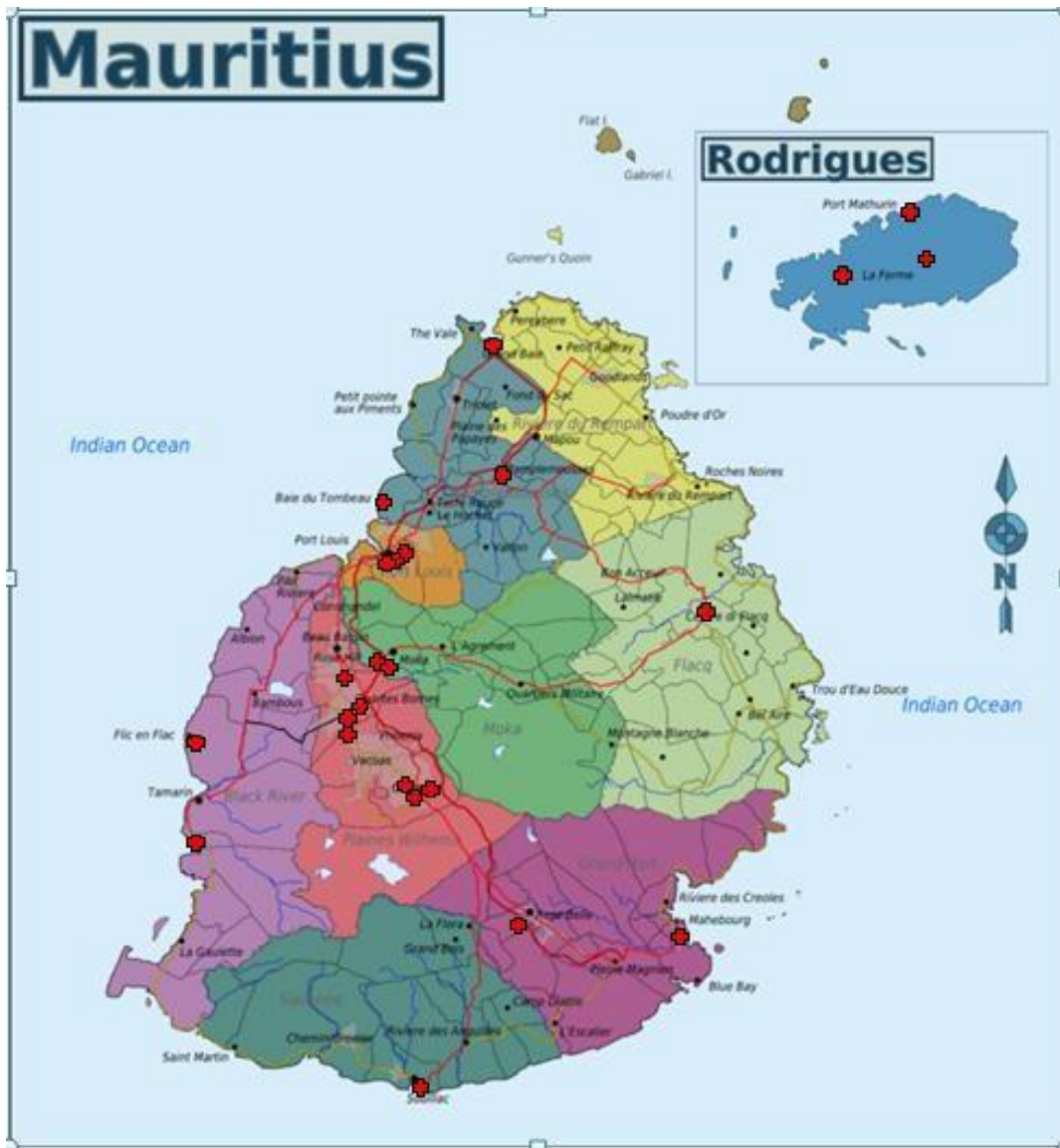
The map below shows the Health regions of the Republic of Mauritius



Revised Sentinel Sites for Acute Flaccid Paralysis Surveillance in Mauritius

Port Louis	Pamplemousses /R. D. Rempart	Moka/ Flacq	Grand Port/ Savanne	P. Wilhems/ B. River	Rodrigues
Dr A. G. Jeetoo Hospital	SSRN Hospital	Bruno Cheong Hospital	J. Nehru Hospital	Victoria Hospital	Queen Elizabeth Hospital
City Clinic	Grand Bay Clinic	Wellkin Hospital	L'Escalier Medi Clinic	Clinique du Bon Pasteur	Zita Jean Louis AHC
Chisty Shifa Clinic	Clinique du Nord	Clinique Mauricienne	Souillac Hospital	Fortis Darné Clinic	
Hyderkhan Medi Clinic	Medi Clinic Goodlands	Medi Clinic Belvédère	Mahebourg Hospital	Clinique Muller (Clinique de Lorette)	
Bouloux AHC	Medi Clinic Triolet	Aegle Clinic	Rose Belle AHC	Nouvelle Clinique Ferrière	
Bambous AHC	Rivere du Rempart AHC	Central Flacq AHC	Tyack AHC	Medisave Medical Centre (Q.Bornes)	
Quenum AHC	Long Mountain Community Hospital	Montagne Blanche AHC	Chemin Grenier AHC	St Jean Clinique (Belle Rose)	
Q.Militaire AHC		Bel Air AHC		Yves Cantin District Hospital	
Lady Twining AHC		Bramsthan AHC		Clinique de l'Occident	
				Quatre Bornes AHC	
				Curepipe AHC	
				Club Road AHC	
				Rose Hill AHC	
				Castel AHC	
				Floreal Medi Clinic	

The map below shows the location of AFP sentinel sites 2017



There has been a routine notification of poliomyelitis cases in Mauritius in the year 1945 with the beginning of Polio epidemics. In fact, according to previous health reports there is evidence that a project analogous to AFP Surveillance was in place since 1925, but reporting was in the form of infantile paralysis (Public Health Ordinance 1925).

Following polio epidemics in the 1940s and 1950s, with the last case of wild poliomyelitis reported in 1967, there has been a continuous passive zero reporting surveillance system for poliomyelitis, which was incorporated in the existing reporting system with other infectious diseases like malaria, diphtheria; whooping cough, etc. that were present in the country.

Following the visit of Dr. Mbaye Salla, of WHO/AFRO in April 2002, active AFP Surveillance was introduced. Consequently Active Acute Flaccid Paralysis Surveillance was started on the field for the Republic of Mauritius on 4th August 2003.

In order to sensitize all stakeholders that would be involved in the implementation of AFP Surveillance, seminars were organized in Mauritius and the island of Rodrigues. The targeted health personnel consisted of Paediatricians, Internal Medicine Physicians, Neurologists, Ward Managers, Public Health Nurses, Records Officers, and parties from Private Clinics.

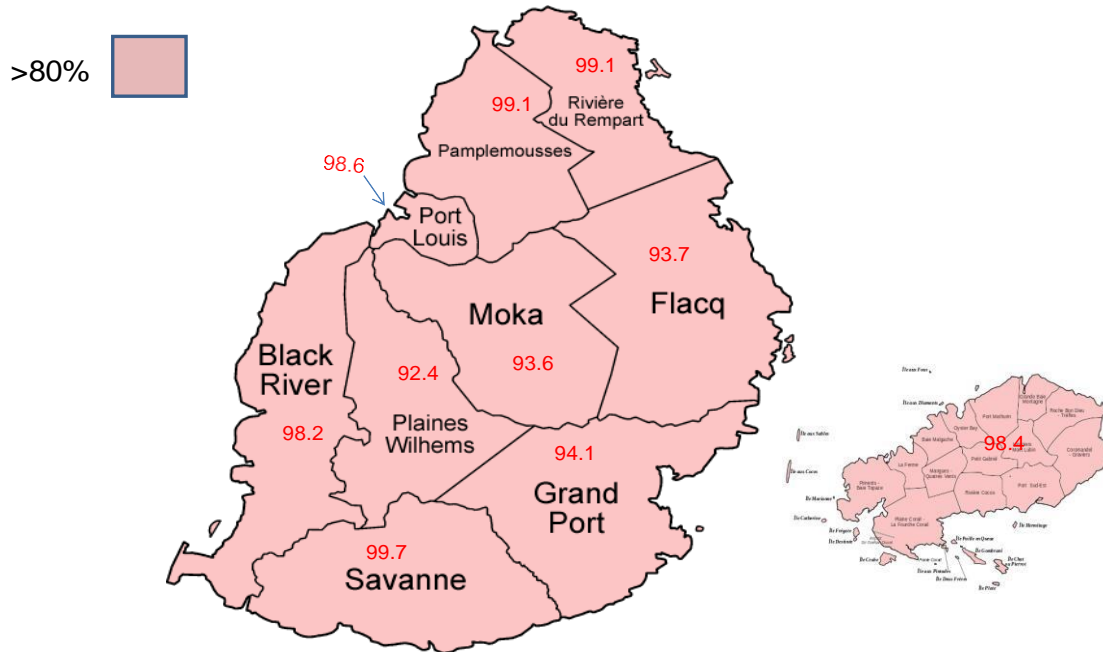
The Ministry of Health and Wellness of Mauritius has committed itself to The Global Polio Eradication Initiative of the WHO and has adopted the following strategies mainly:

- Contribute towards Global Polio Eradication
- Ensure $\geq 90\%$ BOPV and IPV coverage
- Enhance Acute Flaccid Paralysis Surveillance
- Coordination and Advocacy
- Information management
- Communication, Social Mobilization and Behavioural Change
- Training of Health workers

Immunization in general has always been an essential component of the Mauritian health services. The first activities related to Polio Immunization dated back to 1957, when Salk vaccine was given to all children (80,270) under the age of 5 years. In August 1959, Sabin live polio virus vaccine was introduced. Since 1960, Vaccination against Poliomyelitis with Sabin vaccine has become a regular feature of the immunization programme of Mauritius. For example, in 1967, 94% of school entrants aged 5 years and 96% aged 6 years were vaccinated against polio and Diphtheria/Tetanus (1967 Health Report).

Republic of Mauritius

OPV + IPV Coverage Rate (%) by district - 2016



Mauritius has been free from wild polio virus since 1967. Given its insularity characteristics, Mauritius does not share any borders with any country. And no countries in the Indian Ocean are Polio endemic for wild Polio Virus. Should there be any importation, no particular region or group of regions are suspected to be more vulnerable to outbreaks than any other part of the country.

IPV was introduced in November 2015.

All remaining TOPV vaccines were destroyed in December 2016.

Switch from TOPV to BOPV was undertaken in April 2016.

To enable monitoring and evaluation of immunization coverage, the Health Statistics Unit of the Ministry of Health and Wellness publishes a monthly EPI report.

The main indicators in the monthly report are the number and the coverage rate of all antigens in the immunization schedule. Coverage is given in terms of percentage of live births. This report helps health workers to evaluate their performance and take corrective measures.

2. INTRODUCTION

This response plan has been prepared for use, should one or more cases of poliovirus infection occur in Mauritius and it outlines the routine surveillance procedures currently in place to detect potential poliovirus infections. The Ministry of Health and Wellness has prepared this document as a guide for key stakeholders involved in disease surveillance and control, as part of the country's preparedness in addressing the potential public health impact of a case of polio.

Potential Scenarios for a Poliomyelitis Outbreak in Mauritius.

There are several possible presentation scenarios for a case of poliovirus infection in Mauritius and the most likely are presented below.

Scenario 1 -	Importation of wild poliovirus from an endemic country or a country with recently imported poliovirus;
Scenario 2 -	Importation of VDPV from a country that has circulating VDPV or emergence of VDPV or cVDPV2;
Scenario 3 -	Wild poliovirus isolated from the stools of an individual with no neurological symptoms or history of recent travel to a polio endemic area;
Scenario 4 -	Wild poliovirus or Sabin 2 isolated from sewage or environmental samples;
Scenario 5 -	A case of vaccine associated poliovirus (VAPV).

3. MANAGEMENT AND ACCOUNTABILITY

Management structure

S/N	Committee	Roles and Responsibilities	Chairperson
1	National Task Force on Poliomyelitis	<ol style="list-style-type: none"> 1. Establish an Emergency Response and Monitoring Committee with Regional Rapid Response Teams 2. Make a complete risk assessment within 72 hours of confirmation of the index case 3. Reinforce laboratory capacity and to inform Institut Pasteur Madagascar for a potential surge in stool samples for analysis 4. Implementation of a minimum of two large-scale rounds of immunization (SIAs). 5. Reinforce surveillance for AFP for the duration of the outbreak and at least 12 months immediately thereafter. 6. Sustain high coverage of routine oral poliomyelitis immunization of at least 80% and highly sensitive disease surveillance. 7. Estimation of the overall budget for the Action Plan. 	Honorable Minister of Health and Wellness / Director General Health Services

2.	Intersectoral Committee	Inputs and collaborations of various ministries for implementation of the plan and sensitization of different non health stakeholders.	Honorable Minister of Health and Wellness / Director General Health Services
3.	Emergency Response and Monitoring Committee	1. Establish Regional Rapid Response Teams and the Emergency Operations Centre at the CDCU.	Director Health Services (Preventive)
		2. Data collection, mapping, risk assessment, communication, organization of SIAs and reporting to NTFP.	
4.	Regional Rapid Response Teams	The RRRT is responsible for investigations of the index case, contact tracing, identification of “hot cases”, collection and transport of stool samples, assessment of immunization status and implementation of SIAs.	Regional Public Health Superintendents
5.	National Certification Committee	Responsible for implementation of the Polio Eradication Initiative activities and reporting to WHO-ARCC	Regional Public Health Superintendent
6.	National Polio Expert Committee	Responsible for final classification of AFP cases and reporting to NCC	Consultant Paediatrician
7.	National Task Force for Laboratory Containment	Responsible for packaging of stools specimens for onward transmission to IPM, laboratory containment procedures and infections control	Director, Laboratory Services

National Certification Committee Members:

Chairperson: Regional Public Health Superintendent, Communicable Disease Control Unit (CDCU).
A Paediatrician

Neurologist

National Polio Expert Committee Members:

Chairperson: Consultant in charge, Paediatrics Unit

Neurologist

Community Physician

Principal Clinical Scientist, Central Health laboratory

National Task Force for Laboratory Containment Members:

Chairperson: Director, Laboratory Services

Community Physician, CDCU

Principal Clinical Scientist

Polio Secretariat Members:

National Polio Surveillance Officer, Principal Public Health Nursing Office

Senior Public Health Nursing Officer

Health Statistician

Senior Public Health Nursing Officer

WHO/EPI Focal Person

Senior Public Health and Nursing Officer

Confirmation of a polio outbreak or poliovirus event

Poliovirus event

It is a the detection of WPV in a single environmental sample with no evidence of local transmission or detection of VDPV in an acute flaccid paralysis case, environmental sample or other sample with no further detection of a related virus or other evidence suggesting established community-level circulation.

Polio Outbreak

It is a single or multiple case(s) of poliomyelitis due to WPV or cVDPV, a positive environmental sample for WPV/VDPV in which two or more separate samples contain WPV/VDPV with genetic sequencing information that indicates sustained local transmission or a single sample is positive for WPV/VDPV and follow-up investigation identifies polio compatible cases or WPV/VDPV infected persons.

Testing and confirmation of WPV and VDPV is done at the Institut Pasteur Madagascar, Antananarivo. Upon detection of poliovirus in a stool sample, IPM immediately informs the Clinical Scientist at the Virology Unit, Central Health Laboratory, in Mauritius.

Notification

The Clinical Scientist immediately informs the National AFP Surveillance Officer, the Chairperson of the NCC, the Director Health Services Preventive (also the National Polio Eradication Coordinator), the Director Laboratory Services (chairperson of National Task Force for Laboratory Containment), the Chairperson of NPEC, the DGHS of the Ministry of Health and Wellness. The DGHS then informs the Honorable Minister of Health and Wellness on the same day.

Notification to WHO

The Director Health Services, Preventive, as the IHR Focal Point, reports the case to the WHO Country Representative and convenes an urgent meeting with the latter within three hours.

Declaration of the outbreak as a 'National public health emergency'

The Ministry of Health and Wellness through the Honorable Minister will declare the outbreak as a “National Public Health Emergency” upon guidance from the Director General Health Services and the Director Health Services, Preventive. The declaration will be effected via TV and radio channels. The written media will also be involved to convey the press release from the headquarters of the Ministry.

Response operations decisions

The national response plan would be activated by The Honorable Minister of Health and Wellness as Chair of the National Task Force on Poliomyelitis. This Task Force would be convened within 24 hours following the notification of a case of poliomyelitis by the Director General Health Services. The National Task Force on Poliomyelitis would oversee all operations relating to outbreak response. The NTFP would develop the following activities:

1. Establish an Emergency Response and Monitoring Committee and an Emergency Operations Centre (EOC) at CDCU;
2. Setting up of Regional Rapid Response Teams;
3. Conduct an initial investigation;
4. Make a complete risk assessment within 72 hours of confirmation of the index case;
5. Reinforce laboratory capacity and to inform Institut Pasteur Madagascar for a potential surge in stool samples for analysis;
6. Implementation of a minimum of three large-scale rounds of immunization:
 - conducting first-round supplementary immunization activities within two weeks of confirmation of the index case, with an interval of two to three weeks between subsequent rounds;
 - using a type-specific monovalent oral poliomyelitis vaccine or another composition of vaccine if appropriate;
 - targeting all children aged younger than five years in the affected and adjacent geographical areas;
 - ensuring that at least 95% immunization coverage has been reached;
7. Reinforce surveillance for acute flaccid paralysis for the duration of the outbreak and at least 12 months immediately thereafter;
8. Sustain high coverage of routine oral poliomyelitis immunization of at least 80% and highly sensitive disease surveillance;
9. Calculation of the overall budget for the Action Plan with the following main activities:
 - Enhancing Surveillance
 - Funding for increased laboratory investigations and vaccines
 - Supplementary Immunization activities
 - Transport expenses
 - Training
 - Communication
 - Miscellaneous

The NTFP will hold fortnightly meetings to review and assess the situation based on reports emanating from the Emergency Response and Monitoring Committee and the EOC.

Emergency Operations Centre (EOC) or Polio Control Room (PCR)

The Emergency Response and Monitoring Committee will set up an Emergency Operations Centre at the Communicable Disease Control Unit and report to the National Task Force on Poliomyelitis. This Committee will be chaired by the Director Health Services Preventive with the following members:

- The Director Health Services, Preventive (Chairperson)
- Regional Public Health Superintendents (5)
- An epidemiologist
- The Consultant Paediatrician
- A Neurologist
- The Virologist
- Community Physicians of CDCU
- The National AFP Surveillance Officer
- Director Public Health and Food Safety

The Emergency Response and Monitoring Committee would rapidly set up Rapid Response Teams (RRT) for outbreak investigations and timely response. The Committee through the Communicable Disease Control Unit at MOH will be coordinating the activities of the Rapid Response Teams operating at regional level. To ensure that these processes are carried out rapidly and competently, the Emergency Response and Monitoring Committee will meet immediately (within 24 hrs). The Committee is managerially and technically responsible for implementing the action plan and for coordinating all relevant activities during implementation.

The Emergency Response and Monitoring Committee will be advising on and monitoring the activities of the Rapid Response Team(s) including the following:

1. Data collection and retrieving reports from the Rapid Response Team from the periphery.
2. Identification of high risk groups.
3. Assess the risk (with environmental profile).
4. Mapping and target population for immunization determined with immunization supervisors and independent monitors.
5. Communication with health professionals and the public.

6. Review the national emergency action plan (reviewing and updating the existing polio preparedness plan).
7. Providing logistics to the RRT.
8. Epidemiological and environmental surveillance.
9. Reporting to the National Task Force on Poliomyelitis.
10. Document cessation of transmission.

Partner coordination

The Director Health Service, Preventive will be responsible for partner notification and coordination and will inform the WHO Country Representative of the case.

Partner	Contact details
World Health Organization	WHO countryRepresentative E Mail: who@intnet.mu ; afwcomuremit@who.int Officer in Charge WHOoffice Tel: 210 7400, 210 7300

Communication and Media Management

Communication strategies would be initiated very early in the response phase to raise awareness and sensitize the population on poliomyelitis and the need for their collaboration in the implementation of the outbreak response plan.

The strategies would involve different communication channels for the following audiences:

- Community leaders;
- Media dissemination of accurate information through press, TV, radio, etc;
- Sensitization of schoolchildren in educational institutions;
- health professionals; and
- the public through community centres, social welfare centres, mass gatherings.

Various types of informative messages and/or documents should be prepared consistent with the most effective national methods for communication. Effective strategies for information, education and communication and social mobilization are needed to ensure that children remain at home for the house-to-house strategy; parents are sensitized to bring their children for immunization at vaccine delivery points.

Activities on information, education and communication and social mobilization will be carried out in coordination with the health ministry and WHO, and other partners as appropriate.

The focal person for communication strategies:

Principal Health Information Education and Communication Officer

Vaccine registration or licensing

The Ministry of Health and Wellness through the Pharmacy Division has a National Mechanism in place for the registration of all vaccines, drugs, medications for the whole country in both public and private.

Procurement of vaccine and logistics

Following the declaration of an outbreak, special forms are to be filled by Director Health Services for requesting MOPV2 at Headquarters WHO, Geneva via WHO Mauritius office. The EPI manager in conjunction with the Emergency Response and Monitoring Committee will establish estimates of the required vaccines based on the poliovirus type and recommendations from WHO about target age groups and type of vaccine to use.

Funding and resources

There is no specific fund earmarked for outbreak response. All costs of vaccines, logistics, human resources and training and other operational costs are borne by the Ministry of Health and Wellness.

4. RISK ASSESSMENT

Detailed case investigation

The Emergency Response and Monitoring Committee through the Regional Rapid Response Team will initiate investigations of the first case of Poliomyelitis.

The Regional Rapid Response Team will review the patient records and ensure that the following information has been collected for the index case:

- Age of patient, date of onset of paralysis;
- Residence or travel to a polio endemic country, or one that has recently reported imported cases or VDPV;
- Vaccination status, including timeframes and the vaccine used (OPV or IPV);
- Contact with persons recently immunized with OPV or persons who have recently travelled to a polio endemic country, or one that has recently reported imported cases or VDPV, or a country that uses OPV;
- Potential for further spread: health care workers and people who have contact with children, or are involved in food preparation have a greater chance of spreading infection to a larger number of people;
- Potential for exposure to laboratory strains of poliovirus; and
- Vaccination status of contacts.

Risk of spread and grading of the outbreak

Polio outbreak grade definitions are as follows:

- Grade1: Minimal risk of continuation and international spread of transmission due to good population immunity, no major vulnerable population cluster, no security threat or access challenge, and robust health infrastructure for response.
- Grade 2: Moderate risk of continuation and international spread of transmission due to gaps in population immunity, weaknesses in the immunization system and in-country response infrastructure, major vulnerable population clusters, and/ or low security threat or access challenge.
- Grade 3: Significant risk of continuation and international spread of transmission due to significant gaps in population immunity, major vulnerable population clusters, a history of multi-country involvement, serious deficiencies in local in- country response capacities, high security threats and access challenges, and / or a complex humanitarian emergency.

The Emergency Response and Monitoring Committee together with the GPEI's Eradication and Outbreak Management Group (EOMG) will conduct an assessment on the risk of spread, the population immunity in the affected area, any high risk groups and the country's capacity to respond rapidly and effectively. The grading will be performed by the GPEI-EOMG team.

5. RESPONSE PLAN

Development of detailed response plan following an outbreak or event

Declaration of a Public Health Emergency

The Minister of Health and Wellness will declare the event on a National Public Health Emergency upon guidance from the DGHS and NTFP. WHO will be informed and immediate assistance sought within 24 hours of confirmation of the event. The GPEI will be requested to assist the local authorities and the investigation, management, planning, immunization and monitoring activities.

Convening the Regional Rapid Response Team

Following the meeting of the NTFP and the Emergency Response and Monitoring Committee, the Regional Rapid Response Team would be summoned within 24 hours. Technical guidance from WHO would be sought for response operations.

Case Investigations

The RRRT immediately conducts investigations of the case as outlined in 4.1 above.

Field Epidemiological case investigations

An assessment of the population immunity would be undertaken using immunization coverage data.

All hospitals and Private Health Institutions would be required to be on high alert for AFP cases and to notify any AFP case to the Emergency Response and Monitoring Committee with full investigations and collection of stools specimens for each case.

Contact tracing of the individual case will be effected with regard to household contact, toilet contacts, healthcare workers, laboratory workers and public contacts. All contacts will be required to furnish 2 stool specimens taken 24-48 hours apart for poliovirus identification.

Prevent Country Spread

Individuals identified as being infected with poliovirus will be admitted and isolated in a designated hospital/ health institutions with strict Infection Control Precautions observed. Household contact(s) will be quarantined at home. They would be given a full course of IPV. Health care workers in closecontact with index patient, if incompletely vaccinated, would have stool sampling and vaccination with a full course of IPV (3 doses 1 month apart). Education on hygiene and vaccination would be intensified.

AFP Surveillance enhancement

AFP Surveillance would now be extended to all Community Health Centres, Area Health Centres, Mediclinics besides all Regional, District, Community Hospitals and Private Clinics. All the Medical personnel in these centres would be given training and sensitized in AFP detection, detailed history, investigations, reporting, contact tracing and assessment of immunization status of cases and contacts. A daily reporting system would be in place with active case search and retrospective review of records at all the health service points. The target for AFP Surveillance would be an annualized rate greater than 4 non-polio AFP cases per 100,000 children aged under 15 years in the districts, for the duration of the outbreak and for at least 12 months after the last case.

Contact sampling would be undertaken for all AFP cases identified.

Intensive sensitization of all health personnel and care givers would be maintained throughout the outbreak. Enhanced surveillance would continue for 12 months or use after the last case polio is detected.

“Hot” AFP cases

“Hot” AFP cases are high risk AFP cases which include the following:

1. Any AFP case that presents with fever at onset of paralysis progressing within 3 days.
2. Any AFP case less than 5 years who has not received full vaccination.
3. Any AFP case with history of recent travel to a polio endemic country or country experiencing importation / wild poliovirus circulation.
4. Any AFP case with history of contact with persons who have travelled to or from polio endemic countries.
5. Any AFP case from a cluster of AFP cases.
6. Any AFP case in a migrant population.

Laboratory capacity strengthening

All stool specimens collected during the outbreak would be channeled to only one laboratory, the Virology Unit of the Central Health Laboratory at Victoria Hospital. Upon receipt, these infectious or potentially infectious materials would be handled at the appropriate biosafety level as stipulated by WHO, with triple packaging for onward transmission to Institut Pasteur Madagascar. Laboratory personnel would be reinforced and laboratory containment would follow the guidelines of the Global Action Plan III (GAP III) document. Methods of destruction of all infectious or potentially infectious materials would be appropriately described and reported to the NTFL (National Taskforce for Laboratory Containment).

Immunization response (SIAs)

WHO experts (EOMG) would recommend the immunization strategy (SIA) to be adopted for the country. This Strategy would be implemented through the Emergency Response and Monitoring Committee by the Regional Response Rapid Team taking into account the following:

1. The first round of immunization (SIA) takes place within 14 days from confirmation of the poliovirus outbreak.
2. The second round of immunization (SIA) will be undertaken 3-4 weeks after the first round.
3. Use of a monovalent type specific oral polio vaccine or another composition of vaccine if appropriate.
4. Targets all children aged under 5 years in the affected and adjacent districts. This age group may need to be expanded to all children under 15 years depending on case investigations and populations immunity profile. Older teenagers or adults may need to be included.
5. Particular attention to any high risk group (migrant workers, others) identified with focused vaccination and social mobilization approaches.
6. Ensure that at least 95% coverage has been reached.

A nationwide campaign may need to be conducted upon advice of the EOMG.

Immunization Delivery Strategy

Mauritius with a well-established infrastructure will apply a combined strategy using door to door facility based outreach and mobile team approaches to ensure that each and every child is vaccinated. On an average one immunization team would be required per 100-150 children per day.

Supervision and Monitoring

The minimum requirements for quality are a sufficient number of supervisors, correct training, appropriate tools and means of transport. Supervisors would plan and oversee the delivery of oral poliovirus vaccine, review daily plans with the teams, ensure that plans are implemented, take corrective action when necessary and solve problems for teams.

Simple action-oriented supervisory checklists would be designed for an effective daily reporting.

For maximum effectiveness, monitoring would be conducted both during vaccination activities and afterwards. Independent observers should carry out monitoring in addition to health ministry staff. The independent observers would be recruited from other Ministries and from NGOs or from other departments of the health ministry. Independent monitoring has proven an important factor in the rapid detection of problems.

Just before the national immunization day, all monitors would be thoroughly briefed on the areas to be monitored and on the methods of monitoring.

Daily feedback from all monitors to the health ministry would be established so that immediate action can be taken. The monitors would report to the local Rapid Response Team and to the Emergency Response and Monitoring Committee at central level by phone and /or fax.

Given the short time for preparation and training and the urgency of the intervention, the following indicators would be used:

- the number of children immunized and missed on any given day per age group (0–11 months old and 12–59 months old) in a given area;
- the reasons for non-vaccination; and
- the quality of house and finger marking.

Surveys using simple convenience samples during and immediately after completion of the campaign would be useful for getting an indication of areas where all target children have not been reached. Strategies for selecting convenience samples will include interviewing parents of targeted children residing near the health post, at the extreme end of the catchment area, of poorer sections or disadvantaged groups of the community.

Immunization system strengthening

Following the outbreak, routine immunization delivery protocols would be reviewed and lessons learned during the outbreak would be incorporated into a revised EPI strategy to maintain the coverage for polio vaccine as close to 99% as possible.

Vaccination of travellers

Incoming travellers from abroad would be requested to be immunized against polio before their arrival in Mauritius. Outgoing travellers would be provided with oral OPV/IPV at the International Vaccination Centre (a Government facility), Port Louis free of charge between 4 weeks and 12 months before departure or at any time prior to departure in case of last minute unavoidable travel if they have not received a dose of vaccine in the last 12 months. They will also be issued an International Vaccination Certificate documenting the vaccination done.

Polio case management

Individuals identified as being infected with poliovirus would be isolated to minimize potential for transmission.

Contact precautions should be implemented and, if hospitalized, the patient should have a single room. A stool specimen would be collected weekly for testing at the IPM.

Isolation would continue until two stool samples taken seven days apart are shown to be negative for poliovirus.

Poliovirus infection is usually cleared within six weeks by an immunocompetent person but long term shedding may occur in immunocompromised individuals immunized with OPV that may result in an immunodeficient VDPV (iVDPV).

Stool samples would be taken monthly in immunocompromised individuals until three consecutive stools samples are negative. Advice to be sought from the Global Polio Laboratory Coordinator and Virologist at IPM for monitoring of immunocompromised individuals.

Families and carers of a patient infected with polio virus would observe good sanitation and hand washing.

All health care workers, carers and family should have evidence of adequate immunization against polio (see Tracing and management of potential contacts below). As most cases of AFP require hospitalization, health care workers should refer to the Infection Control Guidelines Manual for the prevention of transmission of infectious diseases in the health care setting for the correct infection control procedures.

Treatment of patients is free of user cost at all levels of the health system. Mauritius has a long standing policy in the rehabilitation of disabled persons. The Ministry of Health and Wellness has a special unit (Orthopaedic Workshop) which provides adapted prostheses to disabled persons at no cost. The Ministry of Social Security and National Solidarity has a special dedicated Disability Unit which caters for the needs of disabled persons and provides monetary assistance/ allowance on a monthly basis year round.

6. RESPONSE TO POLIOVIRUS TYPE 2 OUTBREAKS OR EVENTS POST-SWITCH

Response

In the event of a type 2 outbreak or event post switch (tOPV to bOPV), the procedure for outbreak response described in 5.1 to 5.7 would be followed.

Need for close international consultation

Detection of any poliovirus type 2(WPV2, VDPV2) or even Sabin (Four months post switch) in any sample from any source will be considered a global public health emergency and will require notification under IHR (2005). Established international protocol for notifications risk assessment and response of post-switch poliovirus type 2 outbreak response in close consultation with GPEI/WHO. Mauritius will apply to WHO in order to access mOPV2 from the global stockpile with the authorization of the WHO Director General and likewise for IPV procurement.

Communication

International notification of the outbreak would proceed as in 6.2.

Communication strategies would be initiated very early in the response phase to raise awareness and sensitize the population on poliomyelitis and the need for their collaboration in the implementation of the outbreak response plan.

The strategies would involve different communication channels for the following audiences:

- Community leaders;
- Media dissemination of accurate information through press, TV, radio, etc;
- Sensitization of schoolchildren in educational institutions;
- health professionals; and
- the public through community centres, social welfare centres, mass gatherings.

Various types of informative messages and/or documents should be prepared consistent with the most effective national methods for communication. Effective strategies for information, education and communication and social mobilization are needed to ensure that children remain at home for the house-to-house strategy; parents are sensitized to bring their children for immunization at vaccine delivery points.

Activities on information, education and communication and social mobilization will be carried out in coordination with the health ministry and WHO, and other partners as appropriate.

7. ASSESSMENT OF OUTBREAK RESPONSE AND DOCUMENTING INTERRUPTION

Outbreak or event assessment

Independent monitoring will be conducted at least by the second round of Supplementary Immunization Activity. An outbreak / event response assessment would be carried out by the third month from Day 0 and quarterly thereafter until 12 months after the last case of poliovirus identification.

Documentation of interruption

The end of the outbreak will be declared after validating the absence of poliovirus in the population and the environment 6-12 months after the onset date of the most recent case plus 2 months, or as per criteria used by the International Health Regulations – Emergency Committee (IHR–EC) for classifying “states no longer infected (detection of no new wild poliovirus or cVDPV).

The validation reports will be prepared by the Emergency Response and Monitoring Committee, the NPEC, the NTFLC and submitted to the National Certification Committee which after review submits it to WHO-ARCC. The NCC also notifies the National Task Force on Poliomyelitis and other stakeholders.

8. ACTIVITY CALENDAR

8.1 Summary of key activities with timelines

S/N	Timeline and activities	Responsible person
1	<p>WITHIN 24 HOURS</p> <ul style="list-style-type: none"> • Convene an urgent NTFP meeting • Notification to WHO and GPEI and EOMG. • Setting up the Emergency Operations Centre • Full investigations of the case with clinical, epidemiological and social details 	<p>Director Health Services Regional Public Health Superintendent</p>
2	<p>WITHIN 24 HOURS</p> <ul style="list-style-type: none"> • Emergency Response and Monitoring Committee provides report on the outbreak to the NTFP. • The Intersectoral Committee convened to apprise the different stakeholders of the situation. • Communication with the media established. • Regional Rapid Response Team start preparations for immunization with microplans in the affected area, with social mobilization and training of health workers • Enhanced AFP Surveillance activities. 	<p>Director Health Services Regional Public Health Superintendent</p>
3	<p>WITHIN 14 DAYS</p> <ul style="list-style-type: none"> • Weekly meetings of the ERMIC • Weekly meetings of the Regional Rapid Response Teams • Regular consultations with GPEI officials and WHO local office • Finalize all procedures for procurement of vaccines and logistics operations for SIAs. 	<p>Director Health Services Regional Public Health Superintendent</p>

4	<p>FROM 14 DAYS</p> <ul style="list-style-type: none"> • Conduct SIAs under guidance from WHO and GPEI • Continue vaccinator training and communication strategies • Implement independent monitoring and supervision activities • Sustain enhanced surveillance activities • Strengthened laboratory capacities 	<p>Director Health Services Regional Public Health Superintendent</p>
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