

Preventing Polio Outbreaks in PNG

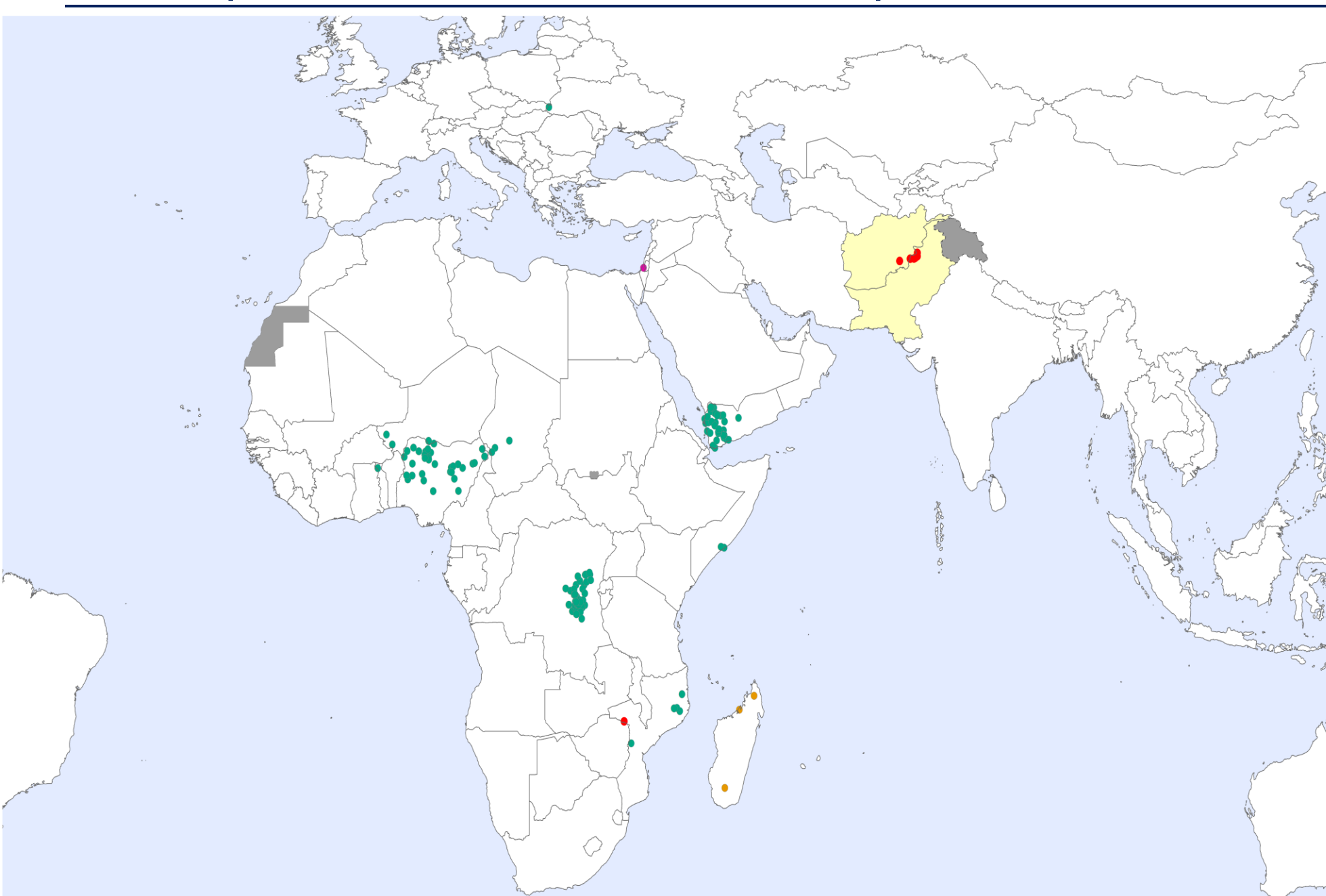
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Importance of Polio vaccination

- Polio targeted for global eradication
 - World Health Assembly resolution in 1989
 - Recent WHA 2022 has renewed pledge to accelerate eradication efforts
 - Only 2 countries remain with endemic circulation
- The key strategies for eradication are:
 - High routine immunization coverage with polio vaccines
 - Supplementary Immunization campaigns in countries with endemic virus circulation or outbreaks
 - Sensitive AFP surveillance
 - Outbreak prevention and preparedness

Global polio cases with onset in the previous 6 months



WPV1 cases (latest onset)		
Pakistan	6	11-May-22
Mozambique	1	25-Mar-22
Afghanistan	1	14-Jan-22
cVDPV1 cases (latest onset)		
Madagascar	3	07-Jan-22
cVDPV2 cases (latest onset)		
Ukraine	1	24-Dec-21
Togo	1	21-Jan-22
Somalia	2	18-Feb-22
Yemen	40	18-Feb-22
Niger	3	22-Feb-22
Nigeria	34	13-Mar-22
Chad	3	25-Mar-22
Mozambique	5	26-Mar-22
DR Congo	53	06-Apr-22
cVDPV3 case (latest onset)		
Israel	1	12-Feb-22

History of Polio in PNG

- PNG declared polio free in 2000
- In June 2018, Polio virus was again detected in PNG
- A total of 8 supplementary immunization campaigns conducted in 2018-2019 required to bring outbreak under control
- In December 2019, the 23rd Polio IHR Emergency Committee reviewed progress of PNG regarding the polio outbreak response. PNG was removed from the list of infected countries but classified as a country vulnerable to re-infection

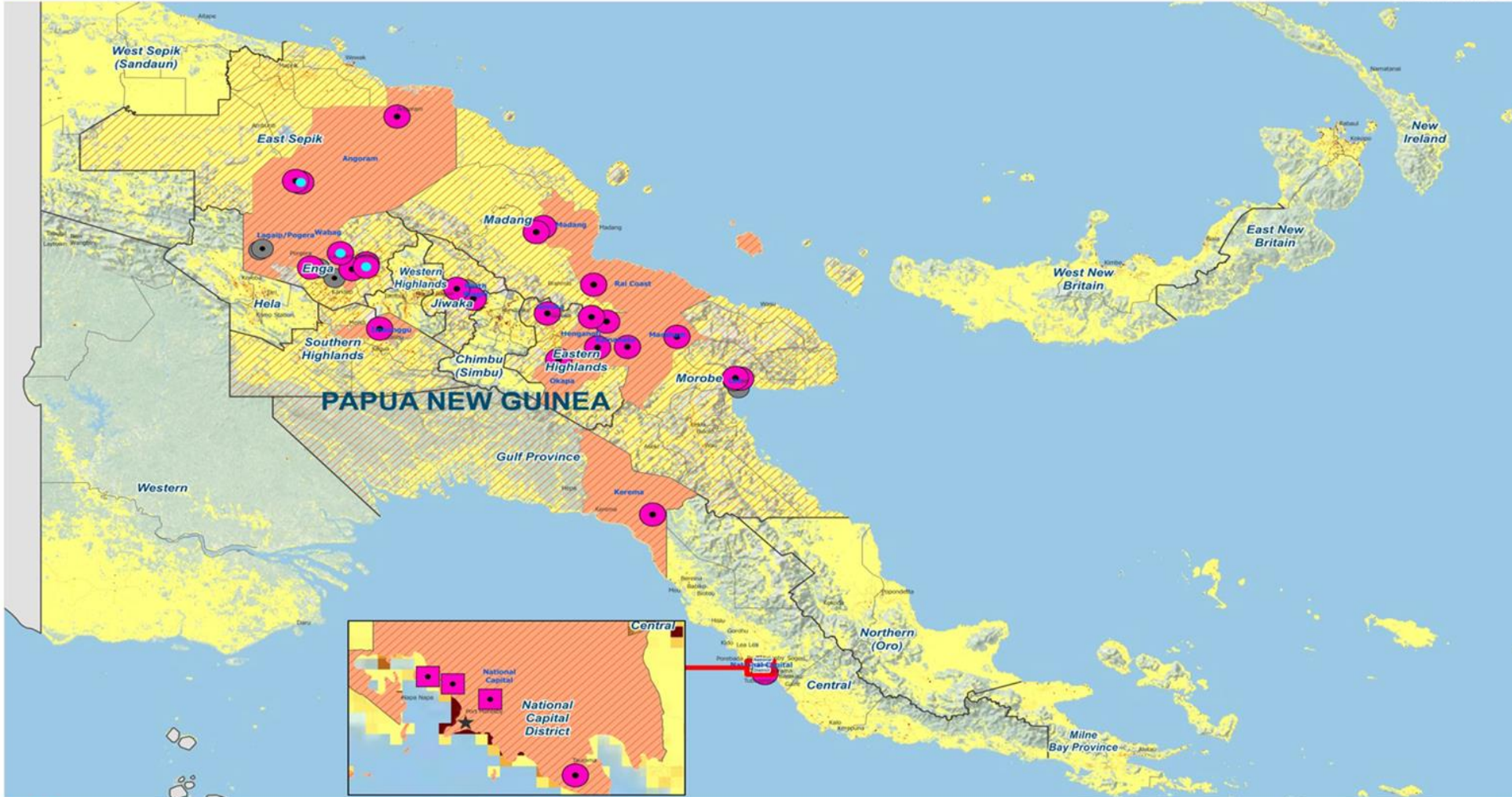
Confirmed cVDPV1 , Polio Compatible and cVDPV1 Env Isolates

Reported cVDPV1 cases, contacts and environmental positive isolates in Papua New Guinea

The boundaries and names shown on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on



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MAP DATE: 18 November 2018, Version 1.0



- cVDPV1 cases
- cVDPV1 case contacts
- Infected Provinces
- Province
- city
- town
- ★ National capital
- Roads
- cVDPV1 env. Isolates
- Infected Districts
- District

cVDPV1 cases by province

1. EHP= 6
2. Enga= 5
3. East Sepik=4
4. Morobe = 3
5. Madang=3
6. Jiwaka=2
7. SHP=1
8. NCD= 1
9. Gulf= 1

Polio Compatibles by province

1. EHP= 4
2. Enga= 1
3. Morobe = 2
4. Madang=1
5. NCD= 1
6. Gulf= 3

Env-Isolates

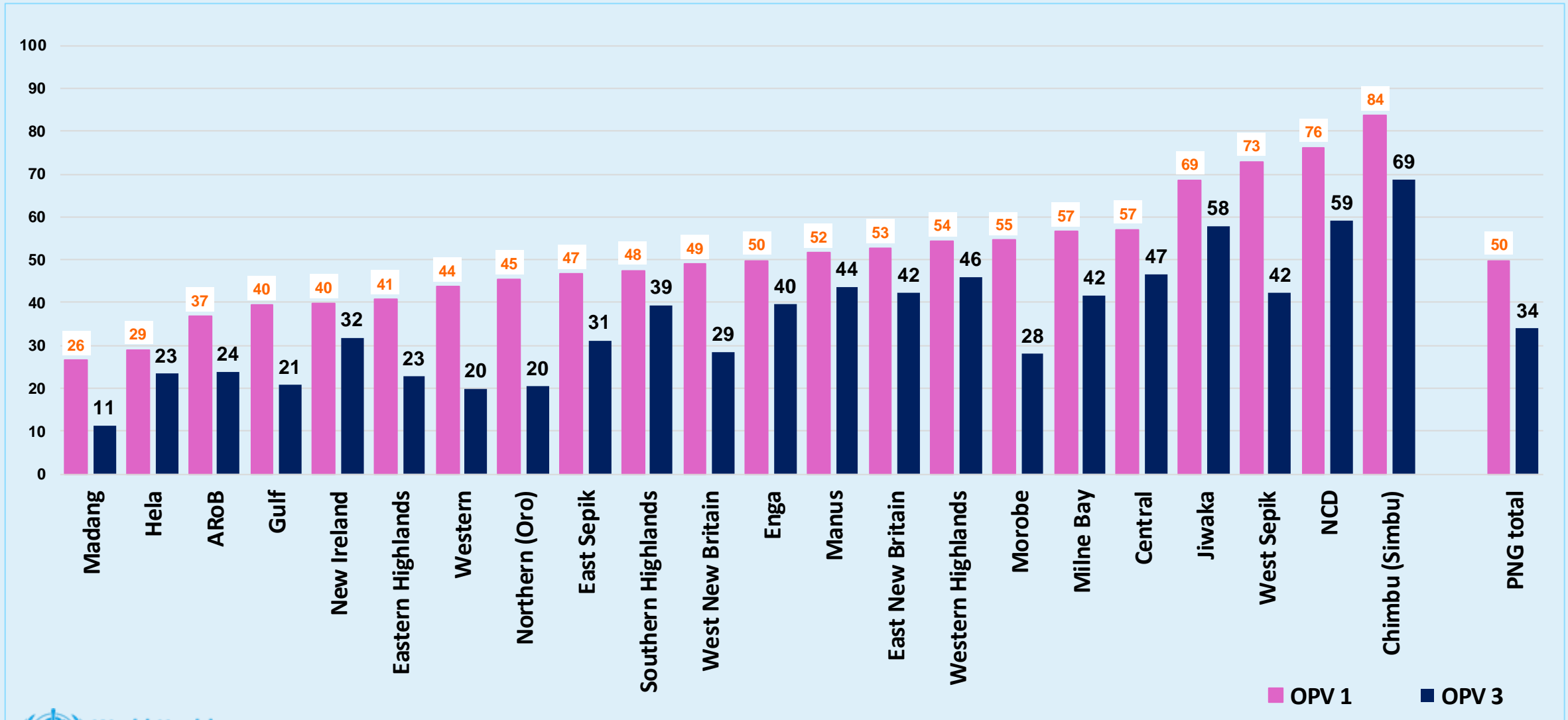
1. Gerehu=3
2. Waigani=3
3. Joyce Bay=1

Current PNG Immunity Status & New Schedule of IPV Administration



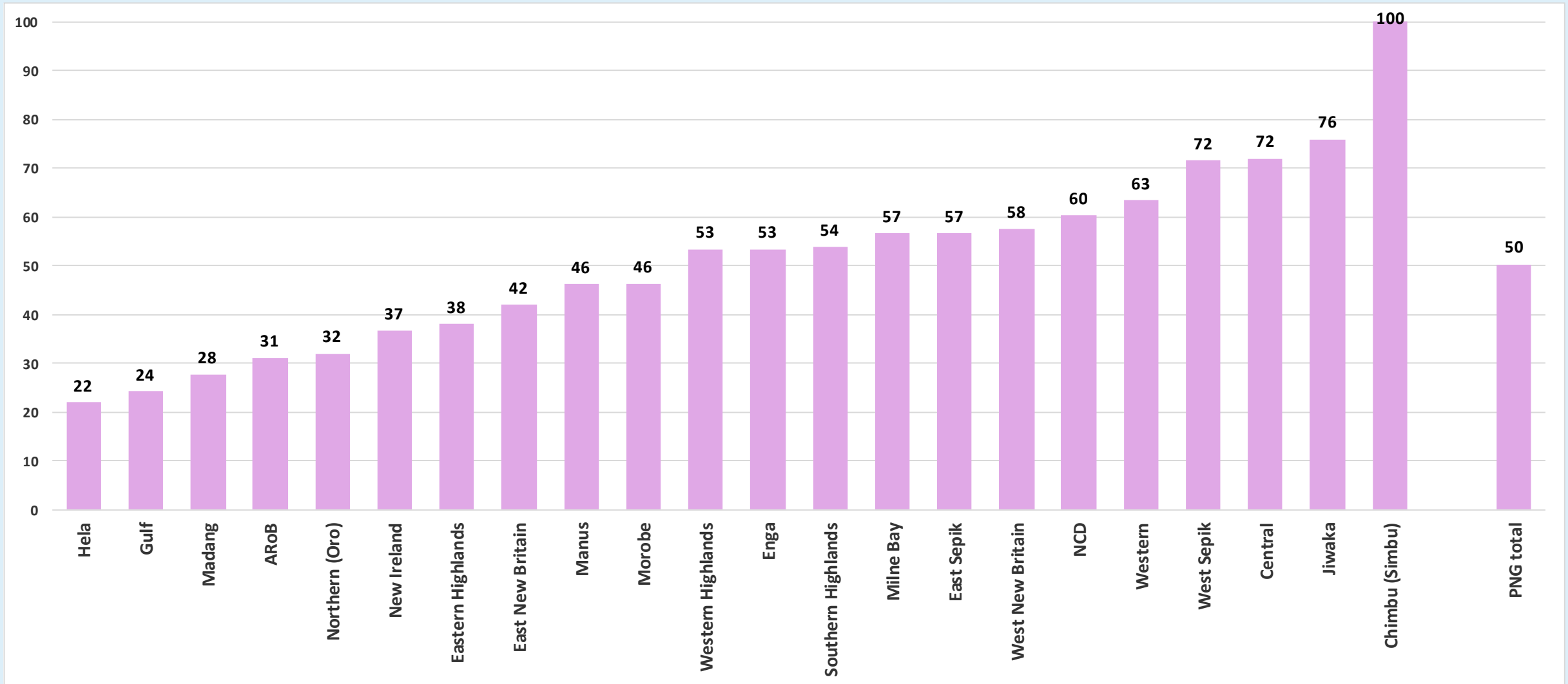
PNG Routine immunization: OPV1/OPV3 reported coverage annualized

Jan–Apr 2022



PNG Routine immunization: IPV1 reported coverage annualized

Jan–Apr 2022



New National EPI schedule

Vaccine	Total # doses	Age of administration
BCG	1	Birth to 11 months
Hep B	1	Birth within 24 hours
OPV	3	1, 2, 3 months
IPV	2	3 months & 9 months
Penta (Tetanus, Diphtheria, Pertussis, Hepatitis B, Hib)	3	1, 2, 3 months
PCV	3	1, 2, 3 months
MR (Measles, Rubella)	3	6, 9, 18 months
TT/Td	5	Women of child bearing age

Introduction of the 2nd dose IPV

- The 2nd dose of IPV was introduced July 2021
- The 1st dose of IPV continues to be administered at 3 months of age or the first visit after the child reaches 3 months - regardless of the number of OPV doses received
- The 2nd dose IPV is administered at the age of 9 months - regardless of the number of OPV doses received
- If there is delay in starting the series of IPV vaccination, the time period between the 1st and 2nd dose must be at least 28 days
- Example: Child presents to HF for 1st dose of IPV at the age of 9 months, he receives IPV1. He should return 1 month later, at age of 10 months, to receive IPV2. He would be eligible to receive the missing IPV2 dose up to the age of 5 years

Why add a 2nd dose of IPV?

- IPV has an immune boosting affect when given alongside the OPV
- IPV provides the only protection against type 2 polio virus which has recently emerged as a vaccine derived virus in many countries
- Adding a 2nd dose of IPV would give better protection against type 2 polio virus and further boost immunity against all 3 types of polio virus.
- Introduction of the 2nd dose of IPV is recommended by immunization specialists – SAGE and Regional TAG
- Aligned with the global plan of polio eradication to eventually replace all OPV with IPV as polio eradication is achieved.

PNG Status of Polio disease surveillance – AFP surveillance system



Current situation AFP surveillance 2022

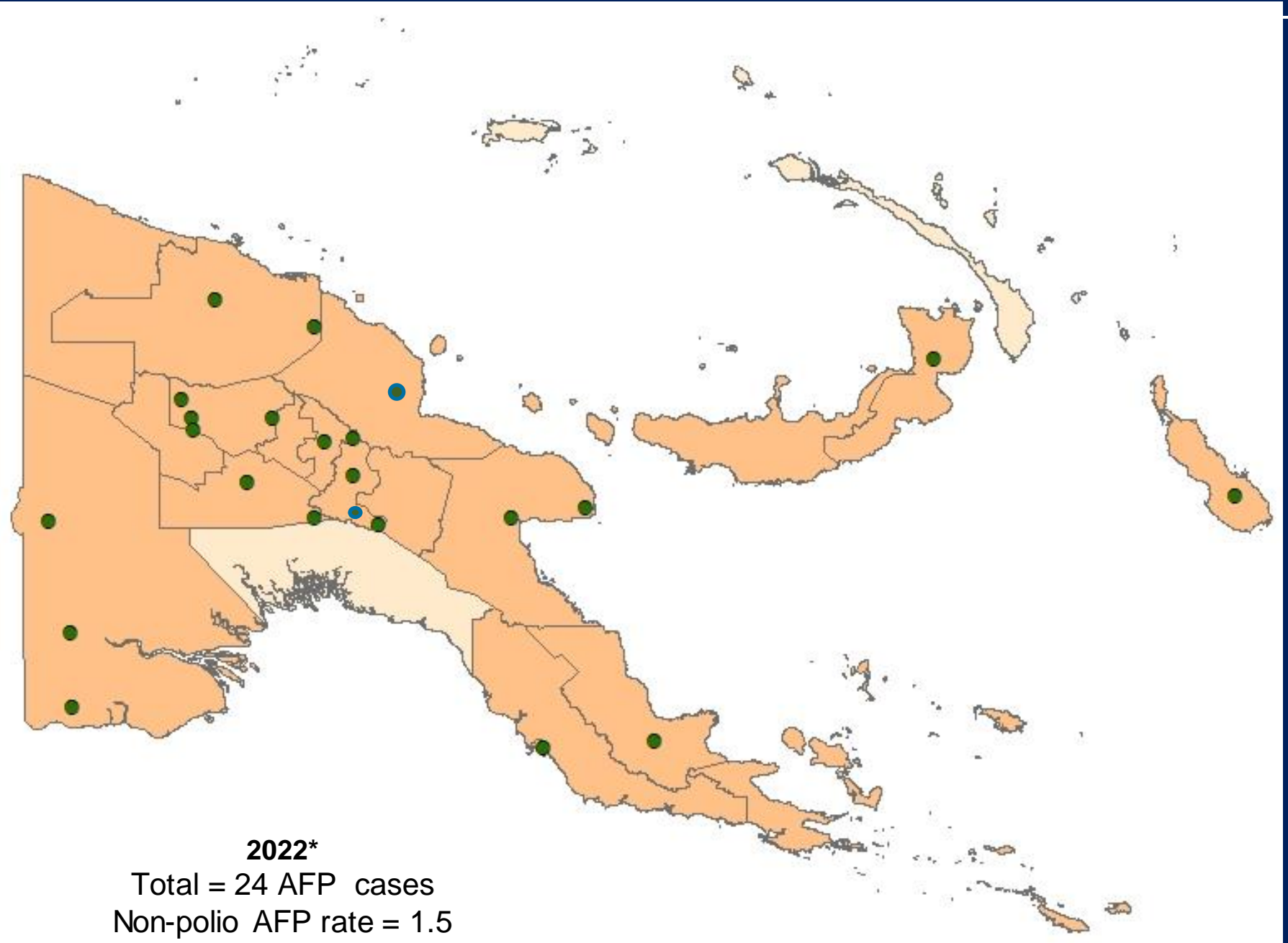
Results of AFP surveillance June 2022

Total AFP cases reported	24
Expected number of AFP cases	39
Total laboratory confirmed polio cases	0
Total number of provinces reporting AFP cases	12
AFP specimen adequacy	62%

Province	Population <15 Yr 2022	Minimum expected NPAFP cases/yr	AFP cases reported 2022 (<15yr)	Annualized NPAFP rate*
Bougainville	154613	3	1	1.6
Central	140446	3	0	0.0
Chimbu	134677	3	3	5.3
East New Britain	165681	3	1	1.4
East Sepik	298301	6	2	1.6
Eastern Highlands	287395	6	0	0.0
Enga	178978	4	5	6.7
Gulf	88639	2	0	0.0
Hela	117790	2	0	0.0
Jiwaka	132475	3	2	3.6
Manus	29120	1	0	0.0
Madang	336591	7	1	0.7
Milne Bay	150212	3	0	0.0
Morobe	390972	8	2	1.2
NCD	164428	3	1	1.5
New Ireland	96635	2	0	0.0
Northern(Oro)	108489	2	1	2.2
Southern Highlands	255518	5	2	1.9
West New Britain	159543	3	0	0.0
West Sepik	145234	3	0	0.0
Western	140808	3	3	5.1
Western Highlands	168914	3	0	0.0
Papua New Guinea	3845459	77	24	1.5

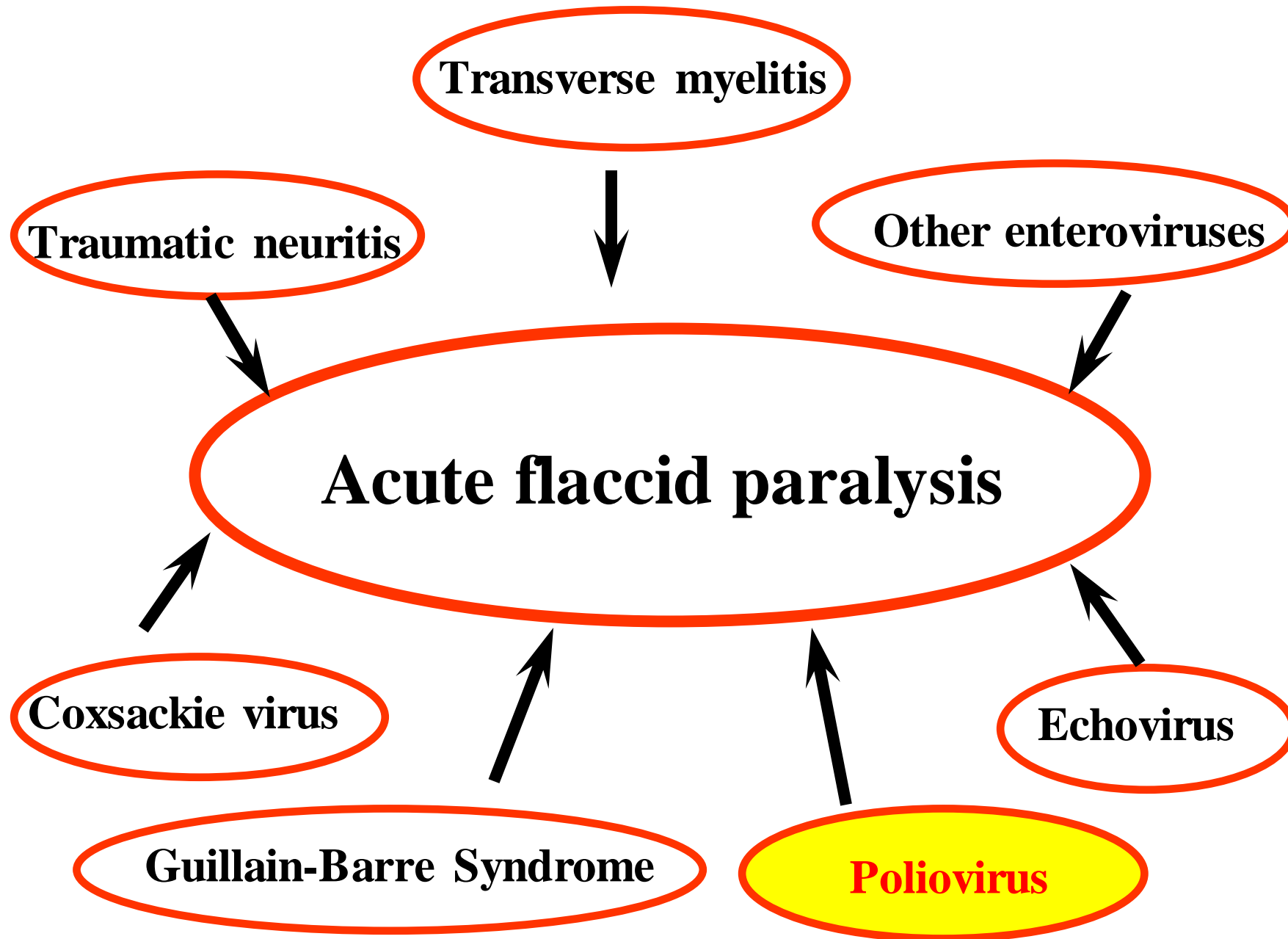
AFP case reporting in 2022

1 dot = 1 AFP case
Dots are placed randomly within the province boundary.



Reporting and Investigating AFP cases

- Immediate reporting to Provincial Disease Control officer or designated Surveillance Officer
- Collect stool specimens for laboratory testing at first opportunity preferably within 14 days of onset of paralysis
 - 2 stool specimens collected 24 hours apart
 - Stool specimens must be kept cold below 8 degrees C from time of collection until samples reach the lab
- Complete case investigation form
- Send with CIF and the sample under reverse cold chain to CPHL



Preventing re-emergence of polio virus

- Introduce the 2nd dose of IPV into RI schedule
- Increase OPV3, IPV1 & IPV2 coverage on urgent basis as part of overall strengthening of the immunization system
 - RI Catch up activity has been effective in vaccinating children overdue for RI doses
- Enhance sensitivity of AFP surveillance
 - Reporting needs to increase to ensure sensitive surveillance capable of detecting early signs of virus circulation
- Integrate the MR follow up SIA planned in 2023 to include administration of OPV

Thank you

