Hexavalent vaccines indicator

Burden & epidemiology

Number of new cases per year (last 3-5 years)

NOT RELEVANT FOR CURRENT DECISIONS - PLEASE CONSULT THE RELEVANT WHO POSITION PAPERS. 1, 2, 3, 4, 5, 6, 7, 8 For disease burden for relevant diseases (at least D,T,P) countries can consult the WHO JRF data for their country, or subregion per WHO JRF. 9

Proportion of the population affected by the disease or infected with the antigen

NOT RELEVANT FOR CURRENT DECISIONS - PLEASE CONSULT THE RELEVANT WHO POSITION PAPERS. 1, 2, 3, 4, 5, 6 For disease burden for relevant diseases (at least D,T,P) countries can consult the WHO JRF data for their country, or subregion per WHO JRF. 10

Serogroup or serotype distribution (for serogroup- or serotype-specific vaccines)

NOT RELEVANT FOR CURRENT DECISIONS - PLEASE CONSULT THE RELEVANT WHO POSITION PAPERS 1, 2, 3, 4, 5, 6, 7, 8

Number of deaths from the disease per year

NOT RELEVANT FOR CURRENT DECISIONS - PLEASE CONSULT THE RELEVANT WHO POSITION PAPERS [1], [2], [3], [4], [5], [6]

Case Fatality ratio (number of deaths / number of new cases, in %)

NOT RELEVANT FOR CURRENT DECISIONS - PLEASE CONSULT THE RELEVANT WHO POSITION PAPERS

Outbreak, epidemic or pandemic risk

Diphtheria, though largely controlled in many regions thanks to vaccination, outbreaks are still reported today, especially in populations with low immunization coverage, high mobility, or poor living conditions. [11] Diphtheria outbreaks have been reported in various settings, including refugee camps in Asia, and among asylum seekers in Europe. [12], [13]

Tetanus is generally rare in areas with high vaccination coverage, and since it is acquired from environmental sources, it does pose a risk for outbreaks. [14]

Pertussis has a well-documented history of causing outbreaks, even in populations with high vaccination coverage. Recent trends show that pertussis continues to have significant outbreak potential worldwide, affecting both children and adults, and posing particular risks to infants. [15], [16]

Hepatitis B has significant potential for outbreaks, especially in settings with poor infection control or low vaccination coverage. Outbreaks of hepatitis B have been documented in both healthcare and community settings, and the virus remains a persistent public health threat in many regions. [17], [18]

Prior to widespread vaccination, small outbreaks or clusters of cases of Hib disease have been noted in day-care centres and there were reports of nosocomial transmission in hospitals. The risk of Hib disease was also higher in larger families. [19]

The risk of poliovirus outbreaks and localised epidemics remains significant in areas with low vaccination coverage, fragile health systems, or gaps in immunization campaigns, particularly in regions experiencing conflict or displacement. Wild poliovirus (WPV) is endemic to Afghanistan and Pakistan, while vaccine-derived poliovirus (cVDPV) outbreaks have been reported in 20

countries in 2024. There is a rising risk of outbreaks of cVDPV2 since the global switch to bivalent oral poliovirus vaccine (bOPV). Although the global pandemic potential is low due to widespread immunity and effective vaccines, lapses in immunization and surveillance have led to the detection of poliovirus in environmental samples in previously polio-free countries. 6, 7, 8, 20

Contribution of the vaccine to achievement of the national, regional or global disease goals

There are no established global elimination goals for Diphtheria or Pertussis (some countries have defined control goals for Diphtheria)

The Maternal and Neonatal Tetanus Elimination (MNTE) initiative, launched by the World Health Organization (WHO) in 1989, initially aimed to eliminate neonatal tetanus by 1995. As of June 2024, 47 out of 59 priority countries have achieved MNTE status, significantly reducing neonatal tetanus cases by 89% and deaths by 84% since 2000. Vaccination is the cornerstone of the strategy. Immunizing women of reproductive age with tetanus toxoid-containing vaccines (TTCVs) has been the primary driver of this reduction. 21, 22

There is a clear and internationally recognized goal to eliminate hepatitis B as a public health threat. The World Health Organization (WHO) has set a target to achieve hepatitis B elimination by 2030, aiming for a 90% reduction in new infections and a 65% reduction in deaths. Vaccination is the single most important tool in the global effort to eliminate Hepatitis B. Widespread and timely hepatitis B vaccination, especially starting at birth, dramatically reduces new infections, chronic disease, and deaths from liver complications. The prevalence of hepatitis B surface antigen (HBsAg) in children under 5 dropped from 4.7% before vaccination to 1.3% by 2015, thanks to universal vaccination programs in 189 countries. 23, 24, 25

While no formal global Hib elimination goal is set by WHO, elimination of invasive Hib disease is considered biologically and programmatically possible, and has been achieved in some countries through high vaccination coverage. After the introduction of Hib conjugate vaccines, countries like the US, UK, and Canada saw a reduction in Hib disease incidence by over 95%, with some regions achieving near elimination of invasive Hib disease in children under five years old. More than 90% of countries have included Hib vaccines in their national immunization programs, resulting in significant global decreases in Hib disease, though complete eradication has not yet

been achieved. 26, 27

Polio vaccination has reduced poliomyelitis cases by over 99.9% globally since the launch of the Global Polio Eradication Initiative in 1988. Coordinated immunization campaigns have led to the certification of polio-free status in the Americas (1994), the Western Pacific (2000), Europe (2002), and Africa (2020). Globally, the vaccines (Polio mono and multivalent and IPV-containing combination vaccines) have brought the world closer to eradicating wild poliovirus, which is now confined to Afghanistan and Pakistan. In addition, they play a critical role in controlling outbreaks of vaccine-derived poliovirus (cVDPV). 28, 29, 30, 31, 32

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