World Health Organization
REGIONAL OFFICE FOR South-East Asia

Immunization and Vaccine Development South-East Asia Region

FACTSHEET 2023
INDONESIA

EXPANDED PROGRAMME ON IMMUNIZATION (EPI)

Table 1: EPI History

Year	Milestone
1997	HepB vaccine introduced
2002	AD syringe introduced
2004	MCV2 introduced in school based immunization programme
2004	DTP-HepB vaccine introduced (in phases)
2004	TT vaccine introduced for women of child bearing age
2007	IPV introduced in one province
2013-14	Pentavalent vaccine introduced in four provinces in 2013 and gradually expended to all provinces by 2014
2016	tOPV to bOPV switched on 04 April
2016	IPV vaccine launched in national routine immunization programme from July
2016-22	HPV introduced (in phases) 2016 - 6 districts (1 province) 2021 - 20 districts (7 provinces) 2022 - 132 districts (9 provinces)
2017	TT vaccine switched to Td for all targetted with age >=15 years
2017-18	MR vaccine introduced 6 provinces in Java island during phase 1 from August 2017 and remaining 28 province from August 2018
2017-22	PCV introduced (in phases)
2018	JE (SA 14142) LiveAtd introduced in Bali province from March
2022	Rotavirus introduced in 21 districts
2022	IPV2 introduced in 3 districts

Source: WHO/UNICEF joint reporting form (JRF) ad EPI/MOH

Disclaimer: The boundaries and names shown and the designations used on all the maps 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.

Table 2: Basic information 2022

Total population[1]	274,859,094
Live births[1]	4,452,717
Children <1 year[1]	4,373,429
Children <5 years[1]	21,856,192
Children <15 years[1]	65,877,189
Pregnant women[1]	4,897,988
Women of child bearing age[1] (WCBA) (15-39 years)	53,472,957
Neonatal mortality rate[2]	11.33 (per 1,000 LB)
Infant mortality rate[2]	18.88 (per 1,000 LB)
Under-five mortality rate[2]	22.17 (per 1,000 LB)
Maternal mortality ratio[2]	173 (per 100,000 LB)
Division/Province/State/Region	34
District	514
Blocks	7266
Village	74,957
Population density[1] (per sq. km)	142
Population living in urban areas[2]	57.20%
Population using at least basic drinking-water services[2]	94%
Population using at least basic sanitation services[2]	88%
Total expenditure on health as % of GDP[2]	2%
Births attended by skilled health personnel[2]	95%
Neonates protected at birth against NT[2]	85%
Children not covered by immunization programme (zero dose children)[3]	570,969

1 *SEAR annual EPI reporting form, 2022*
2 *WHO, Global Health Observatory (GHO) data http://apps.who.int/gho/data accessed on 03 August 2023*
3 *DTP1 coverage from WHO and UNICEF estimates of immunization coverage and UN estimated under one population*

Table 3: Immunization schedule, 2022

Vaccine	Age of administration
BCG	Birth 0 - 1 month
HepB	Birth 0 – 24 hours
DTP-Hib-HepB	2 months, 3 months, 4 months and 18 months
DT	6 to 7 years
Td	7 to 8 years, 10 to 11 years (5th grade), 15 to 39 years (Child bearing women)
OPV	Birth to 1 month, 2 months, 3 months and 4 months
IPV	4 months, 9 months
MR	9 months, 18 months, 6-7 years (1st grade)
HPV	11 years (5th grade) and 12 years (6th grade) elementary school girls (Jakarta Province, Yogyakarta Province, Gorontalo, Central Java, East Java, North Sulawesi, Southeast Sulawesi, Bali, Makassar City)
PCV	2 months, 3 months, 12 months
JE_LiveAtd	10 months (9 Districts of Bali province)
Vitamin A	6 - 59 months
Rotavirus (RV-1)	2 months, 3 months, and 4 months

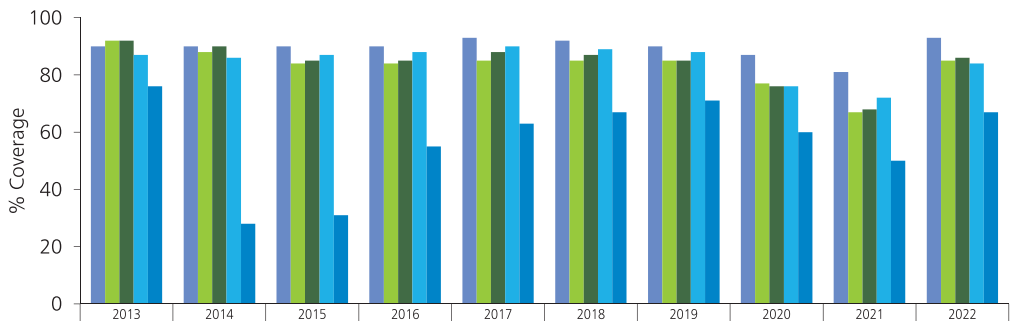
Source: WHO/UNICEF JRF, 2022

Table 4: Immunization system highlights

cMYP for immunization	2020-2024
NTAGI	fully functional
Spending on vaccines financed by the government	100%
Spending on routine immunization programme financed by the government	96.4%
Updated micro-plans that include activities to improve immunization coverage	No data
National policy for health care waste management including waste from immunization activities	in place
National system to monitor AEFI	in place
Most recent EPI CES	DHS - 2022
≥80% coverage for DTP-Hib-HepB3	423 districts (82%)
≥90% coverage for MCV1	379 districts (74%)
≥90% coverage for MCV2	273 districts (53%)
≥10% drop-out rate for DTP-Hib-HepB1 to DTP-Hib-HepB3	86 districts (17%)
Assessment of vaccine hesitancy at national level	2018

Source: WHO/UNICEF JRF, 2022

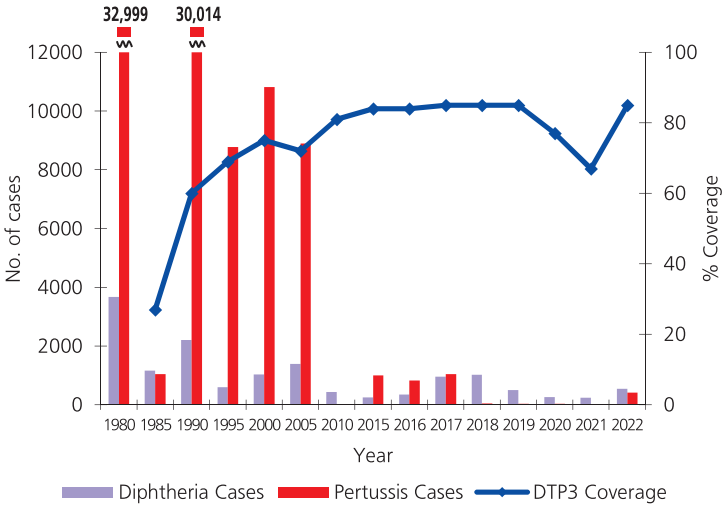
Figure 1: National immunization coverage, 2013-2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
BCG	90	90	90	90	93	92	90	87	81	93
DTP3	92	88	84	84	85	85	85	77	67	85
OPV3	92	90	85	85	88	87	85	76	68	86
MCV1	87	86	87	88	90	89	88	76	72	84
MCV2	76	28	31	55	63	67	71	60	50	67

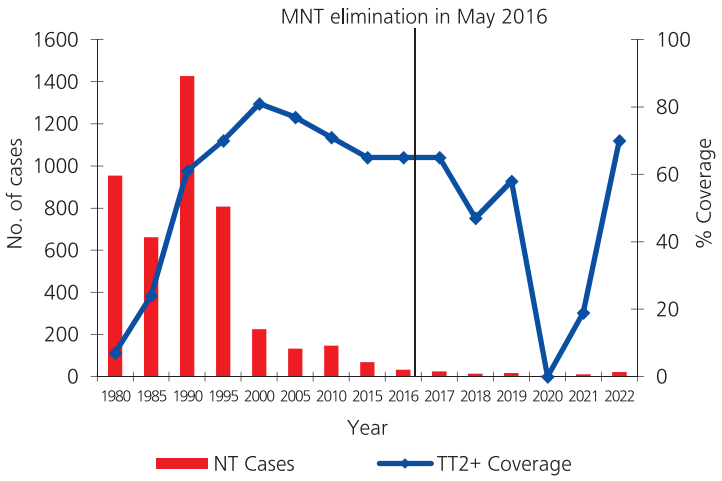
Source: WHO and UNICEF estimates of immunization coverage

Figure 2: DTP3 coverage[1], diphtheria and pertussis cases[2], 1980-2022



[1] *WHO and UNICEF estimates of immunization coverage*
[2] *WHO vaccine-preventable diseases: monitoring system 2022*

Figure 3: TT2+ coverage[1] and NT cases[2], 1980-2022



[1] *Country official estimates, 1980-2022*
[2] *WHO vaccine-preventable diseases: monitoring system 2022*

DTP-Hib-HepB3 coverage by province

Figure 4: 2021

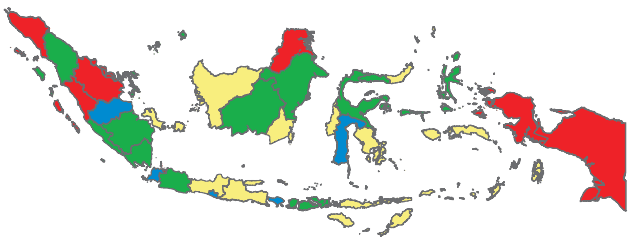


Figure 5: 2022

Source: SEAR annual EPI reporting form, 2021 and 2022 (administrative data)

Table 5: Reported cases of vaccine preventable diseases, 2016-2022

Year	Polio	Diphtheria	Pertussis	NT (% of all tetanus)	Measles	Rubella	Mumps	JE	CRS
2016	0	581	826	33(6%)	6,962	1,238	ND	43	178
2017	0	1,210	1,043	25 (5%)	9,035	1,264	ND	281	205
2018	0[a]	1,755	40	14 (3%)	5,300	1,767	ND	ND	232
2019	0	944	27	17 (4%)	1,815	656	ND	ND	211
2020	0	259	36	4 (ND)	310	159	ND	6	122
2021	0	235	12	11 (ND)	394	268	ND	13	229
2022	0[b]	540	414	21 (ND)	7,704	839	ND	ND	173

Source: WHO/UNICEF JRF (multiple years) *ND=No data*

[a] *Excludes one type 1 VDPV*
[b] *Excludes one type 2 VDPV*

Table 6: AFP surveillance performance indicators, 2016-2022

- The last polio case due to WPV was reported from Aceh Tenggara district, Aceh on 20 February 2006

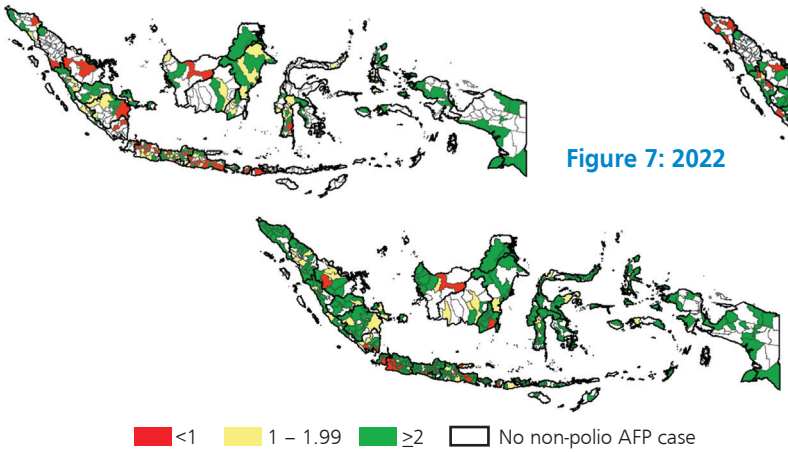
Indicator	2016	2017	2018	2019	2020	2021	2022
AFP cases	1,409	1,740	1,726	1,879	601	1,069	2,431
Wild poliovirus confirmed cases	0	0	0	0	0	0	0
Compatible cases	0	2	0	1	0	0	6
Non-polio AFP rate[1]	2.01	2.29	2.42	2.66	0.82	1.45	3.58
Adequate stool specimen collection percentage[2]	86%	82%	82%	81%	79%	70%	77%
Total stool samples collected	2,686	3,315	3,267	3,498	1,077	1,846	4,503
% NPEV isolation	7	8	7	8	6	5	7
% Timeliness of primary result reported[3]	98	96	96	98	100	99	100

[1] *Number of discarded AFP cases per 100,000 children under 15 years of age.*
[2] *Percent with 2 specimens, 24 hours apart and within 14 days of paralysis onset.*
[3] *Results reported within 14 days of sample received at laboratory.*

Non-polio AFP rate by district

Figure 6: 2021

Figure 7: 2022



Adequate stool specimen collection % by district

Figure 8: 2021

Figure 9: 2022

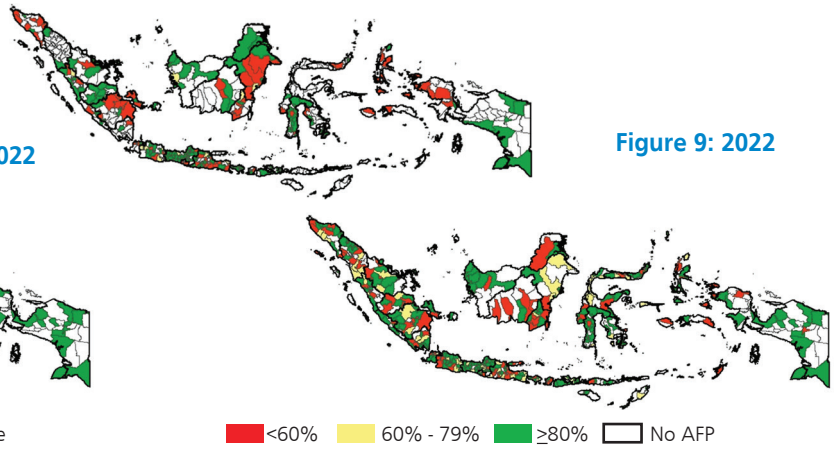


Table 7: Environmental surveillance sites for polio detection, 2019 - 2022

Year	# Provinces	# sites	# samples tested	Isolation								
				SL1	SL3	SL1+SL3	SL2	SL1+SL2	SL1+SL2+SL3	SL2+SL3	VDPV	NPEV
2019	12	12	173	1	2							26
2020	12	12	128	1	2							16
2021	13	13	144	0	3							19
2022	13	14	155	0	4							51

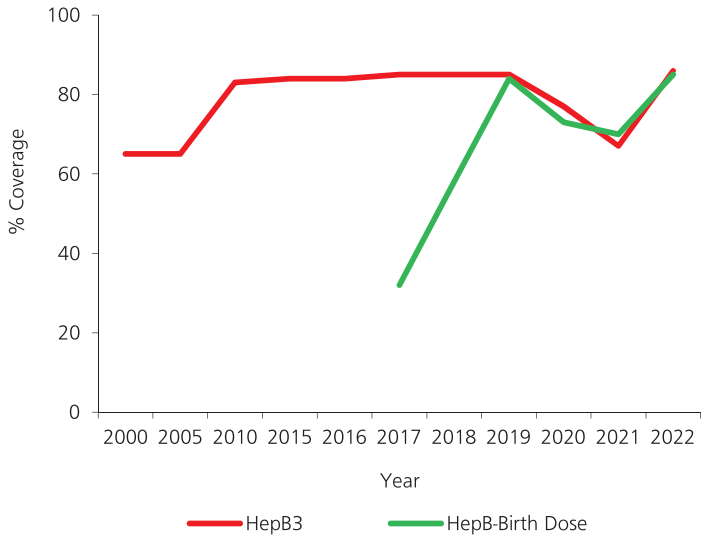
Note: SL1: Sabin like type 1; SL2: Sabin like type 2; SL3: Sabin like type 3; VDPV: Vaccine Derived Polio Virus; NPEV: Non Polio Entero Virus SL2 was isolated due to contamination of bOPV

Table 8: OPV SIAs

Year	Antigen	Geographic coverage	Target age	Target population		Coverage (%)	
				Round 1	Round 2	Round 1	Round 2
2005	OPV	NID	<5 years	23,620,427		98	
2006	OPV	NID	<5 years	23,620,427		99	100
2006	OPV	SNID	<5 years	4,523,187	6,045,438	97	92
2007	OPV	SNID	<5 years	12,517,699		90	92
2009	OPV	SNID*	<5 years	2,052,067		97	
2010	OPV	SNID*	<5 years	4,322,178		92	
2011	OPV	SNID*	<5 years	13,958,095		98	
2016	OPV	NID	<5 years	23,721,004		96	
2018	OPV	SNID*	9 months to 15 years	1,189,876		79	
2019	bOPV	subnational	0 to 15 years	1,235,207	1,193,533	81	98
2020	IPV	subnational	4 months to 15 years	183,660		71	
2022	bOPV	national	12 to 59 months	2,454,340		54	
2022	IPV	national	12 to 59 months	4,024,564		46	

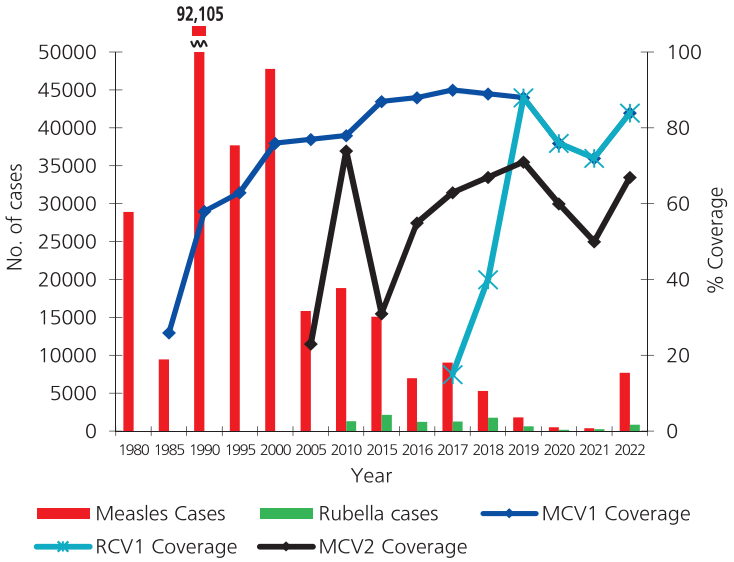
Source: WHO/UNICEF JRF (multiple years)

Figure 10: HepB3 and HepB birth dose immunization coverage[1], 2000-2022



[1] *WHO and UNICEF estimates of immunization coverage*

Figure 11: MCV1 & MCV2 coverage[1] and measles, rubella cases[2], 1980-2022



[1] *WHO and UNICEF estimates of immunization coverage*
[2] *WHO vaccine-preventable diseases: monitoring system 2022*

MR1 coverage by province

Figure 12: 2021

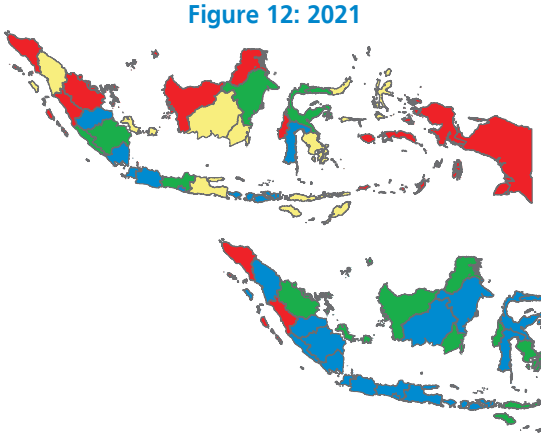
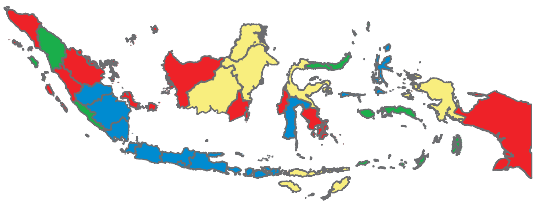


Figure 13: 2022

MR2 coverage by province

Figure 14: 2021

Figure 15: 2022



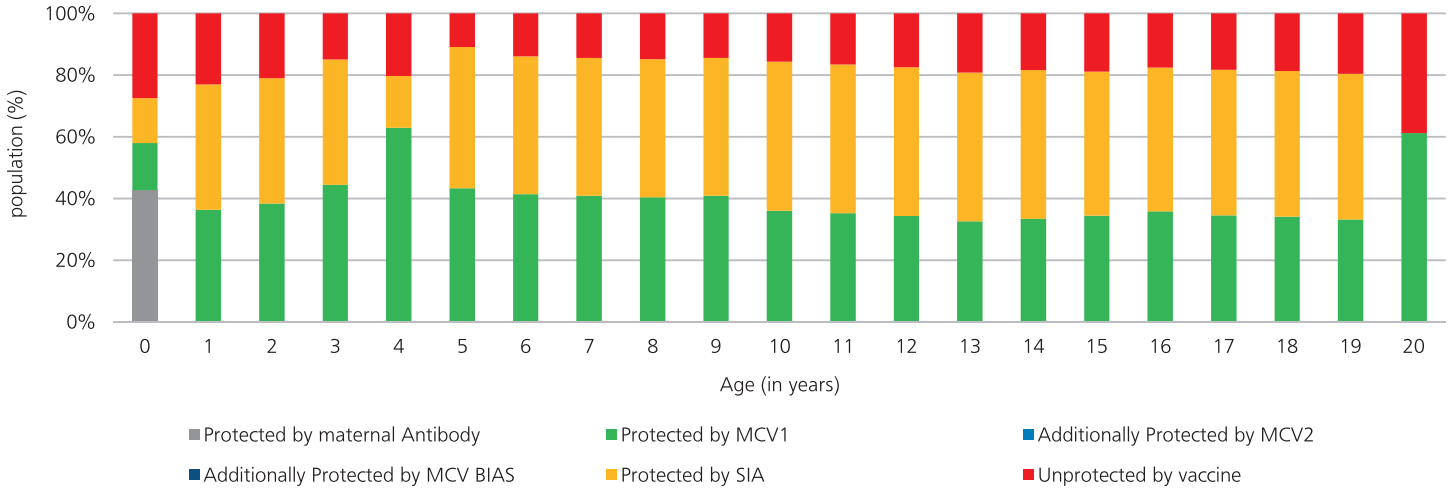
Source: SEAR annual EPI reporting form, 2021 and 2022 (administrative data)

Table 9: MCV/MR SIAs

Year	Geographic Coverage	Target group	Target	Coverage (%)
2005	Subnational	9 months to 15 years	5,515,324	94
2006	Subnational	9 months to 5 years	3,978,096	93
2006	Subnational	6 to 12 years	3,161,323	96
2007	Subnational	9 months to 12 years	2,692,912	106
2007	Subnational	6 to 12 years	2,569,350	102
2007	Subnational	9 to 59 months	14,916,592	93
2008	Subnational	1 to 3 years	11,203	78
2009	Subnational	9 to 59 months	1,763,122	97
2010	Subnational	9 to 59 months	3,619,024	92
2011	Subnational	9 to 59 months	11,843,093	98
2016	Subnational	9 to 59 months	4,222,172	86
2017	Subnational	9 months to 15 years	34,964,386	101
2018	Subnational	9 months to 15 years	31,963,154	73
2022	Subnational (5 province)	9 months to 15 years	36,497,635	73
2022	Subnational (22 province)	9 months to 12 years		
2022	Subnational (7 province)	9 to 59 months		

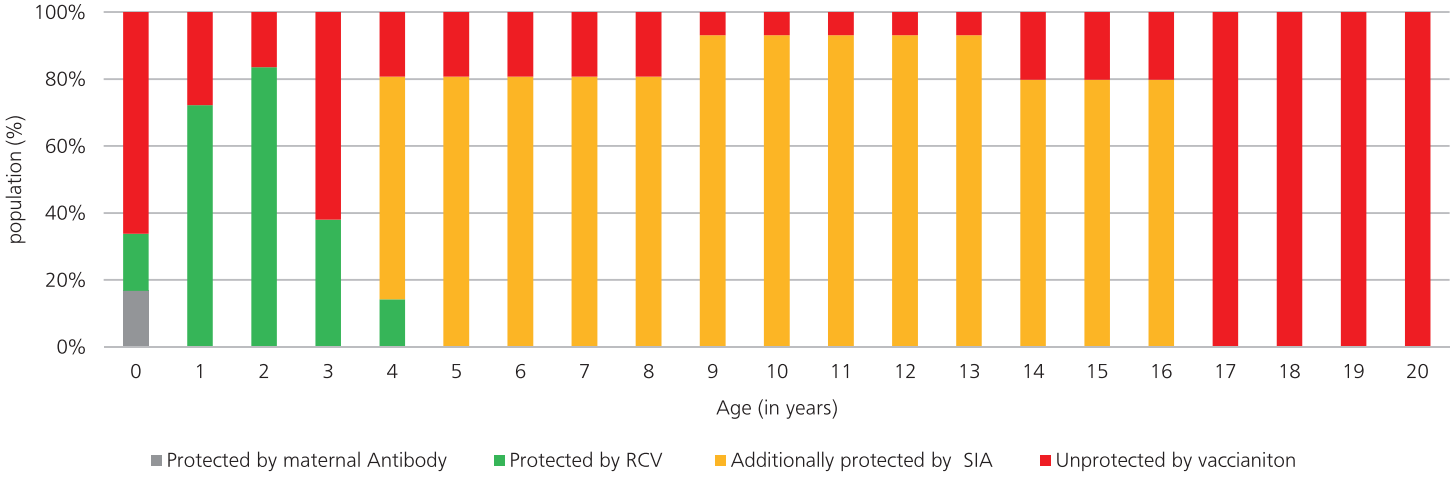
Source: WHO/UNICEF JRF (multiple years)

Figure 16: Immunity against measles - immunity profile by age in 2022*



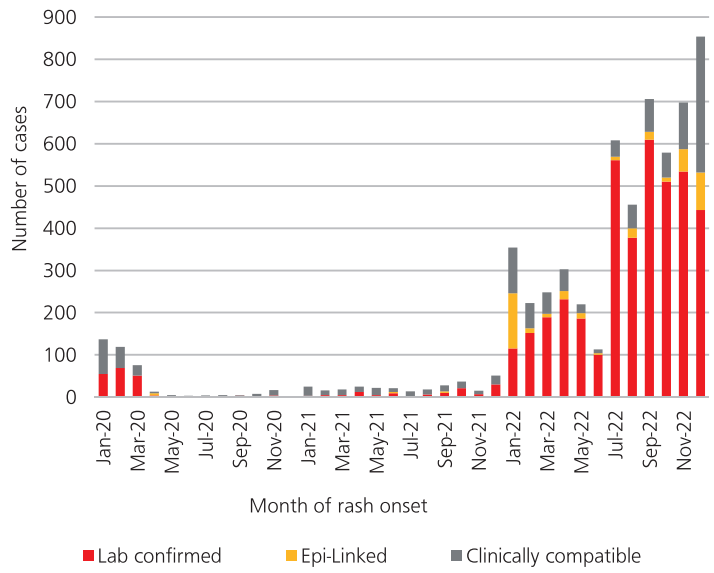
**Modelled using MSP tool ver 2*

Figure 17: Immunity against rubella through vaccination - immunity profile by age in 2022*



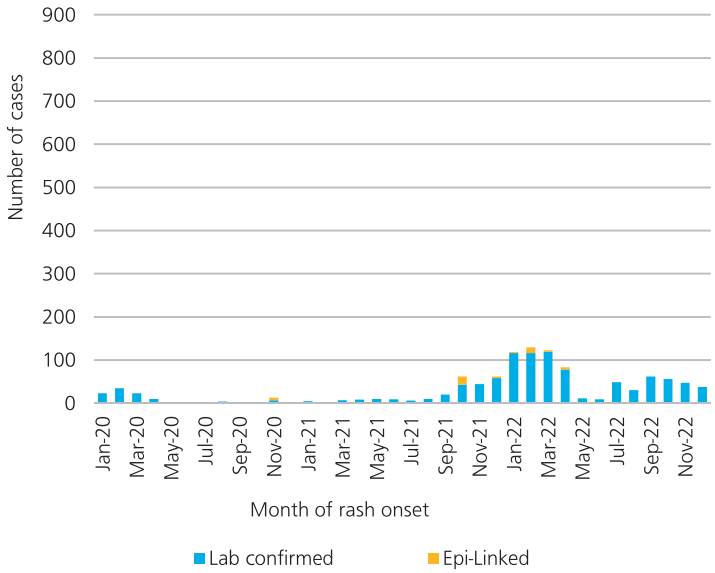
**Modelled using WHO and UNICEF estimates and JRF (multiple years) and does not include immunity due to natural infection*

Figure 18: Confirmed measles cases* by month 2020-2022



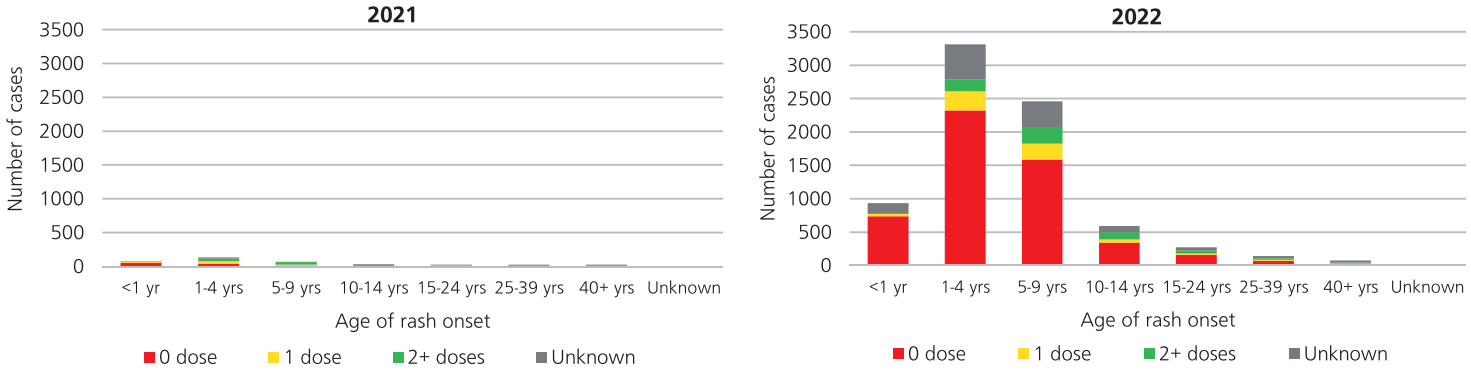
**Includes laboratory confirmed, epidemiologically linked and clinically compatible cases*
Source: SEAR measles case-based data

Figure 19: Confirmed rubella cases* by month 2020-2022



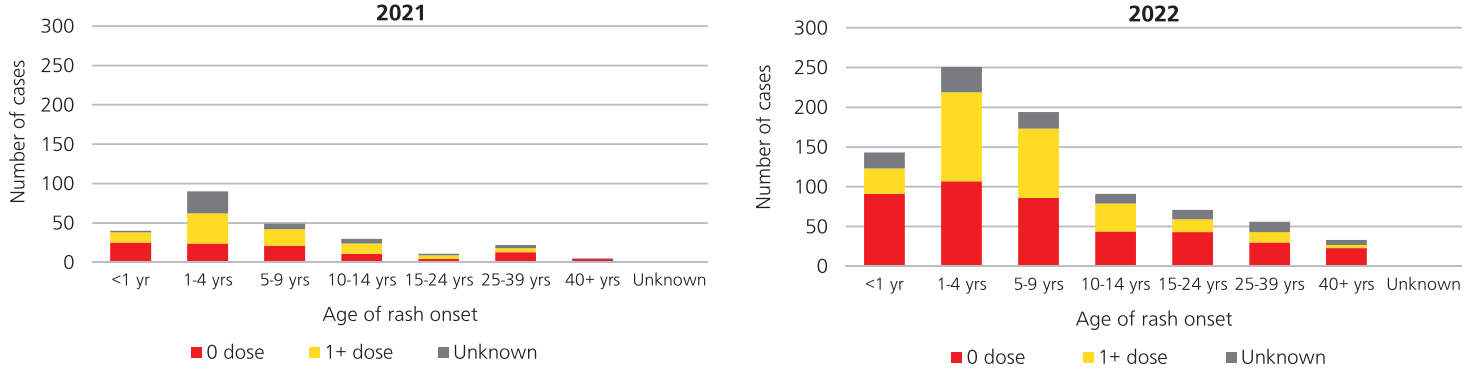
**Includes laboratory confirmed and epidemiologically linked cases*
Source: SEAR measles case-based data

Figure 20: Vaccination status of confirmed (laboratory, Epi linked and clinically compatible) measles cases, by age in 2021 and 2022



Source: SEAR measles case-based data

Figure 21: Vaccination status of confirmed (laboratory and Epi linked) rubella cases, by age in 2021 and 2022



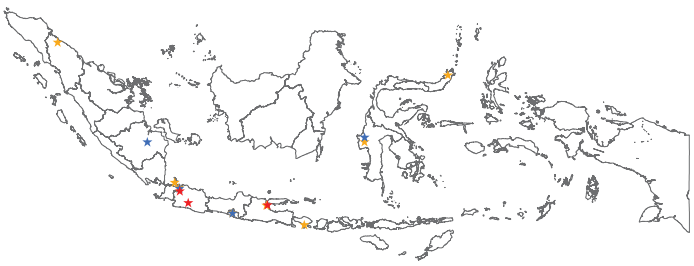
Source: SEAR measles case-based data

Table 10: Summary of measles surveillance indicators, 2020-2022

Indicator	Target	2020	2021	2022
Number of suspected measles cases		3,211	2,931	21,322
Confirmed measles cases	0	310	396	7,704
Lab confirmed	0	310	132	4,844
Epi-Linked	0	0	1	103
Clinically-compatible	0	0	261	2,757
Confirmed rubella cases	0	159	268	839
Lab confirmed	0	159	267	839
Epi-Linked	0	0	1	0
Discarded non-measles non-rubella cases		2,751	2,269	9,149
Percentage of suspected cases with adequate investigation initiated within 48 hours of notification	≥ 80%	68	70.8	79
Reporting rate of non-measles non-rubella cases to national level per 100,000 population	≥ 2	1.01	0.83	3.33
Percentage of second-level administrative units reporting at least 2 non-measles non-rubella cases per 100,000 population per 100,00 population	≥ 80%	11	14	46
Percentage of surveillance units reporting measles and rubella data to the national level on time, even in the absence of cases	≥ 80%	77.4	69.6	88.8
Percentage of specimens received at the laboratory within 5 days of collection	≥ 80%	98.1	92	97
Percentage of IgM results reported to the national public health authorities by the laboratory within 4 days of receipt of specimens	≥ 80%	61.9	82.5	53.4
Genotypes detected				
Measles		ND	ND	D8, B3
Rubella		ND	ND	ND

Source: SEAR Annual EPI Reporting Form (multiple years) *ND=No data*

Figure 22: Network of WHO supported surveillance and immunization medical officers and laboratories



Polio, measles and rubella laboratories
- National Institute of Health Research and development (NIHRD), Jakarta
- Biofarma, Bandung
- Public Health Laboratory, Surabaya

Japanese encephalitis laboratories
- National Institute of Health Research and development (NIHRD), Jakarta
- BBTKLPP Jakarta
- BBTKLPP Yogyakarta
- BBTKLPP Surabaya, East Java
- BBTKLPP Medan, North Sumatera
- BBTKLPP Manado, North Sulawesi
- BBTKLPP Makassar, South Sulawesi

Measles and rubella laboratory
- National Institute of Health Research and development (NIHRD), Jakarta
- Biofarma Laboratory, Bandung
- Public Health Laboratory, Surabaya
- Public Health Laboratory, Yogyakarta
- Public Health Laboratory, Palembang
- Public Health Laboratory, Makassar
- Public Health Laboratory, Jakarta

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