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

Nicaragua

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	138,718
Total population	6,948,415

Table 2: Last endemic cases by year and disease.

Measles	Rubella	CRS
1995	2004	2004

Table 3: Vaccination schedule.

Vaccine	1st Dose	2nd Dose	MMR2 Year Introduced
MMR	12 mo	18 mo	2017

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 vaccinated (numerator)	Coverage of the follow-up campaign (B/C)*100	Number of susceptibles 1-4 years of age	Year of next campaign
2016	MR	1-4 years	568,422	105.48	0	NA

Epidemiology and Quality of Surveillance

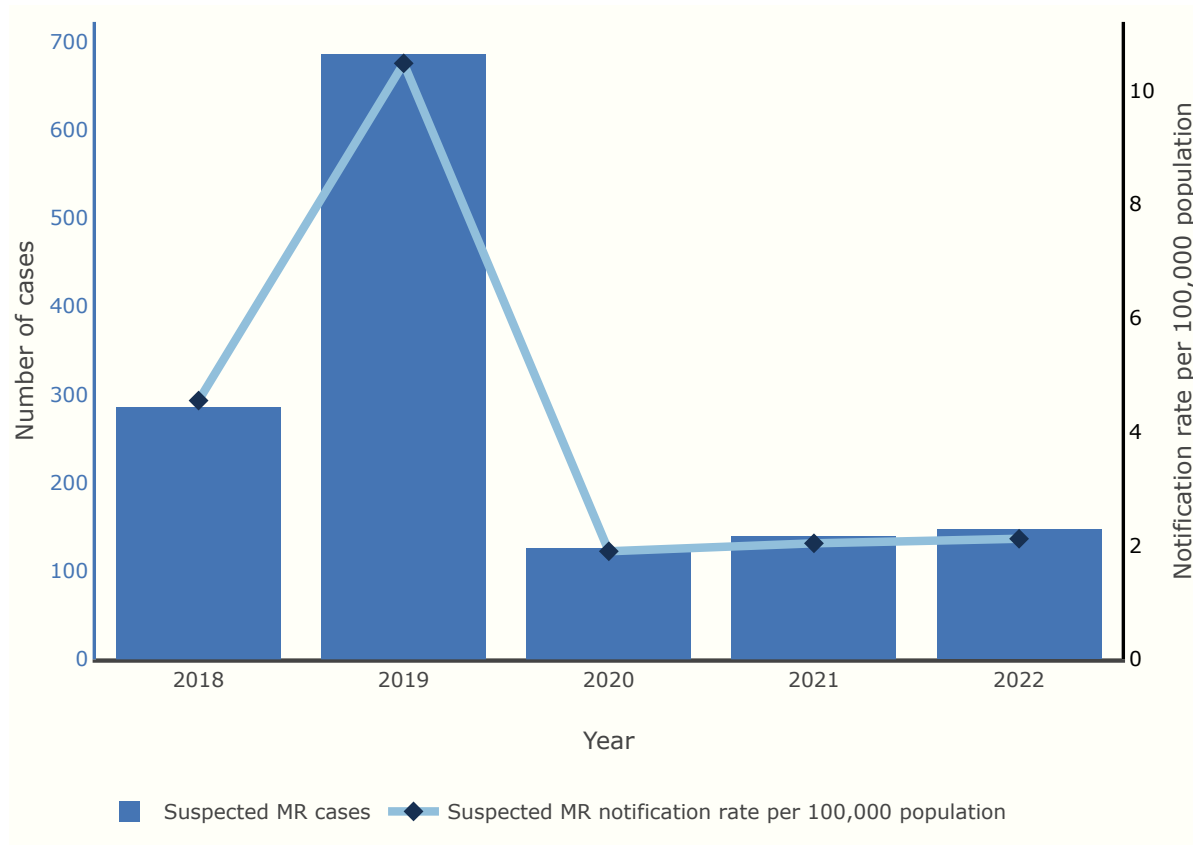Figure 1: Distribution of suspected MR cases and notification rate at the national level, 2018-2022.

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

	2018	2019	2020	2021	2022
Suspected MR cases	286	686	126	140	147
Suspected MR notification rate per 100,000 population	4.55	10.48	1.9	2.04	2.12

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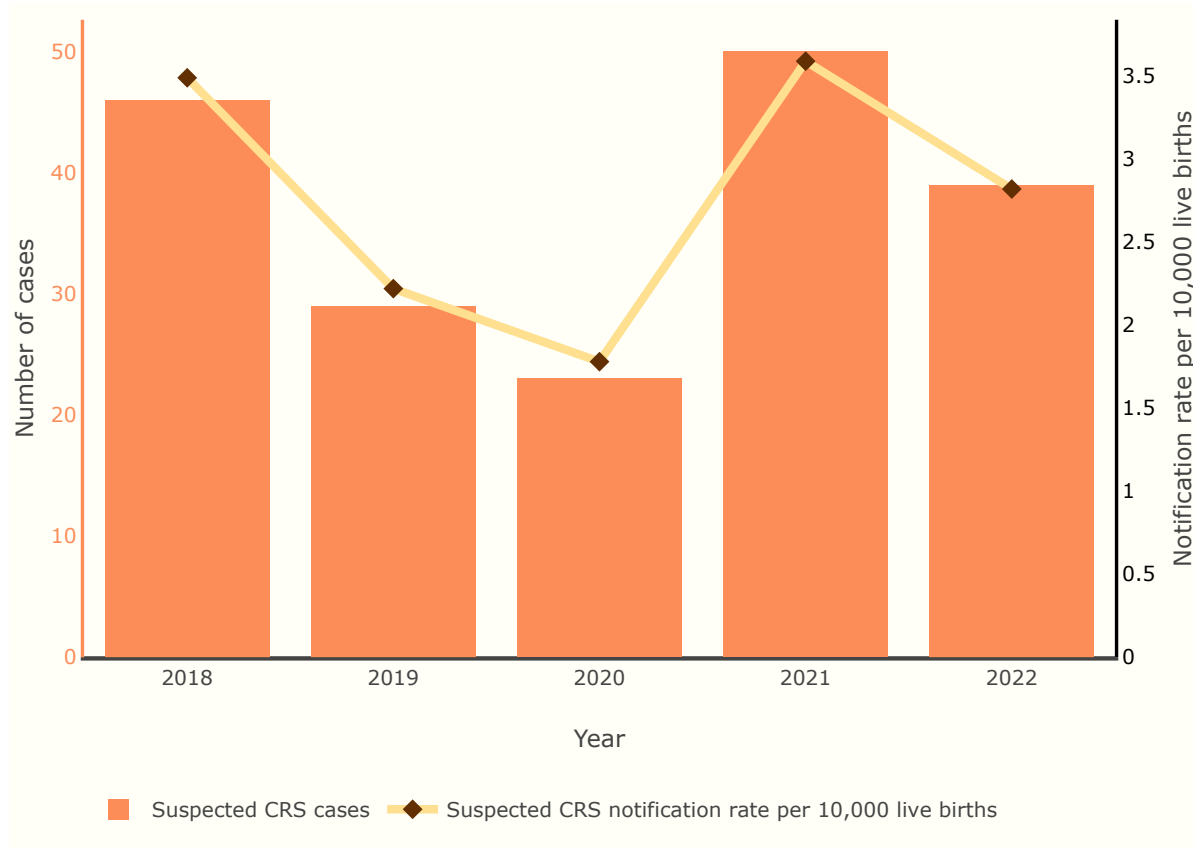

Table 6: Distribution of suspected CRS cases and notification rate at the national level, 2018-2022.

	2018	2019	2020	2021	2022
Suspected CRS cases	46	29	23	50	39
Suspected CRS notification rate per 10,000 live births	3.49	2.22	1.78	3.59	2.82

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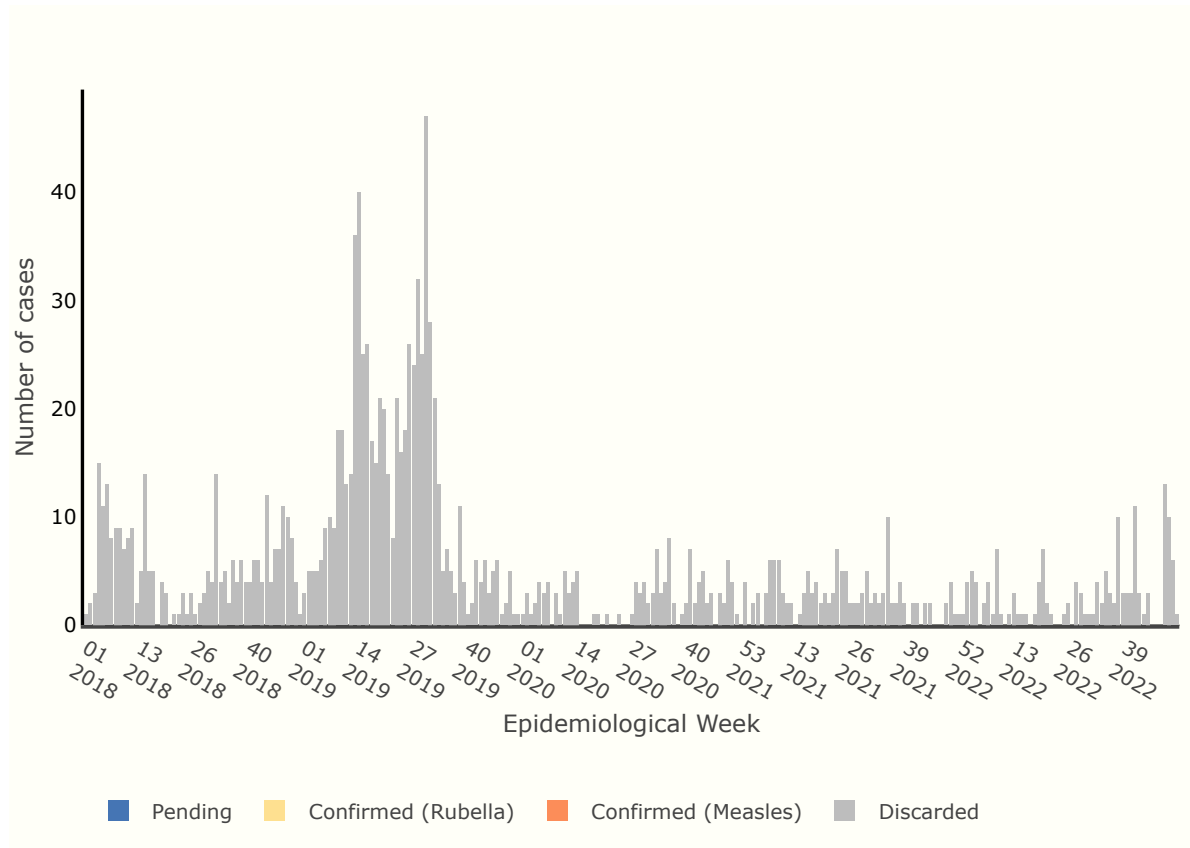

Table 7: Reported cases of measles and rubella by epidemiological year and final classification, 2018-2022.

Classification	2018	2019	2020	2021	2022
Confirmed (Measles)	0	0	0	0	0
Confirmed (Rubella)	0	0	0	0	0
Pending	0	0	0	0	0
Discarded	286	686	126	140	147
Total	286	686	126	140	147

Figure 4: Distribution of reported measles and rubella cases and incidence rate by age group, 2018-2022.
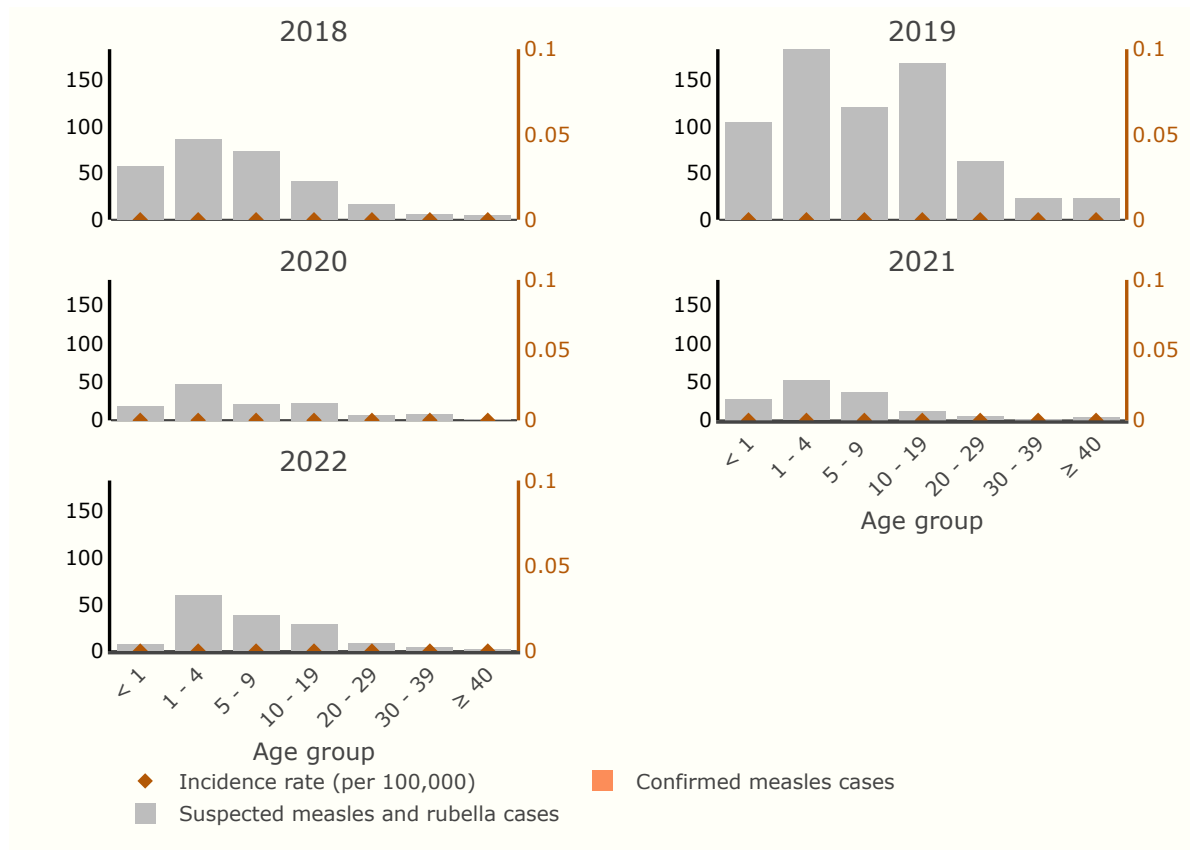
Figure 5: Performance indicators of measles and rubella surveillance by year, 2018-2022.
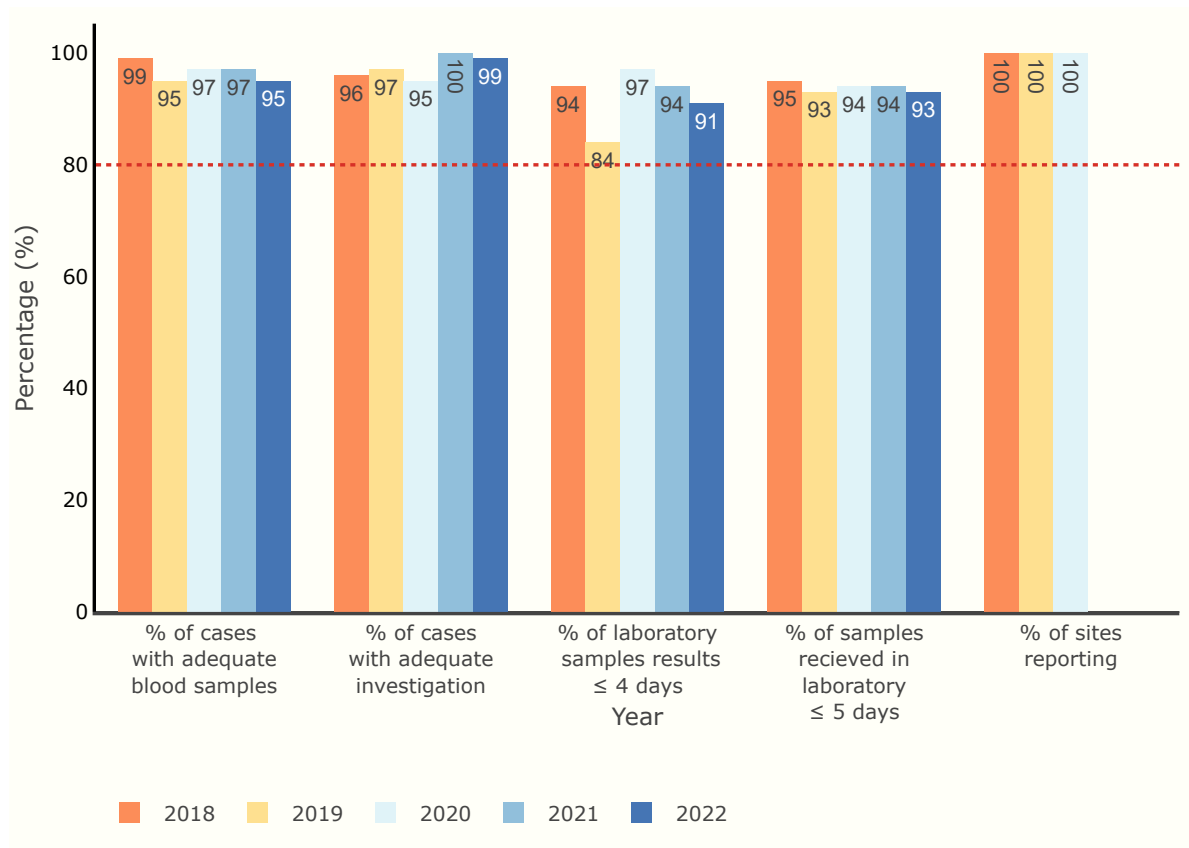
Figure 6: Proportion of the 11 variables reported for adequate investigation indicator, 2022.
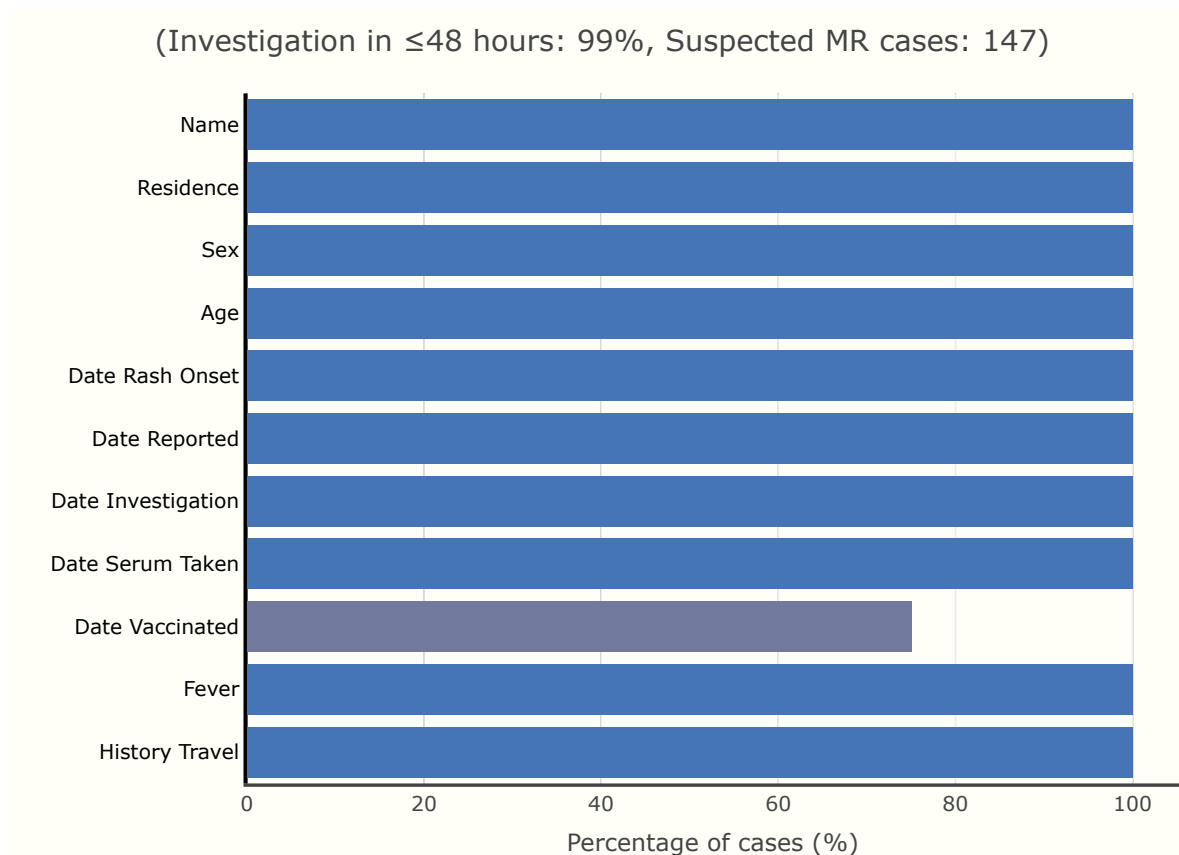

(Investigation in ≤48 hours: 99%, Suspected MR cases: 147)

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	126	153	82
2019	119	153	78
2020	86	153	56
2021	80	153	52
2022	92	153	60

Laboratory Surveillance

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

Year	No. of suspected cases reported	No. of discarded cases	Criteria for discarding			No. of cases discarded by other differential diagnosis					
			IgM Negative	No data	Others	Vaccine reaction	Dengue	Parvo virus	Herpes 6	Allergic reaction	Others
2018	286	286	284	0	2	1	0	0	0	0	1
2019	686	686	641	0	45	5	15	1	0	0	24
2020	126	126	110	0	16	2	11	0	0	0	3
2021	140	140	136	0	4	2	1	0	0	0	1
2022	147	147	144	0	3	2	0	0	0	0	1

Figure 7: Distribution of discarded measles and rubella suspected cases by other differential diagnosis, 2018-2022.
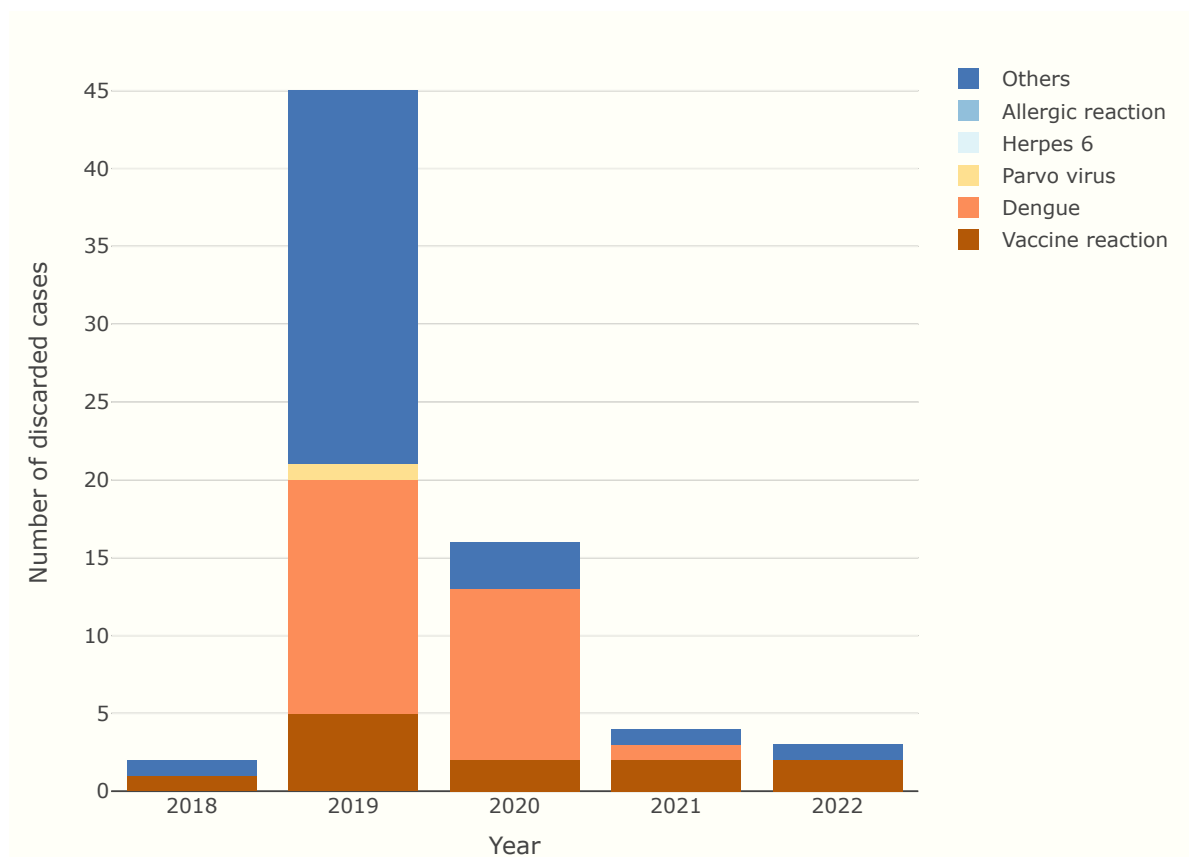
Analysis of Vaccination Coverage and Population Cohorts

Figure 8: 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.
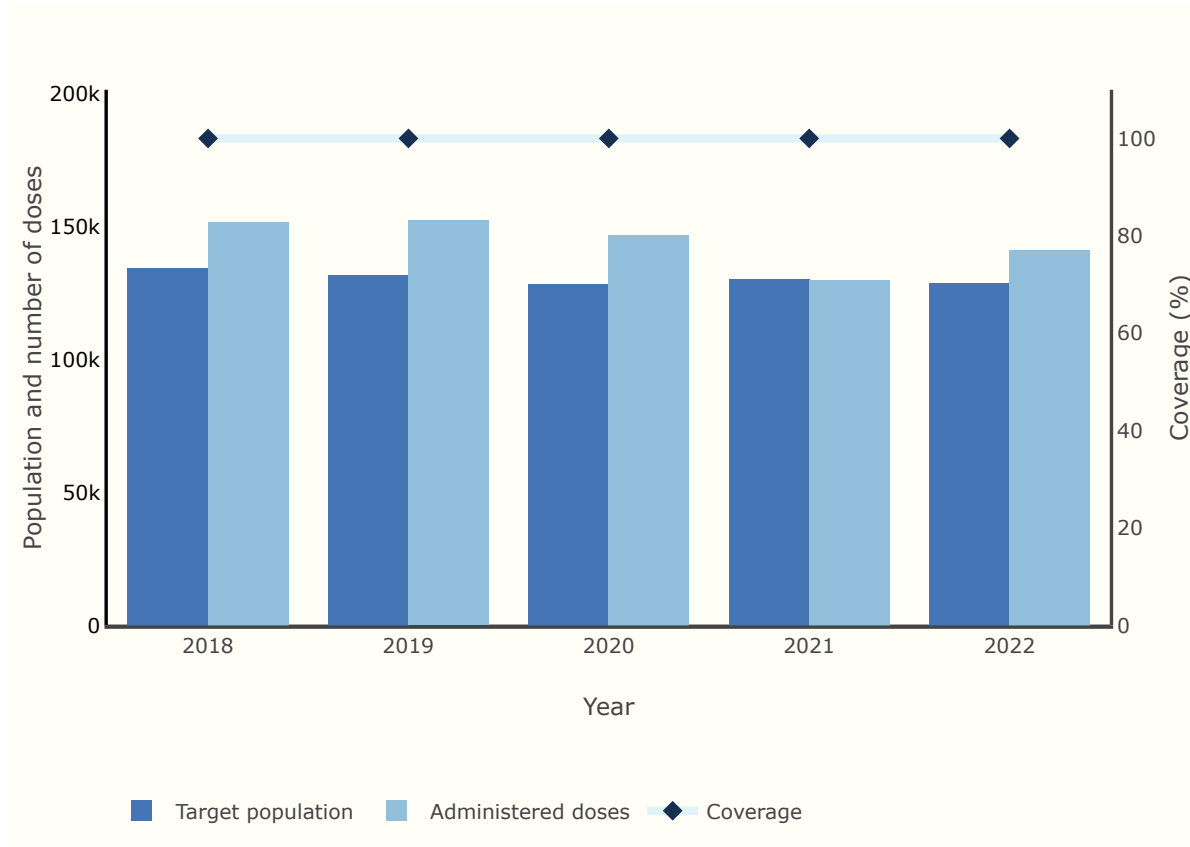
Figure 9: Coverage of the second dose of measles-mumps-rubella (MMR2) vaccine, number of doses administered, and number of children 18 month(s) of age, 2018-2022.
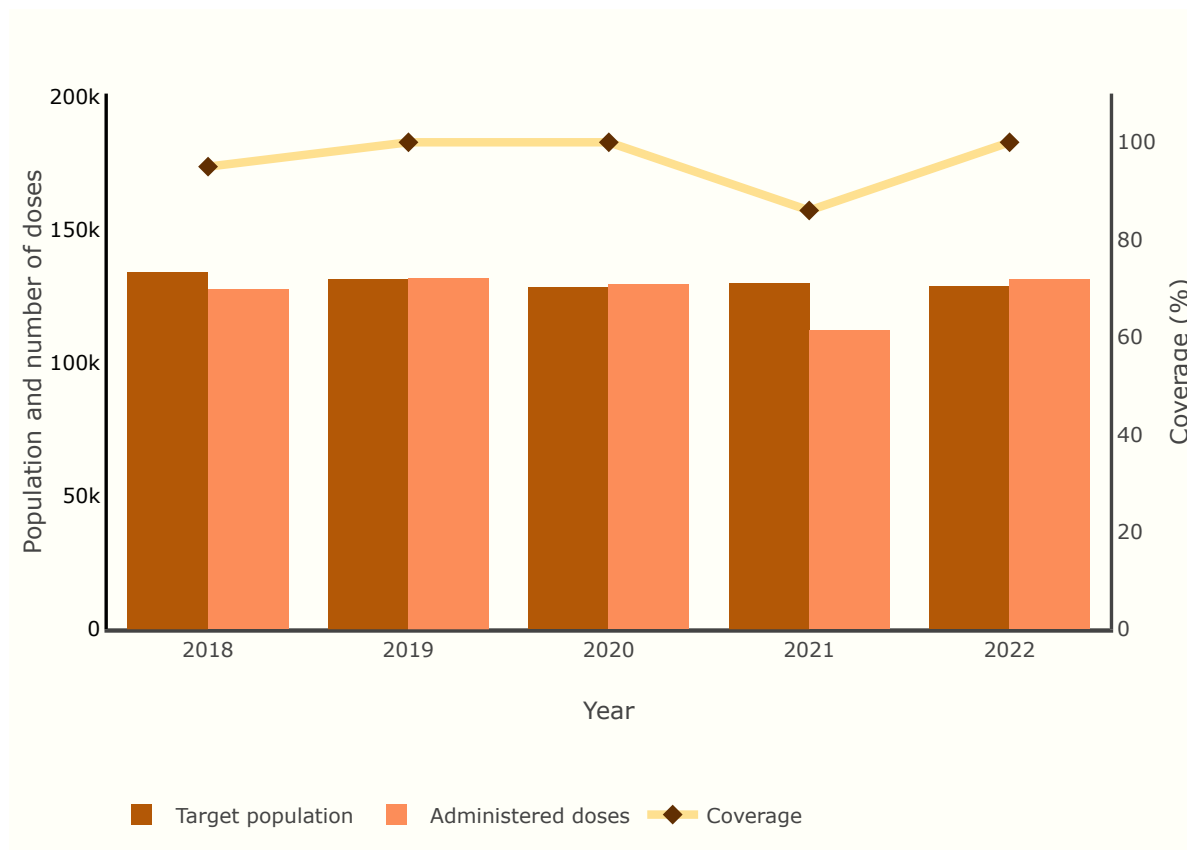

Table 10: Vaccination coverage with first and second dose of measles-mumps-rubella (MMR1 and MMR2) vaccines by target population and administered doses, 2018-2022.

Year	MMR1			MMR2		
	Administered doses	Target population	Coverage	Administered doses	Target population	Coverage
2018	151,623	134,266	100	127,784	134,266	95
2019	152,232	131,606	100	131,974	131,606	100
2020	146,890	128,499	100	129,631	128,499	100
2021	129,958	130,288	100	112,361	130,288	86
2022	141,101	128,804	100	131,497	128,804	100

Figure 10: Proportion of municipalities by MMR1 vaccination coverage ranges, 2018-2022.
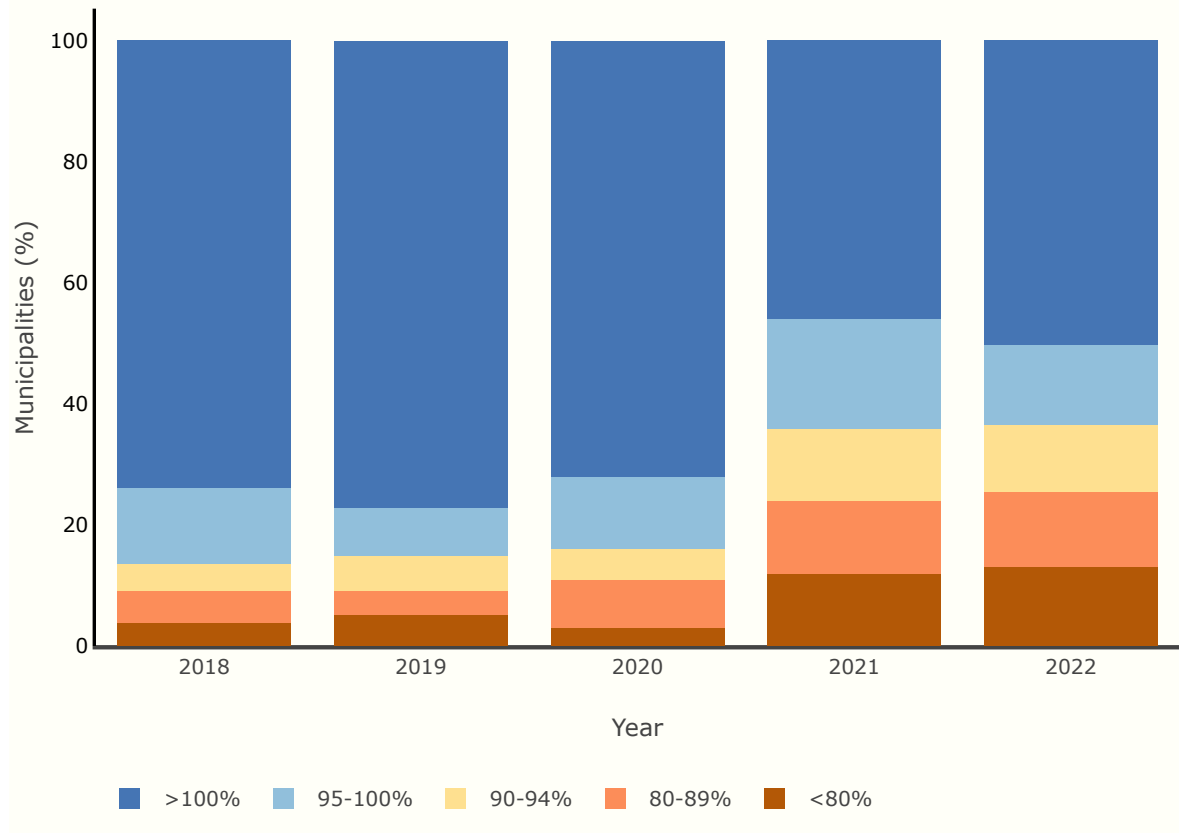
Figure 11: Proportion of children living in those municipalities for MMR1 vaccination coverage ranges, 2018-2022.
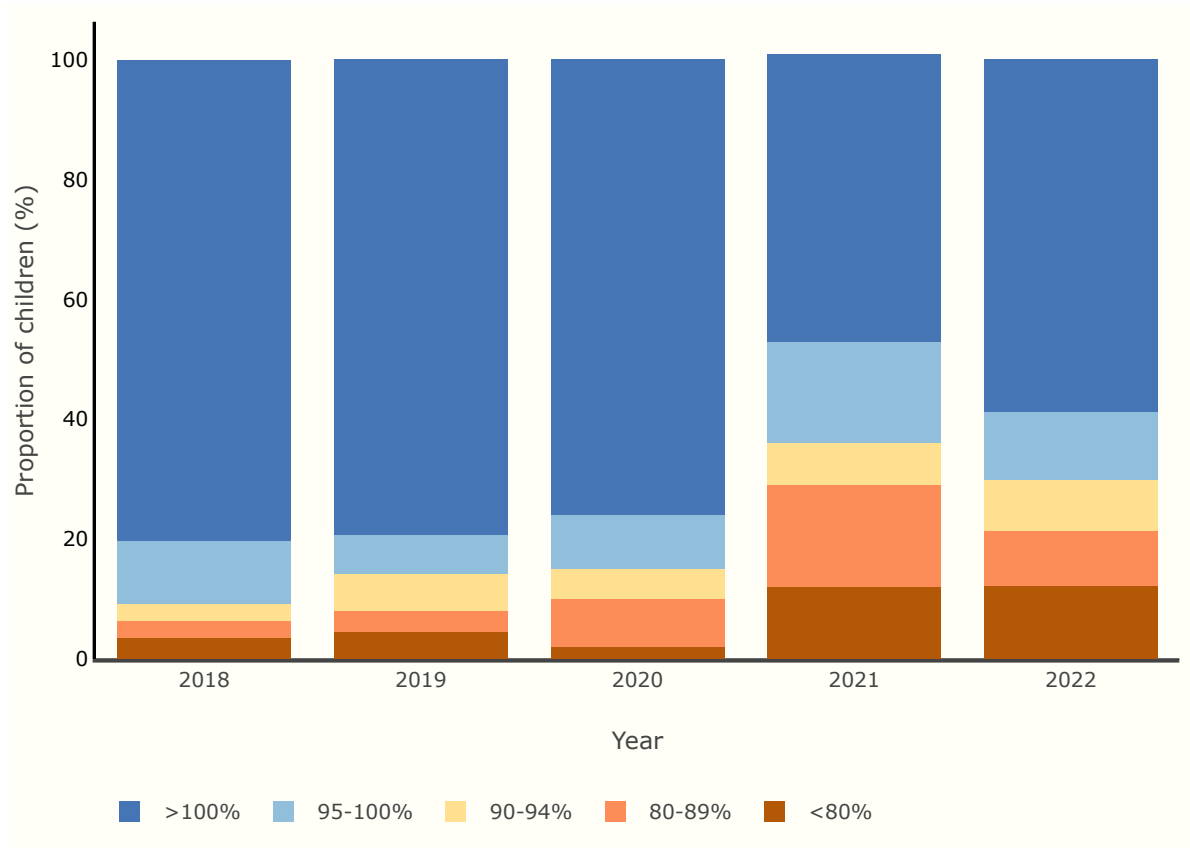
Figure 12: Proportion of municipalities by MMR2 vaccination coverage ranges, 2018-2022.
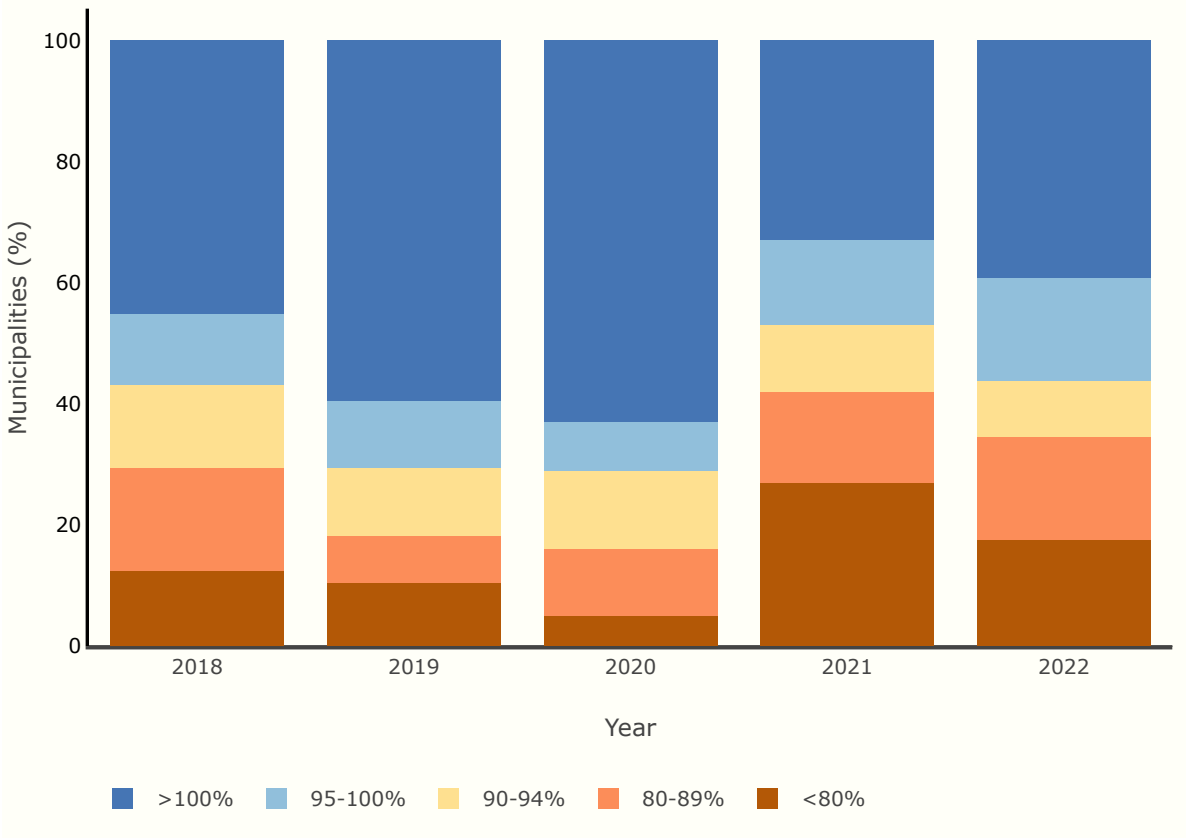
Figure 13: Proportion of children living in those municipalities for MMR2 vaccination coverage ranges, 2018-2022.
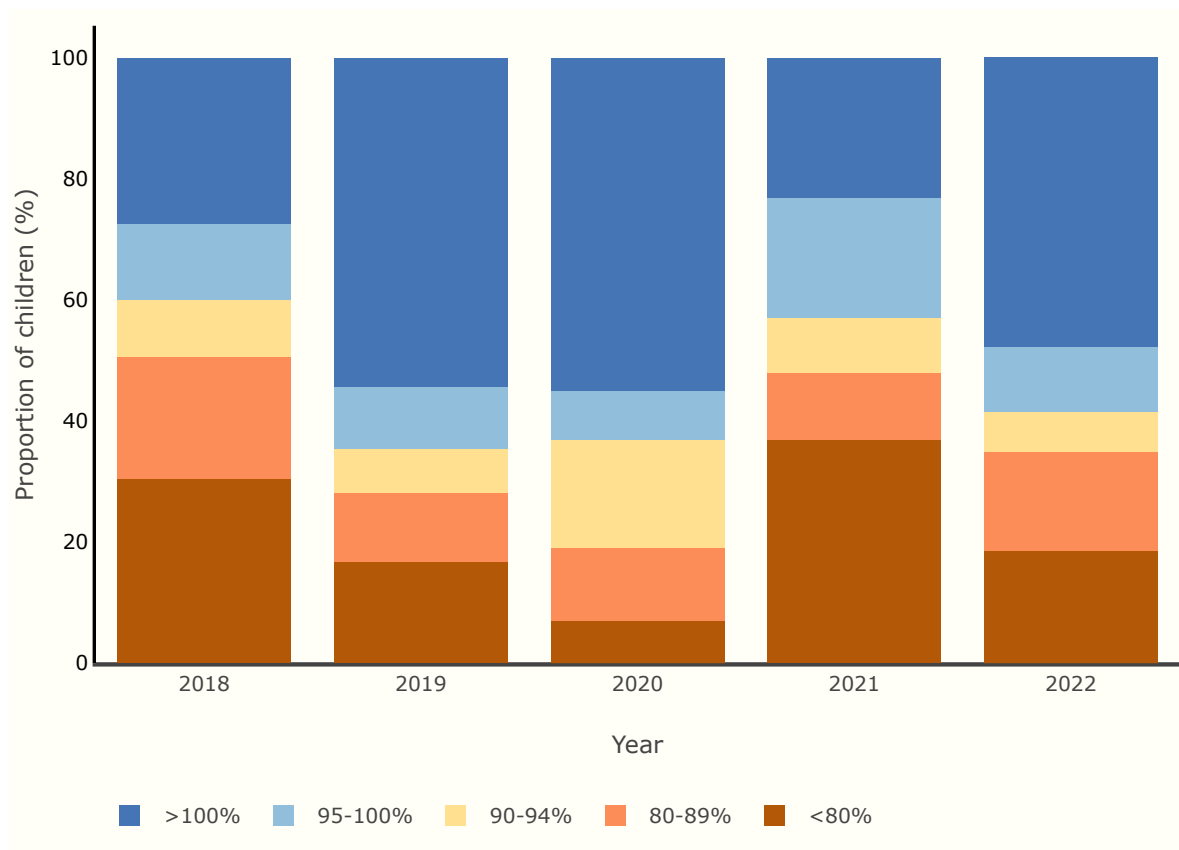

Table 11: Proportion of municipalities with MMR1 and MMR2 coverage ranges and proportion of children living in those municipalities, 2018-2022.

		MMR1		MMR2	
Year	Coverage range (%)	MMR1	MMR2	MMR1	MMR2
2022	<80	13.1	17.6	12.3	18.7
2022	80-89	12.4	17.0	9.1	16.2
2022	90-94	11.1	9.2	8.6	6.6
2022	95-100	13.1	17.0	11.2	10.8
2022	>100	50.3	39.2	58.8	47.8
2021	<80	12.0	27.0	12.0	37.0
2021	80-89	12.0	15.0	17.0	11.0
2021	90-94	12.0	11.0	7.0	9.0

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Year	Range				
2021	95-100	18.0	14.0	17.0	20.0
2021	>100	46.0	33.0	48.0	23.0
2020	<80	3.0	5.0	2.0	7.0
2020	80-89	8.0	11.0	8.0	12.0
2020	90-94	5.0	13.0	5.0	18.0
2020	95-100	12.0	8.0	9.0	8.0
2020	>100	72.0	63.0	76.0	55.0
2019	<80	5.2	10.5	4.5	16.8
2019	80-89	3.9	7.8	3.6	11.3
2019	90-94	5.9	11.1	6.2	7.4
2019	95-100	7.8	11.1	6.4	10.2
2019	>100	77.1	59.5	79.3	54.3
2018	<80	3.9	12.4	3.6	30.5
2018	80-89	5.2	17.0	2.8	20.2
2018	90-94	4.6	13.7	2.8	9.5
2018	95-100	12.4	11.8	10.5	12.4
2018	>100	73.9	45.1	80.2	27.4

References

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