Frequently Asked Questions

Investment Opportunity 2026–2030 impact estimates

Gavi
The Vaccine Alliance

Frequently Asked Questions (FAQs) on impact estimates for Gavi's Investment Opportunity 2026–2030

1. **How does Gavi's commitment of >500 million children immunised in Gavi 6.0 (2026–2030 strategic period) compare to its prior commitment of >300 million unique children immunised in Gavi 5.0/5.1 (2021–2025 strategic period)?**

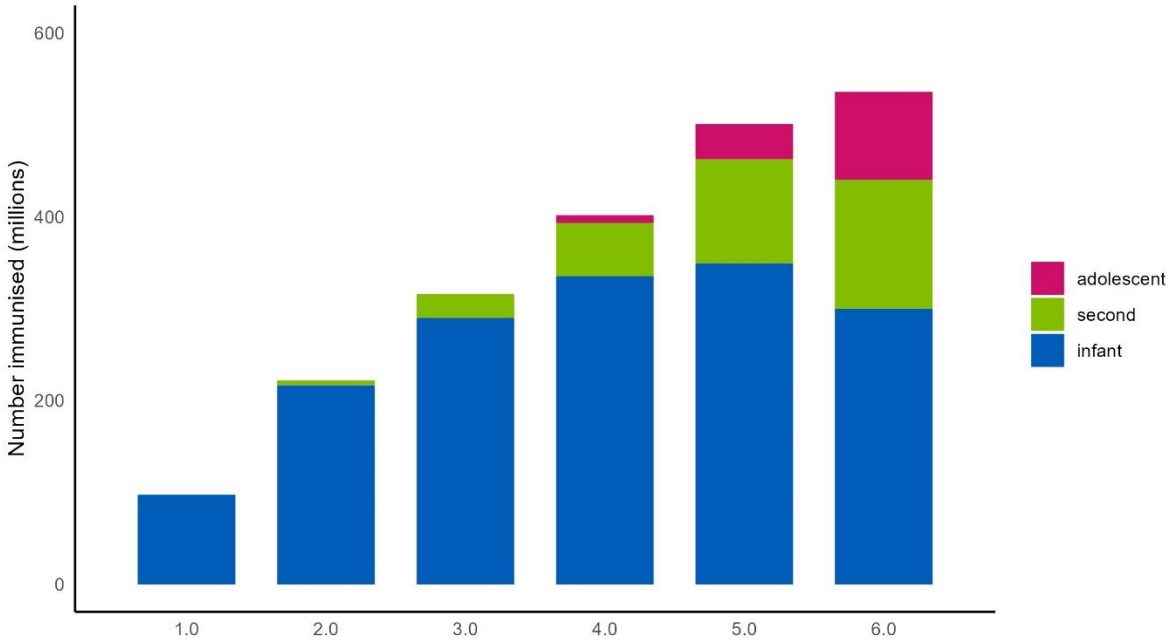
'Unique children immunised', as defined in the Gavi 5.0 Measurement Framework[1] with a target of >300 million children, looks across all Gavi-supported routine vaccines within a country, and counts the number of individuals immunised with the vaccine that reached the most individuals in that country in a given year. It therefore tends to pick up on infant vaccines, which usually have the highest coverage. As the Gavi portfolio is increasingly expanding to reach older children and adolescents, this indicator is now less suitable to measure the number of children reached each year through routine immunisation with Gavi-supported vaccines.

To address this limitation, Gavi has developed a new indicator, which is referred to simply as 'children immunised'. The definition of this indicator is similar to 'unique children immunised', with the important difference that it counts the number of children immunised separately for each age group. Based on Gavi's current portfolio, it counts the number of immunised infants, children in their second year of life and adolescents; this could be expanded if other age groups are targeted by new vaccines in the future. Computationally, it involves conducting the 'unique children immunised' calculation for each age group separately (i.e. counting the Gavi-supported vaccine that reaches the most individuals through routine immunisation in a given year, per age group, and then adding them together).

As in Gavi 4.0 (2016–2020 strategic period), the Gavi 5.0/5.1 target is >300 million unique children immunised; as of 2022, Gavi had helped countries reach >1 billion unique children since 2000. For Gavi 6.0, current forecasts suggest that Gavi will again reach >300 million unique children, albeit at slightly lower levels as compared to Gavi 5.0/5.1 due to country transition out of Gavi support per the current Gavi eligibility criteria. However, Gavi will be reaching more children each year in Gavi 6.0 than ever before, considering different age groups, and given the expansion of its vaccine portfolio, with a total of >500 million in 2026–2030. As can be seen in the figure below, while the number of infants reached with Gavi-supported routine immunisation declines in Gavi 6.0 due to country transition, the number of

[1] Gavi 5.0 Measurement Framework (2021–2025) indicator definitions: https://www.gavi.org/news/document-library/gavi-50-measurement-framework-2021-2025

children reached in their second year of life and adolescence increases. It is important to interpret time trends using the same indicator definition; for example, it would be incorrect to compare >300 million 'unique children immunised' from Gavi 5.0/5.1 to >500 million 'children immunised' in Gavi 6.0.



2. How will Gavi reach another 1 billion children in 2021–2030?

With regard to the past achievement of the Alliance reaching >1 billion children with Gavi-supported routine immunisation since 2000, using the definition of 'unique children immunised', this occurred as of 2022. Using the new definition of 'children immunised', which accounts for the vaccination of different age groups (see FAQ #1 above) reaching >1 billion children happened in 2020 (i.e. the final year of Gavi 4.0). This milestone happens slightly earlier with the new indicator definition, as vaccines for older children – e.g. second dose of measles-containing vaccine (MCV2), human papillomavirus (HPV) vaccine – start contributing to the totals, particularly in late Gavi 4.0.

In terms of time trends, the number of children immunised with Gavi support continues to increase through Gavi 5.0/5.1 and Gavi 6.0. Gavi vaccine forecasts for the remainder of Gavi 5.0/5.1 and for Gavi 6.0 project the number of children immunised in Gavi 5.0/5.1 as nearly 500 million, and more than 500 million reached in the Gavi 6.0 period, for a total of over 1 billion for the decade. This means a total for Gavi 1.0 through Gavi 4.0 of 1 billion children immunised, and a total for Gavi 5.0/5.1 and Gavi 6.0 of another 1 billion children immunised (i.e. 20 years for the first billion children and 10 years for the second billion children).

3. Does the new indicator ‘children immunised’ double count children?

The original indicator ‘unique children immunised’ was defined to avoid double counting the number of children vaccinated with Gavi-supported routine immunisation in a given year. For example, a child might receive pentavalent, pneumococcal conjugate vaccine (PCV) and rotavirus vaccines; and only one of those would be counted. However, by construction it did not exclude the possibility of counting the same child twice over time – for example, a girl in India might have been counted as receiving Gavi-supported pentavalent vaccine in 2017 and counted again as receiving Gavi-supported HPV vaccine in 2027. (HPV vaccine along with typhoid conjugate vaccine are the only Gavi-supported vaccines in India in Gavi 6.0.) The new indicator, ‘children immunised’, will have more of this – given it counts infants separately from children in their second year of life. However, for a given year, neither indicator double counts children.

4. Why does Gavi present a range of 8–9 million future deaths averted for 2026–2030 impact, instead of an exact figure?

As with Gavi’s Investment Opportunity 2021–2025, Gavi presents a range of projected health impacts. The projection is based on a bottom-up approach, wherein the country-vaccine-year level forecasts of dose requirements created as part of Gavi’s financial forecasts are translated into the number of people immunised and, through modelling, the expected impact of those immunisations on mortality. These numbers are then summed to provide a portfolio-level projection of the number of future deaths that countries could avert with Gavi support from 2026–2030. As there are substantial uncertainties in the analysis, the final number is presented as a range.

The range provided is not a statistical uncertainty range. It reflects the use of multiple analyses to estimate the likely impact considering different assumptions about vaccine launches, coverage attainment and potential methodological changes to health impact models. For more information on the different analyses guiding the impact target, please see the technical appendix of Gavi’s Investment Opportunity 2026–2030.

5. How does Gavi estimate the impact of immunisation on future deaths averted?

Gavi impact modelling is conducted through the Vaccine Impact Modelling Consortium (VIMC). To generate Gavi’s impact estimates, individual disease models are run for each vaccine and then aggregated across the entire Gavi portfolio. At least two models for the same antigen are used to account for model uncertainty in the estimates. The VIMC was established in 2017 and is hosted by Imperial College London.

VIMC coordinates the work of more than 20 research groups modelling the impact of vaccination programmes worldwide.[2] As its core objective, it aims to deliver a more efficient and transparent approach to generating disease burden and vaccine impact estimates. Furthermore, the Consortium works on aggregating the estimates across a portfolio of 13 vaccine-preventable diseases and further advancing the research agenda in the field of vaccine impact modelling. VIMC is co-funded by Gavi, the Bill & Melinda Gates Foundation and Wellcome Trust; and it is guided by a stakeholder group of representatives from funders as well as key partners, including UNICEF, WHO and regional modelling hubs. VIMC estimates were also used to establish health impact targets for Immunization Agenda 2030.[3] For more information on the analyses used to establish the Gavi impact target, please see the technical appendix of Gavi's Investment Opportunity 2026–2030.

6. Why does Gavi use the term 'future' deaths averted?

Immunisation averts deaths over the lifetimes of vaccinated individuals by providing immunological protection from a young age. Gavi supports vaccines that prevent deaths from childhood diseases, as well as deaths that would occur decades in the future (e.g. hepatitis B and liver cancer; HPV and cervical cancer). The mathematical models used for projecting the impact of vaccines on mortality allow us to track the benefits of vaccinations carried out today into the future, and then assign those benefits back to the year immunisation occurred. This is important, as it places vaccines that impact mortality later in life (e.g. hepatitis B and HPV vaccines) on the same playing field as vaccines that have more immediate impact (e.g. measles vaccine or PCV). Note that the Investment Opportunity uses the terms 'lives saved' and 'deaths averted' interchangeably; both refer to future deaths averted.

7. What vaccines and activities are included in the impact projections presented in Gavi's Investment Opportunity 2026–2030?

The impact projections include supported vaccines delivered through routine systems and preventive campaigns, as follows: pentavalent; hexavalent; yellow fever; PCV; rotavirus; MCV2; measles-rubella; HPV; meningitis A (menA); multivalent

[2] Information on each of the models is available on the VIMC website: https://www.vaccineimpact.org/

[3] Carter A, Msemburi W, Sim SY, Gaythorpe KAM, Lambach P, Lindstrand A, Hutubessy R. Modeling the impact of vaccination for the immunization Agenda 2030: Deaths averted due to vaccination against 14 pathogens in 194 countries from 2021 to 2030. Vaccine. 2023 Aug 1:S0264-410X(23)00854-X. doi: 10.1016/j.vaccine.2023.07.033.

meningococcal conjugate vaccine (MMCV); Japanese encephalitis (JE); typhoid conjugate vaccine (TCV); diphtheria, tetanus and pertussis-containing (DTP) boosters; hepatitis B birth dose; and oral cholera vaccine (OCV).

The following Gavi-supported interventions are excluded from the impact estimates:

- Vaccines included in national immunisation programmes before Gavi began funding them, such as DTP vaccination for infants or the first dose of measles vaccine.
- New vaccines for which a Gavi forecast is not yet available, namely respiratory syncytial virus (RSV) and rabies.
- Vaccines newly approved for Gavi support under Gavi's Vaccine Investment Strategy (VIS) 2024, i.e. dengue, tuberculosis and group B streptococcus.
- Outbreak response immunisation, including through global stockpiles, for cholera, Ebola, measles, meningococcal and yellow fever vaccines, which protect millions of people against these diseases every year.
- Inactivated polio vaccine (IPV), either standalone or through the hexavalent vaccine – as this is considered a switch from countries' existing polio vaccines, which were included in national immunisation programmes before Gavi support began.
- Future engagement with former and never Gavi-eligible middle-income countries (MICs), as future forecasts of potential country-level vaccine introductions are highly uncertain.

Gavi includes time-limited (five years) catalytic impact for vaccines that a country self-finances after direct support from Gavi ends, since the country would have benefited from Gavi's health system strengthening support and might not have provided the vaccine without Gavi's support. Additionally, Gavi includes impact if a country self-finances a vaccine with access to Gavi prices. For more information on the definition of Gavi support, please see the technical appendix of Gavi's Investment Opportunity 2026–2030.

8. Does Gavi rely on a counterfactual to calculate impact (e.g. a hypothetical in which all support for immunisation has been stripped away)?

Gavi's figures for the number of future deaths averted by countries with Gavi support are computed based on a counterfactual in which no vaccines are administered. These figures only include the impacts of vaccines that Gavi is funding in each country, as opposed to total immunisation activity. As seen in many MICs that still do not provide new and underused vaccines like pneumococcal or rotavirus, countries might not have introduced these high-impact vaccines without Gavi's support, suggesting the counterfactual is reasonable. Moreover, Gavi does not count the impacts of antigens that were introduced before Gavi support began (e.g. DTP, MCV1).

9. How does Gavi's projected health impact of 8–9 million future deaths averted for Gavi 6.0 compare to the target of 7–8 million future deaths averted in Gavi 5.0/5.1?

In Gavi 6.0, we expect countries to avert 8–9 million future deaths with Gavi support, which is a greater impact than the 7–8 million figure for Gavi 5.0/5.1, which Gavi is currently on track to meet. The reason for the increase in Gavi 6.0 is continued scale-up of high-impact vaccines, like HPV, and the greater number of vaccines in the Gavi portfolio.

10. Why is Gavi impact increasing in Gavi 6.0 compared to Gavi 5.0/5.1, despite countries transitioning from Gavi support?

Gavi expects to enter 2026 with 54 eligible countries, down from 57 countries in Gavi 5.0, although this number could change with updated World Bank income classifications and potential revisions to the Gavi Eligibility, Transition and Co-financing Policy (ELTRACO). While country transition in Gavi 5.0/5.1, including India, reduces the number of children targeted with Gavi support, Gavi is reaching more children with more vaccines than ever before (e.g. through HPV vaccination for adolescents; hexavalent and malaria fourth doses for children in their second year of life; hepatitis B birth dose for newborns; continued scale-up of infant vaccines). For India, Gavi-supported impact already declined between Gavi 4.0 and Gavi 5.0/5.1, as support was focused on a smaller number of vaccines through Gavi's strategic partnership with India for 2022–2026, approved by the Gavi Board in June 2021.

11. How is the return on investment (ROI) to immunisation of 54:1 derived?

The return on investment (ROI) to immunisation was computed by the International Vaccine Access Center (IVAC) at Johns Hopkins University.[4] The figure of 54:1 represents the estimated 2021–2030 ROI in 73 Gavi-supported countries of immunisation programmes against ten antigens, ignoring Gavi support, including measles, yellow fever, *Haemophilus influenzae* type b (Hib), Japanese encephalitis (JE), hepatitis B, *Neisseria meningitidis* serogroup A, rubella, *Streptococcus pneumoniae*, human papillomavirus and rotavirus; and includes the broader societal value of people living longer, healthier lives. When considering only the cost of illness averted from immunisation (i.e. savings of health care costs, lost wages and lost productivity due to illness and death), each dollar spent on immunisation is estimated to bring US$ 21.

[4] Sim SY, Watts E, Constenla D, Brenzel L, Patenaude BN. Return On Investment From Immunization Against 10 Pathogens In 94 Low- And Middle-Income Countries, 2011-30. Health Aff (Millwood). 2020 Aug;39(8):1343-1353. doi: 10.1377/hlthaff.2020.00103. PMID: 32744930.