# Measles, Rubella and Congenital Rubella Syndrome (CRS) Country Profile

Pan American Health Organization

#### Introduction

The measles and rubella country profile aims to facilitate the analysis of data compiled in the last five years. This profile was only developed for those countries who officially reported vaccination coverage and case by case surveillance and laboratory data to the Pan American Health Organization (PAHO). There may be minor differences in the country profile if the country has updated data that was not reported to PAHO. The country profile will be automatically updated twice per year: at the end of April (surveillance data) and at the end of September (vaccination coverage data).

#### **General Information**

Table 1: Demographic data, 2022.

Demographic group	Population
1 year of age	229,342
Total population	19,603,758

Table 2: Last endemic cases by year and disease.

Measles	Rubella	CRS
1993	2008	2008

Table 3: Vaccination schedule.

Vaccine	1st Dose	2nd Dose	MMR2 Year Introduced
MMR	1 yr	36 mo	1992

Table 4: Accumulation of susceptibles for measles and rubella.

Year of the last follow-up campaign	Vaccine used (M, MR, MMR)	Age group vaccinated	Number vacci- nated (numera- tor)	Coverage of the follow-up campaign (B/C)*100	Number of susceptibles 1-4 years of age	Year of next cam- paign
2020	MMR	13 months-5 years11 months 29 días	683,587	57.22	166,741	2025

### **Epidemiology and Quality of Surveillance**

Figure 1: Distribution of suspected MR cases and notification rate at the national level, 2018-2022.

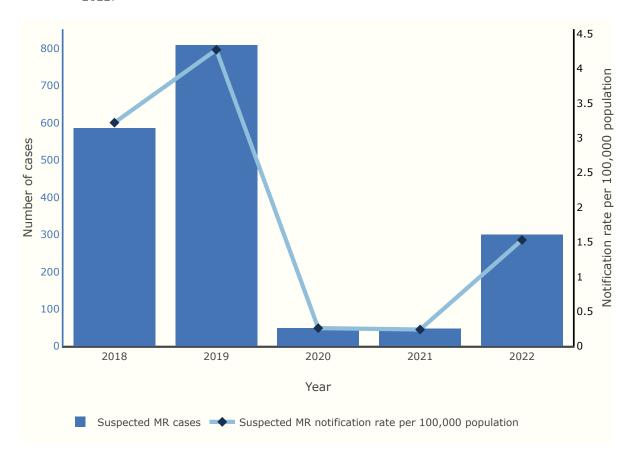


Table 5: Distribution of suspected MR cases and notification rate at the national level, 2018-2022.

	2018	2019	2020	2021	2022
Suspected MR cases Suspected MR notification rate per 100,000 population	586	809	49	47	300
	3.22	4.27	0.26	0.24	1.53

Figure 2: Distribution of suspected CRS cases and notification rate at the national level, 2018-2022.

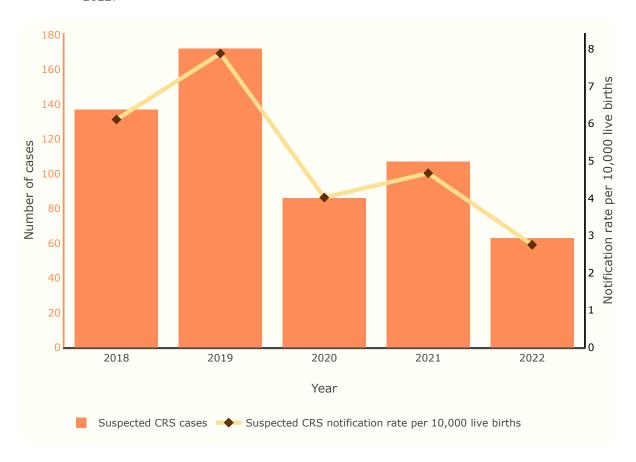


Table 6: Distribution of suspected CRS cases and notification rate at the national level, 2018-2022.

	2018	2019	2020	2021	2022
Suspected CRS cases	137	172	86	107	63
Suspected CRS notification rate per 10,000 live births	6.11	7.88	4.02	4.67	2.75

Figure 3: Reported cases of measles and rubella by epidemiological week and final classification: confirmed, discarded and under investigation, 2018-2022.

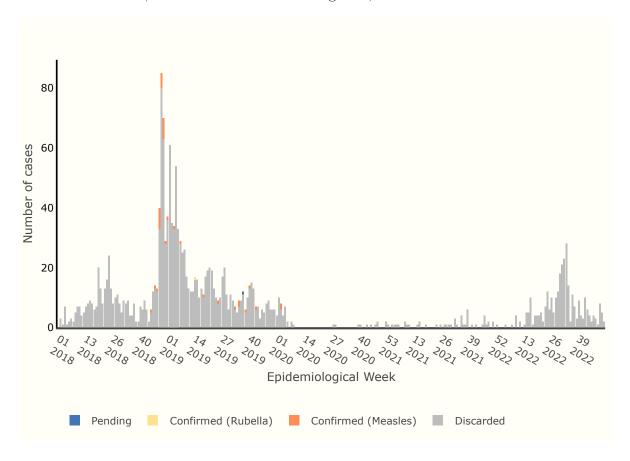


Figure 4: Number of measles and rubella cases by epidemiological year pending final classification, 2018-2022.

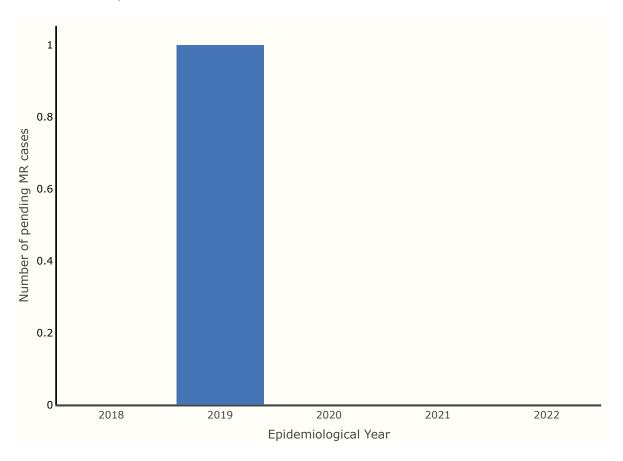
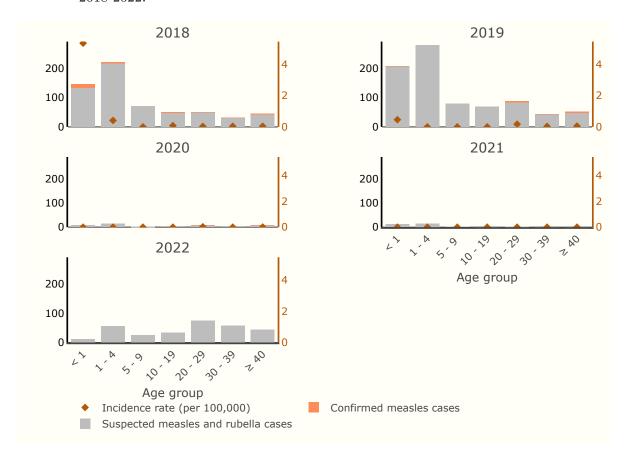
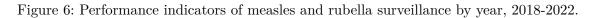


Table 7: Reported cases of measles and rubella by epidemiological year and final classification, 2018-2022.

2018 2019 2020 2021	2020	2019	2018	Classification
sles) 23 11 2 (	6	11	23	Confirmed (Measles)
ella) $0$ $1$ $0$ $0$	(	1	0	Confirmed (Rubella)
0 1 0 0	(	1	0	Pending
563 796 47 47	47	796	563	Discarded
586 809 49 47	49	809	586	Total
ella) 0 1 0 0 0 1 0 0 563 796 47 47		1 1 796	0 0 563	Confirmed (Rubella) Pending Discarded

Figure 5: Distribution of reported measles and rubella cases and incidence rate by age group, 2018-2022.





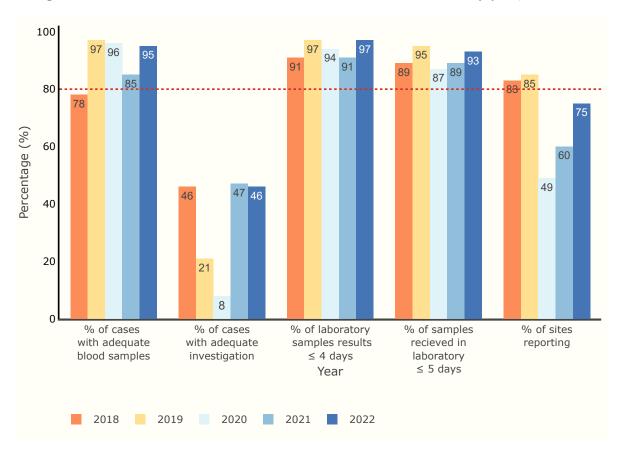


Figure 7: Proportion of the 11 variables reported for adequate investigation indicator, 2022.

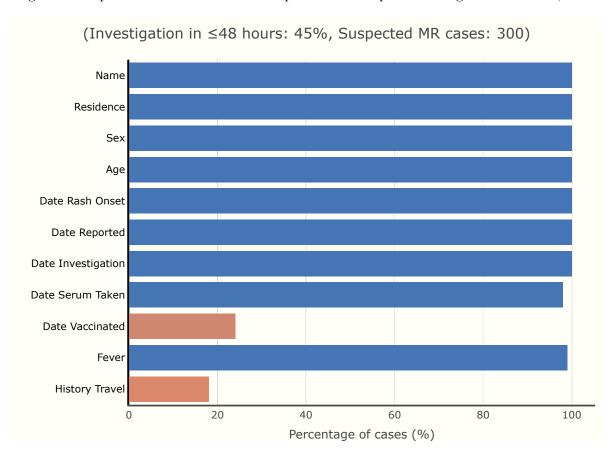


Table 8: Municipalities reporting measles and rubella suspected cases by year, 2018-2022.

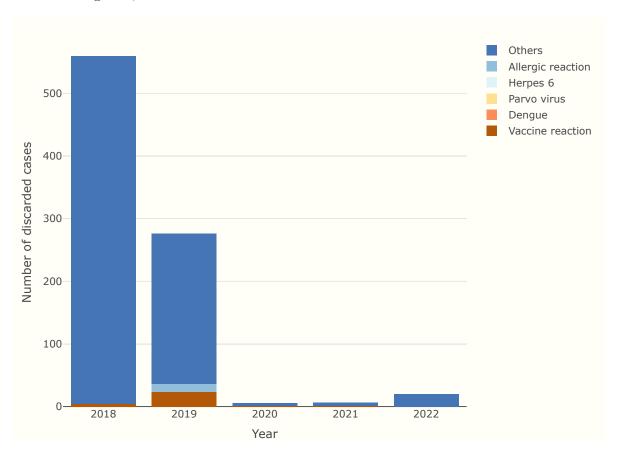
Year	No. of municipalities reporting suspected cases	Total municipalities in the country	% of municipalities reporting suspected cases
2018	114	346	33
2019	124	346	36
2020	31	346	9
2021	31	346	9
2022	84	346	24

## **Laboratory Surveillance**

Table 9: Criteria used to discard suspected measles and rubella cases by year, 2018-2022.

			Criteria	Criteria for discarding			No. of cases discarded by other differential diagnosis				
Year	No. of suspected cases reported	No. of discarded cases	IgM Negative	No data	Others	Vaccine reaction	Dengue	Parvo virus	Herpes 6	Allergic reaction	Others
2018	586	563	3	1	559	4	0	0	0	0	555
2019	809	796	520	0	276	24	0	0	0	12	240
2020	49	47	42	0	5	1	0	0	0	0	4
2021	47	47	41	0	6	1	0	0	0	0	5
2022	300	300	280	0	20	0	0	0	0	0	20

Figure 8: Distribution of discarded measles and rubella suspected cases by other differential diagnosis, 2018-2022.



### **Analysis of Vaccination Coverage and Population Cohorts**

Figure 9: Coverage of the first dose of measles-mumps-rubella (MMR1) vaccine, number of doses administered, and number of children 1 year of age, 2018-2022.

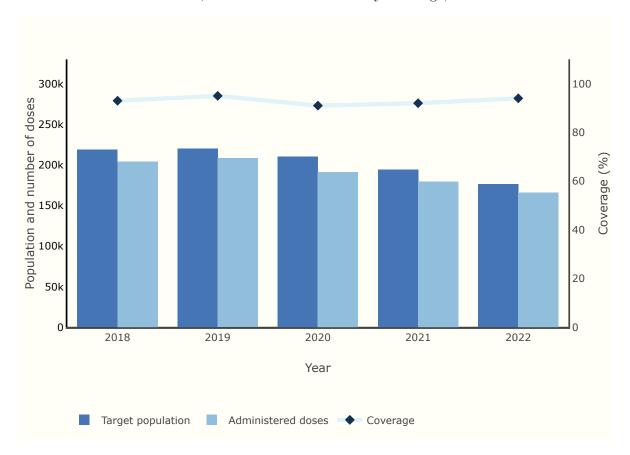


Figure 10: Coverage of the second dose of measles-mumps-rubella (MMR2) vaccine, number of doses administered, and number of children 36 month(s) of age, 2018-2022.

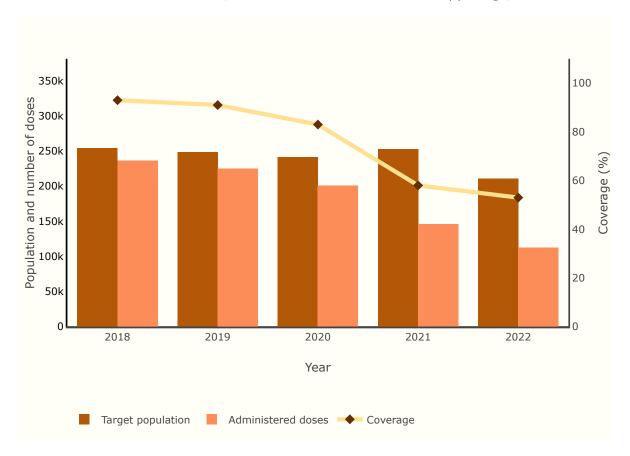
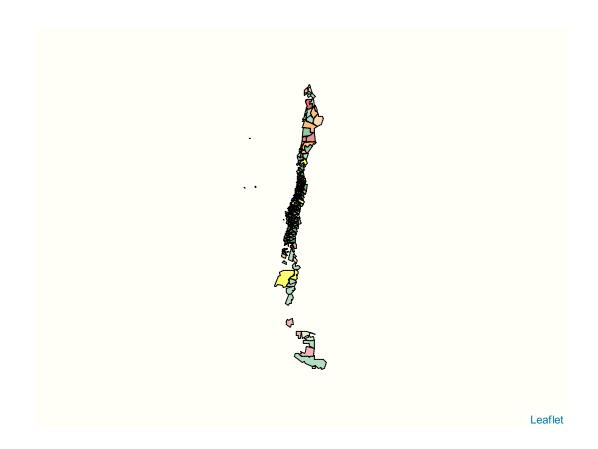
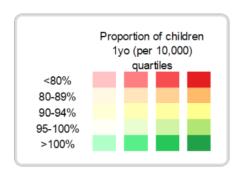


Table 10: Vaccination coverage with first and second dose of measles-mumps-rubella (MMR1 and MMR2) vaccines by target population and administered doses, 2018-2022.

		MMR1			MMR2	
Year	Administered doses	Target population	Coverage	Administered doses	Target population	Coverage
2018	204,353	218,918	93	236,445	254,183	93
2019	208,482	220,307	95	225,168	248,246	91
2020	191,483	210,701	91	200,673	241,404	83
2021	179,799	194,748	92	145,811	252,899	58
2022	166,149	176,940	94	$112,\!556$	210,703	53

Figure 11: Subnational coverage of the first dose of measles-mumps-rubella (MMR1) vaccine and proportion of children aged 1 year, 2021







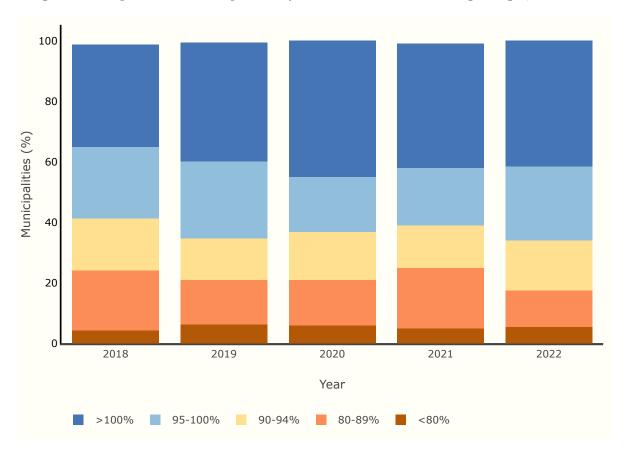
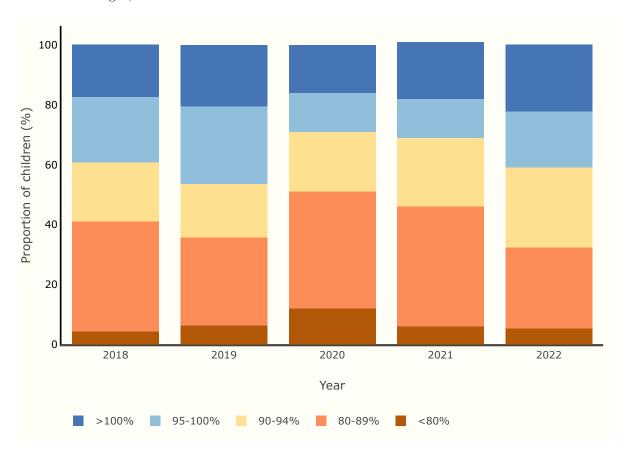


Figure 13: Proportion of children living in those municipalities for MMR1 vaccination coverage ranges, 2018-2022.





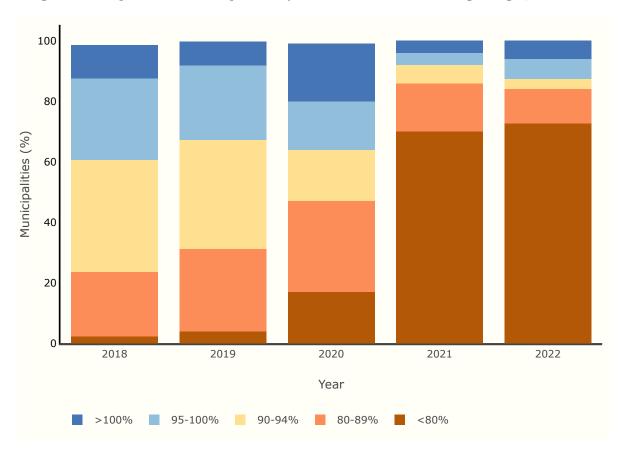


Figure 15: Proportion of children living in those municipalities for MMR2 vaccination coverage ranges, 2018-2022.

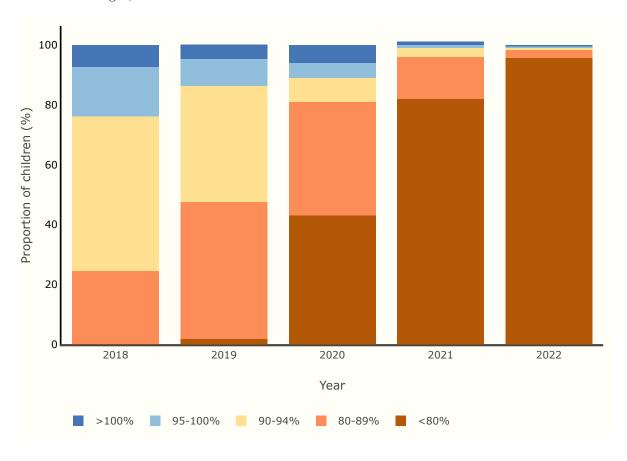


Table 11: Proportion of municipalities with MMR1 and MMR2 coverage ranges and proportion of children living in those municipalities, 2018-2022.

		MMR1		MN	IR2
Year	Coverage range (%)	MMR1	MMR2	MMR1	MMR2
2022	<80	5.5	72.8	5.4	95.7
2022	80-89	12.1	11.3	27.1	2.6
2022	90-94	16.5	3.2	26.7	0.6
2022	95-100	24.3	6.6	18.6	0.6
2022	>100	41.6	6.1	22.2	0.5
2021	< 80	5.0	70.0	6.0	82.0
2021	80-89	20.0	16.0	40.0	14.0
2021	90-94	14.0	6.0	23.0	3.0

2021	95-100	19.0	4.0	13.0	1.0
2021	>100	41.0	4.0	19.0	1.0
2020	<80	6.0	17.0	12.0	43.0
2020	80-89	15.0	30.0	39.0	38.0
2020	90-94	16.0	17.0	20.0	8.0
2020	95-100	18.0	16.0	13.0	5.0
2020	>100	45.0	19.0	16.0	6.0
2019	<80	6.4	4.0	6.4	1.9
2019	80-89	14.7	27.2	29.4	45.7
2019	90-94	13.6	36.1	17.8	38.7
2019	95-100	25.4	24.6	25.8	9.0
2019	>100	39.3	7.8	20.5	4.7
2018	<80	4.3	2.3	4.4	0.2
2018	80-89	19.9	21.4	36.8	24.4
2018	90-94	17.1	37.0	19.7	51.5
2018	95-100	23.7	26.9	21.7	16.6
2018	>100	33.8	11.0	17.5	7.3

### References

Section	Sources
General Information	<ul> <li>[1] United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022, Online Edition.</li> <li>[2] Country reports through the electronic PAHO-WHO/UNICEF Joint</li> </ul>
Epidemiology and Quality of Surveillance	Reporting Form (eJRF).  [3] Integrated Surveillance Information System (ISIS) and country reports to CIM/PAHO.  [2] Country reports through the electronic PAHO-WHO/UNICEF Joint
Laboratory Surveillance	Reporting Form (eJRF). [3] Integrated Surveillance Information System (ISIS) and country reports to CIM/PAHO.
Analysis of Vaccination Coverage and Population Cohorts	[2] Country reports through the electronic PAHO-WHO/UNICEF Joint Reporting Form (eJRF).