

Annex A: Technical report on Gavi 5.0/5.1 indicators

This is a technical report providing definitions of and progress against Mission and Strategy Goal indicators in the Gavi 5.0/5.1 measurement framework. The technical report is populated based on available data and updated bi-annually. The newly available data for 2023 relates to Mission Goals M2, M3, M4, M5, and M6, and Strategy Goals 1, 2, and 3.2.

Note on target trajectories:

In the below graphs, the dotted lines represent the projected annual trajectory that was forecasted when the 2025 targets were set with the PPC/Board in May 2021; the assumption was that coverage would return to 2019 coverage levels in 2021, with the exception of India which would take until 2022. This was noted in a footnote in the PPC paper on the 5.0 Measurement Framework at the time¹:

To account for COVID-19-related disruptions and recovery, it is assumed that vaccine coverage returns to 2019 levels by 2021, with the exception of India, which it is assumed returns to 2019 levels in 2022 and sub-national three doses of pneumococcal conjugate vaccine (PCV3) scale up takes an additional year.



Gavi 5.0 Mission Indicators



M.1: Under-five mortality rate - Updated April 2024

By increasing access to immunisation and enabling equal access to new and underused vaccines, Gavi support is contributing to the reduction in under-five deaths from vaccine-preventable diseases.

The under-five mortality rate in the 57 lower-income countries supported by Gavi fell from 55.3 to 53.6 deaths per 1,000 live births between 2021 and 2022 – a 9% reduction from baseline. We are on track to reach our Mission target of a 10% reduction target by 2025. Estimates for 2023 will be available in late 2024.

This indicator will be updated in April 2025.





This indicator estimates the impact of Gavisupported vaccinations in terms of averting future deaths from vaccine-preventable diseases – one of the ultimate impacts of Gavi support.

By end 2023, more than 3.7 million future deaths had been averted by Gavi-supported vaccinations since the Gavi 5.0 strategic period began in 2021. The cumulative number of deaths averted from 2000 through 2023 is more than 18.8 million.





Reduction in overall disease burden from vaccinepreventable diseases – one of the ultimate impacts of Gavi support.

By end 2023, more than 180 million future DALYs had been averted by Gavi-supported vaccinations since the Gavi 5.0 strategic period began in 2021.



M.4: Reduction in number of zero-dose children - Updated September 2024



The indicator serves as an equity measure, giving an indication of the reach of routine immunisation services to missed communities, with an emphasis on regularly reaching children who are being missed by routine immunisation.

In 2023, there were 11 million zero-dose children in the 57 lower-income countries supported by Gavi, representing an 18% increase since 2019, and up from 10.5 million in 2022. Reaching the Gavi 5.0/5.1 target by 2025 will require a 37% reduction from 2023.

M.5: Unique children immunised through routine immunisation with Gavi - Updated September 2024



least one vaccine delivered through routine systems with Gavi support.

This indicator tracks the number of children immunised with the last recommended dose of at

Countries immunised more than 69 million unique children through routine immunisation with Gavi support in 2023 for a total of more than 205 million children in this strategic period. By end 2023, Gavi-supported countries had immunised more than 1.1 billion unique children with Gavi support since 2000 – meeting our Investment Opportunity 2021–2025 commitment of more than 1.1 billion children immunised by 2025 two years early.

M.6: Economic benefits generated through Gavi-supported immunisations - Updated September 2024



Gavi-supported vaccines have impact beyond health benefits to include the direct and indirect economic benefits of averting illness, death and long-term disability.

More than US\$ 52 billion in economic benefits in the countries we support have been generated through Gavi-supported immunisations since the Gavi 5.0 strategic period began in 2021. From 2000 through 2023, that figure is more than US\$ 250 billion.



Strategy Goal 1: Introduce and scale up vaccines





Summary measure of prioritised vaccine introductions, rate of scale up of newly introduced vaccines and vaccine coverage.

2023 progress: The 57 Gavi-supported countries (Gavi57) increased breadth of protection by 3 percentage points (pp) in 2023 to 56%, against an implied target of 60% by 2025 (+16pp from 2019). With the exception pentavalent, in aggregate all Gavi-supported vaccines had higher coverage in 2023 than before the pandemic in 2019.





Across the four vaccines, the third dose of pneumococcal conjugate vaccine (PCV3) and the last dose in the schedule of human papillomavirus vaccine (HPVC) were trending higher in 2023 than originally projected when Gavi 5.0 targets were set, whereas coverage of the second dose of measlescontaining vaccine (MCV2) was slightly behind but improving. Coverage of the third dose of diphtheria, tetanus and pertussis-containing vaccine (DTP3) is off track.

DTP3 coverage in Gavi57 countries decreased from 83% in 2019 to 78% in 2021 before improving to 80% in 2022 and remaining stable in 2023.

PCV3 coverage has increased from 56% in 2019 to 74% in 2023, mostly driven by scale-up in India.

MCV2 coverage among Gavi57 has also increased, from 57% in 2019 to 66% in 2023, mostly due to continued scale-up, largely driven by High Impact countries.

HPVC coverage has increased substantially among Gavi57 countries, from a revised estimate of 4% in 2019 to 8% in 2022 and doubling to 16% in 2023 – reflecting the success of Gavi's HPV vaccine programme revitalisation, including new introductions in large countries (e.g. Nigeria, Bangladesh) and continued scale-up. HPV vaccine coverage in Ethiopia saw a historic downward revision driven by a new survey.





S1.3: Rate of scale-up of new vaccines: PCV3, Rotac, MCV2, YF - Updated September 2024

S1.5: Country prioritisation of vaccines - Reported for the first time September 2024

To assess the extent to which countries have indicated in their funding applications for new vaccine introductions the use of evidence to inform the decision to introduce a vaccine in the routine immunisation programme, the Gavi Secretariat assessed if the applications took into consideration the following three criteria (as proxies for use of evidence):

- 1. Disease burden: How significant is the health burden (i.e. morbidity and mortality) caused by the disease in question?
- 2. What is the effectiveness of vaccination (e.g. cost effectiveness, impact on deaths averted, quality-adjusted life years, disability-adjusted life years, other health outcomes) compared to other control measures or vaccines?
- 3. Has the country accounted for the budget needed to meet their current and future co-financing requirements for vaccine procurement, and to sustain immunisation levels after transition from Gavi support?

Each criterion was given a score of 1 if present in the application, for a total potential score of 3. Overall, 93% of the applications across all three years had considered disease burden and increase in budget needed, while 76% had considered effectiveness of vaccination. A total of 41 applications were reviewed from 2021 to 2023, increasing substantially (from 4 in 2021 to 31 in 2023) as many countries submitted malaria vaccine applications. In 2021 and 2023, 75% and 74% of applications considered all three criteria, respectively, compared to 50% in 2022. Note: Data was taken from applications, and Gavi's assessment was not validated with country or partners.

This provides a baseline understanding of this indicator for the remainder of Gavi 5.0. Criteria for review were selected from a list of potential areas in which countries could have used evidence to support their application and decision to submit it. A methodology to assess these criteria was developed to ensure standardisation and objectivity when reviewing the applications.

Gavi 6.0 has recognised the importance of vaccine prioritisation (i.e. which vaccine programmes to invest in first when limited by country capacity, resources and supplies) and portfolio optimisation (i.e. assessing the current vaccine portfolio given new products, presentations, schedules or uses, and switch to more opportune ones based on the country and market context) by including them as part of Strategic Goal 1, Objective A. The Secretariat, in consultation with Alliance partners, will be considering the best way to further refine our approach to VPO including strengthening monitoring and reporting on progress in these areas, including through the development of a revised indicator for 6.0.



S1.6: Measles campaign reach – Updated September 2024



This indicator measures the reach and quality of Gavi-supported MCV campaigns.

In 2023, 75% of children aged under five previously unvaccinated against measles received an MCV dose among countries conducting a Gavi-supported preventive MCV campaign. It should be noted that this indicator is based only on the campaigns with post-campaign coverage surveys (PCCS) which were appropriately carried out and which provide robust estimates on measles zero-dose children reached.





The longstanding challenges to detect and respond to outbreaks within the indicator timelines persisted in 2023, including sub-optimal surveillance; and lack of robust preparedness plans and locally available resources to respond. Despite these continuing challenges, 18% Gavi-supported outbreak responses met the disease-specific timeliness threshold in 2023. While this is the same overall performance as 2022, measles and yellow fever vaccines achieved higher rates of timely response. Gavi supports cholera and yellow fever diagnostics to allow for more timely detection and response, and improved vaccine targeting.







This indicator measures how well Gavi-supported countries are able to increase coverage in areas with limited access to immunisation services.

Geographic equity of DTP3 coverage increased to 69% in 2023. There is significant uncertainty around coverage levels and trends in low-coverage districts, because subnational data is frequently observed to have data quality issues (e.g. inaccurate estimates of population size and movement; incomplete reporting).





DTP drop-out in Gavi57 countries remained at 7% in 2023, 1pp above 2019 levels. Both DTP1 and DTP3 coverage in Gavi57 countries remained the same in 2023 as in 2022.





At portfolio level, MCV1 coverage patterns have largely been similar to those of DTP3. MCV1 coverage in Gavi57 countries decreased by 5 percentage points (pp) between 2019 and 2021, before increasing by 3pp to 79% in 2022 and then declining again by 1pp in 2023.





In 2023, Gavi-supported countries reported 12.8 million immunisation sessions were conducted, with 7 million taking place in fixed site facilities and 5.8 million in outreach facilities. 31 Gavi-supported countries reported data on this indicator in 2023, up from 28 in 2022. Only 23 countries have reported on this annually from 2021-23 (data shown in graph). This indicator is new to the WHO/UNICEF Joint Reporting Form (eJRF), so time trends likely reflect reporting completeness. This indicator was part of a developmental agenda for SG2 for 5.0, and it is becoming clear that there is significant variability in countries' capacity to monitor this data.

S2.5: Stock availability at facility level - Data last updated September 2022

In 2021, average full stock availability of DTP- and measles-containing vaccines (MCV) across Gavi57 was 71.6% at the health facility level. In 2022 and 2023, this was not collected through the eJRF. To estimate stock availability at the district level, Thrive360 data was used as an alternative. This analysis considered data from 31 Gavi-supported countries (>40% reporting rate). The average full stock availability for DTP and MCV was 94% and 92%, respectively. Health facility-level data was collected through an ad hoc process, with the support of the eJRF committee. With 24 countries reporting in 2023, the average percentage of health facilities reporting no stock-outs was nearly equivalent for DTP (86%) and MCV (81%). However, data sources and quality require further verification.

The Alliance is taking a proactive approach to strengthening vaccine management. By end 2023, grant applications from 16 of the 24 Comprehensive Vaccine Management (CVM) priority countries included strengthening activities. Additionally, UNICEF deployed vaccine management specialists to improve stock management and reporting, among other tasks. Reporting in Thrive360 increased from approximately 3,900 stores in December 2022 to around 7,100 stores in December 2023. The composite Effective Vaccine Management (cEVM) score improved from 73.3% in 2022 to 73.6% in 2023.

S2.6: EPI management capacity – Data last updated September 2022

Strengthened institutional capacity for programme management and monitoring is on the critical pathway to programmatic and financial sustainability, and a strategic enabler of Gavi's 2021–2025 strategy.

Following an external review of the Alliance approach to build country EPI management capacity, the refinement of leadership, management and coordination (LMC) strategy was paused due to COVID-19 pandemic-related reprioritisation, to avoid burdening country EPI teams. In 2023, Gavi supported technical assistance to enhance LMC capacity to improve EPI performance at sub- and national levels in Burundi, Cameroon, Djibouti, Haiti, Niger and Nigeria, with a specific focus on better use of data for decision-making.

Further, Gavi is supporting the development of a monitoring and learning (M&L) framework for measuring EPI capacity and health workforce development. It is structured around three performance domains: programme, governance and people. The framework was piloted in Ethiopia, India and South Sudan.



S2.7: Countries implementing tailored plans to overcome demand barriers – Updated September 2024

A comprehensive range of demand generation strategies are required to achieve high vaccination uptake. Since the 2021–2025 strategic period began, Gavi has made a number of key shifts in demand generation approaches – including: standardised behavioural measures; evidence-based hyper-local solutions developed with caregivers to reach 'zero-dose' and under-immunised communities; digital mediums to connect online to offline social listening; enhanced service experience to improve access to immunisation services; systematic community engagement to reach caregivers, including men.

Among the 53 Gavi57 countries reporting in 2023, 43 (81%) implemented one or more strategies to address undervaccination, an increase compared to 69% in 2022; and 40 countries (75%) collected behavioural and social data on childhood immunisation using several tools. Key insights include: a gap between social norms and individual intentions; low trust in health workers; the need to improve service experiences; vaccine hesitancy and low confidence due to sub-optimised service delivery challenges; and economic challenges faced by women. Meanwhile, 36 countries leveraged a human-centred design approach to co-create with caregivers hyper-local solutions to reach zero-dose and under-immunised communities.

While these solutions illustrate the significant progress to date, implementation must be strengthened to reach the necessary scale. By integrating COVID-19 response objectives into routine immunisation, 23 countries have strengthened government capacities for systematic collection and use of social data; but further advocacy is needed to mainstream social data into national immunisation systems. While there is progress on standardising monitoring and evaluation (M&E), data must be further integrated into programme design. Further, 63% of countries have a demand strategy to integrate COVID-19 vaccination into routine immunisation – a strong foundation for future pandemic response.

S2.8: Percent of countries addressing gender-related barriers – Updated September 2024

In 2023, of the 33 health system strengthening (HSS) and/or Equity Accelerator Fund (EAF) applications which were reviewed and approved by the Independent Review Committee (IRC), 29 countries (88%) included in their applications interventions to address gender-related barriers to immunisation, up from 67% percent in 2022 (i.e. 6 out of 9 countries).





S3.2: Preventing backsliding in Gavi-transitioned countries – Updated September 2024



This indicator assesses the sustainability of immunisation systems in former Gavi-eligible countries, as demonstrated through the capacity to maintain or increase DTP3 coverage following transition from Gavi support – reflecting Gavi's MICs approach. For the most recent two-year period, this indicator captures countries in which coverage was held constant or increased in at least one year compared to coverage in 2019.

By end 2023, ten former-Gavi MICs-eligible countries maintained or increased DTP3 coverage in 2023 or 2022 compared to 2019, while seven countries did not maintain or increase DTP3 coverage.





New vaccine introductions are a core driver of Gavi's achievement through the MICs Approach. This indicator measures the number of introductions of pneumococcal conjugate, rotavirus, HPV vaccines in former and never Gavi-eligible countries currently eligible for support under the MICs Approach.

In 2023, five new routine vaccine introductions took place in countries eligible for Gavi support under the MICs Approach, against a target of eight to ten by 2025.

This indicator will be updated in April 2025.

Strategy Goal 4: Ensure healthy markets for vaccines and related products



S4.1: Healthy market dynamics - Updated April 2024

Healthy market dynamics are assessed via analysis of fundamental market attributes: demand side dynamics, supply side dynamics and innovation. This holistic view of markets aligns market shaping activities and objectives with Gavi's strategic goals to introduce and scale up vaccines and improve sustainability of immunisation programmes.

Gavi's ongoing market shaping efforts and collaborations with manufacturers helped ensure that ten vaccine markets exhibited acceptable levels of healthy market dynamics, the same number as in 2022.

This indicator will be updated in April 2025.



S4.2: Incentivise innovations – Updated April 2024



S4.3: Scale up innovations – Updated April 2024



Number of innovative products within the pipeline of commercial-scale manufacturers.

The Vaccine Innovations Prioritisation Strategy (VIPS) sees continued success with unprecedented progress. The 2023 progress has brought the overall achievement to ten, continuing to surpass the cumulative target.

This indicator will be updated in April 2025.

Number of vaccines and immunisation-related products with improved characteristics procured by Gavi, which gives an indication of the incremental benefits we are able to bring to countries' immunisation programmes.

In 2023, one new product was procured for Gavi programmes, surpassing the 2023 milestone: multivalent meningococcal conjugate vaccine (MMCV), the first conjugate vaccine to protect against the five predominant causes of meningococcal meningitis in Africa. This brings the total to three new products with improved characteristics procured since Gavi's fifth five-year strategic period began in 2021.

This indicator will be updated in April 2025.