

CO1.4: Childhood vaccination

Definitions and methodology

Childhood vaccination is captured here through two measures that reflect whether children have received relevant vaccinations within the recommended timeframe:

- The proportion (%) of one-year-olds who have received three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine, and;
- The proportion (%) of children under one year old who have received at least one dose of measles-containing vaccine.

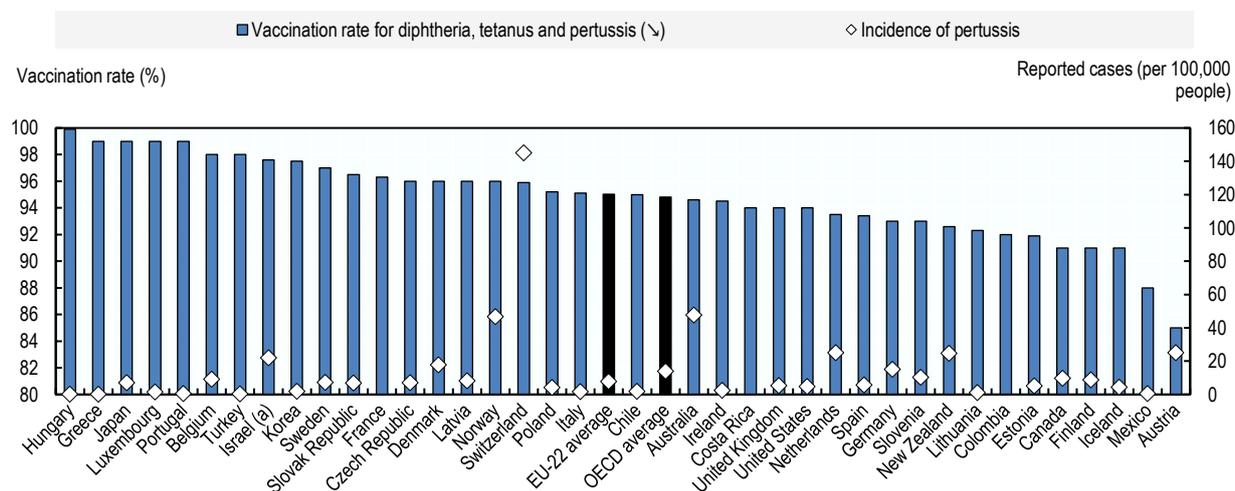
The incidence of pertussis and the incidence of measles are also shown, measured as the number of reported acute cases per 100 000 population.

Key findings

Rates of vaccination for diphtheria, tetanus and pertussis are generally very high in OECD countries (Chart CO1.4.A). On average across OECD countries, 95% of children age one have received three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine. In half of OECD countries (20), vaccination rates are equal to or above 95%, and in almost all they are higher than 90%. At 85% and 88% respectively, Austria and Mexico are the only two countries to have a vaccination rate at or below 90%.

Chart CO1.4.A. Vaccination rates for diphtheria, tetanus and pertussis, and the incidence of pertussis, 2018 or closest available

Proportion (%) of one-year-olds who have received three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine in the given year, and the number of reported cases of pertussis in the given year per 100 000 people



Notes: Data on vaccination rate for diphtheria, tetanus and pertussis refer to 2018 for all countries. Data on the incidence of pertussis refer to 2014 for Switzerland, to 2017 for Belgium and Japan, and to 2018 for Austria, Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Korea, Latvia, Lithuania, Luxembourg, Netherland, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Turkey, United Kingdom and United States. For all other countries, incidence rates refer to 2019.

Other relevant indicators: CO1.1: Infant mortality rates; CO1.3: Low birth weight; CO1.6: Disease-based indicators: Prevalence of diabetes and asthma among children; CO1.7: Obesity among children aged 10 and CO1.8: Regular smokers among 15 year olds by gender.

a. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: [OECD Health Statistics](#)

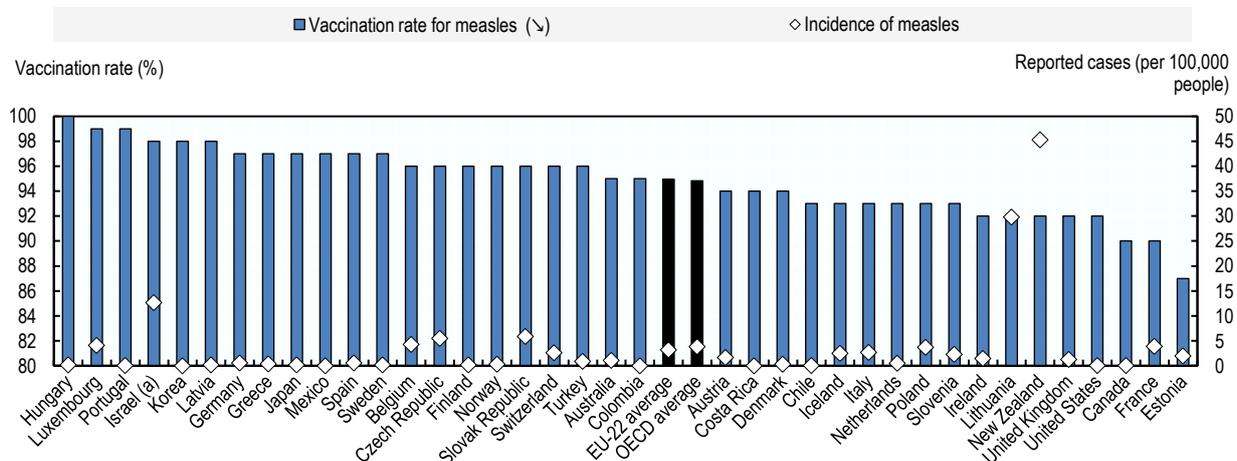
Pertussis has become a rare disease in most OECD countries (Chart CO1.4.A), although in some countries the number of reported cases remains much higher than for other diseases such as measles (see Chart CO1.4.B). In general, the number of reported cases of pertussis is fewer than 20 per 100 000 people. In 2019 or latest available year, only three OECD countries (Australia, Norway and Switzerland) saw more than 45 reported cases of pertussis per 100 000 people. The rate is highest in Switzerland where, in 2014, there were 145 reported cases of pertussis per 100 000 people despite a vaccination rate of 96%.

In general, rates of vaccination against measles are similar to those for diphtheria, tetanus and pertussis (Chart CO1.4.B). On average across OECD countries, 95% of children under age one receive at least one dose of measles-containing vaccine. In all but one OECD country (Estonia), vaccination rates are at or above 90%, and in many (21) rates are at least 95%.

Similar to pertussis, the incidence of measles is very low in almost all OECD countries. In 2019, measles incidence rates were lower than 2 reported cases per 100 000 people in majority of OECD countries (22). But despite high vaccination rates at 90%, very high incidence rates were reported in Lithuania (30 cases per 100 000) and in New Zealand (45 cases per 100 000). Incidence rates were also higher than in past years in Belgium (4 cases per 100 000) and in the Czech Republic (5.5 cases per 100 000).

Chart CO1.4.B. Vaccination rates for measles and the incidence of measles, 2018 or closest available

Proportion (%) of children under one year old who have received at least one dose of measles-containing vaccine in the given year, and the number of reported cases of measles in the given year per 100 000 people



Note: Data on vaccination rate for measles refer to 2018 for all countries. Data on the incidence of measles refer to 2017 for Canada and Japan, and to 2018 for Korea, Turkey and the United States. For all other countries, incidence rates refer to 2019. The age of complete immunisation differs across countries due to different immunisation schedules. For countries recommending the first dose of measles vaccine in children over 12 months of age, the indicator is calculated as the proportion of children less than 12-23 months of age receiving one dose of measles-containing vaccine. See OECD Health Statistics for more detail (<http://www.oecd.org/health/health-data.htm>).

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Source: [OECD Health Statistics](#)

Comparability and data issues

Childhood vaccination policies and schedules and the reporting of vaccinations differ across countries. The data presented in this indicator reflect the actual policy in a given country (or sub-national jurisdiction). Some countries measure the number of vaccinations given based on surveys and others based on administrative data, which may influence results. Similarly, the measurement of the incidence of disease is also subject to cross-national differences in reporting practices. Reporting may be mandatory or voluntary and may include suspected or only confirmed cases, both of which may affect comparability. See OECD Health Statistics and the World Health Organization Global Health Observatory Data Repository for more detail.

Sources and further reading:

OECD Health Statistics: www.oecd.org/health/healthdata;

OECD (2019), Health at a Glance 2019: OECD Indicators, OECD Publishing, Paris, <https://doi.org/10.1787/4dd50c09-en>.