DATA SOURCES.

OFFICIAL coverage: Estimated coverage reported by national authorities that reflects their assessment of the most likely coverage based on any combination of administrative coverage, survey-based estimates or other data sources or adjustments. Approaches to determine official coverage may differ across countries.

SURVEY coverage: Based on estimated coverage from population-based household surveys among children aged 12-23 months or 24-35 months following a review of survey methods and results. Information is based on the combination of vaccination history from documented evidence or caregiver recall. Survey results are considered for the appropriate birth cohort based on the period of data collection.

ABBREVIATIONS

BCG: percentage of births who received one dose of Bacillus Calmette Guerin vaccine.

DTP1 / DTP3: percentage of surviving infants who received the 1st / 3rd dose, respectively, of diphtheria and tetanus toxoid with pertussis containing vaccine.

Pol3: percentage of surviving infants who received the 3rd dose of polio containing vaccine. May be either oral or inactivated polio vaccine.

IPV1: percentage of surviving infants who received at least one dose of inactivated polio vaccine. In countries utilizing an immunization schedule recommending either (i) a primary series of three doses of oral polio vaccine (OPV) plus at least one dose of IPV where OPV is included in routine immunization and/or campaign or (ii) a sequential schedule of IPV followed by OPV, WHO and UNICEF estimates for IPV1 reflect coverage with at least one routine dose of IPV among infants <1 year of age among countries. For countries utilizing IPV containing vaccine use only, i.e., no recommended dose of OPV, the WHO and UNICEF estimate for IPV1 corresponds to coverage for the 1st dose of IPV.

YFV: percentage of surviving infants who received one dose of yellow fever vaccine in countries where YFV is part of the national immunization schedule for children or is recommended in at risk areas; coverage estimates are annualized for the entire cohort of surviving infants.

Disclaimer: All reasonable precautions have been taken by the World Health Organization and United Nations Children’s Fund to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization or United Nations Children’s Fund be liable for damages arising from its use.
The WHO and UNICEF estimates of national immunization coverage (wunec) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-]; challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate</th>
<th>Estimate GoC</th>
<th>Official</th>
<th>Administrative</th>
<th>Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2012</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2013</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2014</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2015</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2016</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2017</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2018</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2019</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2020</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2021</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2022</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
San Marino - DTP1

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

*** Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

** Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

* There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

Description:

2022: Estimate informed by reported administrative data. Estimate challenged by: D-
2021: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-
2020: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-
2019: Estimate informed by reported data. Estimate challenged by: D-
2018: Estimate informed by reported data. Estimate challenged by: D-
2017: Estimate informed by reported data. GoC=R+ D+
2016: Estimate informed by reported data. GoC=R+ D+
2015: Estimate informed by reported data. GoC=R+ D+
2014: Estimate informed by reported data. GoC=R+ D+
2013: Estimate informed by reported data. GoC=R+ D+
2012: Estimate informed by reported data. GoC=R+ D+
2011: Estimate informed by reported data. GoC=R+ D+

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate</th>
<th>Estimate GoC</th>
<th>Official</th>
<th>Administrative</th>
<th>Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>91</td>
<td>**</td>
<td>91</td>
<td>88</td>
<td>NA</td>
</tr>
<tr>
<td>2021</td>
<td>87</td>
<td>**</td>
<td>88</td>
<td>87</td>
<td>NA</td>
</tr>
<tr>
<td>2020</td>
<td>94</td>
<td>**</td>
<td>87</td>
<td>93</td>
<td>NA</td>
</tr>
<tr>
<td>2019</td>
<td>90</td>
<td>**</td>
<td>94</td>
<td>93</td>
<td>NA</td>
</tr>
<tr>
<td>2018</td>
<td>90</td>
<td>**</td>
<td>88</td>
<td>94</td>
<td>NA</td>
</tr>
<tr>
<td>2017</td>
<td>90</td>
<td>**</td>
<td>88</td>
<td>94</td>
<td>NA</td>
</tr>
<tr>
<td>2016</td>
<td>92</td>
<td>**</td>
<td>87</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2015</td>
<td>91</td>
<td>**</td>
<td>87</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2014</td>
<td>92</td>
<td>**</td>
<td>84</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2013</td>
<td>92</td>
<td>**</td>
<td>82</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2012</td>
<td>91</td>
<td>**</td>
<td>88</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2011</td>
<td>93</td>
<td>**</td>
<td>88</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
The WHO and UNICEF estimates of national immunization coverage (vaccine) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

### Description:

2022: Estimate informed by reported administrative data. Estimate challenged by: D-

2021: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-

2020: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-

2019: Estimate informed by reported data. Estimate challenged by: D-

2018: Estimate informed by reported data. Estimate challenged by: D-

2017: Estimate informed by interpolation between reported data. Estimate challenged by: D-

2016: Estimate informed by reported data. GoC=R+ D+

2015: Estimate informed by reported data. GoC=R+ D+

2014: Estimate informed by reported data. GoC=R+ D+

2013: Estimate informed by reported data. GoC=R+ D+

2012: Estimate informed by reported data. GoC=R+ D+

2011: Estimate informed by reported data. GoC=R+ D+

---

**Estimate**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GoC</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
</tr>
</tbody>
</table>

**Official**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GoC</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
</tr>
<tr>
<td>Survey</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Administrative**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GoC</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
<td>[R+]</td>
</tr>
</tbody>
</table>

---

**Estimate** is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

**Estimate** is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

Estimate is supported by reported data [R+] or independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+) and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

2022: Estimate informed by reported administrative data. Estimate challenged by: D-
2021: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-
2020: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-
2019: Estimate informed by reported data. Estimate challenged by: D-
2018: Estimate informed by reported data. Estimate challenged by: D-
2017: Estimate informed by interpolation between reported data. Estimate challenged by: D-
2016: Estimate informed by reported data. GoC=R+ D+
2015: Estimate informed by reported data. GoC=R+ D+
2014: Estimate informed by reported data. GoC=R+ D+
2013: Estimate informed by reported data. GoC=R+ D+
2012: Estimate informed by reported data. GoC=R+ D+
2011: Estimate informed by reported data. GoC=R+ D+

![Graph showing immunization coverage from 2011 to 2022](image.png)
San Marino - IPV1

Description:

Estimates for a dose of inactivated polio vaccine (IPV) begin in 2015 following the Global Polio Eradication Initiative’s Polio Eradication and Endgame Strategic Plan: 2013-2018 which recommended at least one full dose or two fractional doses of IPV into routine immunization schedules as a strategy to mitigate the potential consequences should any re-emergence of type 2 poliovirus occur following the planned withdrawal of Sabin type 2 strains from oral polio vaccine (OPV).

2022: Estimate informed by reported administrative data. Estimate challenged by: D-
2021: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-
2020: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-
2019: Estimate informed by reported data. Estimate challenged by: D-
2018: Estimate informed by reported data. Estimate challenged by: D-
2017: Estimate informed by reported data. GoC=R+ D+
2016: Estimate informed by reported data. GoC=R+ D+
2015: Estimate informed by reported data. GoC=R+ D+

July 1, 2023; page 7

WHO and UNICEF estimates of national immunization coverage - next revision available July 15, 2024 data received as of June 26, 2023
San Marino - MCV1

The WHO and UNICEF estimates of national immunization coverage (vuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate</th>
<th>GoC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>92</td>
<td>R+</td>
</tr>
<tr>
<td>2021</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2020</td>
<td>86</td>
<td>R+</td>
</tr>
<tr>
<td>2019</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2018</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2017</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2016</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2015</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2014</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2013</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2012</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2011</td>
<td>89</td>
<td>R+</td>
</tr>
</tbody>
</table>

Description:

2022: Estimate informed by reported administrative data. Estimate challenged by: D-
2021: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-
2020: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-
2019: Estimate informed by reported data. Estimate challenged by: D-
2018: Estimate informed by reported data. Estimate challenged by: D-
2017: Estimate informed by interpolation between reported data. Programme reports one month vaccine stockout. Estimate challenged by: D-
2016: Estimate informed by reported data. GoC=R+ D+
2015: Estimate informed by reported data. GoC=R+ D+
2014: Estimate informed by reported data. GoC=R+ D+
2013: Estimate informed by reported data. GoC=R+ D+
2012: Estimate informed by reported data. GoC=R+ D+
2011: Estimate informed by reported data. GoC=R+ D+

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.
### San Marino - MCV2

#### Description:
Coverage estimates for the second dose of measles containing vaccine are for children by the nationally recommended age.

<table>
<thead>
<tr>
<th>Year</th>
<th>Official</th>
<th>Administrative</th>
<th>Survey</th>
<th>Estimate</th>
<th>GoC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>92</td>
<td>89</td>
<td>85</td>
<td>92</td>
<td>R+</td>
</tr>
<tr>
<td>2021</td>
<td>89</td>
<td>86</td>
<td>86</td>
<td>89</td>
<td>R+</td>
</tr>
<tr>
<td>2020</td>
<td>85</td>
<td>86</td>
<td>86</td>
<td>85</td>
<td>R+</td>
</tr>
<tr>
<td>2019</td>
<td>86</td>
<td>86</td>
<td>86</td>
<td>86</td>
<td>R+</td>
</tr>
<tr>
<td>2018</td>
<td>86</td>
<td>86</td>
<td>86</td>
<td>86</td>
<td>R+</td>
</tr>
<tr>
<td>2017</td>
<td>84</td>
<td>78</td>
<td>84</td>
<td>84</td>
<td>D+</td>
</tr>
<tr>
<td>2016</td>
<td>79</td>
<td>79</td>
<td>79</td>
<td>79</td>
<td>D+</td>
</tr>
<tr>
<td>2015</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>81</td>
<td>D+</td>
</tr>
<tr>
<td>2014</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>D+</td>
</tr>
<tr>
<td>2013</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2012</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2011</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

The WHO and UNICEF estimates of national immunization coverage (vaccine) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.
- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

July 1, 2023; page 9

WHO and UNICEF estimates of national immunization coverage - next revision available July 15, 2024

data received as of June 26, 2023
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- **Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]**. While well supported, the estimate still carries a risk of being wrong.

- **Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.**

- **There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.**

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

For this revision, coverage estimates for the first dose of rubella containing vaccine are based on WHO and UNICEF estimates of coverage of measles containing vaccine. Nationally reported coverage of rubella containing vaccine is not taken into consideration nor are they represented in the accompanying graph and data table.

### Description:

2022: Estimate based on estimated MCV1. Estimate challenged by: D-

2021: Estimate based on estimated MCV1. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-

2020: Estimate based on estimated MCV1. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-

2019: Estimate based on estimated MCV1. Estimate challenged by: D-

2018: Estimate based on estimated MCV1. Estimate challenged by: D-

2017: Estimate based on estimated MCV1. Estimate challenged by: D-

2016: Estimate based on estimated MCV1. GoC=R+ D+

2015: Estimate based on estimated MCV1. GoC=R+ D+

2014: Estimate based on estimated MCV1. GoC=R+ D+

2013: Estimate based on estimated MCV1. GoC=R+ D+

2012: Estimate based on estimated MCV1. GoC=R+ D+

2011: Estimate based on estimated MCV1. GoC=R+ D+

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

- Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.
San Marino - HepB3

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

Estimate is supported by reported data [R+] or coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

2022: Estimate informed by reported administrative data. Estimate challenged by: D-
2021: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-
2020: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-
2019: Estimate informed by reported data. Estimate challenged by: D-
2018: Estimate informed by reported data. Estimate challenged by: D-
2017: Estimate informed by interpolation between reported data. Estimate challenged by: D-
2016: Estimate informed by reported data. GoC=R+ D+
2015: Estimate informed by reported data. GoC=R+ D+
2014: Estimate informed by reported data. GoC=R+ D+
2013: Estimate informed by reported data. GoC=R+ D+
2012: Estimate informed by reported data. GoC=R+ D+
2011: Estimate informed by reported data. GoC=R+ D+

The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.
## Description:

- **2022**: Estimate informed by reported administrative data. Estimate challenged by: D-
- **2021**: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-
- **2020**: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-
- **2019**: Estimate informed by reported data. Estimate challenged by: D-
- **2018**: Estimate informed by reported data. Estimate challenged by: D-
- **2017**: Estimate informed by interpolation between reported data. Estimate challenged by: D-
- **2016**: Estimate informed by reported data. Programme reports a two months vaccine stockout at the national level. GoC=R+ D+
- **2015**: Estimate informed by reported data. GoC=R+
- **2014**: Estimate informed by reported data. GoC=R+ D+
- **2013**: Estimate informed by reported data. GoC=R+ D+
- **2012**: Estimate informed by reported data. GoC=R+ D+

### Table: San Marino - Hib3

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate</th>
<th>Estimate GoC</th>
<th>Official</th>
<th>Administrative</th>
<th>Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>92</td>
<td>**</td>
<td>92</td>
<td>87</td>
<td>NA</td>
</tr>
<tr>
<td>2021</td>
<td>87</td>
<td>**</td>
<td>87</td>
<td>82</td>
<td>88</td>
</tr>
<tr>
<td>2020</td>
<td>90</td>
<td>**</td>
<td>90</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2019</td>
<td>90</td>
<td>**</td>
<td>90</td>
<td>88</td>
<td>NA</td>
</tr>
<tr>
<td>2018</td>
<td>88</td>
<td>**</td>
<td>88</td>
<td>82</td>
<td>NA</td>
</tr>
<tr>
<td>2017</td>
<td>88</td>
<td>**</td>
<td>88</td>
<td>80</td>
<td>NA</td>
</tr>
<tr>
<td>2016</td>
<td>91</td>
<td>**</td>
<td>91</td>
<td>77</td>
<td>NA</td>
</tr>
<tr>
<td>2015</td>
<td>85</td>
<td>**</td>
<td>NA</td>
<td>78</td>
<td>NA</td>
</tr>
<tr>
<td>2014</td>
<td>85</td>
<td>**</td>
<td>NA</td>
<td>77</td>
<td>NA</td>
</tr>
<tr>
<td>2013</td>
<td>82</td>
<td>**</td>
<td>NA</td>
<td>80</td>
<td>NA</td>
</tr>
<tr>
<td>2012</td>
<td>83</td>
<td>**</td>
<td>NA</td>
<td>83</td>
<td>NA</td>
</tr>
</tbody>
</table>

The WHO and UNICEF estimates of national immunization coverage (vaccine coverage) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- **Estimate is supported by reported data [R+]**, coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.
- **Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.**
- **There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.**

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

- **Estimate is supported by reported data** [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

- **Estimate is supported by at least one data source;** [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

- There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.
The WHO and UNICEF estimates of national immunization coverage (wuenic) are based on data and information that are of varying, and, in some instances, unknown quality. Beginning with the 2011 revision we describe the grade of confidence (GoC) we have in these estimates. As there is no underlying probability model upon which the estimates are based, we are unable to present classical measures of uncertainty, e.g., confidence intervals. Moreover, we have chosen not to make subjective estimates of plausibility/certainty ranges around the coverage. The GoC reflects the degree of empirical support upon which the estimates are based. It is not a judgment of the quality of data reported by national authorities.

Estimate is supported by reported data [R+], coverage recalculated with an independent denominator from the World Population Prospects: 2022 revision from the UN Population Division (D+), and at least one supporting survey within 2 years [S+]. While well supported, the estimate still carries a risk of being wrong.

Estimate is supported by at least one data source; [R+], [S+], or [D+]; and no data source, [R-], [D-], or [S-], challenges the estimate.

There are no directly supporting data; or data from at least one source; [R-], [D-], [S-]; challenge the estimate.

In all cases these estimates should be used with caution and should be assessed in light of the objective for which they are being used.

### Description:

2022: Estimate informed by reported administrative data. Estimate challenged by: D-

2021: Estimate informed by reported administrative data. Fluctuation in reported data may be explained by small birth cohort. Estimate challenged by: D-

2020: Estimate informed by reported data. Administrative coverage is calculated for the total number of live births whereas the reported official coverage accounts for all individuals living in San Marino per year of birth. Estimate challenged by: D-

2019: Estimate informed by reported data. Estimate challenged by: D-

2018: Estimate informed by reported data. Estimate challenged by: D-

2017: Estimate informed by interpolation between reported data. Estimate challenged by: D-

2016: Estimate informed by reported data. Pneumococcal conjugate vaccine introduced in 2016, reporting started in 2016. GoC=R+  D+
Further information and estimates for previous years are available at:
https://data.unicef.org/topic/child-health/immunization/
https://immunizationdata.who.int/listing.html