

CHILDHOOD VACCINATION PROGRAMMES

Childhood vaccination continues to be one of the most cost-effective health policy interventions (Chan et al., 2017). All countries have established vaccination programmes including a minimum number of routine vaccines (i.e. against polio, diphtheria, tetanus, pertussis, measles); additional vaccines (i.e. against pneumococcus, rotavirus and human papilloma virus) are included at national or subnational level based on local morbidity, mortality and cost-effectiveness analysis. Coverage of these programmes and reduction of burden of vaccine preventable diseases can be considered as a quality of care indicator. Polio, pertussis, measles and hepatitis B are taken here as examples as they represent, in timing and frequency of vaccination, the full spectrum of organisational challenges related to routine vaccination.

Reviews of the evidence supporting the efficacy of vaccines included in routine immunisation programmes have concluded that they are safe and highly effective against mortality and morbidity caused by diseases they are treating.

A vaccination for hepatitis B has been available since 1982 and is considered to be 95% effective in preventing infection and its chronic consequences, such as cirrhosis and liver cancer. In 2015, hepatitis B resulted in 887 000 deaths, mostly from complications (including cirrhosis and hepatocellular carcinoma) (WHO, 2018e). In 2007, more than 170 countries had adopted the WHO recommendation to incorporate hepatitis B vaccine including birth dose as an integral part of their national infant immunisation programme. Hepatitis B vaccination is recommended for all children worldwide, and reaching all children with at least three doses of hepatitis B vaccine should be the standard for all national immunisation programmes (WHO, 2017f). Recent data revealed that hepatitis B vaccination across the Western Pacific has averted 7 million deaths and 37 million chronic infections that would have occurred among children born between 1990 and 2014 (Wiesen et al., 2016)

Figure 7.1 and Figure 7.2 show that the overall vaccination of children against pertussis (provided through combined vaccines containing also diphtheria and tetanus) and measles was high in most Asia-Pacific countries and economies in 2016. Almost all children aged around one year received the recommended measles and pertussis vaccination in high and upper-middle income Asia-Pacific countries in 2016, whereas the vaccination rate was at 89% and 86% in lower-middle and low income Asia-Pacific countries for pertussis and measles respectively which, although high, is insufficient to ensure interruption of disease transmission and protection of

the whole population. Exceptions were Pakistan and Papua New Guinea where less than three children in four were vaccinated against pertussis and measles in 2016.

Figure 7.3 shows that the average percentage of children aged one who are vaccinated for hepatitis B across Asia-Pacific countries and economies was slightly lower than for measles and pertussis. Rates for most countries are above 80%, with lower coverage among lower-middle and low income countries, and particularly low coverage in Pakistan and Papua New Guinea.

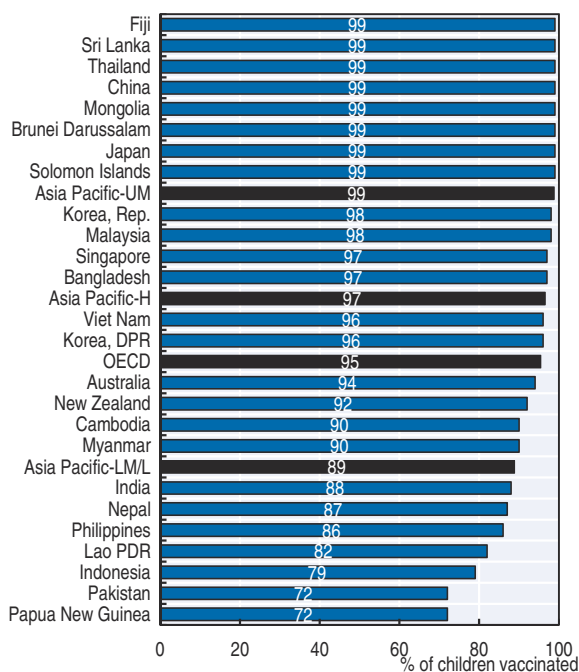
Although vaccination rates have plateaued at a high level in many countries in Asia-Pacific, some countries with historically low rates continue to make substantial progress. In 2007, hepatitis B immunisation in India was only 6%, and measles immunisation in the Lao PDR only 40% of the target population, but as of 2016 their respective vaccine coverage was 88% and 76%, for example. Nevertheless some countries still show slow progress in vaccination rates.

Even though vaccines are designed to be both safe and effective, adverse events following immunisation do occur and need to be reported in order to identify problems and take appropriate corrective actions. Vaccine safety surveillance is progressing in WHO member states and by 2016, 107 of 184 countries globally reporting adverse events following immunisation (AEFI) registered 10 or more annual reports per 100 000 surviving infants. Both regions are gradually improving the vaccine safety surveillance, reaching 75% of countries reporting AEFI and 49% of countries meeting adequate AEFI surveillance performance (Global Vaccine Action Plan, 2017).

Definition and comparability

Vaccination rates reflect the percentage of children at either age one or two that receives the last dose of primary immunisation series by the respective vaccination in the recommended timeframe. Childhood vaccination policies differ slightly across countries. Thus, these indicators are based on the actual policy in a given country. Some countries administer combination vaccines (e.g. MR for measles and rubella) while others administer the vaccinations separately. Some countries ascertain vaccinations based on surveys and others based on administrative data, which may influence the results.

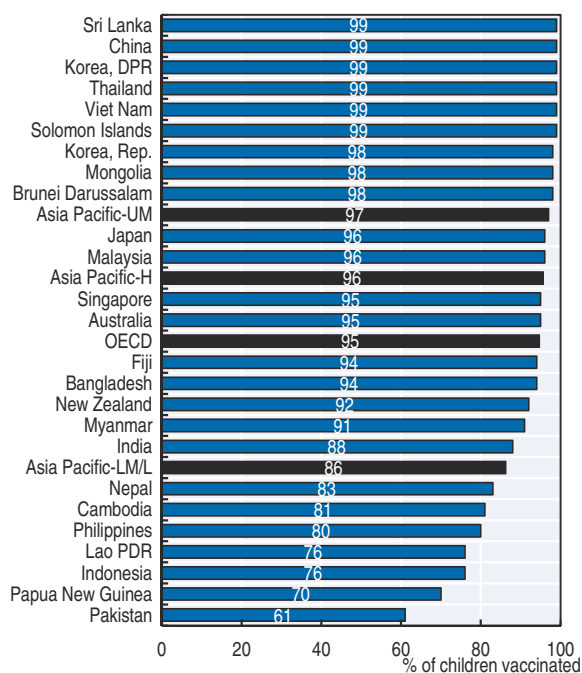
7.1. Vaccination rates for diphtheria tetanus toxoid and pertussis (DTP3), children aged around 1, 2016



Source: WHO, Global Health Observatory 2018.

StatLink <http://dx.doi.org/10.1787/888933868975>

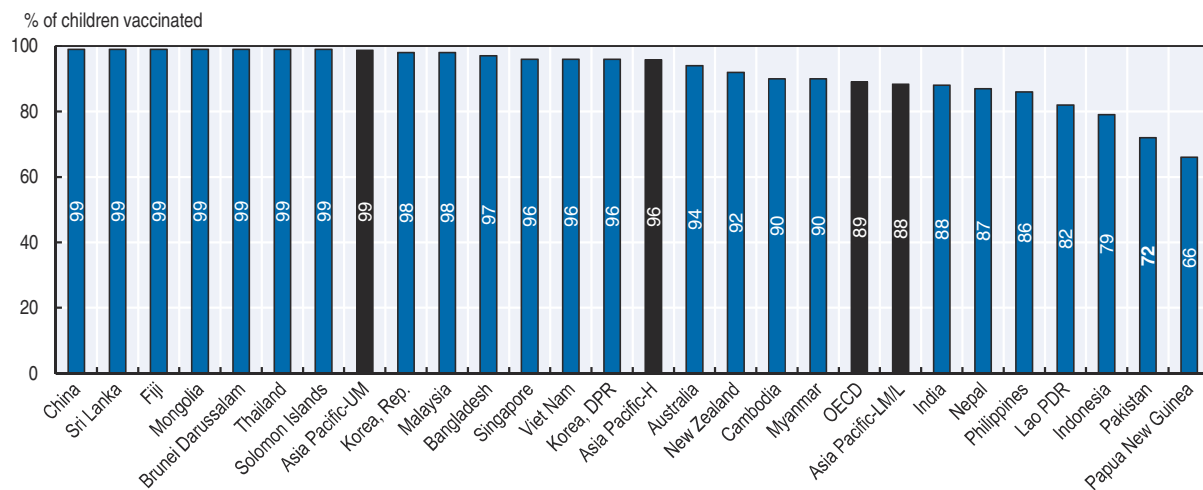
7.2. Vaccination rates for measles (MCV), children aged around 1, 2016



Source: WHO, Global Health Observatory 2018.

StatLink <http://dx.doi.org/10.1787/888933869013>

7.3. Vaccination rates for hepatitis B (Hep3), children aged around 1, 2016



Source: WHO, Global Health Observatory 2018.

StatLink <http://dx.doi.org/10.1787/888933869032>



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