MALAYSIA POLIO OUTBREAK

REPORT ON SABAH POLIO OUTBREAK RESPONSE

(2019-2021)

'We hope that through our strengthened Acute Flaccid Paralysis (AFP) and environmental surveillance, as well as achieving high routine IPV immunisation coverage, Malaysia will continue to sustain its polio-free status'

Tan Sri Dato' Seri Dr Noor Hisham bin Abdullah

Former Director General of Health Malaysia.

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CONTENT

FOREWORDS

Kopivosian,

First and foremost, I would like to extend my heartfelt congratulations and sincere gratitude to those who were involved in managing polio outbreak in 2019. Your unwavering commitment, tireless dedication and collaborative spirit were instrumental in effectively responding to public health crisis. Achieving such a successful response despite the unprecedented challenges presented by the concurrent COVID-19 pandemic was both inspiring and deeply commendable. Polio is a crippling and potentially deadly infectious disease caused by the poliovirus. It mainly affects children under the age of five and can lead to irreversible paralysis and in some cases can even be fatal. Thanks to decades of global effort, the world has made remarkable progress and as long as polio exists anywhere, it's a threat everywhere.

Controlling a polio outbreak requires a coordinated, swift, and strategic response. Public trust is vital. Misinformation can lead to vaccine hesitancy, so engaging local leaders, educators, and community health workers is crucial to spreading accurate information. Thus, managing risks which include risk communication is also important.

Maintaining a polio-free state is not an easy task. Polio surveillance is one of the most critical pillars in the fight against polio. We must continue to strengthen the current polio surveillance for early detection. While vaccination protects children from the virus, surveillance is how we track, respond to, and ultimately stop its spread.

Once again, thank you to everyone.

DR MARIA SULEIMAN
DIRECTOR
SABAH STATE HEALTH DEPARTMENT

Salam sejahtera,

In December 2019, Malaysia confirmed its first polio case in over 27 years, marking a significant and concerning development in the nation's public health landscape. What was once considered an eradicated disease in the country had re-emerged in Sabah, with three additional cases of circulating vaccine-derived poliovirus type 1 (cVDPV1) confirmed in early 2020.

In response to the outbreak, the Sabah State Health Department swiftly mobilized resources to conduct a targeted vaccination response in Tuaran, the locality where the first case was reported. Shortly thereafter, a State-wide Polio Immunization Campaign, *Kempen Imunisasi Polio Sabah (KIPS)*, was launched, which targeted all children under the age of 13 years across Sabah. This demographic was chosen because most had little to no intestinal immunity against poliovirus, following Malaysia's 2008 transition from the oral polio vaccine (OPV) to the inactivated polio vaccine (IPV) under the National Immunization Program.

The implementation of KIPS occurred amidst the global COVID-19 pandemic – of which Sabah was also severely impacted. Despite unprecedented operational challenges, including movement restrictions, resource limitations, and public health safety concerns, Sabah State Health Department’s adaptive strategies, including, drive-through vaccination, community-based outreach with strict infection prevention protocols, and extensive inter-agency collaboration were a testament to the strong leadership and the unwavering dedication of the public health workforce in Sabah. Congratulations on this remarkable achievement.

DR MUHAMMAD BIN JIKAL
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General disclaimers

All reasonable precautions have been taken by the authors to verify the information contained in this publication.

Photos in this report were contributed by the following:

Pictures in this book were provided by various health staff throughout Sabah during the campaign.

ABBREVIATIONS

AFP	Acute Flaccid Paralysis
bOPV	Bivalent Oral Polio Vaccine (Type 1 and 3)
COVID-19	Coronavirus Disease 2019
CSF	Cerebrospinal fluid
cVDPV	Circulating Vaccine-Derived Poliovirus
ENV	Environmental surveillance
EOC	Emergency Operation Center
EV	Enterovirus surveillance
GPEI	Global Polio Eradication Initiative
ICM	Intra Campaign Monitoring
ICRC	International Committee of the Red Cross
IDS	Information Documentation system
IHR	International Health Regulations
IMR	Institute of Medical Research
IPV	Inactivated polio vaccine
ITD	Intratypic Differentiation
KIPS	Kempen Imunisasi Polio Sabah
MOH	Ministry of Health, Malaysia
mOPV2	Monovalent Oral Polio Vaccine (Type 2)
OPV	Oral Polio Vaccine
PIK	Pusat Informatik Kesihatan (Health Information Centre)
RCM	Rapid Convenient Monitoring
SIA	Supplementary Immunization Activities
SSHD	Sabah State Health Department
SWACH	Sabah Women and Children's Hospital
UNICEF	United Nations Children's Funds
VDPV	Vaccine derived polio virus
VIDRL	Victorian Infectious Diseases Reference Laboratory
VPD	Vaccine Preventable Diseases
WPV	Wild Polio Virus
NPEV	Non-Polio Entero virus
VVM	

DEDICATION TO OUR HEROES

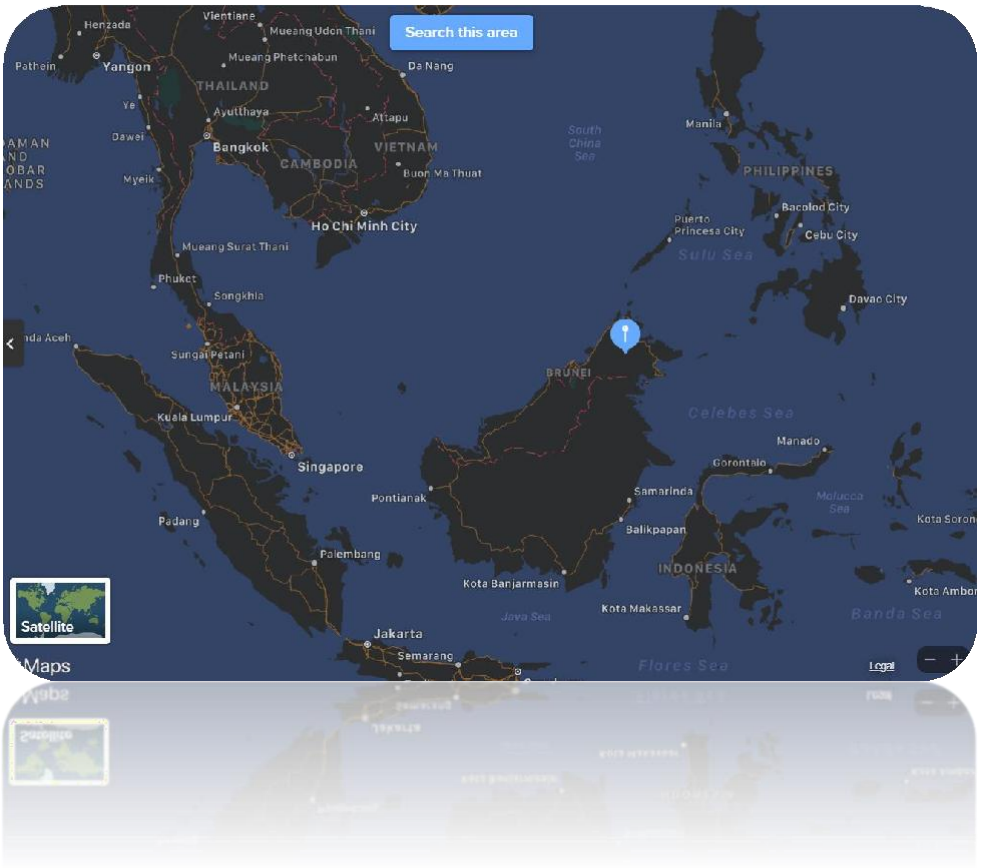
The polio outbreak response in Malaysia was led by the Ministry of Health Malaysia with the support from the partners in the Global Polio Eradication Initiative (including the World Health Organization and UNICEF)

The outbreak response operations have been made possible through dedication, hard work and commitment of the hundreds of front-line polio heroes who faced challenges relentlessly to ensure that every child in Sabah is protected from polio.

SABAH

Sabah is one of the states of Malaysia located on the northern part of Borneo Island and bordered with the Malaysian state of Sarawak to the southwest and Indonesia's Kalimantan region to the south. The Federal Territory of Labuan is an island just off the west coast of Sabah. Sabah also shares maritime borders with Viet Nam to the west and the Philippines to the north and east. Sabah is divided into 26 districts with the land area of 72,689 km².

Kota Kinabalu is the state capital city and the economic centre of the state. As of the 2019 census in Malaysia, the state's population is 3.9 million. Sabah has an equatorial climate with tropical rainforests and abundant animal and plant species. The state has long mountain ranges on the west side which form part of the Crocker Range National Park. The main economic activities in Sabah are palm industries, oil and gas and tourism.



EXECUTIVE SUMMARY

In December 2019, the confirmation of Malaysia's first polio case in 27 years became a major concern after sequencing of an isolate by VIDRL Australia reported detection of Circulating Vaccine Derived Polio Virus Type 1 (cVDPV1). Subsequently, three more cVDPV1 cases were reported in Sabah state through Acute Flaccid Paralysis (AFP) surveillance.

What was once thought to be an eradicated disease in the country has now re-emerged in Sabah. Rapid vaccination response was immediately carried out in the affected locality targeting children who missed their routine vaccination. Soon after, a State-wide Polio Immunisation Campaign called Kempen Imunisasi Polio Sabah (KIPS) was launched on 27 December 2019, initially targeting children under the age of 5 years but later expanded to all children below 13 years. These children had little to no intestinal immunity following the switch from oral polio vaccine (OPV) to Inactivated Polio Vaccine (IPV) under the National Immunisation Programme in 2008.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Baby boy infected with polio virus, first case in 27 years

- Decorative photo

PUTRAJAYA: The Ministry of Health has confirmed that a three-month-old baby boy from Tuaran, Sabah, has been infected with the polio virus, becoming the first case after 27 years of Malaysia being free of the disease.

Its director-general, Datuk Dr Noor Hisham Abdullah, said the victim was found to have a fever followed by weakness in his limbs, and was admitted to the Intensive Care Unit after being confirmed to be infected with vaccine-derived poliovirus type 1 (VDPV1), last Friday.

He said the baby is currently being treated in the isolation ward and is in stable condition, but still requires


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Polio outbreak in Malaysia

Home / Outbreaks and emergencies / Polio outbreak in Malaysia

On 8 December 2019, the Ministry of Health of Malaysia announced the country's first case of polio since 1992. Testing has confirmed that the virus is genetically linked to poliovirus circulating in the Philippines.

The World Health Organization (WHO) is working closely with UNICEF and the other partners in the Global Polio Eradication Initiative to support the Ministry of Health in responding to this outbreak. WHO's support is focused on the provision of technical advice in the areas of surveillance and case detection, risk communication and the immunization response.

As children are most at risk of polio, WHO urges all parents and caregivers to ensure that all children under the age of 5 years are vaccinated. Multiple doses are required for full protection.

Visit the WHO Malaysia website

During the early part of the outbreak, efforts had been made to determine the possible source of the outbreak and identify missed AFP notifications. Although the

source could not be identified but it was hypothesized that infection might have come from asymptomatic individuals. Acute flaccid paralysis (AFP) surveillance and environmental surveillance of poliovirus are sensitive measures for detecting potential cases of poliomyelitis and presence of poliovirus circulation. In March 2020, WHO declared COVID-19 a pandemic and this has greatly affected the vaccination campaign. Among the issues and challenges faced were the complexities and uncertainties of COVID-19 pandemic. Activities had to be adapted to adhere to the Covid-19 Standard Operating Procedures (SOP) to prevent risk of COVID-19 transmission. Despite all the restrictions including the enforcement of Movement Control Order (MCO), Ministry of Health through Sabah State Health Department, managed to successfully conduct the Supplementary Immunization Activities (SIA) campaign.

POLIO CASES IN SABAH

A total of four (4) confirmed Circulating Vaccine Derived Polio Virus Type 1 (cVDPV1) cases were detected in Sabah. The 1st reported case was from Tuaran district and the result was confirmed on 6 December 2019. The 2nd and 3rd cases were reported from Sandakan and Kinabatangan district respectively and were confirmed on 8 January 2020. The 4th case was also from Sandakan and confirmed on 5 March 2020 All cVDPV1 isolates were noted to be genetically linked to the poliovirus isolated in the Philippines.

Two cases were classified as polio compatible, decided during the Expert Review Committee meeting. Cases involved a 10-month-old, non-citizen child from Kinabatangan district with the onset of paralysis on 8 January 2020 and a 4-year-old Malaysian child from Lahad Datu district with the onset of paralysis on 29 January 2020. Both cases presented polio symptoms, but the stool samples taken were negative for VDPV.

Up to December 2020, no human case of cVDPV2 were reported. cVDPV2 were detected only from environmental samples. One (1) sample was classified as ambiguous VDPV2 and was not genetically linked with other isolates. In July 2020, VDPV3 isolates were detected in Tuaran and was classified as aVDPV3.

The summary of all cases is as follows:

Case 1

On 28 November 2019, Sabah State Health Department received a verbal notification of an Acute Flaccid Paralysis (AFP) case from Sabah Women's and Children Hospital (SWACH). The case was a 3-month-old male Malaysian child from Tuaran district. He was born on 6 August 2019 and received his first dose of IPV on 9 October 2019, at the age of 2 months. He developed fever on 26 October 2019 and subsequently weakness on 29 October 2019. Parents initially sought treatment at Tuaran Hospital but subsequently referred to SWACH for further management. Rectal swab sample taken on 30 October 2019 detected Sabin-like poliovirus type 1 and 3 discordant following ITD by National Polio Lab on 28 November 2019. Sequencing by VIDRL

Australia reported detection of cVDPV1 on 6 December 2019, with 37 nucleotide divergence (4.7%), which were identical and genetically linked to the VDPV1 sequence from the Philippines S19-506-I. The new virus was classified immediately as cVDPV1, as described in GPEI Guidelines for Reporting and Classification of Vaccine-derived Polioviruses. Two stool samples taken on 9 and 10 November 2019 were reported as negative. The exposure was likely between 21 September and 22 October 2019 (4 - 35 days IP). 25 close contacts were identified, from which stool samples were taken from 24 contacts and all were reported negative for polio. Following the detection of case, Active Case Detection (ACD) was then carried out in the surrounding areas. 602 houses were visited and 2,245 residents interviewed, out of which 716 were aged less than 15 years old. No AFP cases were found. From those aged less than 15 years old, 52 were found to have missed their immunisation, while 53 were unsure of their immunisation status. 22 samples from healthy children less than 5 years old in the surrounding areas were taken. 16 samples were reported as negative, while NPEV was isolated from the remaining samples. 2 children were vaccinated with IPV alone and 85 children vaccinated with DTaP-IPV/Hib. Control activities were also expanded to Taman Telipok Ria in Tuaran, where 20 stool samples were collected from 20 healthy children; all samples tested negative for polio. A team from the Malaysia Epidemic Intelligence Program (EIP) also came to Sabah to help in outbreak investigation mainly to help determine the source of the outbreak. Although the exact source could not be determined, it was hypothesized that the source could have come from an asymptomatic case.

Case 2

On 3 December 2019, Kinabatangan District Health Office received a notification of an Acute Flaccid Paralysis case from a General Practitioner in Kinabatangan district. Case was an 11 years old non- citizen, male who developed weakness, back pain and unable to walk on 1 December 2019. He was born in Basilan Philippines and never been immunized. Father works as a laborer at Melabau Palm Estate, Kinabatangan. Two stool samples were taken on 8 December 2019 and 9 December 2019. VIDRL reported as Polio Virus type 1 with 35 and 34 mutations and a divergence rate of 3.76%; thus, classified as cVDPV1. The isolate is genetically linked with case 1 and isolates of a case reported in the Philippines.

13 close contacts were identified, and stool samples from 11 contacts were taken; all reported as negative. 21 samples from healthy children in the surrounding area were also taken. NPEV were detected in three samples, while other samples were reported as negative. ACD was carried out in the surrounding area. A total of
84 houses were visited and 282 residents (254 non-citizens) interviewed, out of which 105 (101 non-citizens) were aged less than 15 years old. No AFP cases were found. From those aged less than 15 years old, 101 (all non-citizens) were found to have missed their immunization. Rapid response vaccination activity was carried out from 29 December 2019 – 6 January 2020 in the surrounding areas, targeting children aged 2 months to 15 years old who have missed their routine polio vaccination (citizens & non-citizens). A total of 42 children were vaccinated using DTaP-IPV/Hib (2 months to less than 7 years old), while 59 children aged 7 to 15 years old were given IPV stand-alone vaccine. 37 children were given bOPV when it was available during this period.

Case 3

Case was 8 years old, male, non-citizen child. He was home delivered and never received polio immunization. He developed fever on 9 December 2019 and sudden onset of bilateral limb weakness and lethargy on 12 December 2019 which started from the lower limb ascending to the upper limbs. He was admitted to Duchess of Kent Hospital in Sandakan on 12 December 2019, initially diagnosed as Guillain Barre Syndrome. Stool samples were collected on 17 December 2019 and 18 December 201920. Laboratory results from VIDRL reported as polio virus type 1 with 35 nucleotide mutations, resulting in 3.87% divergence and thus classified as cVDPV1. The isolate was genetically linked with case 1 and isolates in the Philippines. 8 contacts were identified (4 were siblings aged less than 15 years old) and stool samples taken; 7 samples were negative, while one sample was rejected. 20 samples from healthy children aged 5 years and below in the surrounding area were taken. All samples were reported as negative. Active case detection was carried out in the surrounding area. A total of 1,120 houses were visited and 5,700 residents interviewed out of which 2,081 were aged less than 15 years old. No AFP cases were found. From those aged less than 15 years old, 777 (393 non-citizens)

were found to have missed their immunisation, while 473 (221 non-citizens) were unsure of their immunisation status. Rapid response vaccination was carried out from 24 December 2019 – 10 February 2020 in the surrounding areas, targeting children aged 2 months to 15 years old who have missed their routine polio vaccination. A total of 298 children were vaccinated using DTaP-IPV/Hib while OPV was given to 895 children during this period. Currently the child had been discharged from the hospital and able to ambulate well. No residual paralysis was noted.

Case 4

The child was a 3 years old, male, non-citizen. He was home delivered (in Malaysia) and never received polio immunization. Both parents were non-citizens. This case lives in Tunku Sime Darby Palm Estate in Sandakan, Sabah. He developed fever and sudden onset of limb weakness on 18 January 2020 but did not seek treatment. He was brought to health clinic for bOPV on 24 January 2020 and before allowed home, noted by the health care worker to have lower limb weakness. He was then referred to hospital for further investigation. First stool sample was collected on 29 January 2020 and received by IMR on 31 January 2020. Second stool sample was collected on 1 February 2020 and received by IMR on 5 February 2020. Laboratory results from VIDRL reported as polio virus type 1 with 32 and 33 nucleotide mutations respectively from the LR and RLR isolates, resulting in 3.5 and 3.6% divergence and thus classified as cVDPV1. The isolate is genetically linked with Tuaran case and isolates in Philippines. Immediate response commenced on 16 March 2020. By this time bOPV vaccination campaign have already started. 194 non-citizen children were investigated and 103 were given DTaP-IPV/Hib vaccination. 5 contacts were identified, and stool samples taken, all reported as negative.

Figure:Team from the Malaysia Epidemic Intelligence Program (EIP) presenting their investigation findings to the State EOC

CHRONOLOGY OF EVENTS

28 NOVEMBER 2019
Received AFP notification. Immediate outbreak response initiated

29 NOVEMBER 2019
- Activation of State EOC
-Outbreak investigation

6 DECEMBER 2019
Confirmation of 1st case of Polio from Tuaran district

27 DECEMBER 2019
State-wide immunization Campaign 2019/2020 (KIPS) officiated in Tuaran

21 JANUARY 2020
State-wide bOPV campaign

11 MARCH 2020
WHO declared Covid-19 a **PANDEMIC**

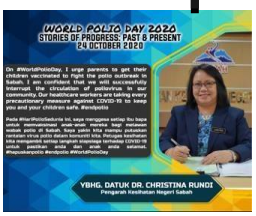
31/08/2020
Recovery MCO.

2 JUNE 2020
Conditional MCO.
mOPV2 campaign started.

18 MARCH 2020
Nationwide Movement Control Order (MCO) in Malaysia.
Campaign withheld

JUNE- AUGUST 2020
Recovery MCO Remaining district started the mOPV2 campaign.

20 OCTOBER 2020
Completion of active phase followed by extended mopping up activities.

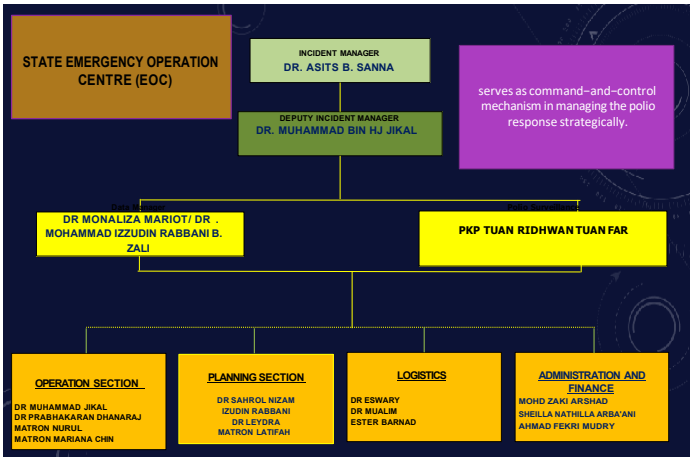


INCIDENT MANAGEMENT SYSTEM

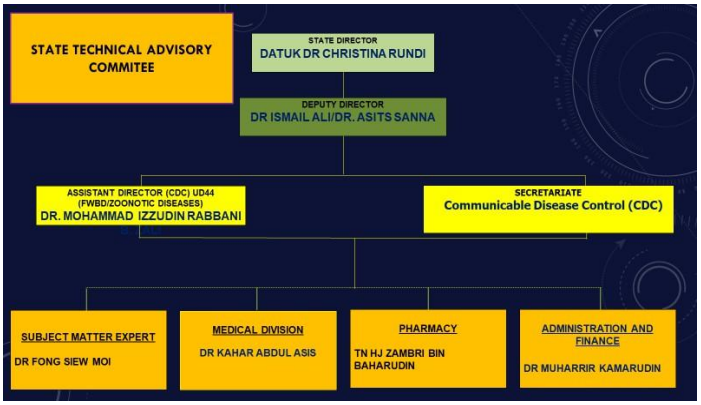
The overall management of the polio outbreak response was led by the Ministry of Health of Malaysia, through the Sabah State Health department. The State Emergency Operation Centre (SEOC) was activated on 29 November 2019 when the first notification of AFP case with possible Sabin Like type 1 and 3 discordant was made.

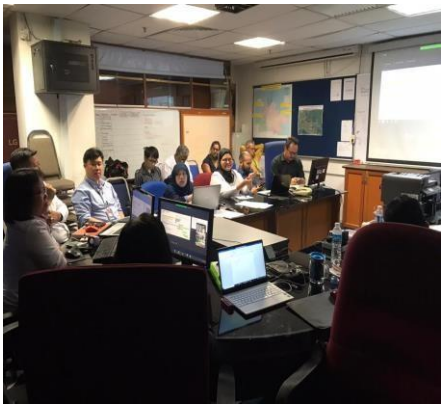
The State EOC serves as the centre that connects with the National EOC and supports the functionality of the district EOCs. It also serves as command-and- control mechanism in managing the polio response strategically. Weekly meetings were held regularly with district representatives to discuss vaccine coverages, updates on surveillance and issues faced by the districts. During the Covid-19 pandemic, meetings are done virtually to minimise the risk of Covid-19 transmission.

STATE EMERGENCY OPERATION CENTER



STATE TECHNICAL ADVISORY COMMITTEE

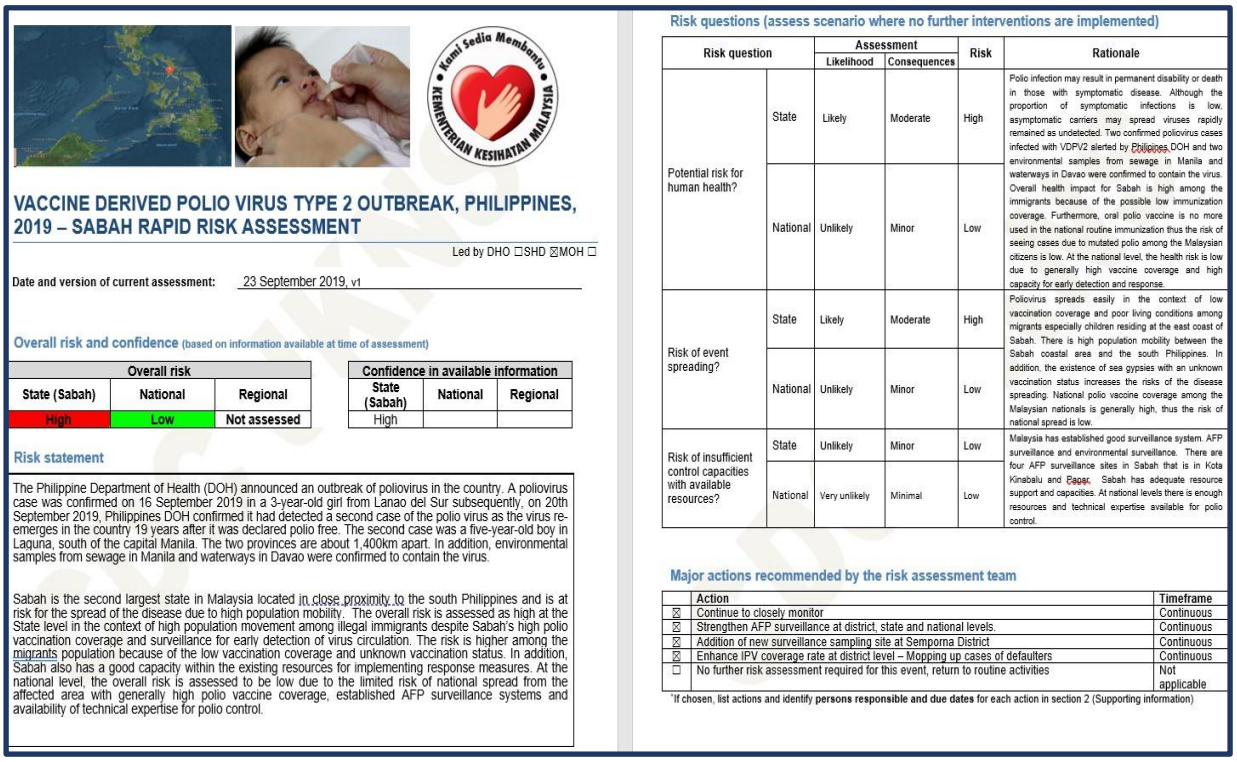




RISK ASSESSMENT

Following the polio outbreak declared in the Philippines on 19 September 2019, a rapid risk assessment was conducted on 23 September 2019. The overall risk was assessed as HIGH at the state level based on the high migrant mobilization from the Philippines. An alert letter was then sent to all the districts in Sabah on 7 October 2019. They were advised to stenghthen AFP surveillance and increase coverage of IPV vaccination including tracing and vaccinating all defaulters. In addition, one new environmetal surveillance sampling site was chosen in Semporna.

On 7 December 2019, another rapid risk assessment was done when Tuaran reported its first case. The overall risk was assessed as low for Malaysian children in context of high polio vaccination coverage among them and the existing acute flaccid paralysis (AFP) and environmental surveillance for early detection of polio virus circulation. In view of the source that still couldn't be determined, risk of spread would be HIGH among the migrant population because of the low vaccination coverage and some with unknown vaccination status. Nevertheless, Sabah has a good capacity within the existing resources for implementing good response measures.



VACCINE DERIVED POLIO VIRUS TYPE 2 OUTBREAK, PHILIPPINES, 2019 – SABAH RAPID RISK ASSESSMENT

Led by DHO ☐SHD ☒MOH ☐

Date and version of current assessment: 23 September 2019, v1

Overall risk and confidence (based on information available at time of assessment)

Overall risk		
State (Sabah)	National	Regional
High	Low	Not assessed

Confidence in available information		
State (Sabah)	National	Regional
High		

Risk statement

The Philippine Department of Health (DOH) announced an outbreak of poliovirus in the country. A poliovirus case was confirmed on 16 September 2019 in a 3-year-old girl from Lanao del Sur subsequently, on 20th September 2019, Philippines DOH confirmed it had detected a second case of the polio virus as the virus re-emerges in the country 19 years after it was declared polio free. The second case was a five-year-old boy in Laguna, south of the capital Manila. The two provinces are about 1,400km apart. In addition, environmental samples from sewage in Manila and waterways in Davao were confirmed to contain the virus.

Sabah is the second largest state in Malaysia located in close proximity to the south Philippines and is at risk for the spread of the disease due to high population mobility. The overall risk is assessed as high at the State level in the context of high population movement among illegal immigrants despite Sabah's high polio vaccination coverage and surveillance for early detection of virus circulation. The risk is higher among the migrants population because of the low vaccination coverage and unknown vaccination status. In addition, Sabah also has a good capacity within the existing resources for implementing response measures. At the national level, the overall risk is assessed to be low due to the limited risk of national spread from the affected area with generally high polio vaccine coverage, established AFP surveillance systems and availability of technical expertise for polio control.

Risk questions (assess scenario where no further interventions are implemented)

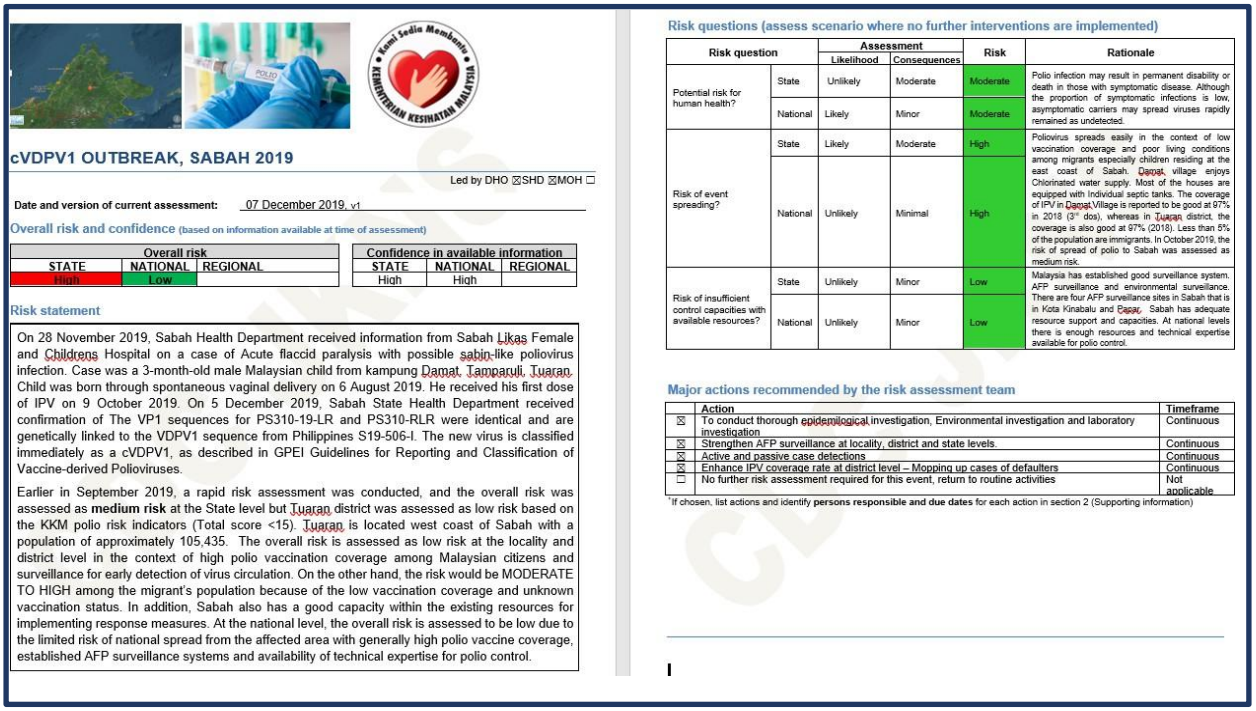
Risk question		Assessment: Likelihood	Assessment: Consequences	Risk	Rationale
Potential risk for human health?	State	Likely	Moderate	High	Polio infection may result in permanent disability or death in those with symptomatic disease. Although the proportion of symptomatic infections is low, asymptomatic carriers may spread viruses rapidly remained as undetected. Two confirmed poliovirus cases infected with VDPV2 alerted by Philipines DOH and two environmental samples from sewage in Manila and waterways in Davao were confirmed to contain the virus. Overall health impact for Sabah is high among the immigrants because of the possible low immunization coverage. Furthermore, oral polio vaccine is no more used in the national routine immunization thus the risk of seeing cases due to mutated polio among the Malaysian citizens is low. At the national level, the health risk is low due to generally high vaccine coverage and high capacity for early detection and response.
	National	Unlikely	Minor	Low	
Risk of event spreading?	State	Likely	Moderate	High	Poliovirus spreads easily in the context of low vaccination coverage and poor living conditions among migrants especially children residing at the east coast of Sabah. There is high population mobility between the Sabah coastal area and the south Philippines. In addition, the existence of sea gypsies with an unknown vaccination status increases the risks of the disease spreading. National polio vaccine coverage among the Malaysian nationals is generally high, thus the risk of national spread is low.
	National	Unlikely	Minor	Low	
Risk of insufficient control capacities with available resources?	State	Unlikely	Minor	Low	Malaysia has established good surveillance system. AFP surveillance and environmental surveillance. There are four AFP surveillance sites in Sabah that is in Kota Kinabalu and Pagar. Sabah has adequate resource support and capacities. At national levels there is enough resources and technical expertise available for polio control.
	National	Very unlikely	Minimal	Low	

Major actions recommended by the risk assessment team

	Action	Timeframe
☒	Continue to closely monitor	Continuous
☒	Strengthen AFP surveillance at district, state and national levels.	Continuous
☒	Addition of new surveillance sampling site at Semporna District	Continuous
☒	Enhance IPV coverage rate at district level – Mopping up cases of defaulters	Continuous
☐	No further risk assessment required for this event, return to routine activities	Not applicable

*If chosen, list actions and identify **persons responsible and due dates** for each action in section 2 (Supporting information)

Source: Communicable Disease Control Unit, SSHD.2019



cVDPV1 OUTBREAK, SABAH 2019

Led by DHO ☒SHD ☒MOH ☐

Date and version of current assessment: 07 December 2019, v1

Overall risk and confidence (based on information available at time of assessment)

Overall risk			Confidence in available information		
STATE	NATIONAL	REGIONAL	STATE	NATIONAL	REGIONAL
High	Low		High	High	

Risk statement

On 28 November 2019, Sabah Health Department received information from Sabah Likas Female and Childrens Hospital on a case of Acute flaccid paralysis with possible sabin-like poliovirus infection. Case was a 3-month-old male Malaysian child from kampung Damat, Tamparuli, Tuaran. Child was born through spontaneous vaginal delivery on 6 August 2019. He received his first dose of IPV on 9 October 2019. On 5 December 2019, Sabah State Health Department received confirmation of The VP1 sequences for PS310-19-LR and PS310-RLR were identical and are genetically linked to the VDPV1 sequence from Philippines S19-506-I. The new virus is classified immediately as a cVDPV1, as described in GPEI Guidelines for Reporting and Classification of Vaccine-derived Polioviruses.

Earlier in September 2019, a rapid risk assessment was conducted, and the overall risk was assessed as **medium risk** at the State level but Tuaran district was assessed as low risk based on the KKM polio risk indicators (Total score <15). Tuaran is located west coast of Sabah with a population of approximately 105,435. The overall risk is assessed as low risk at the locality and district level in the context of high polio vaccination coverage among Malaysian citizens and surveillance for early detection of virus circulation. On the other hand, the risk would be MODERATE TO HIGH among the migrant's population because of the low vaccination coverage and unknown vaccination status. In addition, Sabah also has a good capacity within the existing resources for implementing response measures. At the national level, the overall risk is assessed to be low due to the limited risk of national spread from the affected area with generally high polio vaccine coverage, established AFP surveillance systems and availability of technical expertise for polio control.

Risk questions (assess scenario where no further interventions are implemented)

Risk question		Assessment: Likelihood	Assessment: Consequences	Risk	Rationale
Potential risk for human health?	State	Unlikely	Moderate	Moderate	Polio infection may result in permanent disability or death in those with symptomatic disease. Although the proportion of symptomatic infections is low, asymptomatic carriers may spread viruses rapidly remained as undetected.
	National	Likely	Minor	Moderate	
Risk of event spreading?	State	Likely	Moderate	High	Poliovirus spreads easily in the context of low vaccination coverage and poor living conditions among migrants especially children residing at the east coast of Sabah. Damat village enjoys Chlorinated water supply. Most of the houses are equipped with Individual septic tanks. The coverage of IPV in Damat Village is reported to be good at 97% in 2018 (3rd dos), whereas in Tuaran district, the coverage is also good at 97% (2018). Less than 5% of the population are immigrants. In October 2019, the risk of spread of polio to Sabah was assessed as medium risk.
	National	Unlikely	Minimal	High	
Risk of insufficient control capacities with available resources?	State	Unlikely	Minor	Low	Malaysia has established good surveillance system. AFP surveillance and environmental surveillance. There are four AFP surveillance sites in Sabah that is in Kota Kinabalu and Papar. Sabah has adequate resource support and capacities. At national levels there is enough resources and technical expertise available for polio control.
	National	Unlikely	Minor	Low	

Major actions recommended by the risk assessment team

	Action	Timeframe
☒	To conduct thorough epidemilogical investigation, Environmental investigation and laboratory investigation	Continuous
☒	Strengthen AFP surveillance at locality, district and state levels.	Continuous
☒	Active and passive case detections	Continuous
☒	Enhance IPV coverage rate at district level – Mopping up cases of defaulters	Continuous
☐	No further risk assessment required for this event, return to routine activities	Not applicable

*If chosen, list actions and identify **persons responsible and due dates** for each action in section 2 (Supporting information)

Source: Communicable Disease Control Unit, SSHD, 2019

A revised risk assessment was carried out by Ministry of Health to identify areas of high risk for poliovirus importation and transmission. Three (3) parameters were assessed.

- Population susceptibility assessment
- Surveillance assessment
- Threat assessment

14 districts, mainly in the east coast were identified as high-risk districts where transmission of polio virus among the community was high. 11 districts fell under the medium risk category.

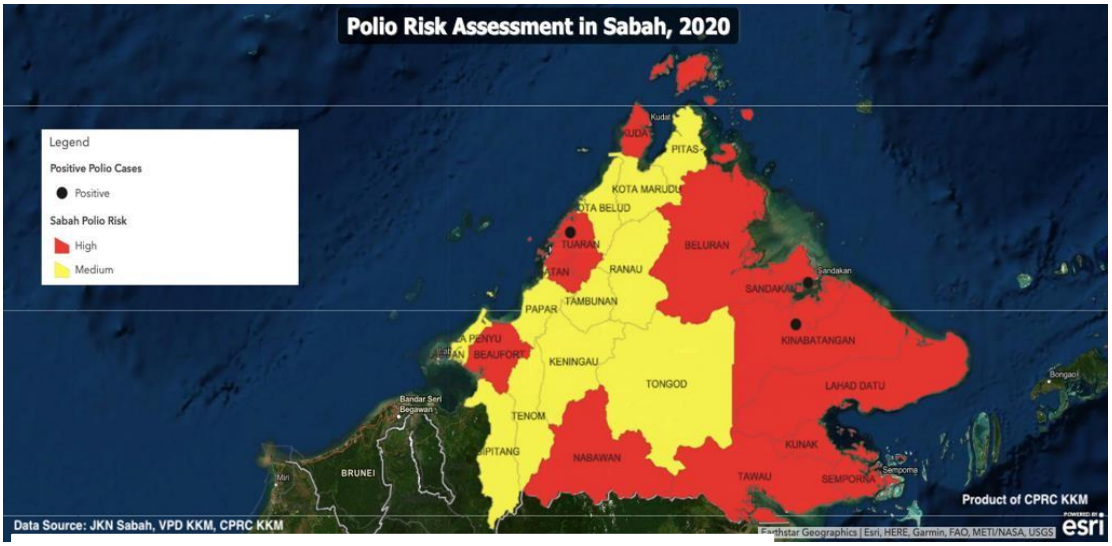


Figure 1: Map of Sabah showing revised risk assessment

DETECTION OF POLIO VIRUS IN THE ENVIRONMENT (POLIO ENVIRONMENTAL SURVEILLANCE)

An infected person can excrete relatively large amounts of poliovirus for several weeks and the virus can circulate in a population well-vaccinated with IPV without any AFP cases. Sabah started doing polio environmental sampling in 2016. Under the routine polio surveillance, 3 sampling sites were selected, one from Kota Kinabalu district and two from Papar district. The main objectives are to verify the existence of poliovirus in the absence of clinical cases and to document the absence of poliovirus in circulation. Grab sampling is the main method used to collect samples from the selected sewage treatment plants.






Following the polio outbreak in the Philippines, one additional sampling point were selected in Semporna district. In 2020, 39 sampling points have been selected throughout Sabah. As of July 2021, the number of sampling sites has been reduced to 35, following recommendations by OBRA team. Out of the 25 districts, 10 districts are currently doing 'composite sampling' making a total of 25 samples collected monthly. Selected sites were chosen based on several criteria which include catchment areas that represent high risk population. Institute of Medical Research

(IMR) and the National Public Health Laboratory, Ministry of Health conducted training on 14 January 2020 on procedures and methods of sampling. Environmental samples collected were transported to the State Public Health Laboratory in Kota Kinabalu in accordance with a standard protocol. Concentration of the samples was done before sending them, either to the Institute of Medical Research or the National Public Health Laboratory in Kuala Lumpur.

From 2019 to 2020, 20 samples showed the presence of cVDPV1, eight (8) for the presence of cVDPV2, and one (1) isolate showed the presence of aVDPV2 which is not linked genetically to any isolates reported before. Furthermore, one (1) sample collected in July 2020 from Tuaran detected VDPV3 which was not linked genetically to other isolates reported, thus classified as ambiguaous VDPV3.

Positive sampling points in Sabah

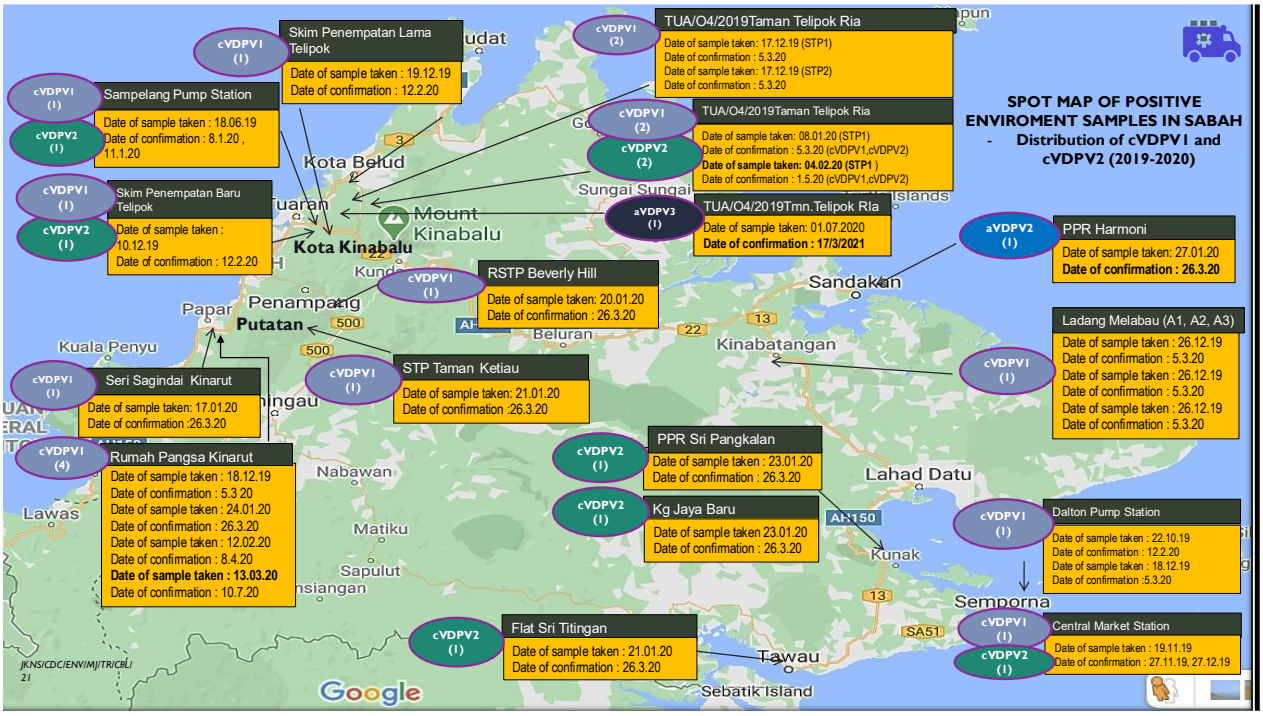


Figure 2: Positive Sampling Sites in Sabah

Sample processing

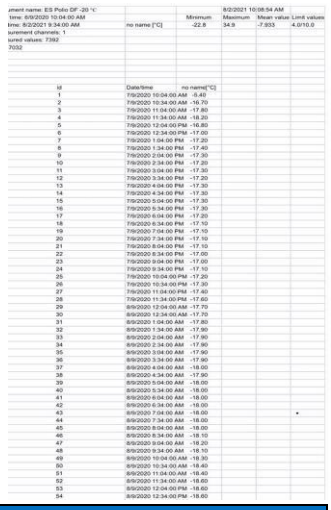
Environmental samples (ES) taken were directly sent to MKAKK in a cool box, and samples temperature are checked upon receiving. All samples received will be recorded into an internal computerized system (e-Lab). Half of the individual sample (500ml) will be used for the concentration process.

Temporally storage of remaining sample after concentration process. (2º - 8ºC)

Storage of remaining sample after concentration process. (-80ºC)

Concentration processes were done by Medical Laboratory Technologist and supervised by Science Officers. Concentrated samples will be inoculated into the Cell Line for Virus Isolation process. Inoculated Cell Line will then be observed daily for Cytophatic Effect (CPE) and any CPE detected are reported to a sceince officer for verification. Samples that show CPE will be sent to IMR for confirmatory test.

Pouring sample into a separating funnel using chiller for overnight incubation at 4ºC)



Storage temperature monitoring using Data Logger

DETECTING POLIO VIRUS IN HUMANS (AFP SURVEILLANCE)

The surveillance of acute flaccid paralysis (AFP) is a key strategy for monitoring the progress of poliomyelitis eradication and is a sensitive measure for detecting potential cases of poliomyelitis and poliovirus infection. AFP surveillance activities includes case detection, case management, collection of stool samples, laboratory testing, investigation and reporting. A circular letter from the Director General of Health Malaysia dated 19 December 2019 was sent to all states and health facilities regarding the polio outbreak in Sabah.

The circular included instructions to ensure polio vaccination coverage of more than 95% in all areas, enhance AFP surveillance where target non polio AFP rate was increased to > 3 per 100,000 population under 15 years old in Sabah. A circular letter to all facilities in Sabah was also released by the State Health Director dated 14 January 2020 reminding staff to strengthen polio AFP surveillance.

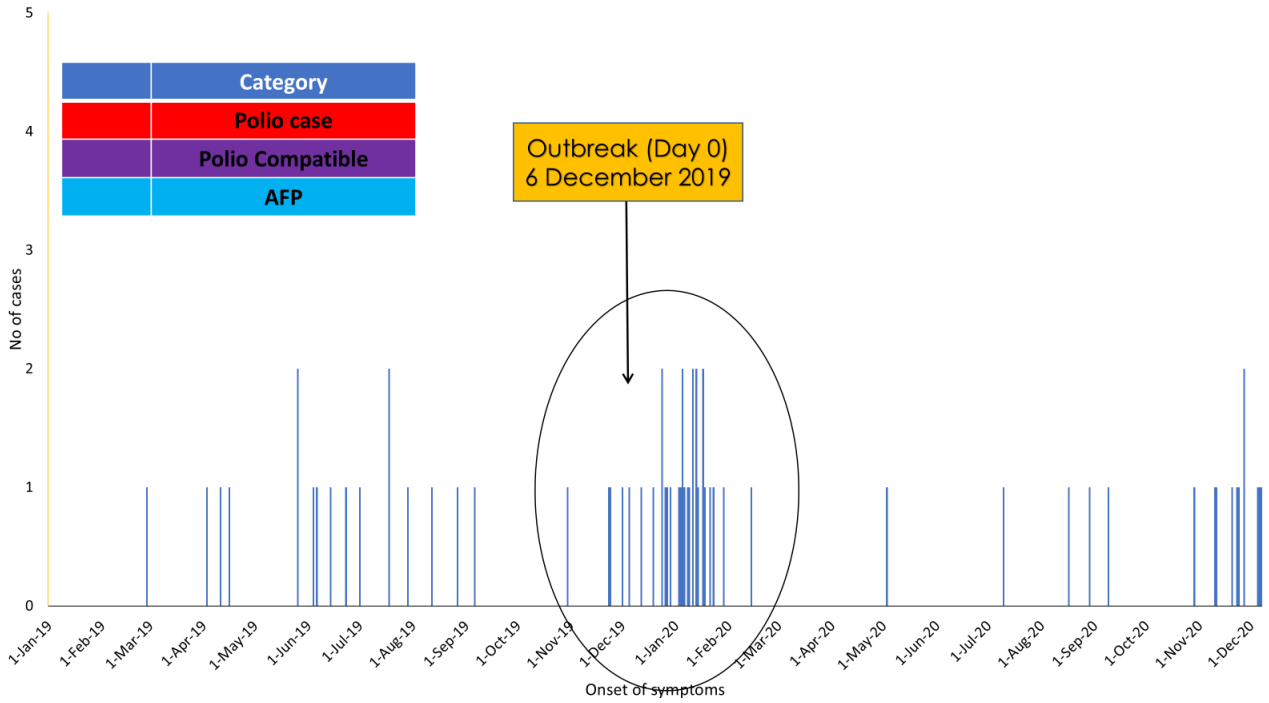


Figure 3: Distribution of confirmed Polio, Polio Compatible and Acute Flaccid Paralysis, Sabah 2019-2020

For every case of acute flaccid paralysis, stool specimens were collected and transported to IMR in accordance with the standard protocol. The Sabah Public Health Laboratory in Kota Kinabalu provided technical support to districts staff so that stool samples collected were properly labelled, packed and transported to the Institute of Medical Research in Kuala Lumpur. Confirmatory testing was done at Victorian

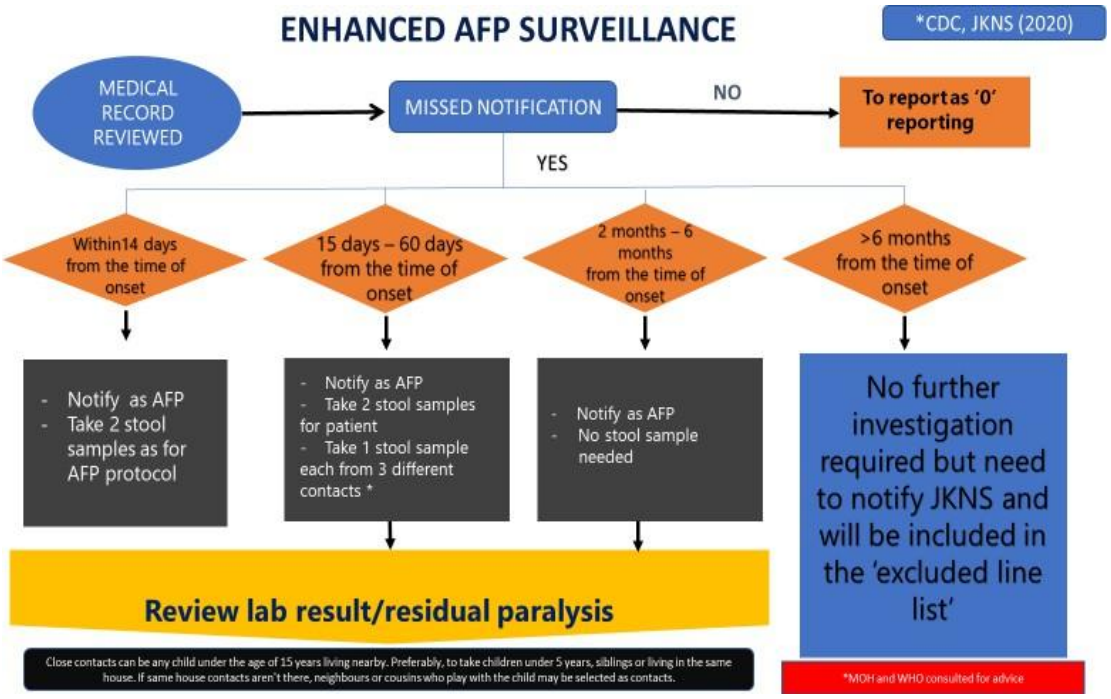
Infectious Diseases Reference Laboratory (VIDRL), a WHO Polio Regional Reference Laboratory located at the Doherty Institute, Melbourne, Australia. Once poliovirus is confirmed, further genetic analysis is made. As of 31 December 2020, a total of 38 AFP cases with onset of symptoms in 2020, were reported in Sabah. Out of the 38 cases, 30 cases were classified as discard 1, three (3) cases classified as discard 2 and two (2) cases classified as discard 3. Two (2) cases were classified as polio compatible which was decided during experts review meeting (ERM). 1 case was diagnosed as cVDPV1. In 2020, 81.6% of the cases had adequate stool specimen collected. 81.6% of AFP cases reported in Sabah were among Malaysian citizens and 18.4% were among non-citizens. Kota Kinabalu district reported the highest number of AFP cases followed by Papar and Penampang district. 21.6% of cases had viral myositis as their final diagnosis. 11 AFP cases reported were excluded from the AFP surveillance database due to age more than 15 years old.

Final Classification	No.	%
Discard 1	30	78.9
Discard 2	3	7.9
Discard 3	2	5.3
cVDPV1	1	2.6
Polio Compatible	2	5.3
Total	38	**100.0**

Table 1: AFP cases Final Classifications, 2020

Enhanced AFP surveillance

Efforts had been made by district health offices to review medical and attendance records for any AFP cases not notified to the District Health Office, using a standard form. Children identified as missed AFP notification will be managed according to the protocol as shown in the flow chart below. In 2020, a total of 56,506 admission registry and medical records had been reviewed, and no missed notification of AFP cases were noted. As of June 2021, a total of 16,744 admission registry and medical records had been reviewed. A flow chart on enhanced AFP surveillance was developed by the state CDC team to facilitate district decision making when missed notification was found. A focal point at the district level had been appointed to facilitate surveillance activities at the respective district.

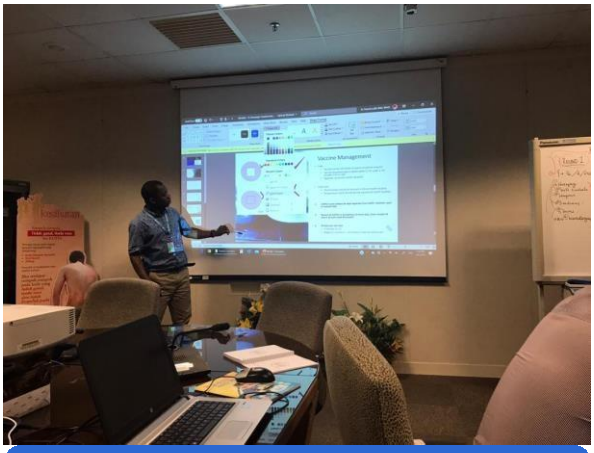


Healthy Children Survey

Stool samples from 20 healthy children from each affected locality i.e detection of cVDPV1 case or positive environmental sample, were taken as part of the outbreak investigations and to see whether VDPVs are circulating in the general population. Healthy Children sampling was also done in areas where AFP cases classified as polio Compatible were reported. 183 stool samples were investigated and 1 sample from Semporna was detected positive for cVDPV1.

TRAINING

Following the outbreak in Philippines, a series of talks and lectures were held on topics of Polio and Vaccine Derived Polio Virus (VDPV). Training for trainers' course was conducted in two (2) separate locations on 14th and 20th February 2020 by WHO and UNICEF team. Topics discussed was mainly on polio, mOPV2 vaccine management and risk communication. Nearly 150 staff attended the training. The CDC and Family Health unit have also conducted separate trainings on vaccination procedures, planning of vaccination campaign , waste management, management of refusals and data reporting.



Dr Caleb from UNICEF explaining mOPV2 management

Training through done virtually by Dr Waheed on RCM and ICM

Training for trainers by GPEI, WHO and UNICEF

State Family Health Division conducting a Polio training.

Ministry of Health conducting a meeting and training on mOPV2 vaccine management.

Mr. Joon from UNICEF facilitating a training session on communication strategy

Dr Cory receiving a token of appreciation from Dr Aishah Senin

Visit by the VPD team from MOH lead by Dr Mohd Hanif Zailani on RCM plan for Sabah

SSHD CDC conducting a field training on monitoring

Meeting and training by the WHO and UNICEF at Ministry of Health Malaysia, Putrajaya

INFORMATION, EDUCATION AND COMMUNICATION (IEC)

Information Education and Communication (IEC) is an approach which attempts to change or reinforce the behavior of a target population regarding a specific problem and in this case, towards polio. IEC in this campaign was led by the State Health Promotion team. Specific strategies, approaches and method were designed to enable individuals, families, groups, organisations, and communities to gain knowledge on polio and explain the importance of polio vaccination. IEC is a crucial part of this polio campaign by providing correct information to the public and as part of the operational and risk communication.

Public/radio talks, printing materials, frequently asked questions (FAQ) and social media were among the strategies used to convey messages about polio to the public.

Radio talk by CDC, SSHD

TV interview on Polio, Dr

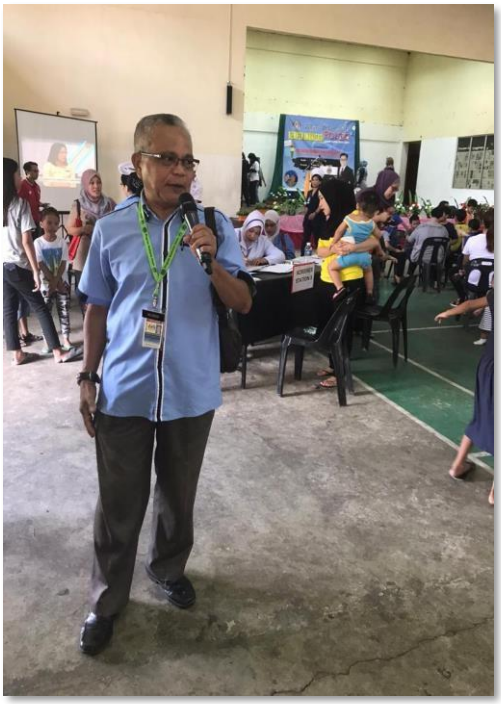
Messages on polio done through various radio talks and tv shows

Health posters on polio and campaign schedule

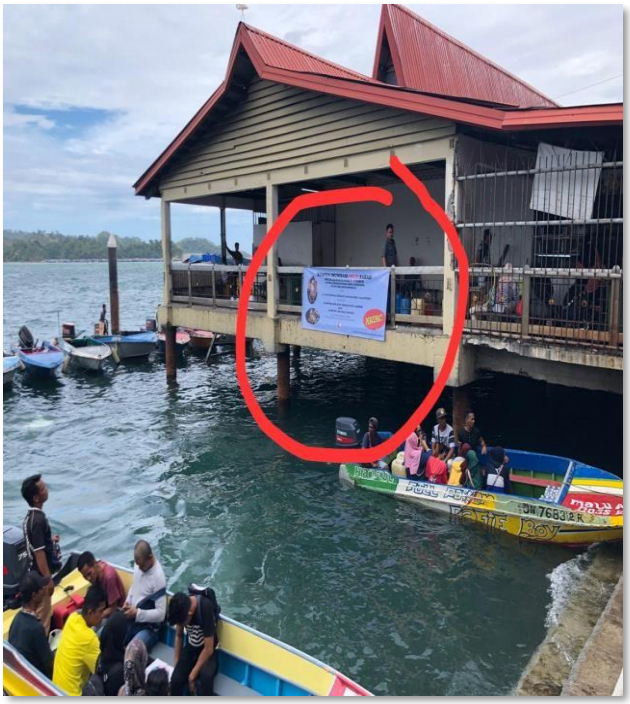
Our Health Promotion heroes in action. Giving Polio talks no matter where.

Subject include polio disease and importance of vaccinating children with OPVs.

Speech on polio by the State Health Director during World Polio Day



Tuan Hj. Musbah speaking local dialect to convey messages to public on polio and the campaign



Banners were placed in strategic locations where the information on polio campaign can be appreciated

POLIO SURVEY

From August to October 2020, a cross-sectional survey was conducted by Sabah State Health Promotion Team, to determine community level of knowledge, attitude and perception on polio. 260 respondents participated in this survey and data was analysed using SPSS v.25.

97.3% of the participants knew about the campaign. 86.5% obtained the information from health care workers followed by 85.8% from electronic and social media combined. Only 85.4 % knew that polio is caused by a virus. 64.6% of the respondents noted that paralysis are among the symptoms of polio. 58.1% knew that transmission can occur through contact with infected stool and only 22.7% knew that polio can be infected through ingestion of contaminated food. 97.7% knew that polio can be prevented by taking polio vaccine.

Majority of the respondents had good attitude towards polio prevention - eating well cooked food, practicing hand hygiene and drinking boiled water though 15% thought that polio could be prevented by taking Vitamin C. 100% of the respondents were willing to vaccinate their children and the most popular vaccination sites were health facilities followed by schools (14.6%). 3.8% agreed to the statement that polio is not a dangerous disease. 6.5% were not worried if their child were infected by poliovirus. 48.5% thought that polio could be prevented by taking supplements. Nevertheless 96.5% agreed to share information on the importance of polio vaccination to their friends and neighbours.

MOBILIZING COMMUNITY

Social mobilizers and volunteers were also trained and were part of the polio teams, both at the fixed sites and mobile units that conducted house-to-house vaccinations. Some of the mobilizers were volunteers from the communities that already have good relations with the Sabah State Health Department. Among the volunteers were from the community members of COMBI, KOSPEN, Tzu Chi, ICRC, MERCY, local community leaders and students. They 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 airtime in the first two rounds of the campaign. Key messages focused on the country declaring polio outbreak, that young children are at risk, no treatment for polio and prevention through vaccination.

MANAGING RUMORS

One pertaining issue that was identified during this campaign were rumours spread by the vaccine hesitants.. Several reported rumours and misconceptions have been documented (an example is given below), and these were quickly managed through prompt action by our health promotion team.

1. 'OPV cause a lot of side effects'
2. 'Why need OPV when we already received IPV'
3. 'We don't need the vaccine. Getting infected by the disease is good'
4. 'The vaccine is not '*halal*'
5. 'This campaign is a government's conspiracy against the public'

RISK COMMUNICATIONS

Effective risk communication about polio involves informing the public about the disease, its transmission, and the importance of vaccination, while also addressing concerns and misinformation to build trust and encourage vaccination. Strategies utilised targeting individual caregivers with facts about polio and polio vaccination developing frequently asked questions (FAQs), social media, radio talks and distributions of education materials.

VACCINATION RESPONSE

National Immunisation Programme (NIP)

Malaysia's National Immunisation Programme (NIP) has been established since the 1950's. Immunisation against Poliomyelitis started in 1972 with the introduction of Oral Polio Vaccine (OPV) into the NIP. The switch from OPV to Inactivated Polio Vaccine (IPV) in our Routine Immunisation schedule occurred in 2008, with the use of DTaP-IPV//Hib vaccine. However, OPV was still used at that time in the School Health Programme, given to 7-year-olds as a booster dose. OPV was fully phased out in Sabah by 2016. DTaP-IPV/Hib vaccine is given to children at the ages of 2, 3,5 and 18 months. .

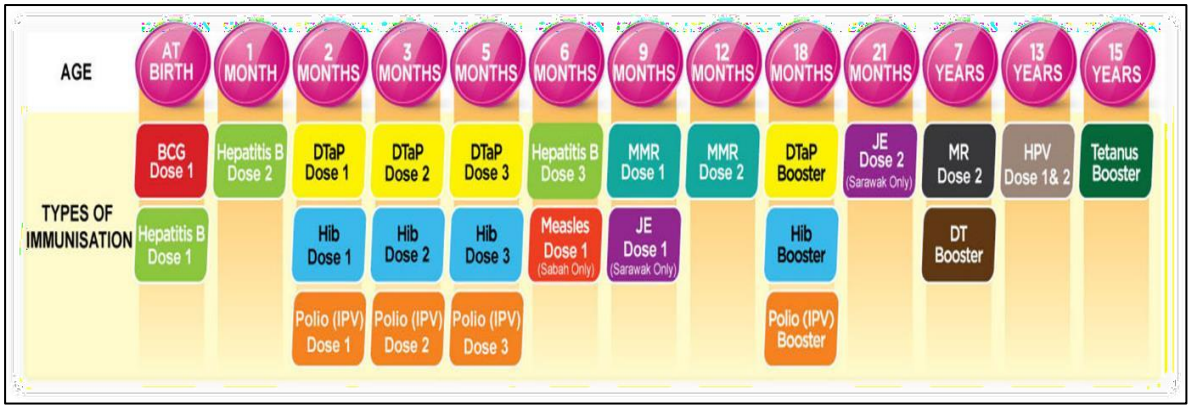


Figure 4: Malaysia routine immunization schedule (source MOH 2019)

Polio vaccination campaign (KIPS)

Both cVDPV1 and cVDPV2 were detected in Sabah from AFP cases and environmental samples. Thus, vaccination response using bOPV and mOPV2 was planned to cover the whole of Sabah to stop poliovirus transmission. SIA campaigns started on 27 December 2019 and initially planned to be completed by April 2020.

MICROPLANNING

Localities or areas where supplementary immunization activities (SIA) are planned to be done were divided into 3 categories. Based on this information, specific approach on methods of delivering the campaign was planned.

Category 1 – Areas where more than 80% of the residents are Malaysian citizens with no security issues.

Category 2 – Areas with security issues but do not require assistance from security forces.

Category 3 – Areas where majority of the residents are non-citizens and requires assistance from security forces.



Vaccination strategies include:

- House-to-house visits.
- Fixed posts.
- Special vaccination sessions (e.g., drive through, Flying Doctor Service (FDS) , transit, and outreach teams); and
- Vaccination in preschool and primary schools by the school health team.

The type of session was determined and outlined in the microplanning for every district vaccination team, including the number of teams and number of vaccines and cold chain equipment required as well as logistics arrangement. Every child vaccinated was marked with indelible ink finger marker. Vaccination card or slip was given for each child, as record for the parents to keep.

Pic: Tan Sri Hisham Abdullah vaccinating a child at Gaya Island on 1 January 2020

Pic: Datuk Dr Christina vaccinating a child during the KIPS launching on 27 December 2019



Microplanning was also based on the denominator estimated by Sabah State Health Department and District Health Offices. The target population for the Polio Immunisation Campaign Sabah was all children aged 0 to below 13 years old. As the true figures of the immigrant population by age group is not known, estimation was done using multiple data sources.

For the age group 0 to 5 years old, denominator was formulated based on Actual Live Birth (ALB) figures from Health Management Information System (HMIS) e-reporting system, Estimated Live Birth (IDS) figures from Health Informatics Centre (PIK), MOH, population statistics from Department of Statistics Malaysia (DOSM), Tuberculosis Information System (TBIS) and i-Kelahiran. For the age group of 5 to 13 years old, the denominator was based on school enrolment data, as well as population statistics from PIK and DOSM. All District Health Offices have developed detailed microplanning as per the operational guide developed for the polio SIA campaign.






To ensure that all children regardless of their citizenship in Sabah were given polio vaccine during the SIA campaign, the vaccines used during SIA were given free of charge. Since the outbreak of poliovirus in Sabah on December 2019, Ministry of Health Malaysia has urged parents, guardians as well as childcare centres, kindergartens, and school authorities to ensure that children receive OPV during the vaccination campaign. School health team played a major role in SIA programme in Sabah.

Challenges arose when the government temporarily closed educational institutions to contain the spread of COVID-19 pandemic. This did not hinder the program as parents brought their children to health facilities to get vaccinated and adhering to Covid-19 SOP to get OPV was mandatory.

DISTRICT READINESS ASSESSMENT

District Readiness Assessment was done prior to campaign using a standard format adapted from GPEI District Readiness Assessment form. For bOPV campaign, assessments were made through district visits and telephone interviews. Among the criterias assessed were their readiness in terms of advocacy, communication, planning and coordination, vaccine management, cold chain and logistics, safety, supervision and monitoring, and social mobilization.

For mOPV2 campaign, each district was required to present their plans to the state EOC before starting the campaign. The State Director would give the 'good to go' once the EOC agreed that they were ready.

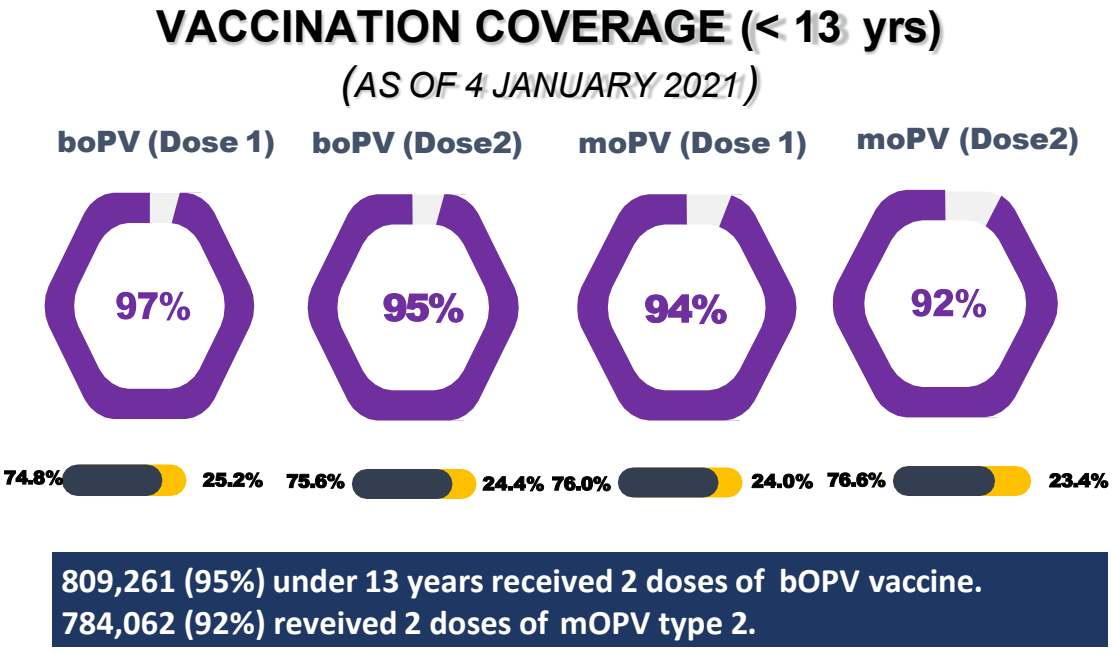
GENERAL OVERVIEW OF VACCINATION COVERAGE

10,000 doses of bOPV vaccine were acquired from the Ministry of Health in mid-December 2019. Vaccination campaign using bOPV commenced on 27 December 2020 in Tuaran district, while other districts commenced their bOPV campaign in January 2020 after an additional 450,000 doses bOPV vaccine received in mid-January 2020. Due to COVID-19 pandemic, a Movement Control Order (MCO) was enforced from 18 March 2020 to 9 June 2020, followed by Recovery MCO from 10 June to 31 August 2020. During the MCO period, bOPV vaccination campaign in Sabah continued in health facilities only. However, the number of children vaccinated

during this period was minimal, as parents were worried of the risk of COVID-19 infection if they visit health facilities.

The campaign was stepped up during the Recovery MCO (RMCO). The initial timeline of the planned bOPV rounds was therefore affected. Babies born in August to September 2020 were also given bOPV, as well as children who have missed bOPV during the active campaign period.

Initially, mOPV2 was scheduled to start in late March 2020. However, due to MCO, it was deferred. The mOPV2 campaign eventually started in Kinabatangan district on 2 June 2020. From 9 June 2020 onwards, other districts started their mOPV2 campaign in stages according to their readiness assessment and the Covid-19 situation in their respective districts. Districts were divided into epidemiological blocks based on the population movement and culture. As of 4 January 2021, the overall coverage were as follows:



Challenges

Among the issues and challenges of the campaign in Sabah state:

i) Concurrent cVDPV1, cVDPV2 and cVDPV3 outbreak requiring use of both bOPV and mOPV2 vaccines.

ii) Complexity and uncertainty of COVID-19 pandemic with enforcements of movement Control Orders (MCO's). Activities had to be adapted to adhere to the Standard Operating Procedures (SOP's) set by the government to prevent risk of COVID-19 transmission among the Health Care Workers (HCW) and public.

iii) Resources for the campaign using existing manpower. Volunteers were kept to a minimum to minimise the risk of COVID-19 transmission.

iv) Changes in Vaccine Vial Monitors (VVM) on mOPV2 vials were noted, some have progressed to stage III and IV from prolonged storage in vaccine fridges, due to delay in mOPV2 vaccination rounds. mOPV2 had to be transferred to vaccine freezers to maintain its quality.

POST IMMUNIZATION CARD

KEMENTERIAN KESIHATAN MALAYSIA

KEMPEN IMUNISASI POLIO SABAH (KIPS) 2019/2020

REKOD PEMBERIAN TITISAN *ORAL POLIO VACCINE* (OPV)

NAMA KLIEN:_____

NO.DOKUMEN:_____

UMUR:_____

ALAMAT KEDIAMAN:_____

_____

DOS	TARIKH DIBERI	NO BATCH	NAMA STAF YANG MEMBERI
1			
2			

NAMA KLINIK:_____

*Sila Simpan Rekod Pemberian Titisan *Oral Polio* Sepanjang Hayat Anda!

SPECIAL STRATEGY

In April 2020, when MCO was slightly eased up under the Conditional MCO, Tambunan District Health Office initiated the first drive through station for administering bOPV. This innovation proved popular during the COVID-19 pandemic, at a time when Malaysia was still under MCO, as schools were closed, and parents were reluctant about getting their children vaccinated at any fixed post. Later, other districts also implemented this strategy with great success.

162,843 doses of OPV were given to children in 14 districts using drive through strategy. In the beginning, 8,382 children received bOPV vaccine (dose 1) and 18,276 children received their dose 2 bOPV vaccine through this method. It became more popular when mOPV2 campaign started and the Conditional Movement Control Order (CMCO) was imposed in June 2020. As of 15/12/2020, 73,355 children were vaccinated with mOPV2 dose 1 and, 62,830 children vaccinated with dose 2.

VACCINE SUPPY AND LOGISTIC MANAGEMENT

At the state level, the primary unit given the responsibility to manage OPV vaccine was the pharmacy department which is under the logistic section of the EOC. The Deputy Director (Pharmacy) serves as the technical advisor for this team.

The vaccine management includes vaccine procurement, management of cold chain and inventory management system. Updates from the vaccine usage, latest status of VVM are reported daily through email to the state EOC. Regular discussion with the Ministry of Health and UNICEF was held to determine the status of the VVM. At the district level, the district pharmacists are the supervisor for vaccine management.

Initially, 910,000 doses of bOPV were received by Sabah State Health Department for the purpose of vaccinating children under the age of 5 years old. Further 1,623,582 doses were purchased to cater the expansion of target population to under the age of 13 years. Supply of mOPV2 was received in late February 2020.

Strict monitoring of the storage, distribution, usage, and destruction of mOPV2 were as per the global technical guidelines to ensure that the vaccine is not mixed up with or mistaken for another vaccine (or vaccines) and that no vials are left within the country once the SIA rounds are completed, and the Outbreak Response Assessment team (OBRA) recommends mOPV2 destruction.



TEAM CODE

REFER M/S - 38/43

TEAM CODE: **TAMPS006**

DATE: 16.6.6.2020

VIAL QUANTITY: 10

POLIO VACCINE MANAGEMENT

Sabah State Health Department received 10,000 doses (1000 vials of 10 doses vial) of bOPV on 20 December 2020. Thereafter, a total of 900,000 doses (45,000 vials of 20 doses vials) were purchased in January and February 2020. The procurement schedule and distribution were as follows:

bOPV (10 doses/vial)	
Quantity received	10,000 doses
Delivery date	20th Dec 2020
Monitoring	Daily report on usage, wastage and balance
Supplied to	PKK KK 3900 doses PKK SDK 1000 doses PKK Tuaran 5100 doses
Indications	Children under 5 years

bOPV (20 doses/vial)	
Quantity received	900,000 doses
Delivery date	3rd-4th week Jan 2020
Monitoring	Daily report on usage, wastage, and balance
Supplied to	All districts
Indications	Children under 13 years

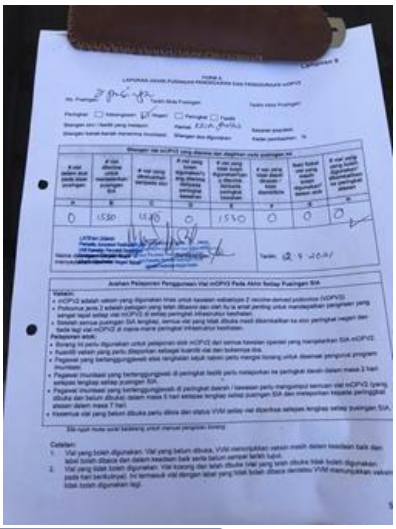
bOPV (20 doses/vial)	
Quantity received	1,200,000 doses
Delivery date	1st-2nd week March 2020 3rd -4th week June 2020
Monitoring	Daily report on usage, wastage, and balance
Supplied to	All districts
Indications	Children under 13 years

mOPV2	
Quantity received	2,533,582 doses (12668 pack)
Delivery date	1st distribution: 2nd-3rd week March 2020 2nd distribution: 1st week July 2020
Monitoring	Daily report on usage, wastage and balance
Supplied to	All districts
Indications	Children under 13 years

Vaccine (bOPV, mOPV2 and IPV) usage and balance was monitored daily by these districts and reported to Sabah State Health Department. VVM status of both bOPV and mOPV2 was monitored on a weekly basis. All reports are sent to Ministry of Health and Sabah State Health Department.

POST CAMPAIGN mOPV2 COLLECTION AND DISPOSAL

Teams from Sabah State Health Department conducted an audit to verify the number of mOPV2 vials used during the campaign. A standard verification form was used to verify and ensure that all mOPV2 vials were accounted for. Disposal of mOPV2 vials were done according to recommendations by WHO and UNICEF.



Counting and packing of used mOPV2 vials in Lahad Datu district. A standard verification form was used.

Counting of vials in Kinabatangan district

Verification done. No missed vials were found

10 vials were put in each zip lock bag

mOPV2 audit in Pitas district

MONITORING AND DISTRICT EOC ASSESSMENT

70 health care workers were trained on intra campaign rapid convenience monitoring (RCM) and vaccination post intra campaign monitoring (ICM). The objectives of monitoring were to identify missed children and identify issues faced by districts during the campaign and offer immediate solutions. Movement restrictions during this Covid-19 pandemic posed a great challenge to our monitoring activities.

Monitoring of the SIA campaigns is crucial to ensure high quality service delivery. The monitoring of SIAs were done through Intra campaign monitoring and rapid convenience assessments (RCA) by monitors from districts and Sabah State Health Department, as the COVID-19 outbreak, and Movement Control Order (MCO) affected the initial plans on using independent monitors. All monitors used a common monitoring format to assess the quality of the rounds by identifying areas with missed children.

The findings from the monitoring were used to plan for mop-ups and programmatic corrective actions. Intra Campaign RCM and ICM were carried out in 14 districts. A total of 881 children were checked during the market surveys, and 29 (3.2%) children were found missed vaccination. A total of 92 villages visited and 2964 children checked, and 144 (4.8%) children found missed vaccination. The main reasons for missed vaccination were ‘absent during the vaccination days (85%). Children who were found missed were given vaccination on the spot.

PICTURE GALLERY OF RCM AND ICM


"SAYA TELAH
MELENGKAPKAN
4 DOSE POLIO"
"SAYA TELAH
MELENGKAPKAN
4 DOSE POLIO"

MARKET AND HOUSE TO HOUSE SURVEYS AT MULTIPLE LOCALITIES IN SEVERAL DISTRICTS IN SABAH

BRIEFING BY CDC BEFORE FIELD WORK

MOH TEAM DOING HOUSE TO HOUSE SURVEYS

HOUSE TO HOUSE SURVEY

MARKET SURVEY

HOUSE TO HOUSE SURVEY

Discussion with DHO prior to RCM

House to house survey

"SAYA TELAH LENGKAP 4 DOS ORAL POLIO"

"I have completed 4 doses of my polio vaccination"

…Boy –

"SAYA SUDAH POLIO DOS KE-2, ANDA BILA LAGI??

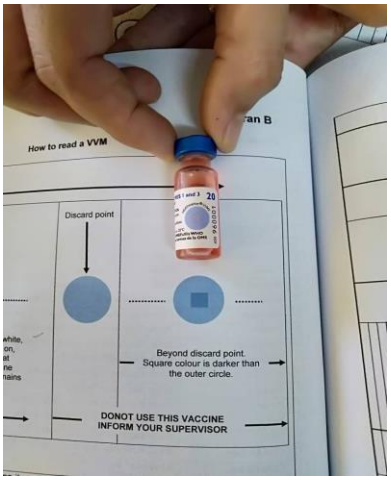
CEGAH SEBELUM TERLAMBAT"

"I have received my second dose, when will you?

Prevent polio before it's too late "…Girl

DISTRICT EOC ASSESSMENT

The RCM team also assessed the Emergency Operation Centre (EOC). The areas covered in the assessment included structures and function, resources, microplanning, vaccine management and health education and communication. A standard checklist was developed by the state CDC with guidance from WHO. Any weaknesses identified during the assessment were discussed and rectified accordingly.



OUTBREAK RESPONSE ASSESSMENT (OBRA)

OBRA was done on 8 February 2021. OBRA recommendations were as follows:

Acute Flaccid Paralysis Surveillance

1. The GPEI recommends that stool adequacy should be at least 80%, and the NPAFP rate should be 3 per 100 000 children under 15 years of age.
2. Continue training and sensitization on AFP surveillance for clinicians at national and subnational levels.
3. Initiate and maintain active AFP surveillance.
4. Maintain community surveillance through religious leaders, community leaders, teachers, and health volunteers.
5. Ensure timely transportation of stool samples to the lab.
6. Initiate contact sampling for inadequate AFP cases. Three samples from close contacts of the affected child should be taken, preferably from children under 5 years
7. The Ministry of Health should undertake a review of AFP surveillance in Sarawak

Environmental And Laboratory Surveillance

1. Ensure the backlog of samples is cleared as a prerequisite for outbreak closure. Request support from WHO to seek help from additional polio labs in the Region for samples processing.
2. Systematically investigate and review the environmental sites every six months and regularly investigate reasons for delayed shipment/transportation.
3. For sites with six months or more without an NPEV isolation rate, consider changing the site or collection points. Composite samples may be considered within the same districts.
4. Consider using technologies, such as satellite mapping and blue line mapping, to improve sites' quality and sensitivity.
5. Consider making improvements in logistics and cold chain management with training, temperature log-in and dependable courier.
6. Consider booster training for all the labs doing the two-phase concentration method in collaboration with WHO on sample collection and processing. Currently, virtual training may be done.

7. Consider booster training on infectious substances shipping guidelines for national and subnational level staff working with environmental and AFP surveillance. The available online materials may be utilized
8. Monitor the performance of Kota Kinabalu Public Health Laboratory (KKPHL) for virus isolation and cell sensitivity, including mycoplasma testing. It is recommended to report cell sensitivity to the IMR on a quarterly basis.
9. Consider the inclusion of National Public Health Laboratory (NPHL) and KKPHL in the Global Polio Laboratories Network (GPLN) for WHO accreditation for different capacity of testing.
10. Consider enrolment of NPHL and KKPHL in the WHO external quality assessment programme (EQAP) for virus isolation and environmental sampling to monitor their performance.
11. Discard all clinical samples with PV2 after confirmation (to work with WHO on the selection of isolates for referral to the global specialized laboratory (GSL) for assay development), including all reference strains and laboratory quality standards (LQS).
12. Develop a surge capacity plan in terms of equipment, supplies, human resources, and training of more staff to assist in testing.

Routine Immunization

1. Encourage ongoing efforts for an exemption of routine immunization from the Fee Act.
2. Adapt strategies used during SIAs that could be adapted to routine immunization for improved utilization by both citizens and non-citizens.
3. Launch catch-up activities like periodic intensification of routine immunization (PIRI) to mitigate COVID-19-related drops in coverage. PIRI could also be integrated into the routine immunization programme to improve utilization by non-citizens.

Vaccine Management

1. Store current mOPV2 stocks at -20 C at the central level store until outbreak closure or end of shelf life.
2. Consider destroying all vaccine vials (usable and unusable) after the expiry date of the remaining usable vials.

3. Prepare a detailed vial disposal report, as explained in the mOPV2 technical guidance (http://polioeradication.org/wp-content/uploads/2020/05/mOPV2-Technical-Guidance20200525.pdf).
4. Consider an effective vaccine management assessment to improve vaccine management.

Communication And Social Mobilization

1. Use communication indicators and date in the planning phase for implementation.
2. Document the lessons learnt for potential future use
3. Document the use of traditional media landscape and influencers.
4. Consider conducting a communication channel and network analysis for hard-to reach areas/non-citizen groups for future use (COVID-19, polio)

CLOSURE OF POLIO OUTBREAK IN SABAH

On 11 September 2021, Polio outbreak in Sabah was officially closed by Ministry of Health Malaysia. It was announced after a decision made at the twenty-ninth meeting of the Emergency Committee under the International Health Regulation (2005) on the international spread of poliovirus, which was held on 4 August 2021. The emergency Committee decided that Malaysia is no longer subject to the temporary recommendations for a cVDPV1 – infected country but remains vulnerable to reinfection by wild poliovirus or circulating vaccine derived polioviruses.

KENYATAAN AKHBAR
KEMENTERIAN KESIHATAN MALAYSIA

WABAK POLIO DI MALAYSIA DIISYTIHAR TAMAT

Kementerian Kesihatan Malaysia (KKM) dengan sukacitanya ingin memaklumkan bahawa Pejabat Perwakilan Pertubuhan Kesihatan Sedunia (WHO) ke Malaysia, Brunei Darussalam dan Singapura dalam perutusan rasminya kepada KKM pada 10 September 2021 telah mengisytiharkan penamatan wabak polio di Malaysia.

Pengisytiharan ini dilakukan berdasarkan penilaian oleh pasukan penilai yang terdiri daripada panel pakar antarabangsa yang telah melaksanakan penilaian menyeluruh terhadap tindakan kawalan dan pencegahan wabak polio yang dijalankan di Malaysia. Berdasarkan penilaian tersebut, usaha Malaysia dalam kawalan dan pencegahan wabak tersebut telah diiktiraf sebagai berjaya menghentikan penularan wabak polio.

DESTRUCTION AND DISPOSAL of mOPV TYPE 2 VIALS

On 3 December 2021, in the presence of Sabah State Health Director, Datuk Dr Rose Nani Mudin, WHO and UNICEF representatives, 126599 mOPV2 vials were successfully destroyed.

As per guidelines, all mOPV2 vials must be destroyed and disposed of. Destruction of the mOPV2 vials were done at Lok Kawi Treatment Plant using Amb Ecosteryl Microwave Disinfectant System method conducted by existing concession company appointed by the Ministry of Health, SEDAFIAT SDN. BHD. (962225-K).

Briefly the processes were as follows:

Process:

1. Waste is placed into the loading hopper
2. Once the waste is dumped into the loading hopper, the shredder is activated to shred and break down the waste.
3. Treatment screw brings the waste products into the microwave vessel where it is heated up to a temperature of 100 degrees centigrade
4. Wastes enter the Heat–Insulated Hopper for further treatment/ decontamination
5. After the treatment process is complete, the waste residue (SW501) is then taken out for further disposal into a secured landfill.

Operator giving safety and procedure briefing to the State Director, Dr Fina (WHO), Dr Elaine (UNICEF), Datin Syantini (MOH)

Collection of all mOPV2 vials from all over Sabah and collected in a yellow bin container

Vials uploaded into the Amb Ecosteryl Microwave Disinfectant System

Team from MOH, WHO, UNICEF and SSHD monitoring the process and procedure to make sure all vials were distructed.

Group photo with MOH representatives, WHO and UNICEF after observing the destruction of mOPV type 2 vials at Sedafiat Lok Kawi Plant.

TRIBUTE TO OUR HEROES

NATIONAL EOC
MINISTRY OF HEALTH
MALAYSIA LEAD BY
DATO'CHONG CHEE
KHEONG

STATE EOC, SABAH
STATE HEALTH
DEPARTMENT

VPD SECTOR, MINISTRY OF HEALTH MALAYSIA

INSTITUTE OF MEDICAL RESEARCH, KUALA LUMPUR



NATIONAL PUBLIC HEALTH LABORATORY, KUALA LUMPUR

PEDIATRIC DEPARTMANT, SABAH WOMEN AND CHILDREN HOSPITAL

KOTA KINABALU PUBLIC HEALTH LABORATORY

COMMUNICABLE DISEASE CONTROL (CDC) AND SURVEILLANCE SECTOR, SABAH STATE HEALTH DEPARTMENT

STAFF OF FAMILY HEALTH DEVELOPMENT UNIT,

(PRIMARY CARE AND MATERNAL AND CHILD HEALTH UNIT)

SABAH STATE HEALTH DEPARTMENT

Polio warriors

Geared with PPE, our staff in Sandakan

Follow-up visit to 1 of the cases

White angels, ready for duty

Case visited by the then Health Minister

Visit by the Director of Disease Control, MOH to Gaya Island

Armed forces joined hands to help our team in the category 3 areas.

Geared with PPE's during the Covid-19 Pandemic

Vaccines were given with love and care

Sub-urban folks are not sidelined

Temporary vaccination center at a shopping mall

Vaccinating children at a construction site

By whatever means, polio vaccination activities done through mobile method at Pagalungan river, Nabawan. Congratulations to our polio frontliners from Nabawan Health clinic for their excellent hardwork and dedication

At the heart of polio eradication efforts stand health workers across the world who put themselves on the frontline day after day, sometimes in dangerous situations or tackling tough terrain, to get vaccines to children. (GPEI)

POLIO VOLUNTEERS

Engaging Village Leaders

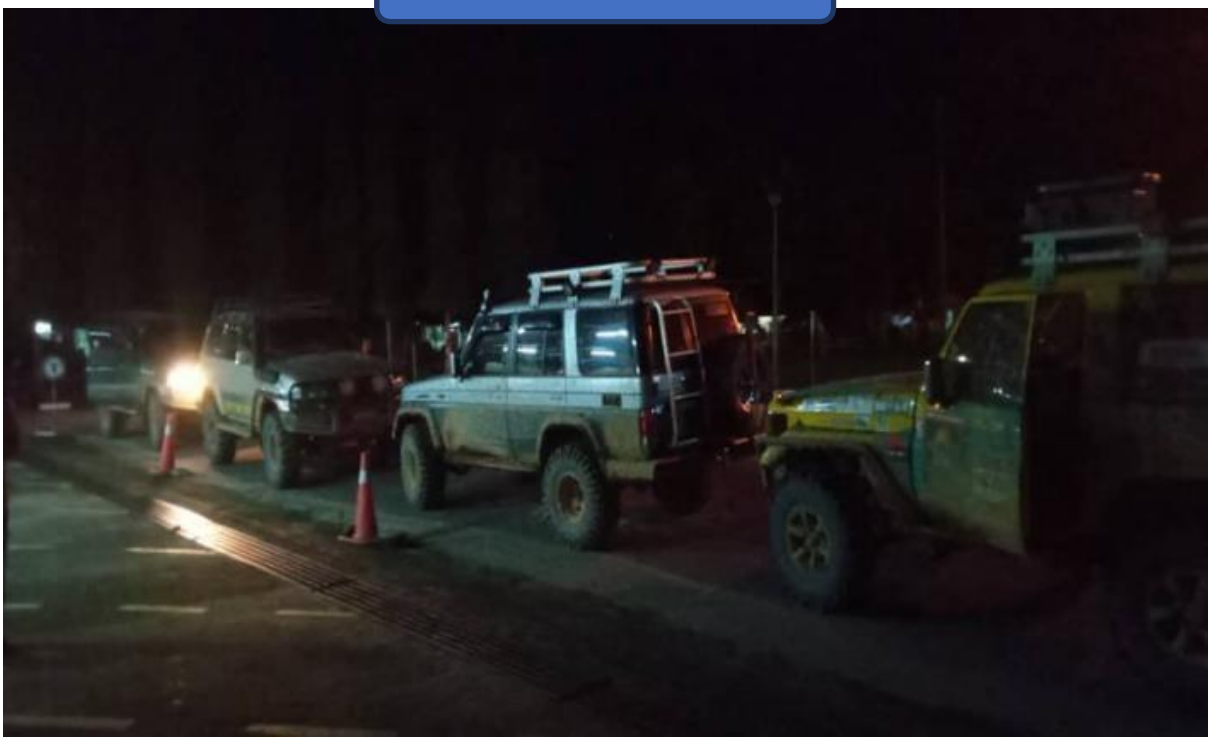
Community Volunteers

INTERNATIONAL COMMITEEE OF THE RED CROSS

MERCY MALAYSIA

ICRC

4 X 4 team came to the rescue



4 x 4 team from Nabawan and Keningau district

DRIVE THROUGH STRATEGY

In April 2020, Tambunan Health District Office initiated the first drive through station for administering bOPV. This innovation proved popular during the COVID-19 pandemic, at a time when Malaysia was still under MCO, as schools were closed, and parents were apprehensive about bringing children to a healthcare facility. Many districts also subsequently implemented this strategy with great success.

162,843 doses were given through this method

SCHOOL HEALTH PROGRAM

Activities by the Kuala Penyu School Health team in various schools within the district in early March 2020. Health education talks are part of the programme to ensure the students understand the purpose of the campaign.

Tawau health district team actively engaging the communities by giving health promotion talks to parents, teachers and students about poliomyelitis and the polio immunisation campaign.

Collaboration with the Ministry of Education and State Education Department was essential for the SIA campaign in schools. Meetings were held at state and district levels prior to the start of the campaign. In these examples, teachers in Kota Marudu were also actively involved as finger markers.

Immigrant children in schools are also not forgotten. School health team in Papar district visiting the Indonesia International School in Ladang Kimanis Papar.

Putatan KIPS team visiting various nurseries, preschool and primary schools in early March 2020.

When the MCO started on 18 March 2020, the school campaign strategy was challenged with the closure of all schools and daycare centres. Nevertheless, the district teams persevered, and the campaign continued in various ways whilst adhering to new COVID-19 SOPs.

In SJK (C) Pai Wen, Ranau, our school health team worked together with the teachers, volunteers, and police to carry out a vaccination campaign in the school hall on 9 June 2020.

Campaigns in Sook, Keningau also saw a different set-up with stringent adherence to SOPs, compared to campaigns before MCO. Education on handwashing became essential in schools as seen in SK Binowu, where the school recycled broken washing machines as handwashing stations.

In SJK (C) Pai Wen, Ranau, our school health team worked together with the teachers, volunteers, and police to carry out a vaccination campaign in the school hall on 9 June 2020. Even though schools were closed, response from parents for OPV vaccination was still encouraging. School halls became good venues for immunization campaigns, in adherence to SOPs.

In Sook, Keningau, the inaccessible road on 12 June 2020 meant that the school children had to walk 2-3km to meet our healthcare team by the road for OPV.

LEAVING NO CHILD BEHIND

KIPS team from KK Abuan crossing rocky rivers to reach three different villages in the interior of Beluran district. The team stayed for three days two nights for the campaign in Tagalapang, Waigon dan Nakadong Villages.

The Flying Doctor Service (FDS) has proven to be critical to our most vulnerable population including those living in rural areas. It was instrumental in reaching out to the population in rural areas inaccessible by road.

Areas accessible by road may still prove challenging as muddy, untarred roads left this 4-wheel drive vehicle stuck on their way to Sonsogon Magandai Village, Kota Marudu for KIPS.

One of our community nurses piloting a boat, as the team ventures to Pinapak Village in the northern district of Pitas.

Just off the coast of Kota Kinabalu, a healthcare worker administers OPV directly off the boat to children living in Gaya Island.

Rain or shine, the campaign continues as we aim to leave no child behind.

Another KIPS team providing immunisation above the waters in Semporna district.

Reaching out to every child, no matter where they are.

Among the challenges of visiting houses built above water is the unstable bridges or walkway leading to the houses. This unfortunate incident saw two staff fell into the waters as they accidentally stepped on unhinged planks.

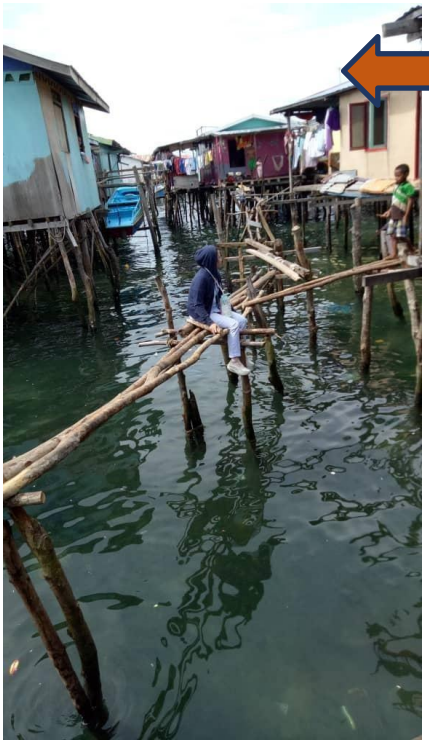
Rainy weather worsens the road conditions, making it difficult to manoeuvre, even for 4-wheel drives.

A team in Kinabatangan using a plantation transport

(Village Uber - 😊)

Working together with the security agencies

This team were on their way via boat to Gaya Island for SIA campaign.



Another example of the treacherous path during a house-to-house campaign in Gaya Island. This is definitely not for the faint-hearted.

Challenging terrains in Sabah saw our KIPS immunisation team in Penampang climbing hills to reach a migrant settlement area with about a hundred children.

Boat wreck can be seen in this picture. The incident happened in Nabawan during transport of vaccines to the interior clinic. 30 vials of mOPV2 vaccine sunk in the river.

No matter where, every child under 13 in Sabah must receive their polio immunization.

SIA campaign in Benta Estate, a palm oil estate in Tawau.

ADHEREING TO COVID-19 SOP DURING VACCINE CAMPAIGN

KENINGAU MOBILE CLINIC USED TO VACCINATE CHILDREN IN THE INTERIOR PART OF SABAH


"SAYA TELAH MELENGKAPKAN 4 DOSE POLIO"


Thursday, 5 March 2020 at 9:58:55 AM
N 6.249599°, E 116.345315° ±32.00m
Jalan Tenghilan Linsuk
89150 Tuaran Sabah
Malaysia
Altitude:17.7meter
Speed:0.7km/h


KEMPEN IMUNISASI
2020

SIA activities in a remote water village in Kuala Penyu

Villagers meeting halfway with healthcare workers by the river in Pagalungan, an interior sub-district in Nabawan, for OPV.

SPECIAL MENTION

A special mention to our staff Mr Muhammad Qayyum Bin Saiman and his team for his heroic effort and attempt to save and retrieve 50 mOPV type 2 vaccines which fell into Pagalungan river when their boat capsized because of unfavourable weather. The incidence happened on 10 July 2020 during the transport of the vaccines to the interior village of Pagalungan at Nabawan district.

His team managed to save 20 vials of mOPV type 2 vaccine at that time. Indeed it was an exemplary effort and truly commendable. We are very proud to have such an admirable polio work force.

Nabawan team that attempted to retrieve the vaccines in the river

Saved vaccines

Capsized boat

PUBLIC'S APPRECIATION

Thank you to Ministry of Health for this great initiative. (Drive through method)

Thank you so much to the medical officers and staffs of Tenom Health Clinic. They came to our school (Vun Shin) to vaccinate our children with polio vaccine which will stimulate our children's immune system to form antibodies against polio virus.

Media

BANGGA

Itulah perasaan saya awal pagi tadi bercampur terharu. Barisan hadapan yang sentiasa memastikan kewajiban dan dasar kerajaan dapat direalisasi serta ditunaikan. Dalam suasana yang getir dan membungkam.

Bergerak dari rumah ke rumah, pintu ke pintu dan bagi saya dari hati ke hati. Lengkap berpakaian PPE. Mencari sisa baki anak anak yang belum sempat atau tidak lengkap dos imunisasi Polio.

Tahniah dan terima kasih atas pengorbanan yang dicurahkan ke arah kesejahteraan kita bersama. Kami amat berbangga dan amat menghargainya. Kepada masyarakat di luar sana berilah sedikit ruang dan kerjasama kepada mereka.

Dalam hati aku selalu berkata dan berdoa: Ya Allah, selamatkan Malaysia, selamatkan kami semua. Aamiin Ya Rabbal Alamiin...

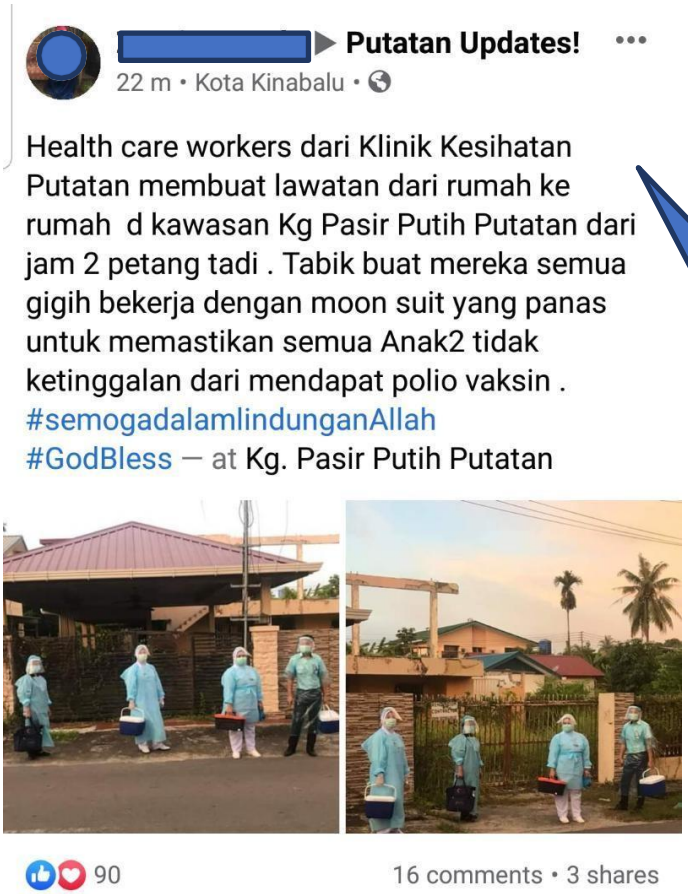
Apasal aku terharu ya...?

Teruskan perjuangan.
Sama sama berjuang...

Sense of Pride

This morning I felt a sense of pride and touched seeing our frontlines despite the current situation, continue to deliver excellent health services to our children and to ensure that the government's policy are well implemented. Armed with personal protective gear, these health care workers moved from 1 house to another. Their objective is to find children yet to receive or complete polio vaccination. I thank and congratulate all of you for your hard work and dedication. You really made us proud. I urge the community to lend a hand and help them in any way possible. In my heart I pray that Allah save us all.

Goodness! I'm emotional 😊 #keepfighting #togetherwefight



[redacted] ▶ **Putatan Updates!** •••

22 m • Kota Kinabalu •

Health care workers dari Klinik Kesihatan Putatan membuat lawatan dari rumah ke rumah d kawasan Kg Pasir Putih Putatan dari jam 2 petang tadi . Tabik buat mereka semua gigih bekerja dengan moon suit yang panas untuk memastikan semua Anak2 tidak ketinggalan dari mendapat polio vaksin . #semogadalamlindunganAllah #GodBless — at Kg. Pasir Putih Putatan

90 16 comments • 3 shares

"Since 2 pm today, health care workers from Putatan Health Clinic are doing house to house visit at Pasir Putih village. I salute them for their dedication. Even while wearing PPE in this hot sunny day they continue to do their duty just to ensure that our children are vaccinated with polio vaccine"

星洲日報

SIN CHEW DAILY 星期刊

23 • 2 • 2020

踩着泥濘下鄉服務

最美赤腳白衣天使

Local Chinese newspaper.

'Angels in whites'

APPENDICES

A. EOC assessment form

ASSESSMENT OF POLIO VACCINATION CAMPAIGN (DISTRICT EOC LEVEL)			
State: Sabah		**District**	
Date of assessment:		**Campaign/Round**	
Monitor/Supervisor:		**Signature**	
EOC STRUCTURE AND FUNCTION		**Yes = 1, Partial = 0.5, No = 0**	**Remarks**
1	EOC has been established		
2	EOC is well organised according to IMS structure with defined roles and TORs		
a	Incident manager		
b	Liason officer		
a	Information officer		
b	Operation section		
a	Planning section		
b	Finance and administration section		
a	Logistic section		
3	Monitoring plan available?		
4	Weekly or monthly meeting done		
5	Meetings done as per schedule? Weekly/fortnightly/monthly		
6	Were the meetings chaired by the Head of the district (DHO)?		
7	Minutes of meeting available?		
8	Microplanning at district level done and available?		
9	Finance monitoring plan is there and being done?		
10	Date recording and documentation is complete?		
MICROPLANNING			
1	Is the MP present and complete (all components)?		
2	Was the MP completed in time?		
3	Is it rationalized in terms of human resource and targets?		
4	Are the targets properly calculated based upon evidence?		
5	Does it include all types of population (citizens, non-citizens, highrisk?		
6	Hard to reach areas included in the microplanning		
7	Children with containdication for vaccine have been identified		
SUPERVISOR			
1	Has the Supervisor been appointed?		
2	Was the Supervisor trained? Date of training?		
3	Does he have a proper supervisory plan?		
4	Has he been doing/done supervisory visits as per plan?		
HUMAN RESOURCE			
1	Is enough human resource available (Supervisors, Teams)?		
2	Volunteers have been identified?		
3	100% of the teams (volunteers and govbernment) being trained? (If not write the number not trained and why)		
4	Is the human resource enough and as per the guidelines?		
HEALTH EDUCATION / COMMUNICATIONS			
1	Polio health education/promotion materials are available		
2	RCCE activities (community sessions, media, annoucements, etc.) being planned in advance?		
3	RCCE activities being done as per plan?		
4	Impact Assessment done, if any?		
DATA MANANGEMNT/DISPLAY MATERIAL			
1	Data manager has been appointed		
2	Is there any soft data management? Dashboard		
3	Data sharing with state being done on daily basis?		
4	Hard formats of data with display available? (Targets, coverage, HR, Routine EPI, map)		
5	Data for RI, SIAs, Surveillance, monitoring maintained in both soft and hard forms?		
SURVEILLANCE			
1	Surveillance indicators present and diplayed?		
	Has a dedicated officer been appointed for both surveillance		
a	Map of Polio Cases / Positive Environmental Samples		
b	Stool adequacy		
c	NPAFP rate		
2	Enivronmental Sampling present?		
3	If Yes, sites identified and mapped?		
4	Samples taken and transported with completeness and timeliness?		
5	AFP reporting and audit channels well in place?		
6	Staff trained on AFP surveillance?		
7			
VACCINATION CAMPAIGN			
1	bOPV dose 1 - > 95%		
2	bOPV dose 2 - > 95%		
3	mOPV dose 1- > 95%		
4	mOPV dose 2- > 95%		
ROUTINE IMMUNIZATION			
1	Plan (Microplan) for Routine EPI present?		
2	BWN are included in RI program?		
3	Coverage of routine immunization is more than 80% (dTap)		
4	Drop out rate is less than 10% for dose 1 and dose 3?		
MONITORING			
1	Pre-campaign monitoring in place?		
a	Team training monitored?		
b	Supervisors training monitored?		
c	Microplan assessment done?		
d	Logistics (including vaccine management) monitored?		
2	ICM in place?		
a	Health facility monitoring / session monitoring done?		
b	Teams visited / monitored?		
c	Household clusters (RCM) done?		
2	Post Campaign Monitoring in Place?		
a	Post-campaign household clusters done (RCM)?		
b	Market Survey done?		
c	LQAS done?		
VACCINE MANAGEMENT			
1	Has Supervisor done his job effectivley?		
2	Has the logistics officer done his job effectively (reverse(?		
3	Are the vaccine vials kept/stored as per protocols? (2 to 8 degrees Celsius)		
4	Has regular check on vaccine and VVM being kept?		
5	Report to JKNS done?		

Districts were assessed on their readiness to conduct the campaign using this standard form. Assessment were done during EOC visit, telephone interviews and their presentation to the EOC.

B. District Microplanning Format

KEMPEN IMUNISASI POLIO NEGERI SABAH 2019/2020 (KIPS 19/20)

MICROPLANNING DAERAH

SUPERVISOR: _____

FIELD MONITORS: _____

CDC CHIEF: _____

MCH CHIEF: _____

EOC: _____

AFP/Environment Surveillance Focal Point: _____

*Borang ini digunakan bagi membantu daerah di dalam pengurusan micro kempen imunisasi

Daerah: Tarikh:

NO	Clinic operational area	Locality/village	Category	Estimated number of children under 13		Date		Method of SIA	Number of teams	cool box	Number of vials required	Number of Volunteers required	Note
				Citizen	Non Citizen	Date start	date end						
1													

88

C. District readiness assessment

DISTRICT POLIO SIA READINESS ASSESSMENT

NEGERI:_____

DAERAH:_____

SUPERVISOR:_____

TARGET POPULATION:_____

TARIKH PENILAIAN:_____

TARIKH MULA SIA:_____

	ACTIVITIES	COMPLETED? WRITE 'Y' OR 'N' AT EACH VISIT			REASON FOR NOT COMPLETING	ACTION REQUIRED	DEADLINE	RESPONSIBLE PERSON
		1ST VISIT	2ND VISIT	3RD VISIT				
	PLANNING, COORDINATION & FUNDING							
1	Have the following SIA components been operationally planned?							
	training							
	Vaccines and supply manangement							
	AEFI							
	Social mobilization/communication							
	Daily data analysis/format							
2	Is there a coordination team at this level?							
	Source (Minutes)							
3	3. Is there political commitment for the SIA?							
	Source: Launching etc							
4	Do validated microplans identify target population by geographic area/vaccination site?							
	source : Microplans, maps							
5	Are "special" strategies planned for geographically hard-to-reach, marginalized and resistant populations?							
6	Have funds been received and distributed for all planned activities?							
7	Have health workers and volunteers been trained?							
	SUPERVISION AND MONITORING							
1	Is there a supervision plan that includes names, dates and daily locations of supervisors?							
2	Have supervisors/monitors been identified and trained to do rapid convenience monitoring?							
3	Have arrangements been made to ensure daily reporting of coverage and other data to the next highest level							
	VACCINES, COLD CHAIN, LOGISTICS							
1	Is there sufficient functional coldchain capacity and/or contingency plans for vaccine storage?							
	Refrigerators							
	Freezers							
	Cold boxes/Vaccine carriers							
2	Have pocket guides for vaccinators (and supervisors), forms, checklists, training and communication materials been received?							
3	Has the district secured vehicles and fuel to transport bundled vaccines, supplies during SIA							
4	Are the received supplies of vaccines and other inputs consistent with the target population and expected wastage factors?							
	SOCIAL MOBILIZATION AND COMMUNICATIONS							
1	Are social mobilization and communication activities being implemented according to plans/microplans							
2	Is the community aware of the date and venue of the SIA?							
	COMMENTS : IS THE DISTRICT READY FOR SIA							
	YES							
	NO							

D. Intra Campaign Monitoring

SABAH HEALTH DEPARTMENT mjlet/cdc/jkns/2020-01

KEMPEN IMUNISASI POLIO SABAH (KIPS) 2019/2020

Checklist for Intra Campaign Monitoring (Health facility and vaccination site)

Name of Observer: _____ **Designation:** _____

Health Facility Area : _____ **Date:** ____/____/____ **Type of site** Health Facility (F) Mobile (M) Outreach (O)

	Site Name				
1					
2					
3					
4					

	This is an Observation checklist for monitoring the quality of implementation of the campaign at the vaccination post level. Supervisor may use this checklist to record each visit to any post.	Site 1	Site 2	Site 3	Site 4
		Mark: YES (Y) or NO (N)			
	A. SITE ORGANIZATION				
1	The site is well marked with campaign poster/banner and can be easily identified				
2	Sufficient vaccination team present at the post according to guideline/need				
3	Crowd is well controlled and session is going according to plan				
4	Every child is tallied immediately after vaccination				
5	Vaccination team has received training prior to campaign				
	B. SESSION OPERATION & VACCINATION PRACTICE				
6	Only one vial of vaccine is used at a time				
7	Vaccinators administer the vaccine through oral route				
8a	Health care workers explain to caregivers about the vaccine and possible side-effects				
8b	Health care workers check the vaccine expiry date and the colour VVM				
9	Finger mark and tally/recording done correctly, immediately after vaccination				
	C. WASTE MANAGEMENT				
10	Vaccinators put used vials in an appropriate container/disposable waste bag immediately after use				
11	Appropriate container/disposable waste bag are not overfilled (not more than 3/4 of the total volume)				
12	Filled sharp bin are properly closed and secured in a safe place (If used)				
13	Other wastes are kept in a separate plastic bag/container				
	D. AEFI MANAGEMENT				
14	AEFI forms are available at the health facility site				
15	Vaccinators know what to do in case of an AEFI (recognition, referral and reporting)				
	E. COLD CHAIN				
16	Vaccine Carrier with 4 ice packs available and in use at post				
17	OPV are kept in vaccine carrier and vial in use kept in foam pad				
18	Vaccine carrier are not exposed to direct sunlight				
	F. LOGISTICS				
19	Adequate OPV supplied				
20	Number of vials used and children vaccinated as per tally sheet match (targeted wastage 15%)				
21	Tally sheets (line listings) used correctly				
22	Tally sheets, Finger markers, sharp bin are available				
	G. SOCIAL MOBILIZATION AND ROUTINE IMMUNIZATIONS				
23	Social mobilizer/team are present with each team				
24	Social mobilizers are visiting house to house to mobilize children				
25	Local announcements done				
26	Health workers explain to caregivers about times and locations for routine immunizations, including measles vaccination				
27	Health workers actively search for unvaccinated children, and direct them to vaccination post				
	H. MANAGEMENT OF mOPV2 USAGE				
28	mOPV2 vials are stored in separate containers or plastic bags inside the refrigerator at health facility				
29	Container is clearly labelled "mOPV2 for Polio outbreak use only"				
30	Managing distribution is recorded for each vaccinator the number of vials issued, campaign round, and date. (Physically verify the sheet)				
31	The vaccinators are returning/ aware of returning all unopened and opened, or damaged (partially or fully used) vials to the health facility at end of each day				
32	The mOPV2 management focal person is fully aware of the mechanism to report back the number of all opened vails and remaining stock balance (unopened vials) to the district/ city level				
33	The health facility has an effective mechanism to safely return all unopened and opened vials (partial or fully used) to the district/ city level				
	I. SUPERVISION				
34	Has the supervisors visited this site today (Signature proof)				
35	Todays campaign is in accordance with the microplan schedule				

Site #	COMMENTS
0	
1	
2	
3	
4	

* Adapted from WHO MR-OPV vaccination campaign in PNG

E. House to house ICM-RCM form

mjlet/cdc/jkns/2020-02

SABAH STATE HEALTH DEPARTMENT

KEMPEN IMUNISASI POLIO SABAH (KIPS) 2019/2020

OPV ICM HOUSE-TO-HOUSE CLUSTER FORM FOR TARGETED CHILDREN BELOW 13 YEARS IN SABAH

State: SABAH **District:** _____ **Health Facility:** _____

Locality : _____ **Date of Monitoring:** _____

Name of Monitors: _____

Latitude : Longitude :

OPV- SIA ICM														Routine Immunisation received		AFP in the house	
Household number	Sex	Total number of children living in the house	Total number of children (0 - < 13 years) present during monitoring visit	Age of the child checked by the Monitor		WN	BWN	OPV vaccine received in this round (OPV-SIA)				If no vaccine received in OPV SIA, reason for not being vaccinated (Multiple codes can be entered)	Source of Information about this SIA (Multiple codes can be entered)	YES	NO	YES	NO
								Yes			No						
				0 - < 5 Years	5 - < 13 years			Finger mark	Child record/ Appointment card	Recall							
1	M																
	F																
2	M																
	F																
3	M																
	F																
4	M																
	F																
5	M																
	F																
6	M																
	F																
7	M																
	F																
8	M																
	F																
9	M																
	F																
10	M																
	F																
Total	M																
	F																

Sources of information about the campaign:
1. Village health volunteers 2. Banners 3. Poster 4. Local administration (Village/District) 5. Community 6. Health Worker
7. Radio 8. TV 9. School 10. Local announcement 11. Church 12. Others (specify)

Reasons for no vaccination:
1. Child not available
2. Refused
3. Vaccinated but not finger marked
4. Other reasons (specidfy)

Other(s):

* Source adapted from WHO MR-OPV vaccination campaign in PNG

F. Market survey ICM-RCM form

mjlet/cdc/jkns/2020-03

KEMPEN IMUNISASI POLIO SABAH (KIPS) 2019/2020

SABAH STATE HEALTH DEPARTMENT

TRANSIT POINTS (MARKET, BUS and BOAT STATIONS, MOSQUES, CHURCHES, CONGREGATIONs AND DISTRICT HOSPITALS) FORM FOR OPV SIA MONITORING

Check 25 children < 13years of age.	**Latitude:**	**Longitude:**

State: SABAH District :_____ Health Facility: _____ Date of Monitoring:_____

Name of Monitors:_____ Market/Transit Point Visited:_____

Note: Put a tick mark (P) in the relevant column

No.	OPV SIA Check										
	Age of the child checked by the Supervisor/ Monitor		Sex of the child cheked		OPV vaccine received in this round			If No vaccine received in OPV SIA, give reason	IF NOT VACCINATED	NATIONALITY	
					YES		NO			WN	BWN
	0- < 5 years	5- < 13 years	M	F	Finger mark	Recall		*(Multiple codes can be entered)*	Which town/area /settlement does child reside in?		
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
Total											

Reasons for no vaccination:

1. Child not available
2. Refused
3. Vaccinated but not finger marked
4. Other reasons (specify)

Other reasons given:

*Adapted from Papua New Guinea Polio Outbreak Campaign

G. MEDICAL RECORD REVIEW FORM

EnAFP/B03/2020_SBH

MEDICAL RECORD REVIEW FORM - ENHANCED *ACUTE FLACCID PARALYSIS* SABAH

* weekly assessment should be done and reporting send to sbhcprc@moh.gov.my

NAME OF FACILITY VISITED		
TYPE OF FACILITY		
DATE OF VISIT		
PERIOD REVIEWED	**From:**	**To:**
LIST OF DEPARTMENT/WARDS/OUTPATIENT SERVICE IN THE HOSPITAL LIKELY TO HAVE apf CASES (<15 YEARS OLD)	Number of patients records searched	Name of surveillance officer and signature
Total number of records reviewed		
Total Number of suspected AFP cases found		
Total Number of AFP cases unreported		

Line List of suspected AFP cases identified during medical record review

Patient's name	Date of Birth DD/MM/YY	Date of presentation at hospital	Date of paralysis onset	Previously reported	
		(DD/MM/YY)	(DD/MM/YY)	Reported Yes/No	Date Reported

H. POST IMMUNIZATION CARD

KEMENTERIAN KESIHATAN MALAYSIA

KEMPEN IMUNISASI POLIO SABAH (KIPS) 2019/2020

REKOD PEMBERIAN TITISAN *ORAL POLIO VACCINE* (OPV)

NAMA KLIEN:_____

NO.DOKUMEN:_____

UMUR:_____

ALAMAT KEDIAMAN:_____

_____

DOS	TARIKH DIBERI	NO BATCH	NAMA STAF YANG MEMBERI
1			
2			

NAMA KLINIK:_____

***Sila Simpan Rekod Pemberian Titisan *Oral Polio* Sepanjang Hayat Anda!**

SPECIAL APPRECIATION

1. WORD HEALTH ORGANIZATION (WHO)
2. GLOBAL POLIO ERADICATION INITIATIVES (GPEI)
3. WORLD HEALTH ORGANIZATION (WESTERN PACIFIC COUNTRY OFFICE
4. WORLD HEALTH ORGANIZATION, MALAYSIA COUNTRY OFFICE
5. UNITED NATION CHILDRENS FUND (UNICEF)
6. MERCY MALAYSIA
7. ROTARY CLUB MALAYSIA
8. LIONS CLUB
9. SABAH NURSING ASSOCIATION
10. COMMUNITY BEHAVIOURAL IMPACT (COMBI)
11. PANEL PENASIHAT KLINIK
12. SABAH ESTATE DRESSER ASSOCIATION
13. INTERNATIONAL COMMITEEE OF THE RED CROSS (ICRC)
14. UNIT PEMAJU PEMBANGUNAN MASYARAKAT (UPPM)
15. POLIS DIRAJA MALAYSIA (PDRM)
16. ANGKATAN TENTERA MALAYSIA (ATM)
17. PASUKAN POLIS MARINE MALAYSIA
18. PERSATUAN BULAN SABIT MERAH
19. EAST SABAH SECURITY COMMAND (ESSCOM)
20. PASUKAN BOMBA DAN PENYELAMAT SABAH
21. TZU CHI FOUNDATION MALAYSIA
22. ISLAMIC MEDICAL ASSOCIATION OF MALAYSIA RESPONSE AND RELIEF TEAM (IMARET)
23. PERSATUAN PACUAN 4 RODA NEGERI SABAH
24. KETUA-KETUA MASYARAKAT
25. KOSPEN

"THANK YOU FOR ALL THE SUPPORT AND GUIDANCE

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AKCKNOWLEDGEMENT

We would like to acknowledge the support and contributions of the following:

1. **Tan Sri Dato' Seri Dr Noor Hisham Abdullah**
   Former Director General of Health Malaysia

2. **Datuk Dr Chong Chee Kheong**

   Former Deputy Director General of Health (Public Health)
   Ministry of Health, Malaysia

3. **Datuk Dr Norhayati Rusli**
   Former Deputy Director General of Health (Public Health)
   Ministry of Health, Malaysia

4. **Datuk Dr Rose Nani Mudin**
   Former Director
   Sabah State Health Department

5. **Datuk Dr Christina Rundi**
   Former Director
   Sabah State Health Department

6. **Datuk Dr Ismail Ali**
   Former Deputy Director
   Sabah State Health
   Department

7. **Dr Asits Sanna**
   Former Deputy Director (Public
   Health) Sabah State Health
   Department

8. **Dr Mohd Hanif Zailani**
   Head of Zoonosis and Vaccine Preventable Disease (VPD) Sector, MOH

9. **Dr A'aishah Senin**
   Former Head of Sector Vaccine Preventable Diseases (VPD), MOH

10. **Dr Fong Siew Moi**
    Former Sabah State Consultant Paediatrician,
    Sabah Women's and Children's Hospital.

11. **Dr Wong K. Juin**
    Consultant Paediatrician,
    Sabah Women's and Children's Hospital

12. **Dr Zaiton Yahaya**
    Former Sabah State Family Medicine Consultant

13. **Dr Hani Mat Hussin**
    Former Director National Public Health Laboratory, MOH

14. **Dr Tahir Aris**
    Former Director Institute of Medical Research (IMR), MOH

15. **Dr Rokiah Mohd**
    Former Drector Family Health Development Division, MOH

16. **Dr Saidatul Norbaya Buang**
    Family Health Development Division, MOH

17. **Dr Ravindran A/L Thayan**
    Former Institute of Medical Research (IMR) Virologist, MOH

18. **Dr Thilaka Chinnayah**
    Former Director Malaysia Epidemic Intelligence Program (EIP), MOH

19. **Dr Marina Kamarudin**
    Malaysia Epidemic Intelligence Program (EIP), MOH

20. **Dr Noorhaida Ujang**
    Malaysia Epidemic Intelligence Program (EIP), MOH

21. **Dr P. Raviwharmman A/L Packierisamy**
    Malaysia Epidemic Intelligence Program (EIP), MOH

22. **Dr Hasrina Hasan**
    Malaysia Epidemic Intelligence Program (EIP), MOH

23. **Datin Shantini Thevendran**
    Former Head, Public Health Pharmacy Services
    Sector Public Health Development Division

24. **Dr Rohani Jahis**
    Former Head of Sector Zoonotic Diseases, MOH

Delima Merah Permata Purba

Terikat Bersinar Cincin Laksamana

Kejayaan Kita Usaha Bersama

Terpahat Sejarah Di Mata Dunia

TERBITAN:
CAWANGAN KAWALAN PENYAKIT BERJANGKIT
JABATAN KESIHATAN NEGERI SABAH
KEMENTERIAN KESIHATAN MALAYSIA
2023