

# Importance of Surveillance in Controlling Vaccine Preventable Diseases

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# John Snow and the Broad Street Pump



**NOTICE.**

**PREVENTIVES OF**  
**CHOLERA!**

Published by order of the Sanatory Committee, under the sanction of the Medical Council.

**BE TEMPERATE IN EATING & DRINKING!**  
*Avoid Raw Vegetables and Unripe Fruit!*  
Abstain from **COLD WATER**, when heated, and above all from *Ardent Spirits*, and if habit have rendered them indispensable, take much less than usual.

**SLEEP AND CLOTHE WARM!**  
DO NOT SLEEP OR SIT IN A DRAUGHT OF AIR.  
Avoid getting Wet!

Attend immediately to all disorders of the **Bowels.**

**TAKE NO MEDICINE WITHOUT ADVICE.**

Medicine and Medical Advice can be had by the poor, at all hours of the day and night, by applying at the Station House in each Ward.

CALEB S. WOODHULL, Mayor  
JAMES KELLY, Chairman of Sanatory Committee.

# Modern Epidemiologic Methods



- Proposed new hypothesis for disease causation
- Used systematic methods to test hypothesis
- Provided evidence
- Pushed for recommendations that will prevent additional cases and deaths

# Public Health Surveillance

## What?

Collection, analysis, interpretation, and timely dissemination of health-related data

## When, How?

Ongoing and systematic

## Why?

For public health action

- ✓to reduce morbidity (disease) and mortality (death)
- ✓and to improve health

# We use public health surveillance to...

- **Describe** the burden of or potential for disease
- **Monitor** trends and patterns in disease, risk factors, and agents
- **Detect** sudden changes in disease occurrence and distribution
- **Provide** data for program, policies, and priorities
- **Evaluate** prevention and control efforts



# Epidemiology Bureau

## Mandate

- Provide and promote epidemiologic information for evidence-based decision making

## Mission

- We provide stakeholders with surveillance and epidemiologic information to prevent and control outbreaks and to improve health policies, programs, and systems
- Develop competent health personnel to detect and respond to public health threats.





# Philippine Integrated Disease Surveillance and Response (PIDSR)

## IHR

*For rapid response to notify IHR*

## PIDSR

*Epidemic Surveillance for early warning systems*

**Epidemic Prone Disease Case Surveillance (EDCS)**  
*(Indicator based surveillance)*

**Event Based Surveillance and Response (ESR)**  
*(Event based surveillance)*

**Sentinel Hospitals**  
*ALL Level 3: Government Hospitals*

**Non-Sentinel Health Facilities**  
*Disease Reporting Units*

**Rapidly captures any event of acute public health threat (e.g. cluster of diseases, unusual and rare health events)**

### EDCS Core Processes:

1. Case Detection
2. Case Registration
3. Case Reporting
4. Laboratory Testing and Confirmation
5. Data Management
6. Analysis and Interpretation
7. Feedback
8. Epidemic Response
9. Monitoring and Evaluation

### ESR Core Processes:

1. Capture
2. Verify
3. Filter
4. Assessment
5. Response
6. Feedback and Information Dissemination

DOH AO NO. 2021-0057 Revised PIDSR Guidelines





# Philippine Integrated Disease Surveillance and Response

## Vaccine Preventable Diseases (VPD)

Acute Flaccid Paralysis

Diphtheria

Measles

Neonatal Tetanus

Non-neonatal tetanus

Pertussis

Rubella

## Food and Water-borne Diseases (FWBD)

Acute Bloody Diarrhea

Acute Viral Hepatitis

Cholera

Rotavirus

Typhoid Fever

## Zoonotic Diseases

Chikungunya

Dengue

Leptospirosis

Rabies

## Other Diseases

Acute Meningitis  
Encephalitis Syndrome

Influenza Like Illness

Meningococemia

Severe Acute  
Respiratory Infection

DOH AO NO. 2021-0057 Revised PIDS Guidelines





# VPD Surveillance Objectives

**Monitoring disease  
elimination**

**Detection of outbreaks  
and new pathogens**

**Evidence for new vaccine  
introduction or optimizing  
vaccine schedules**

**Evaluation of  
immunization program  
performance**

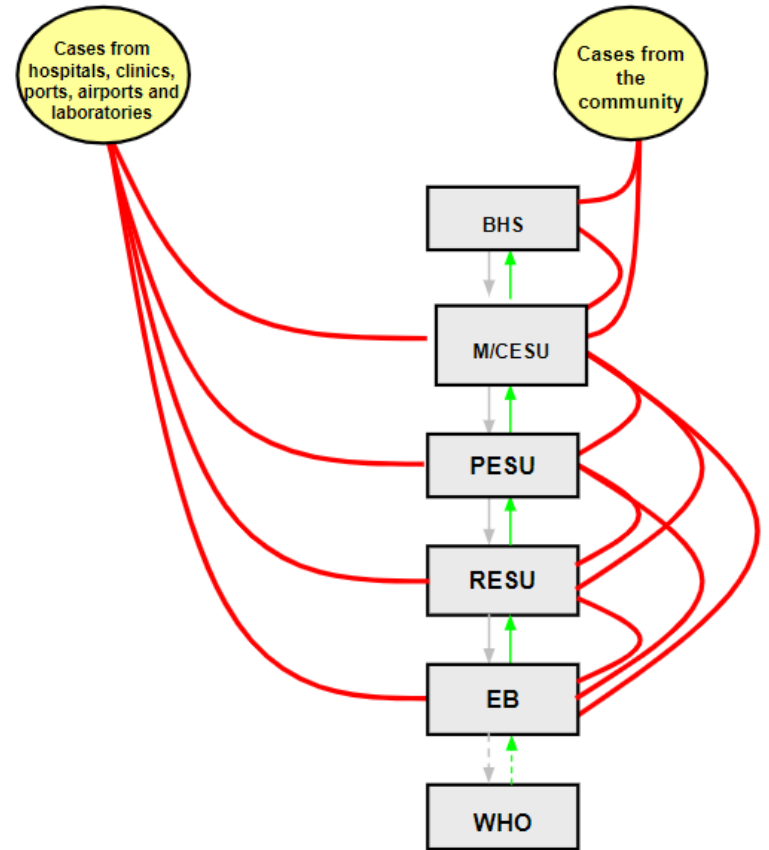
**Vaccine effectiveness,  
impact on disease burden  
or both**

**Changes in disease  
strains or types**

# Case Detection

All VPDs are detected in Disease Reporting Units (DRUs) using standard case definitions.


**All VPD cases** should be **reported/notified to the next higher level** Epidemiology and Surveillance Unit (ESU) **within 24 hours** using the fastest means possible




# Case Reporting

- Case Investigation Forms (CIF) and/or Case Report Forms (CRF) are used in reporting information
- Entries in the CIF shall be encoded in the Epidemic Prone Disease Case Surveillance Information System (EDCS-IS) or the PIDSR Software.
- Encoded data in the EDCS-IS shall be validated by the next higher level ESU within 24 hours
- **Zero-case reporting daily**

Version 2019



Case Investigation Form  
**Measles/Rubella**  
(ICD 10 Code: B05, B06)



Name of DRU: \_\_\_\_\_

DRU Complete Address: \_\_\_\_\_ Type:  DR-U  CHO  Gov't Hospital  Private Hospital  Clinic  
 Gov't Laboratory  Private Laboratory  Airport/Seaport

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**I. PATIENT INFORMATION**

Patient Number: \_\_\_\_\_ Patient's First Name: \_\_\_\_\_ Middle Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Sex:  Male  Female Date of Birth: \_\_\_\_\_ Age: \_\_\_\_\_  
Days Months Years

Pregnant?  Y  N  U  U  
If yes, weeks of pregnancy  1st  2nd  3rd  4th  5th  6th  7th  8th  9th  10th  11th  12th  13th  14th  15th  16th  17th  18th  19th  20th  21st  22nd  23rd  24th  25th  26th  27th  28th  29th  30th  31st

Complete Address: \_\_\_\_\_  
House No. Street No. P.O. Box No. City/Municipality/Province

Patient admitted?  Y  N Date Admitted (Seen/Consult): \_\_\_\_\_ Is the case a member of indigenous group?  Y  N  
If YES, specify: \_\_\_\_\_

Name of parent/caregiver: \_\_\_\_\_ Contact No.: \_\_\_\_\_

Date of Report: \_\_\_\_\_ Name of reporter: \_\_\_\_\_ Contact No.: \_\_\_\_\_  
MM DD YY

Date of Investigation: \_\_\_\_\_ Name of investigator: \_\_\_\_\_ Contact No.: \_\_\_\_\_  
MM DD YY

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**II. CLINICAL DATA**

Fever:  Y  N Date onset: \_\_\_\_\_  
MM DD YY

Rash:  Y  N Date onset: \_\_\_\_\_  
MM DD YY

Cough:  Y  N  
 Koplik sign:  Y  N  
 Runny nose/coryza:  Y  N  
 Red eyes/conjunctivitis:  Y  N

Adrenalgia/arthritis:  Y  N  
 Swollen lymphatic nodes:  Y  N

Are there any complications?  
 Y  N  
 If YES, specify: \_\_\_\_\_  
 Other symptoms: \_\_\_\_\_  
 Working/Final Diagnosis: \_\_\_\_\_

If Y, specify location:  
 Central  Sub-occipital  
 Post-auricular  Others, specify \_\_\_\_\_

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**III. VACCINATION HISTORY AND VITAMIN A SUPPLEMENTATION**

Patient received measles-containing vaccine (MCV)?  Y  N

If Yes, indicate the number of doses whichever is applicable: MV \_\_\_\_\_ MR \_\_\_\_\_ MMR \_\_\_\_\_

Date last dose received (MCV): \_\_\_\_\_

Measles vaccine received validated through:  Vaccination Card  Logsheet  By recall  \_\_\_\_\_ (others, specify)

Was vaccination received during special campaigns?  Y  N

If patient did not receive any MCV, state the reason(s):

Mother was busy  Child was sick  Forgot schedule  
 Against belief  No vaccine available  Other reasons, specify \_\_\_\_\_  
 Medical contraindication  Vaccinator not available  
 Fear of side effects  Not eligible for vaccination

Was the patient given Vitamin A during this illness?  Y  N

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**IV. EXPOSURE HISTORY**

With history of travel within 23 days prior to onset of rash?  N  Y If YES, specify place and timing:  
 Place of travel: \_\_\_\_\_ Date of travel: \_\_\_\_\_

< 7 days from rash onset  7-23 days from rash onset

\*Was there contact with a confirmed Measles case 7-23 days prior to rash onset?  N  U  Y  
 \*Was there contact with a confirmed Rubella case 7-23 days prior to rash onset?  N  U  Y  
 If YES, name of contact: \_\_\_\_\_ Place of residence: \_\_\_\_\_ Date of contact: \_\_\_\_\_

Tick the type of place where exposure probably occur:  Day care  Barangay/Chhime  School  Health Care Facility  
 Dormitory  Others, specify \_\_\_\_\_

\*Are there other known cases with fever and rash (regardless of presence of 3 C's) in the community?  Y  N  U

\* Note: If the answer to any of the two questions was YES, coordinate with the ESU for validation and field investigation

cont at the back

# Global Goals to VPD Eradication, Elimination, and Control

## **Global Polio Eradication:** Goal and Target for the year 2030

- **Goal:** Elimination of infection (Regional eradication, including VDPV)
- **Target:** Zero incidence of polio due to any type of poliovirus infection

## **Measles Elimination**

- **Stop the transmission of endemic measles virus**
- **Vision:** a world where all countries are equipped with robust measles outbreak preparedness, prevention and response systems

## **Neonatal Tetanus Elimination**

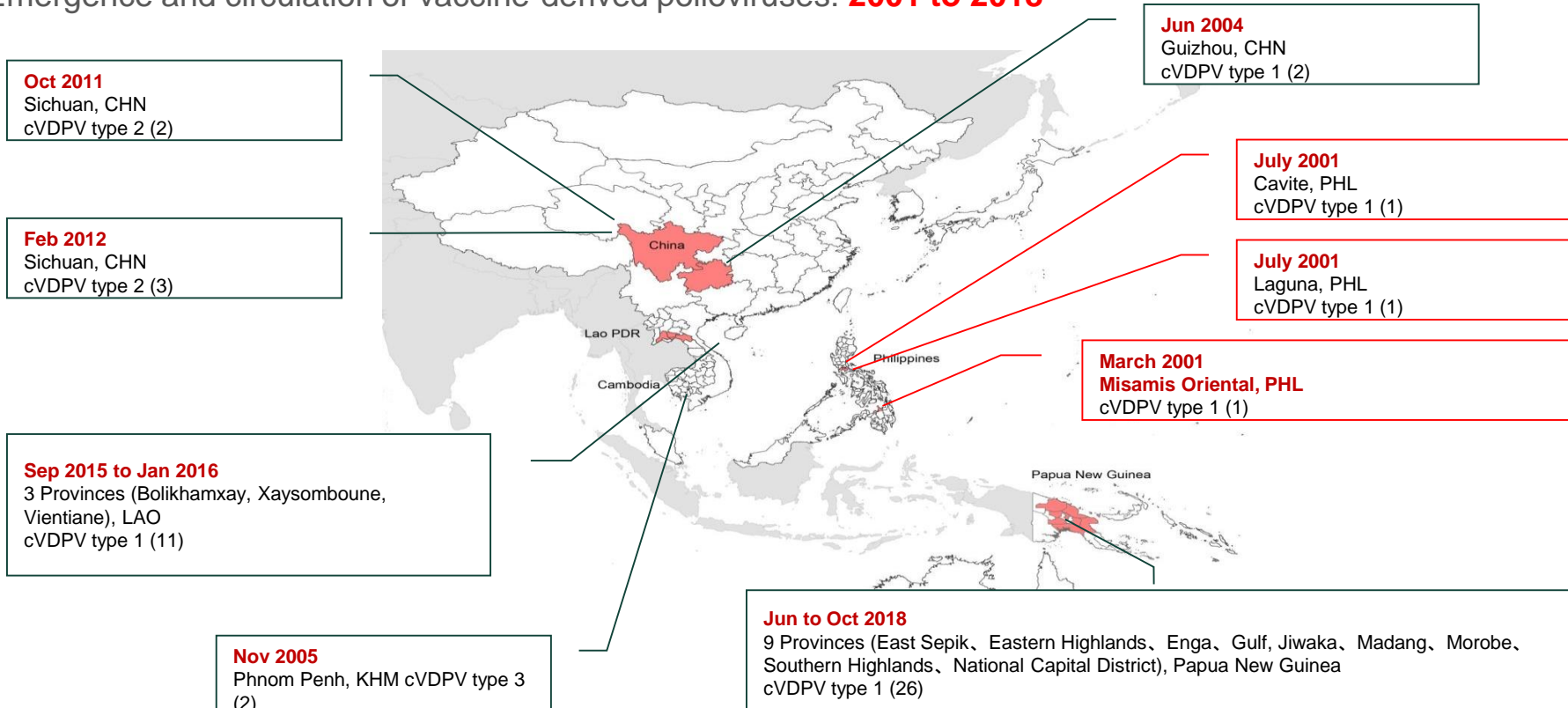
- Achieve and maintain <1 NT case per 1,000 live births in every municipality and city every year

## **Diphtheria and Pertussis**

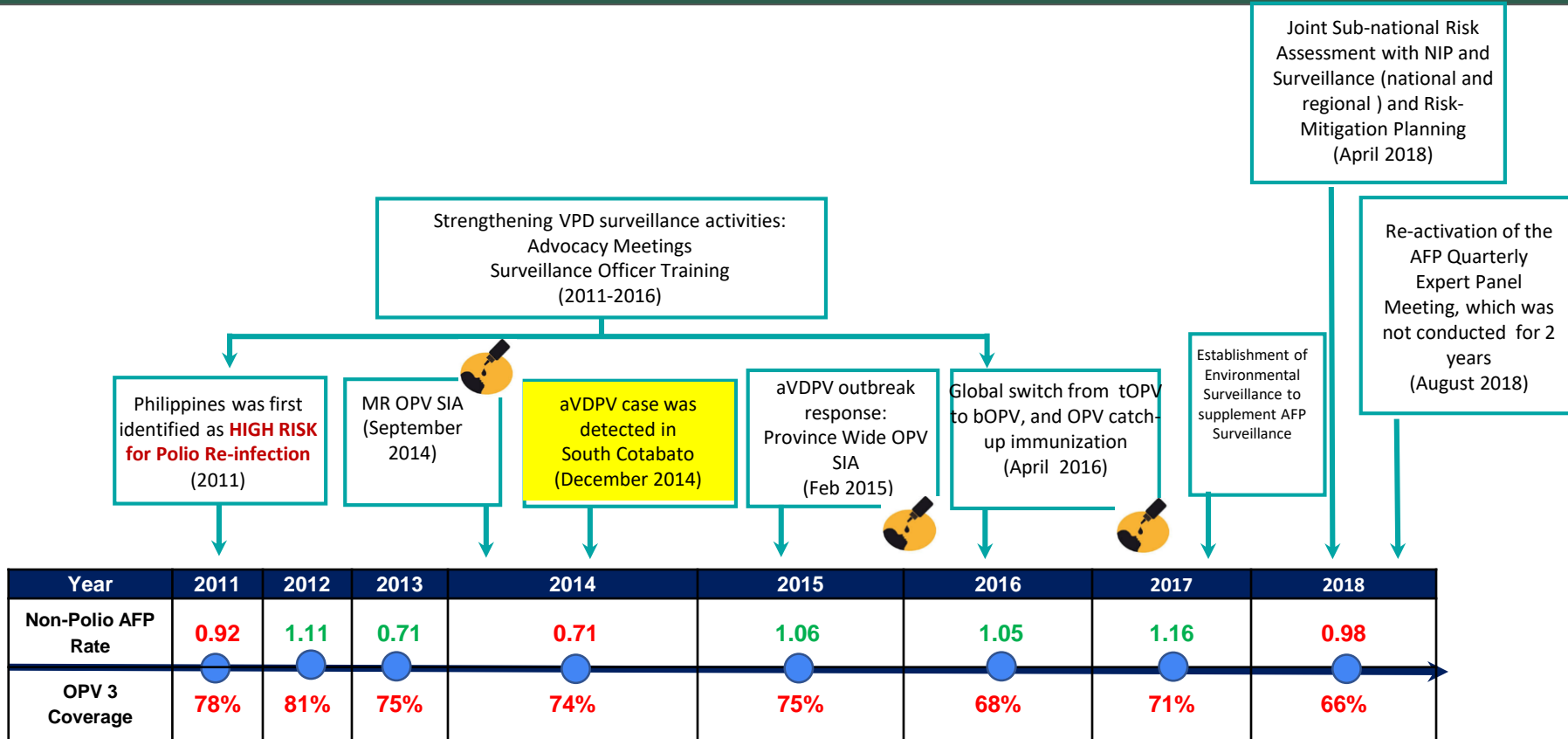
- Control of the occurrence of diphtheria and pertussis cases , deaths and outbreaks in the country

# Polio Eradication in the Western Pacific

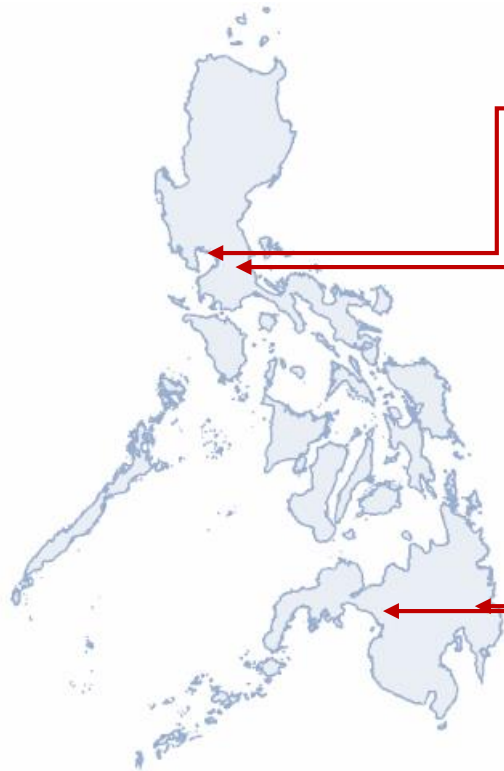
- The Philippines and Western Pacific were certified Polio-free in **November 2000**
- Emergence and circulation of vaccine-derived polioviruses: **2001 to 2018**



# Philippine Efforts to Eradicate Polio



# Polio Outbreak: Re-emergence after 19 Years



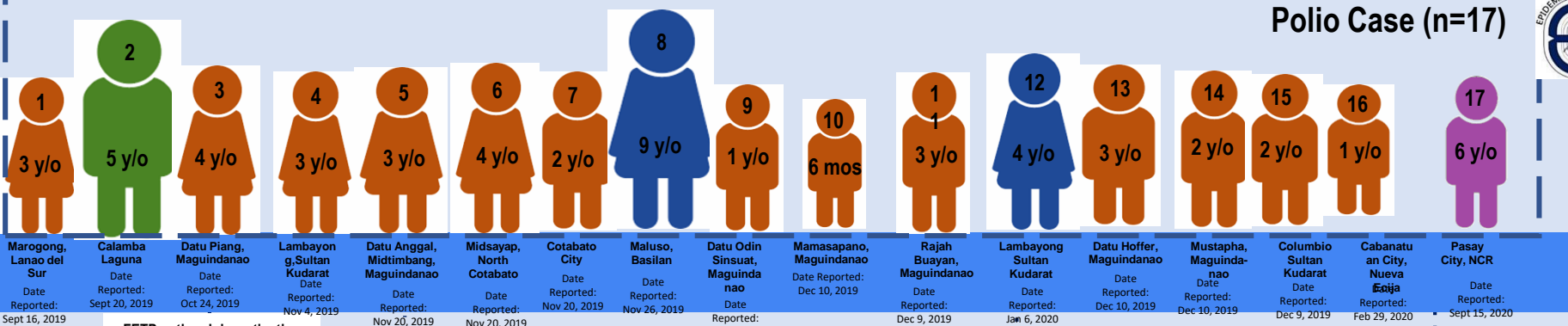
<b>Tondo, Manila</b> (Environmental Sample)	JULY 1-VDPV1(+NPEV) JULY 22-VDPV1(+SL1&SL3) AUG 13-VDPV1, <b>VDPV2</b> (+SL3) AUG 27-VDPV1(+PV3-SL)
<b>Legarda, Manila</b> (Environmental Sample)	AUG 23-PV1-SL, PV3-SL, <b>VDPV2</b>
<b>Laguna</b> (AFP Case)	AUG 27 (Onset of Paralysis), <b>VDPV2</b>
<b>Davao City</b> (Environmental Sample)	AUG 22- <b>VDPV2</b> & NPEV
<b>Lanao del Sur</b> (AFP Case)	JUNE 16 (Onset of Paralysis), <b>VDPV2</b>

# Polio Infected Children (N=31)

September 2019 – September 2021



Polio Case (n=17)



FETP outbreak investigation

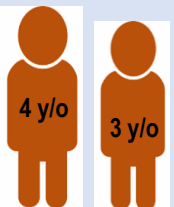
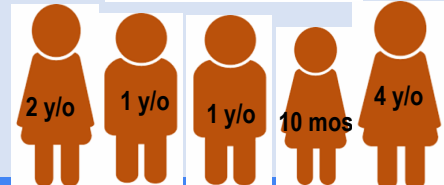
Contact Sampling

Contact Sampling

Healthy Children Stool Survey

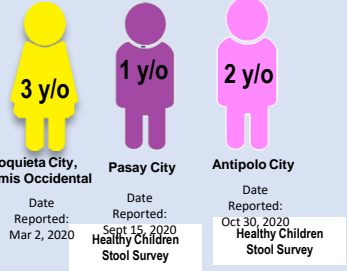
Contact Sampling

Legend:



- cVDPV2 (Cluster 1 – Type 2)
- iVDPV2 (Cluster 2 – Type 2)
- cVDPV1 (Cluster 1 – Type 1)
- aVDPV2
- aVDPV2
- aVDPV2
- aVDPV2
- aVDPV2
- aVDPV2

aVDPV2s are genetically unlinked



Datu Piang, Maguindanao  
Date Reported: Nov 26, 2019

Talayan, Maguindanao  
Date Reported: Dec 20, 2019

Lambayong, Sultan Kudarat  
Date Reported: Dec 9, 2019

- All cVDPV1 and cVDPV2 isolates in the Philippines (AFP and ES) are genetically linked with each other, as well as with cVDPV1 and cVDPV2 isolates (AFP and ES) in Sabah

Note: Numbers remain unchanged since November 21, 2022



# Strengthened surveillance and outbreak response



- Active AFP surveillance (house-to-house)
- Field investigations
- Funding support to hire AFP Surveillance Officers (AFPSO)
- Training of AFPSO
- Regular meeting even during pandemic (virtual)
  - Between national and regional
  - Between DOH, WHO, and experts

# Closure of Polio Outbreak in 2021



World Health  
Organization

unicef 

**WHO, UNICEF COMMEND END  
OF POLIO OUTBREAK IN PH**



#workingPCOO

[www.pcoo.gov.ph](http://www.pcoo.gov.ph)



@pcoogov

Despite end of Polio Outbreak we  
remain at high risk for VPD outbreaks

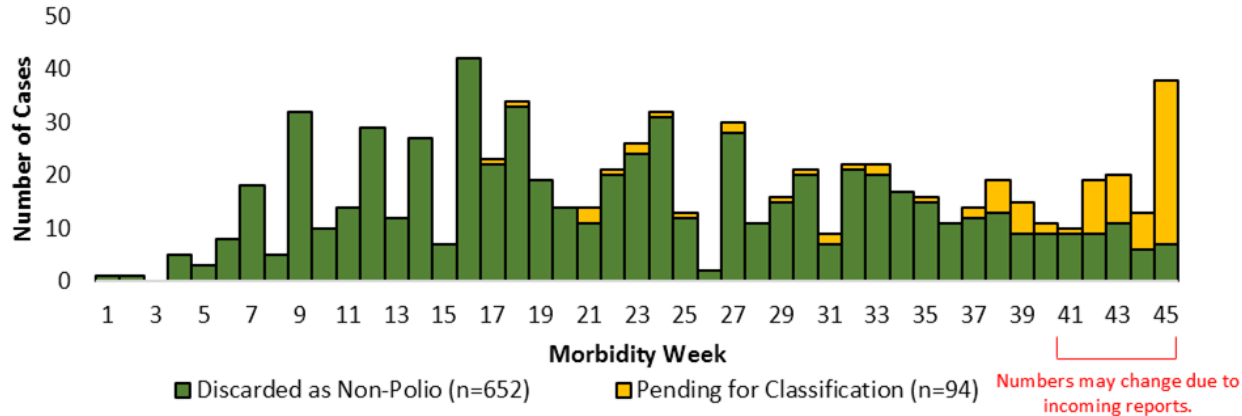


# Cases of VPDs are on the rise in 2022

Diseases/ Conditions	Cases			Deaths		CFR (%)	
	2021	2022	% Change	2021	2022	2021	2022
Acute Flaccid Paralysis (AFP)	764	746	↓2	41	17	5	2
Diphtheria	40	61	↑53	14	17	35	28
Reported Measles- Rubella	210	572	↑172	0	1	0	0.2
- Measles Cases	175	524	↑199	0	1	0	0.2
- Rubella Cases	35	48	↑37	0	0	0	0
Neonatal Tetanus	16	45	↑181	9	10	56	22
Pertussis	23	29	↑26	0	2	0	7

# National Situationer: Acute Flaccid Paralysis

Reported AFP Cases by Date of Report and Classification  
Philippines, January 1 – November 12, 2022 vs 2021



- **87% (652) were discarded as Non-Polio AFP Cases**
- **Children 4 years old and below** comprise 41% of the cases
- **55% (413) were males**
- **4% (30) of the cases were not vaccinated**

# Need to maintain quality surveillance for polio to prevent future outbreaks

## AFP Surveillance Performance by Region Philippines, January 1 to November 12, 2022 (MW 1-45)

Regions	<15 yo Population	Expected AFP Cases for 2022	Reported AFP Cases to date	Annualized AFP Reporting Rate	Annualized Non-Polio AFP Rate <sup>1</sup>	Adequacy of Stool Specimen <sup>2</sup> (Target ≥80%)
<b>PHILIPPINES</b>	<b>32,748,676</b>	<b>665</b>	<b>746</b>	<b>2.63</b>	<b>2.30</b>	<b>75</b>
I	1,547,765	31	36	2.69	2.46	92
II	1,084,998	22	30	3.20	3.09	83
III	3,414,056	68	62	2.10	1.79	68
IV-A CALABARZON	4,566,967	91	104	2.63	2.20	44
IV-B MIMAROPA	1,116,946	22	12	1.24	0.93	50
V	2,076,574	42	53	2.95	2.84	91
VI	2,304,807	46	49	2.46	2.26	82
VII	2,425,583	49	60	2.86	2.67	73
VIII	1,496,934	30	73	5.64	4.86	88
IX	1,233,551	25	42	3.93	3.37	83
X	1,534,338	31	31	2.33	1.88	94
XI	1,627,433	33	35	2.49	2.20	77
XII	1,464,388	29	31	2.45	2.45	77
BARMM	1,826,302	37	27	1.71	1.58	93
CAR	531,948	11	15	3.26	2.82	80
Caraga	929,722	19	17	2.11	1.49	65
NCR	3,566,363	71	89	2.24	1.72	70

1 Applied New AFP Rate by WHO= [((( All reported AFP cases/ current morbidity week) \* 52/<15 Population]\*100,000)

2 Applied New Non-Polio AFP Rate by WHO= [(((AFP cases classified as Non-Polio/ current morbidity week)\* 52/<15 Population]\*100,000)]

3 Adequacy of Stool Specimen= No. of AFP cases with Adequate Stools/ Reported Cases x 100

### Legend:

AFP & NP-AFP Rate

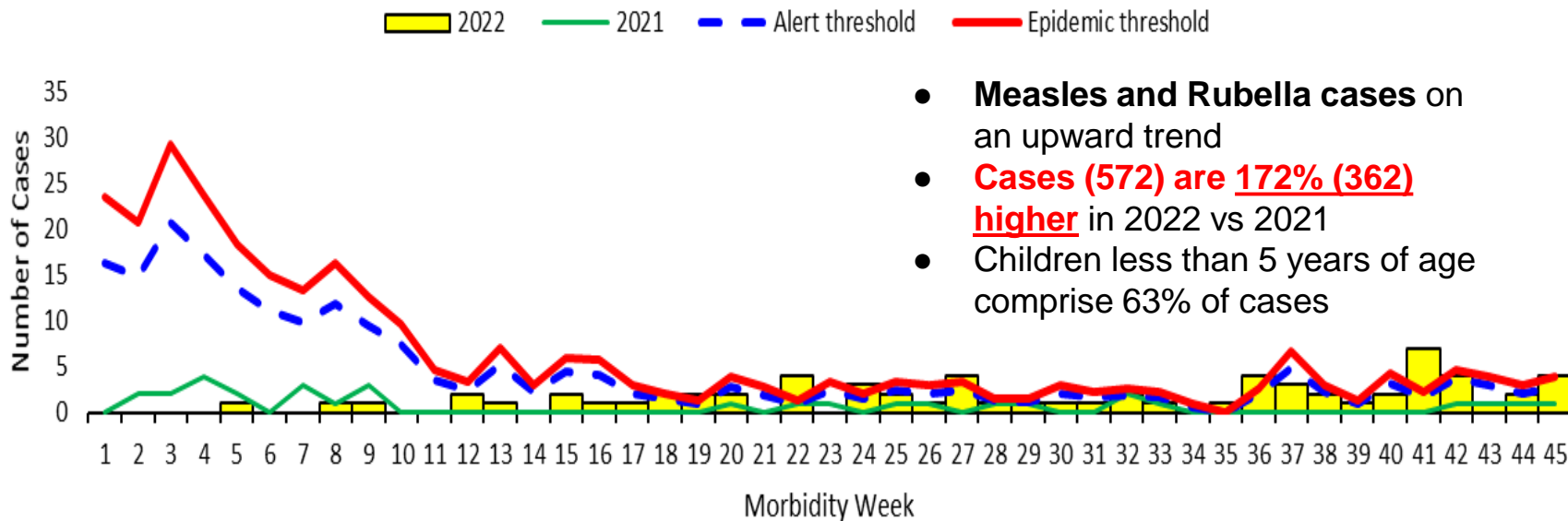
≥ 2.00/100,000
1.00 - 1.99/100,000
≤0.99/100,000

Stool Adequacy Rate

≥ 80%
50-79%
≤ 50%

# National Situationer: Measles-Rubella

Nationally, cases have not yet reached the measles alert and epidemic threshold levels; peak of cases was observed in MW 36



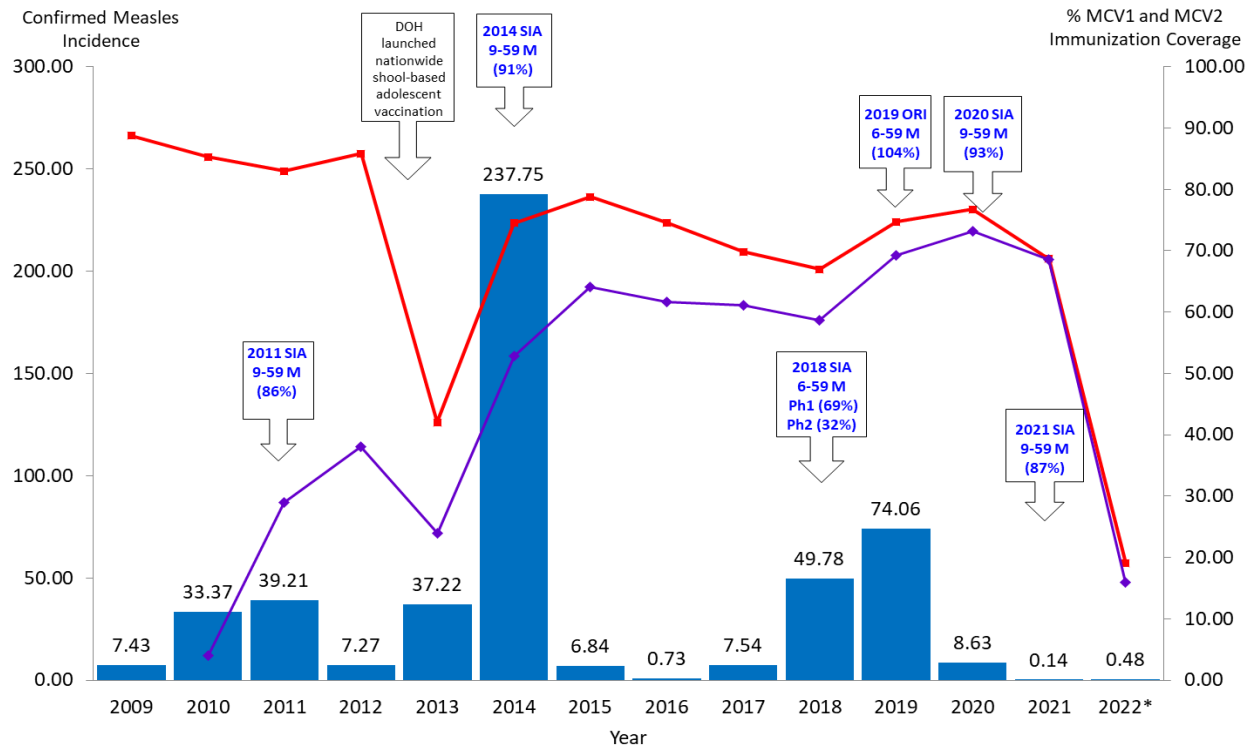
- **Measles and Rubella cases** on an upward trend
- **Cases (572) are 172% (362) higher** in 2022 vs 2021
- Children less than 5 years of age comprise 63% of cases

Note: Reported measles cases include confirmed measles and clinically compatible measles cases  
\*Data as of January 1 ↓ November 5, 2022 (MW 1 ↓ 44) with updates as of November 9, 2022

# During large-scale measles outbreak in 2019, 637 deaths occurred and 89% were aged under five years

In 2016, there were only 3 deaths and 39 deaths in 2017. This increased to 341 in 2018.

In 2019, 637 deaths were reported (CFR: 1.3%) mostly among children <5 y/o



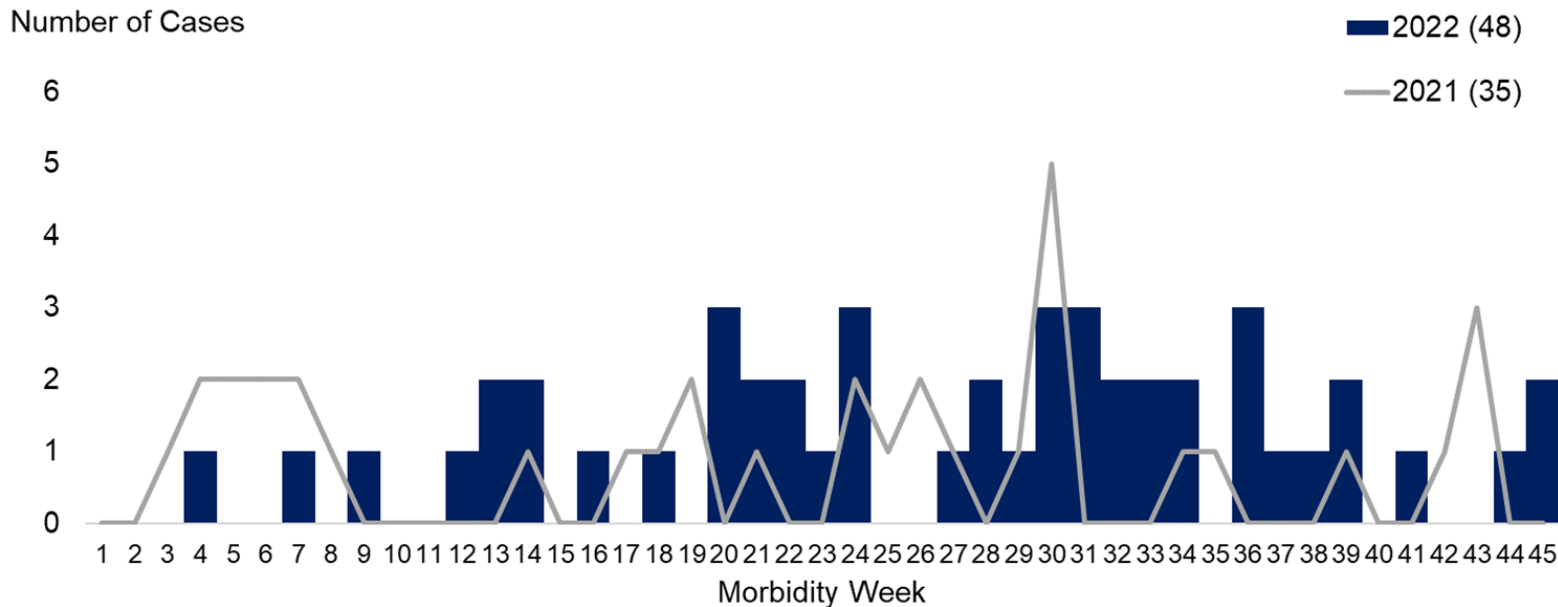
Partial MVC coverage as of January-May 2022

\*Annualized data from January 1 to November 12, 2022 (MW 1-45)

■ Incidence Rate per 1M Population — MCV1 Coverage — MCV2 Coverage



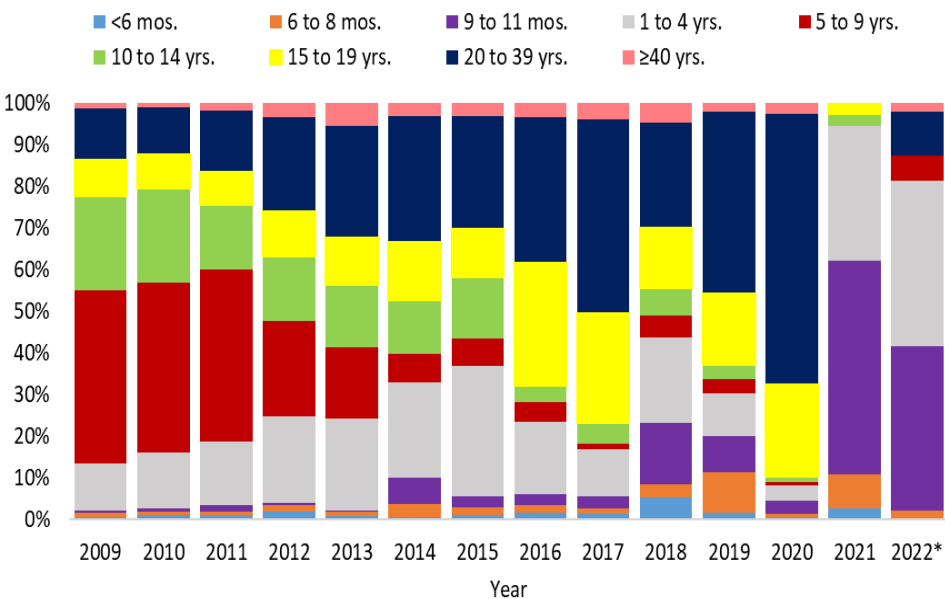
For rubella, 48 laboratory confirmed rubella cases were reported to date. Like measles, this is higher than cases reported during same time period in 2021



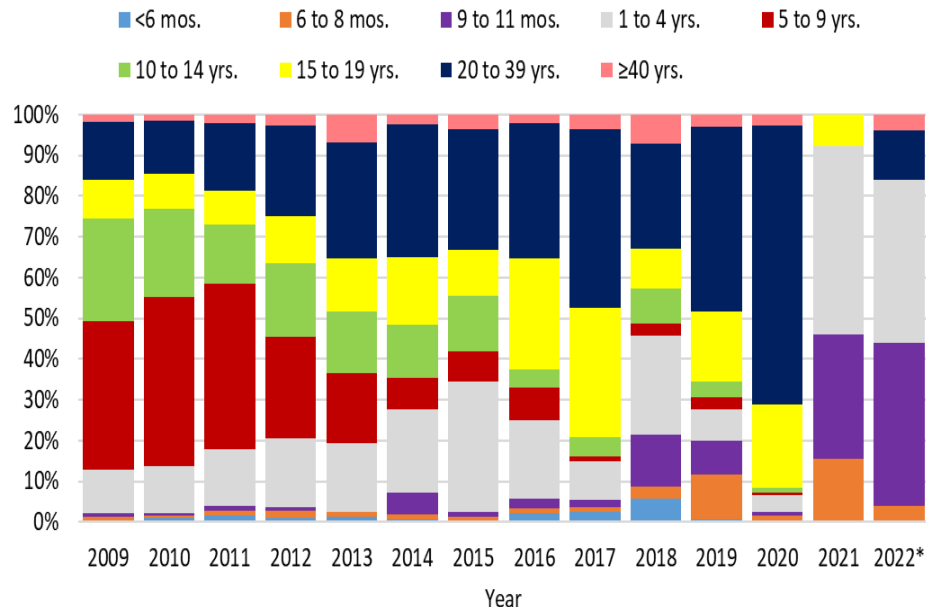
*\*Note: This data is updated as of November 16, 2022  
2022 vs 2021 during same time period*

% rubella cases among females aged 15 and above have increased from 65% to 92% in 2020. The increasing number and proportion of rubella cases who are females of childbearing age may lead to increased risk for congenital rubella syndrome or CRS

### Confirmed Rubella by Age Group 2009-2022

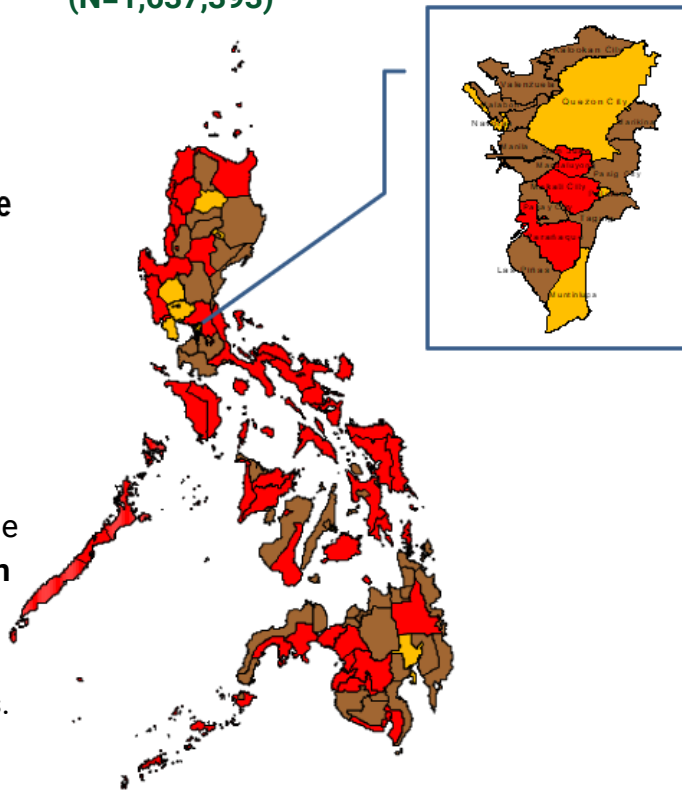
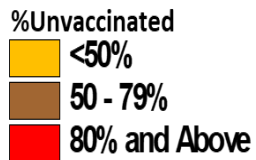


### Female Confirmed Rubella by Age Group 2009-2022



# All regions are at high risk for measles outbreak based on risk assessment conducted in 2021

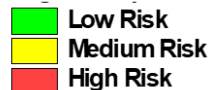
## % MCV1 Unvaccinated Children Less Than 2 Years Old\* (N=1,637,393)



Significant **gaps in achieving high and equitable routine immunization coverage** trigger the **rapid accumulation of susceptible children** against measles and VPDs.

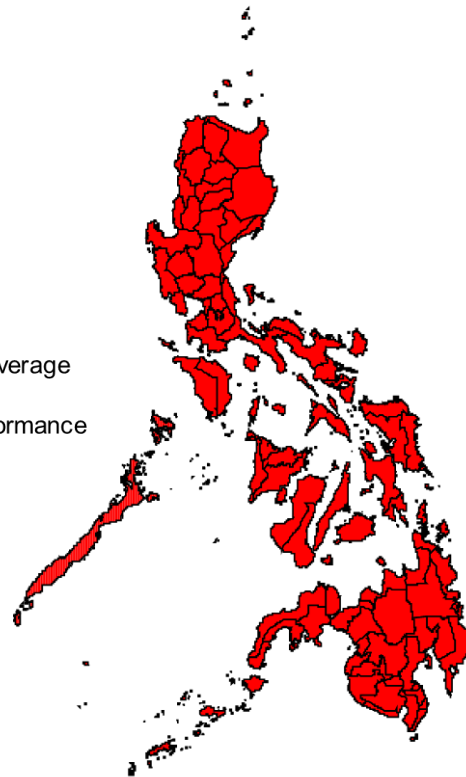
## Measles Risk Assessment, 2021

### Legend:



### Criteria:

- Measles Surveillance Performance
- MCV Immunization Coverage
- MR SIA Coverage
- Program Delivery Performance



# On a national level, 3 out of 6 MR surveillance indicators were met

REGION	POPULATION	Total Number of Reported Cases	Case Classification					Annualized Measles Incidence Rate	Timeliness & Adequacy of Specimen Collection	Timeliness & Adequacy of Case Investigation	Annualized Suspect Measles Reporting Rate	Annualized Non-measles/Non-rubella reporting rate	Percentage of Measles Compatible
			Clinically Compatible Measles		Laboratory Confirmed Measles	Laboratory Confirmed Rubella	Non- Measles/ Rubella Discarded Cases						
			No Data of Specimen Collection	Pending Laboratory Result									
Target: <1/1,000,000 Pop.	Target: >80%	Target: >80%	Target: >2/100,000 Pop.	Target: >2/100,000 Pop.	Target: <10%								
PHILIPPINES	110,278,979	2,162	379	92	53	48	1,590	0.48	81	76	2.26	1.67	22
I	5,361,706	139	15	0	4	4	116	0.75	88	86	2.99	2.50	11
II	3,727,855	110	8	5	4	0	93	1.07	91	85	3.41	2.88	12
III	12,564,099	199	30	9	4	8	148	0.32	83	76	1.83	1.36	20
CALABARZON	16,380,075	173	87	4	3	4	75	0.18	48	42	1.22	0.53	53
MIMAROPA	3,265,445	42	16	2	4	0	20	1.22	62	60	1.49	0.71	43
V	6,151,655	40	5	0	2	3	30	0.33	85	85	0.75	0.56	13
VI	8,045,608	120	4	1	2	3	110	0.25	96	94	1.72	1.58	4
VII	8,174,327	330	57	7	3	3	260	0.37	79	72	4.66	3.67	19
VIII	4,599,102	88	21	1	4	2	60	0.87	75	66	2.21	1.51	25
IX	3,919,855	116	21	20	3	3	69	0.77	80	79	3.42	2.03	35
X	5,080,154	145	12	14	4	6	109	0.79	90	91	3.30	2.48	18
XI	5,303,445	230	18	16	3	4	189	0.57	92	89	5.01	4.12	15
XII	4,628,694	43	10	1	0	2	30	0.00	77	77	1.07	0.75	26
BARMM	4,783,401	17	9	3	0	0	5	0.00	41	41	0.41	0.12	71
CAR	1,818,199	59	0	0	1	0	58	0.55	100	92	3.75	3.68	0
Caraga	2,836,833	58	17	2	0	2	37	0.00	67	59	2.36	1.51	33
NCR	13,638,526	253	49	7	12	4	181	0.88	77	70	2.14	1.53	22

LEGEND:	≥1	<80%	<80%	<2/100,000 Pop.	<2/100,000 Pop.	<10%
						≤50%
						>50%

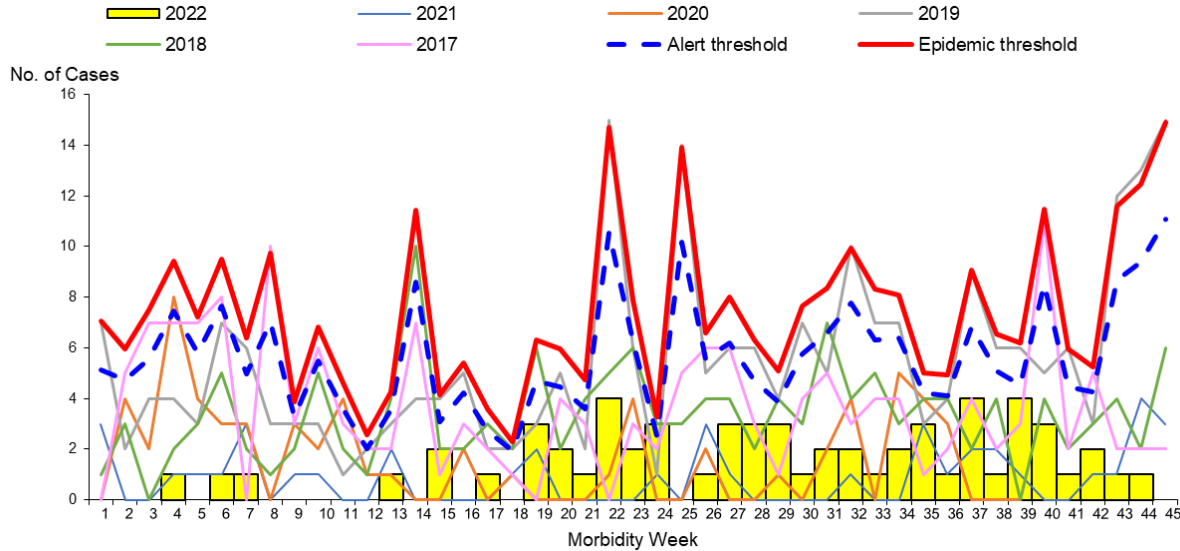
Reported suspect measles and rubella cases include confirmed measles, confirmed rubella, clinically compatible measles cases and non-measles/rubella discarded cases

\*Data as of January 1- November 12, 2022 (MW 1-45) with updates as of November 16, 2022

# National Situationer: Diphtheria

While total cases higher than last year, weekly cases remain low and remained below the alert and epidemic thresholds

**Reported Diphtheria Cases by Morbidity Week**  
**Philippines, January 1 – November 12, 2022 vs 2017-2021**

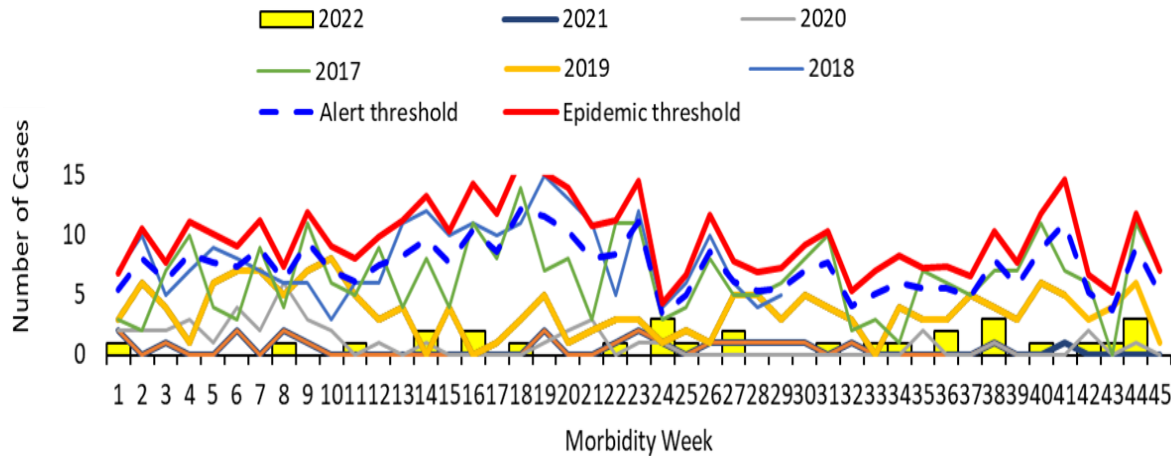


- **Cases (61) are 53% (21) higher** vs 2021
- **61% (37) were females**
- **28% (17) belonged to the 1 to 4 years age group**
- **CFR is at 27.9% (17 deaths)**
- **No confirmed case yet. All cases were probable.**

# National Situationer: Pertussis

Few pertussis cases are being reported weekly. Although higher than last year's cases, reports remain lower than pre-pandemic years and thresholds

**Reported Pertussis Cases by Morbidity Week**  
**Philippines, January 1 – November 12, 2022 vs 2017-2021**

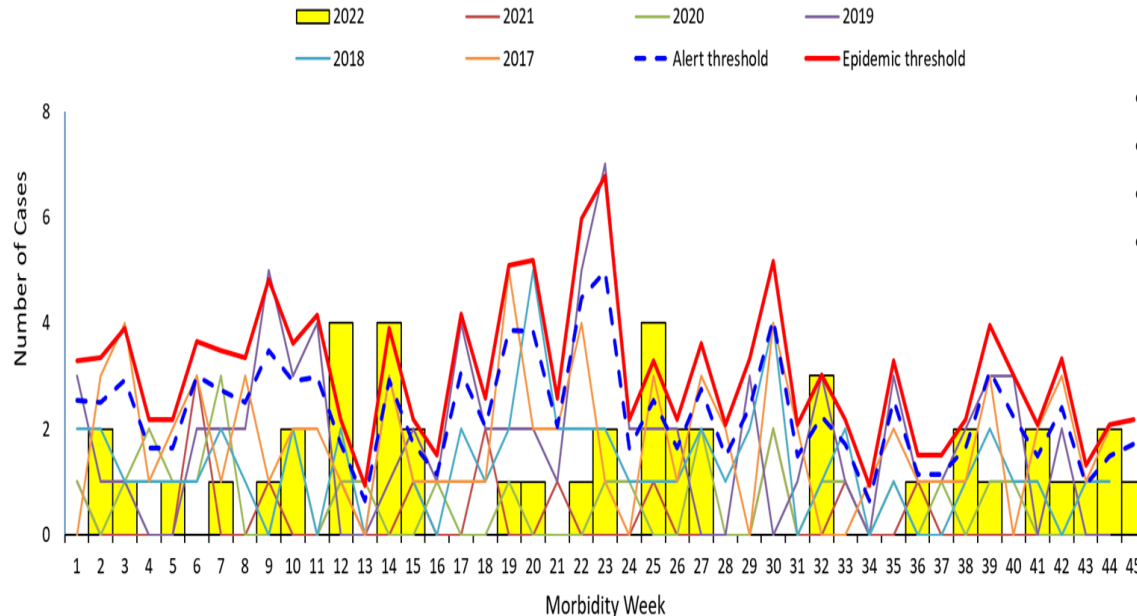


- **Cases (29) were 26% higher** vs 2021
- **62% (18) were males**
- **Infants <6 months** comprise of **52% (15)** of cases

# National Situationer: Neonatal Tetanus

Cases have increased by 181% in 2022 vs 2021 and affect 11 regions, including NCR; 10 were deaths with a CFR of 22%

**Reported Neonatal Tetanus Cases by Morbidity Week  
Philippines, January 1 – November 12, 2022 vs 2017-2021**



- **Cases (45) were 181% (29) higher** vs 2021
- **62% (28) were males**
- **69% (31) were aged 3 to 7 days old**
- **CFR at 22% (10 deaths)**

**Though we have capacities to continuously detect cases, there are still gaps in our surveillance**







# Philippine Integrated Disease Surveillance and Response

## Points of Strength and for Improvement Highlighted by WHO Assessments

### Strengths

- PIDSR is established in all levels of the public health surveillance system
- Established expert committees for AFP, MR, and AEFI
- Established reference laboratory
- Hardworking and capable staff

### Weaknesses

- Delayed reporting of cases and laboratory results
- Lack of funding and support
- Unstable staffing with no proper training
- No established surveillance for Congenital Rubella Syndrome

### Key Recommendations

- ✓ Establish sentinel based surveillance
- ✓ Develop an online system to strengthen data management and feedback on all levels
- ✓ Improve laboratory capacity and testing
- ✓ Develop operational guidelines for staffing and surveillance
- ✓ Strengthen capacity for outbreak response
- ✓ Establish sentinel surveillance for Congenital Rubella Syndrome (CRS)



# Decline in case detection, reporting, and confirmation

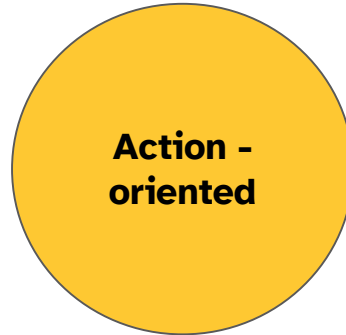
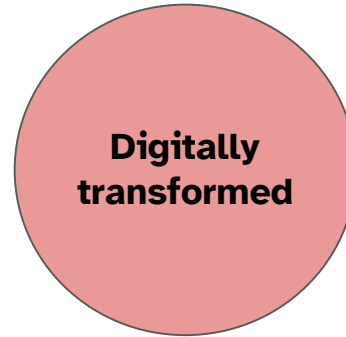
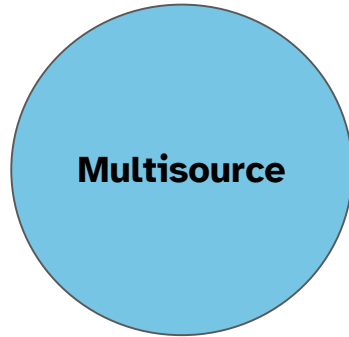
- Less familiarity with clinical presentation of VPDs
- Epidemiology and surveillance network clinical practitioners, private health facilities, and non-health care institutions like workplaces and schools
  - Case definitions, CIF/CRF and how to report
  - What samples to collect and how/where to send for confirmation
  - Case and outbreak investigations done in silo
  - Limited feedback between ESUs and reporting units
- We need to engage more specialists who will compose expert groups
  - AFP and Measles-Rubella expert panels
  - National and Regional Adverse Event Following Immunization Committees (N/RAEFIC)

# What to expect moving forward

- Indicator- or case-based surveillance strengthened through:
  - Selection, establishment, and capacitation of sentinel sites
  - Shift to an online information system
  - More efficient data management process
  - Increased relevance and utility of surveillance reports
  - Better access to data through public trackers
- Quality event-based surveillance (early warning system)
- Expansion of laboratory confirmatory and sequencing capacity
  - Sub-national VPD laboratories
  - Improved sequencing capacity and use of information
- EB to serve as center that will consolidate epidemiological and health-related data to produce comprehensive analysis of country situation

# Public Health Surveillance should be

- Able to integrate data from multiple sources and systems
- Ready for transition to EHR-linked surveillance
- Innovative and able to adapt new technologies (e.g. genomic surveillance)



- Utilizes both digital and manual systems; manual processes able to be supported digitally
- Able to process, manage, and analyze huge amounts of data
- Agile and adaptive processes and systems to meet evolving needs
- **Responsive and relevant reports**
- **Quick flagging and endorsement for response**
- **Balance between data completeness and quick action**

# Partners in Achieving Elimination and Eradication Goals



Kumpletuhin ang bakuna ni baby!

LIMANG BISITA HANGGANG BIRTHDAY NIYA!

BAKUNA	SAKIT NA MAIIWASAN	PAGKA-PANGANAK	1st	2nd	3rd	4th	5th
			1½	2½	3½	9	1
			BUWAN	BUWAN	BUWAN	BUWAN	TAON
BCG VACCINE	Tuberculosis (TB)						
HEPATITIS B VACCINE	Hepatitis B						
PENTAVALENT VACCINE (DPT-Hep B-HiB)	Difterya, Tetano, Hepa B, Pertussis, Pulmonya, Meningitis						
ORAL POLIO VACCINE (OPV)	Polio						
INACTIVATED POLIO VACCINE (IPV)	Polio						
PNEUMOCOCCAL CONJUGATE VACCINE (PCV)	Pulmonya, Meningitis						
MEASLES, MUMPS, RUBELLA VACCINE (MMR)	Tigdas, Beke, German Measles						



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- Disease Reporting Units Nationwide
- National and Regional Expert Panel Review Committee for AFP
- National Verification Committee for Measles and Rubella Elimination
- Clinical practitioners and medical associations



Department of Health, Philippines



# Key Messages

- Surveillance remains key in keeping us secure by monitoring current and possible health threats and providing early signals to trigger timely and appropriate action
- The COVID-19 pandemic and previous outbreaks taught us how quality surveillance provided us the critical information we need to guide our strategies and response
- A strong surveillance systems requires a strong, well-coordinated network of equally capacitated units and partners

# Thank you!

You may contact us through:

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Republic of the Philippines  
**Department of Health**