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). In almost all OECD countries vaccination rates are higher than 90%, and in most (22) rates they are equal to or above 95%. Only three OECD countries (Austria, Iceland and Mexico) have a vaccination rate at or below 90%, with the rate lowest in Austria at 83%.

Chart CO1.4.A Vaccination rates for diphtheria, tetanus and pertussis, and the incidence of pertussis, 2014 or latest 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

![Chart CO1.4.A](image_url)

- Data on the incidence of pertussis refer to 2013 for Belgium, Canada, Finland, France, Portugal and the United States
- 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

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.
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. Only three OECD saw more than 50 reported cases of pertussis per 100,000 people in 2014 (Australia, Norway and Switzerland), with the rate highest in Switzerland, where despite a vaccination rate of 96% there were 145 reported cases per 100,000 people.

In general, rates of vaccination against measles tend to be marginally lower than those for diphtheria, tetanus and pertussis (Chart CO1.4.B). This is likely related to concerns about the measles vaccine being linked to brain damage. Nevertheless, in all but five OECD countries (Austria, Denmark, France, Iceland and Italy) vaccination rates are above 90%, and in many (19) OECD countries rates are at least 95%. The rate of vaccination against measles in Austria (76%) stands out as particularly low when compared to other OECD countries.

Similar to pertussis, the incidence of measles is very low in almost all OECD countries. In 2014, the highest incidence rate was in New Zealand where, despite a vaccination rate of 93%, there were 6.2 reported cases of measles per 100,000 people. Of those five countries (Austria, Denmark, France, Iceland and Italy) with rates of vaccination against measles at or below 90%, the highest observed incidence rate – in Italy – stood at only 2.7 reported cases per 100,000 people.

**Chart CO1.4.B** Vaccination rates for measles and the incidence of measles, 2014 or latest 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

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a) Data on the incidence of measles refer to 2005 for Poland, and 2012 for Norway, Portugal, the United Kingdom and the United States
b) 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)
c) 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

**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.