Gavi 5.0 Measurement Framework (2021-2025)

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Gavi
The Vaccine Alliance

TABLE OF CONTENTS

OVERVIEW

INTRODUCTION

The Gavi 5.0 Measurement Framework ("Measurement Framework") is the primary mechanism for routine monitoring and reporting on performance of Gavi's 2021-2025 strategy ("Gavi 5.0"). It was developed iteratively by the Gavi Secretariat, in consultation with partners and technical experts across the Alliance.

The Measurement Framework is a component of Gavi's Learning System—the overarching approach to generating and using evidence to strengthen delivery of Gavi strategies, policies, and programming. This document details the rationale, structure, and components of the Measurement Framework.

BACKGROUND

The Gavi Board approved the 2021-2025 strategy ("Gavi 5.0 strategy") in June 2019. The Measurement Framework has been designed to measure progress towards achieving Gavi's mission, strategy goals and objectives stipulated in the 2021-2025 Strategy.

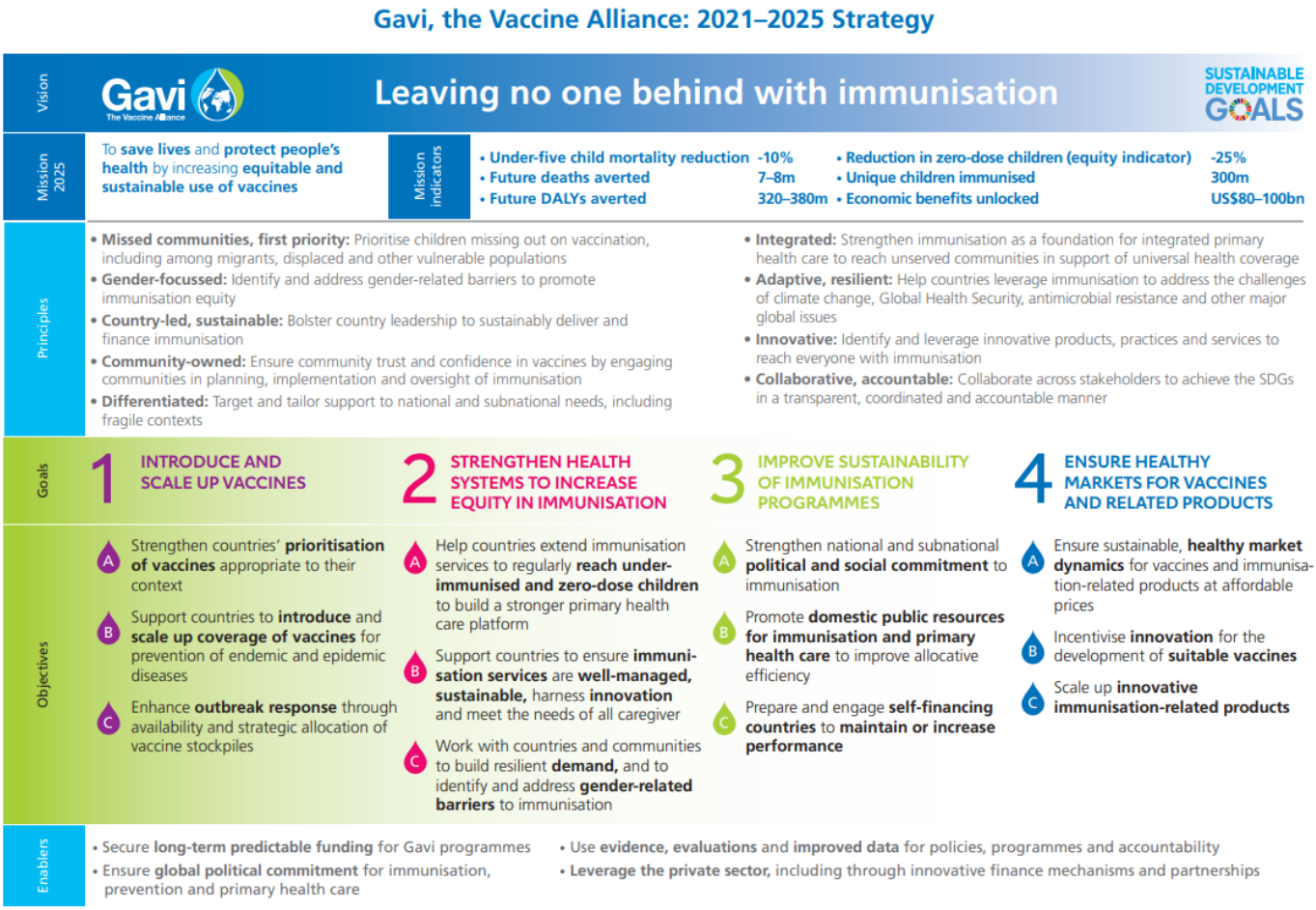


Figure 1: Gavi 2021-2025 Strategy One-Pager

THEORY OF CHANGE

Gavi's highest level ambitions are stipulated in its vision ("Leaving no one behind with immunisation") and mission ("Save lives and protect people's health by increasing equitable and sustainable use of vaccines"). The vision and mission represent the impact level results that Gavi will contribute to. Gavi's investments and programming will be operationalized to achieve four main strategy goals (long-term outcomes): 1) Introduce and scale up vaccines, 2) Strengthen health systems to increase equity in immunisation, 3) Improve sustainability of immunisation programmes, and 4) Ensure healthy markets for vaccines and related products. Gavi will apply the following key levers to generate requisite outputs and short-to-medium term outcomes that will contribute to achievement of the strategy goals: a) vaccine support, b) cash grants, c) technical assistance, and d) advocacy. The Gavi 2021-2025 strategy theory of change is illustrated in figure 2 below.

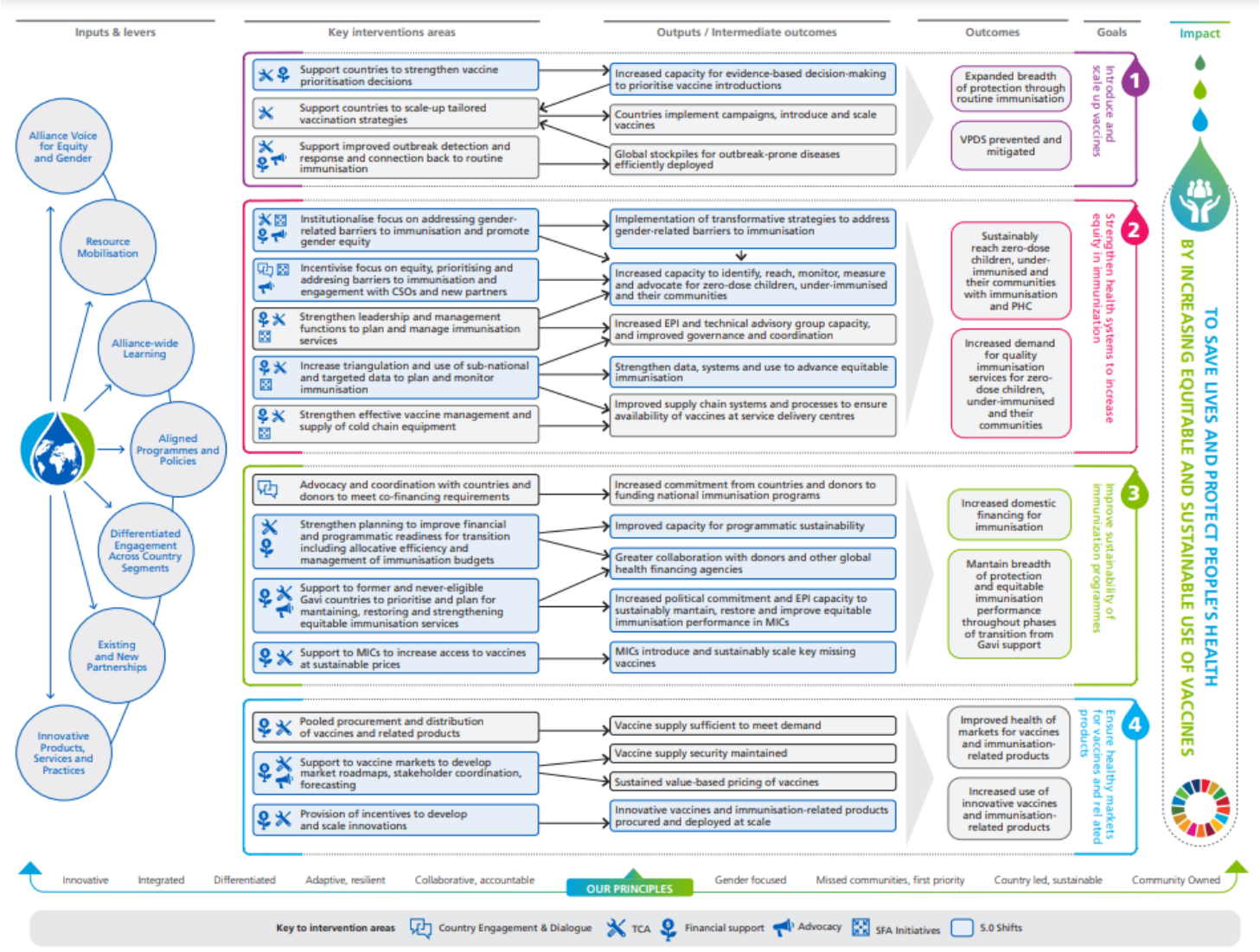


Figure 2: Gavi 5.0 Theory of Change

Using the ToC to underpin routine performance management facilitates the selection of indicators that are directly linked to the strategy goals and, due to their location along causal pathways, will indicate not only whether the Alliance is on or off-track to meet its objectives, allowing for more real-time course correction. An important part of the ToC approach is the identification of key assumptions about our operating context and risks to the achievement of our objectives–both of which will be routinely monitored.

PERFORMANCE MONITORING

Key shifts from Gavi 4.0 to Gavi 5.0 necessitated new ways of approaching performance monitoring of Gavi's strategy. The Measurement Framework reflects these shifts and builds on the lessons learned from performance monitoring of the 2016-2020 strategy. The major improvement is the use of the theory of change (ToC) to clearly articulate the Gavi 5.0 strategy in a way that strengthens our ability to monitor and evaluate it. Key performance indicators included in the Measurement Framework have been selected to measure results along and across the causal pathways of the strategy theory of change (from monitoring implementation of inputs and processes to delivery of outputs and achievement of immunisation outcomes).

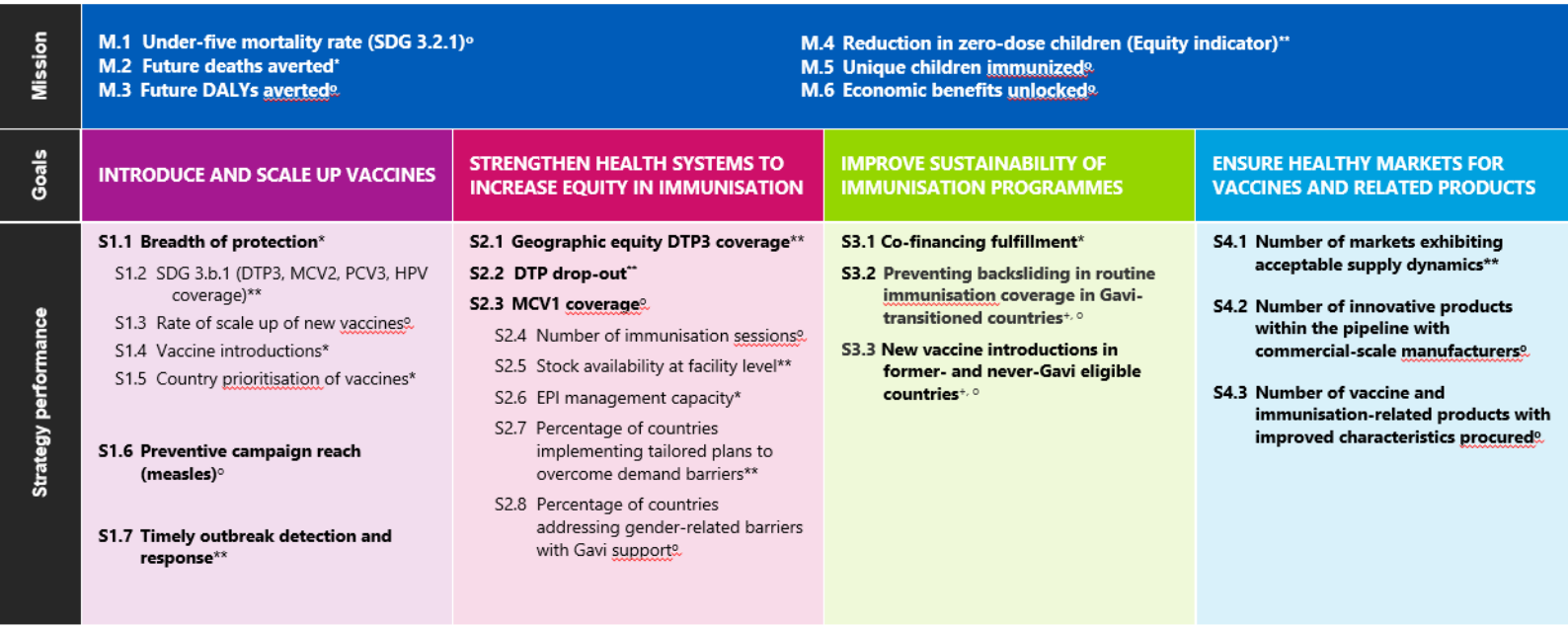
The Measurement Framework has been structured to monitor and measure performance of Gavi 5.0 at two levels:
1) Strategy performance;
2) Strategy implementation.

Strategy Performance Monitoring

Strategy performance monitoring focuses on measuring progress towards achievement of the strategy objectives and goals (i.e., the outputs, outcomes, and impact), with shared accountability across the Alliance and reporting to the Gavi Board. Strategy performance indicators measure the production of deliverables and achievement of key results downstream in the causal pathways of the Gavi 5.0 theory of change. Strategy performance indicators, and their associated baselines and targets, have been approved by the Gavi Board (see figure 3). Several Mission indicator targets are included as commitments in the Gavi 2021-2025 Investment Opportunity. The strategy performance indicators, baselines and targets approved by the Gavi Board are summarized in Annex A.

Note:

The Gavi Board approved elements of the 5.0 measurement framework across meetings held in 2020 and 2021. For some decisions, the Board approved proposals as part its consent agenda based on the recommendation of the Programme and Policy Committee (PPC). Board documents related to this process, which contain the rationale for the choice of indicators include: July 2020 Board paper, December 2020 Board paper, June 2021 Board Consent Agenda, November 2021 Board Consent Agenda.



Alignment with Global IA2030 M&E indicators
** full alignment (8)
* alignment with differences due to Gavi context (6)
! not aligned (0)
° not included in IA2030 (12)

Figure 3: Gavi 5.0 Strategy Performance Indicators

Strategy Implementation Monitoring

Strategy implementation monitoring focuses on measuring progress in the provision of key inputs by Gavi, and implementation of programming necessary to produce key deliverables and achieve outputs and short-to-medium term outcomes. While there are different operational monitoring activities within Gavi, a small set of strategy implementation indicators are selected to supplement and help interpret the strategy performance indicators as part of regular reporting to the Board. These strategy implementation indicators on progress (SIIPs) facilitate monitoring operational and programme implementation aspects of Gavi 5.0 and serve as intermediary signals to monitor whether the Alliance is on track to achieving the strategy objectives or the likelihood of top risks materialising. These indicators are not approved by the Board.

REPORTING

Gavi 5.0 strategy performance indicators will be used to measure the progress Gavi is making towards achieving the strategy's mission and goals. They measure progress at an aggregated level, across Gavi's portfolio of countries and programming. Strategy performance indicator data will be used to understand trends in specific programmatic areas or portfolio of countries, and to determine progress towards achieving the Board-approved target of planned achievement by 2025. Interpretation of the strategy performance indicators will be facilitated by reporting on the SIIPs, which provide more operational information and are "on the results chain" to the Board-approved strategy performance indicators. Results will be reported annually to the Gavi Board and the public via the Strategy Programmes and Partnerships updates to the Board and Annual Progress Report, respectively[1]. In addition, results will be reported via customised reports to fulfill donor requirements.

ROLES AND RESPONSIBILITIES

The Measurement and Strategic Information sub-team within the Measurement, Evaluation and Learning team is the custodian of the Gavi 5.0 Measurement Framework. Key responsibilities include:

1. Coordinate design of the measurement framework for a given strategy period. This includes coordinating selection of key performance indicators to measure strategy performance, establishing targets for each indicator and attaining Board approval of proposed indicators and targets.
2. Support the Gavi Resource Mobilisation team to develop donor logframes that are consistent with the measurement framework.
3. Compute indicator results and ensuring new data are available for reporting to the Gavi Board and relevant stakeholders as per agreed schedule.
4. Support interpretation of indicator results and conduct further analysis to unpack additional insights.
5. Ascertain quality and accuracy of reported data and interpretation.
6. Coordinate updates and reporting of strategy implementation indicators, in collaboration with business owners and the Strategy team.

1 New data for strategy performance indicators are available at different time points over the course of a calendar year. Some indicators are updated in Q1 and Q2 of a given calendar year, others are available only in Q3 and Q4. Reporting to the Gavi Board will occur in two tranches, June and November/December of a given calendar year. Reporting to the public and donors will occur in Q3 of a given calendar year.

Annex A: Summary of Baselines [2] and Targets for Gavi 5.0 Strategy Performance Indicators

ID	Indicator name	Baseline	2025 target
MISSION INDICATORS			
M.1	Under-five mortality	58 per 1,000	-10%
M.2	Future deaths averted	-	7-8m
M.3	Future DALYs averted	-	320-380m
M.4	Reduction in zero-dose	9.7m	-25%
M.5	Unique children immunised	-	300m
M.6	Economic benefits unlocked	-	US$80-100b
STRATEGY GOAL 1: INTRODUCE AND SCALE UP VACCINES			
S1.1	Breadth of protection	47%[3]	+16pp
S1.2	SDG3.b.1		
	DTP3	81%	+4pp
	MCV2	58%	+13pp
	PCV3	53%	+23pp
	HPV2	8%	+17pp
S1.3	Rate of scale up of new vaccines		
	PCV3	n/a	90%
	Rotac		
	MCV2		
	YF		
S1.4	Vaccine introductions	-	82
S1.5	Country prioritisation[4]	-	-
S1.6	Preventative campaign reach (measles)	-	50%
S1.7	Timely outbreak detection and response	25%	+50%
STRATEGY GOAL 2: STRENGTHEN HEALTH SYSTEMS AND EQUITY IN IMMUNISATION [5]			
S2.1	Geographic equity of DTP3 coverage	67%	+7pp
S2.2	DTP drop-out	7%	-1pp
S2.3	MCV1 coverage	80%	+4pp
S2.4	Number of immunisation sessions	n/a	n/a
S2.5	Stock availability at facility level	n/a	n/a
S2.6	EPI management capacity	n/a	n/a
S2.7	Plans to overcome demand barriers	n/a	n/a
S2.8	Gender-related barriers	n/a	n/a
STRATEGY GOAL 3: IMPROVE SUSTAINABILITY OF IMMUNISATION PROGRAMMES			
S3.1	Co-financing fulfillment	100%	100%
S3.2	Preventing backsliding in Gavi-transitioned countries	8 countries[6]	No decline[7]
S3.3	New vaccine introductions in former- and never-Gavi eligible countries	n/a	n/a
STRATEGY GOAL 4: ENSURE HEALTHY MARKETS FOR VACCINES AND RELATED PRODUCTS			
S4.1	Healthy market dynamics	-	10
S4.2	Incentivise innovations	-	8
S4.3	Scale-up innovations	-	9

[2] Baseline values as of Board approval in December 2021 unless otherwise noted. Baselines may be updated as more data become available and revised estimates for indicators are published. For coverage indicators, the baseline values are for year 2019 (pre-COVID19 pandemic).

[3] Baseline as of July 2022, based on 5.0 definition for breadth of protection.

[4] Indicator held in abeyance pending future implementation of the Vaccine Investment Strategy.

[5] The Gavi Board approved (December 2020) to the proposal that no targets be set for indicators S2.4 to S2.8. They will be monitored for directionality as the Alliance establishes and strengthens systems to consistently collect quality data.

[6] Baseline for 2021 set as of July 2022.

[7] No numeric value for 2025 target, which is framed as the proportion of Gavi-transitioned countries at least sustaining performance.

Annex B: Gavi 5.0 Strategy Performance Indicator Reference Sheets

MISSION INDICATORS

M.1 Under-five mortality rate

The under-five mortality rate measures the probability of a child born in a specific year or period dying before reaching the age of five, if subject to age-specific mortality rates for that period. This indicator is expressed as the number of deaths among children under-five in a given year, per 1000 live births.

2025 Target

-10% reduction

Strategic objective	NA
Level of reporting	Mission
Numerator	Number of deaths among children aged 0-4 years (0-59 months of age)
Denominator	Number of live births
Data type	Average probability
Level of disaggregation	Gavi-eligible countries
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation Team – Corporate Performance Monitoring and Measurement
Rationale for use	The under-five mortality rate is a leading indicator of child health and overall human development. It is indicative of government commitment to health. 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 use of this indicator as part of Gavi's strategy reflects Gavi's commitment to contributing to global and country health goals and is in alignment with Sustainable Development Goal (SDG) 3 target on child mortality: All countries to reduce under-five mortality to at least as low as 25 deaths per 1,000 live births by 2030.
Method of measurement	This indicator is calculated as a population-weighted average of estimated under-five mortality rates from the UN Inter-agency Group for Child Mortality Estimates (IGME) for Gavi-eligible countries in the 2021-2025 strategy period. Generating accurate estimates of under-five mortality poses a considerable challenge because of limitations in data availability and quality. The IGME was established in 2004 to enhance country capacity to produce timely and properly assessed estimates of child mortality. This is led by UNICEF and WHO and includes the World Bank and United Nations Population Division.

M.1 Under-five mortality rate

The under-five mortality rate measures the probability of a child born in a specific year or period dying before reaching the age of five, if subject to age-specific mortality rates for that period. This indicator is expressed as the number of deaths among children under-five in a given year, per 1000 live births.

2025 Target

-10% reduction

	The estimation process takes vital registration systems as the preferred source of data on child mortality because they collect information as events occur and cover the entire population. However, many developing countries lack vital registration systems that accurately record all births and deaths. Therefore, household surveys, such as the Multiple Indicator Cluster Surveys (MICs) and Demographic and Health Surveys (DHS), are the primary source of data on child mortality in developing countries. The IGME seeks to compile all available national-level data on child mortality, including data from vital registration systems, population censuses, household surveys and sample registration systems. A hierarchical Bayesian regression is used to estimate the trend in under-five mortality from the available data sources; this estimation process includes the projection of mortality rates for years without available data.
Analysis and interpretation	This indicator is expressed as the number of deaths among children under-five in a given year, per 1000 live births. Formally, this is not a rate (i.e., the number of deaths divided by the number of individuals at risk during a certain time period), but a probability of death derived from a life table. The reduction in under-5 mortality is a mission indicator and reflects one of Gavi's aspirations for the 2021-2025 strategic period. Tracking progress annually across Gavi- eligible countries provides a measure of the ultimate impact of Gavi activities, recognizing that Gavi's contributions toward averting these under-five deaths are intertwined with many other investments and actions—most importantly those made by countries themselves.
Strengths and limitations	A strength of including the under-five mortality rate as part of the Gavi strategy is that this is a key impact indicator used globally for multiple purposes, including the Sustainable Development Goals (SDGs). This indicator is also calculated using publicly available data, requiring no additional reporting burden from countries. A limitation of this indicator is that many other factors beyond the influence of Gavi affect a country's under-five mortality rate—including poverty, conflict, nutrition and many other factors. Therefore, a contribution perspective is essential. An additional limitation relates to extensive challenges in measurement. Due to the lack of consistent and high-quality data across countries, the values for this indicator come from an estimation process that involves imputation for years without primary data on child mortality rates (particularly for recent years) and have large accompanying uncertainty. This indicator may be slow in responding to policy changes, both because it is at the end of a long results chain and because it relies on data from household surveys which reflect child mortality from earlier time periods.
Data source	Child mortality estimates from IGME and estimates of live births from the United Nations, Department of Social and Economic Affairs, Population Division.

M.2 Number of future deaths averted with Gavi support

Number of future deaths averted as a result of Gavi-supported vaccinations

2025 Target

7-8m

Strategic objective	NA
Level of reporting	Mission
Numerator	NA
Denominator	NA
Data type	Number
Level of disaggregation	None
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation Team – Corporate Performance Monitoring and Measurement
Rationale for use	This indicator estimates the impact of Gavi-supported vaccinations in terms of averting future deaths from vaccine-preventable diseases. Mortality reduction is one of the ultimate impacts of Gavi support and is therefore important to estimate on a periodic basis.
Method of measurement	Future deaths averted are estimated by the Vaccine Impact Modeling Consortium (VIMC), an external consortium of disease modelers coordinated by a Secretariat based at Imperial College London. The VIMC Secretariat coordinates the work of 18 academic research groups with each group estimating the impact of a specific vaccine based on a counterfactual in which no vaccines are administered. The estimate for each disease is calculated as the average of two or three separate models (depending on the disease) to account for uncertainty in estimated impact due to model differences. Future deaths averted are estimated over the lifetime of those receiving vaccinations in a given year, to reflect the long-term benefits of vaccination, which is particularly relevant for HepB and HPV vaccination given the morbidity and mortality benefits occur in adulthood. Overall deaths averted is then reported as the aggregate across disease areas. Methods are described further in Li et al 2019 and on the VIMC website. In order to assess the long-term impact of Gavi support in countries which may not have otherwise funded vaccine programmes, the numbers reported against this indicator reflect both where Gavi has provided direct support (i.e. active funding for vaccine programmes in a given year), as well as catalytic support (i.e. in the five-year period immediately following a country's transition out of Gavi support). Most of the pathogens in Gavi-supported vaccines are included in the calculation, as follows: hepatitis B, Haemophilus influenzae type-b , pneumococcal, rotavirus, yellow fever (campaign and routine), meningitis A (campaign and routine), Japanese Encephalitis (campaign and routine), human papillomavirus, measles second dose, measles-rubella campaigns, rubella routine. Typhoid, preventive cholera, diphtheria, tetanus and pertussis (through Gavi-supported DTP boosters) will be added for Gavi 5.0). While Gavi supports Inactivated Polio Vaccine (IPV) estimates of future averted from IPV are not incorporated due to the difficulty of assessing the counterfactual of no vaccination given most countries are polio-free.

M.2 Number of future deaths averted with Gavi support

Number of future deaths averted as a result of Gavi-supported vaccinations

2025 Target

7-8m

Analysis and interpretation	Future deaths averted is a mission indicator and reflects one of Gavi's aspirations for the 2021-2025 strategic period. Tracking progress annually against the target of 7-8 million deaths averted with Gavi support between 2021 and 2025, provides a measure of the ultimate impact of Gavi support and allows for an assessment of whether the Alliance is on track to achieve our target. For communication purposes, this indicator is sometimes referred to as "lives saved". As described in its M&E framework and Strategy, Gavi adopts a contribution perspective when estimating impact—recognizing that reported impact estimates do not reflect exclusive attribution to Gavi, but a broader impact at country level to which Gavi is one of many contributors, in support of countries and alongside other development partners.
Strengths and limitations	The strength of this indicator is that it provides an estimate of the ultimate impact of Gavi-supported vaccines on vaccine preventable mortality. The primary limitation is substantial measurement error, which is difficult to quantify. Model-based estimates of impact rely on several assumptions that are difficult to test. To some extent, the uncertainty is mitigated by the use of two to three different models per disease to account for uncertainty due to model differences. A second limitation is that the indicator estimates impact of Gavi-supported vaccination against a simple alternative scenario of no vaccination rather than a more complex scenario that seeks to determine which countries may have introduced which vaccines in the absence of Gavi support; this may lead to an overestimation of Gavi-related impact. Lastly, since the aim of this indicator is to track all deaths averted through Gavi-supported vaccination, it counts deaths that would have happened in the following year as well as decades into the future. From a communication perspective, the inclusion of the latter can be challenging to explain.
Data source	Publicly available, peer-reviewed disease models are used to estimate future deaths averted, as described further in: Li, Xiang., et al, 2019". The disease models use WHO/UNICEF estimates of immunisation coverage (WUENIC) for coverage and estimates of population size from the United Nations Population Division.
Further information and related links	Li, X. et al. 2019. Estimating the health impact of vaccination against 10 pathogens in 98 low- and middle-income countries from 2000 to 2030. medRxiv 19004358; doi: https://doi.org/10.1101/19004358 VIMC website: https://www.vaccineimpact.org/resources/

M.3 Number of future disability-adjusted life years (DALYs) averted with Gavi support

Number of future disability-adjusted life years (DALYs) averted as a result of vaccination with Gavi-supported vaccines

2025 Target

320-380m

Strategic objective	NA
Level of reporting	Mission
Numerator	NA
Denominator	NA
Data type	Number
Level of disaggregation	None
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation Team – Corporate Performance Monitoring and Measurement
Rationale for use	This indicator measures the impact of Gavi-supported vaccines on morbidity, and mortality. Reduction in overall disease burden from vaccine-preventable diseases is one of the ultimate impact measures of Gavi support and is therefore important to estimate on a periodic basis. The use of DALYs comes from recognition that focusing exclusively on deaths averted overlooks important morbidity-related impact achieved as a result of reduction in morbidity. This helps supplement the tracking of future deaths averted.
Method of measurement	DALYs measure the number of healthy life years lost due to disability or premature death. DALYs are calculated as the sum of the years of life (YLL) lost due to premature mortality and the number of years lost due to disability (YLD) amongst people living with a health condition. Years lost from premature mortality are estimated using a standard expectation of the age of death. Years lost due to disability are estimated by weighting the number of years lived with a disability by a disability weight which reflect the severity of the condition and its impact on functional capacity. Future DALYs averted are estimated by the Vaccine Impact Modeling Consortium (VIMC), an external consortium of disease modelers coordinated by a Secretariat based at Imperial College London. The VIMC Secretariat coordinates the work of 18 academic research groups with each group estimating the impact of a specific vaccine based on a counterfactual in which no vaccines are administered. The estimate for each disease is calculated as the average of two or three separate models (depending on the disease) to account for uncertainty in estimated impact due to model differences. Future DALYs averted are estimated over the lifetime of those receiving vaccinations in a given year, to reflect the long-term benefits of vaccination, which is particularly relevant for HepB and HPV vaccination given the morbidity and mortality benefits occur in adulthood. Overall DALYs averted is then reported as the aggregate across disease areas. Methods are described further in Li et al 2019 and on the VIMC website. In order to assess the long-term impact of Gavi support in countries which may not have otherwise funded vaccine programmes, the numbers reported against this indicator reflect both where Gavi has provided direct support (i.e. active funding for vaccine programmes in a given year), as well as catalytic support (i.e. in the five-year period immediately following a country's transition out of Gavi support).

M.3 Number of future disability-adjusted life years (DALYs) averted with Gavi support

Number of future disability-adjusted life years (DALYs) averted as a result of vaccination with Gavi-supported vaccines

2025 Target

320-380m

	Most of the pathogens in Gavi-supported vaccines are included in the calculation, as follows: hepatitis B, Haemophilus influenzae type-b (Hib), pneumococcal, rotavirus, yellow fever (campaign and routine), meningitis A (campaign and routine), Japanese Encephalitis (campaign and routine), human papillomavirus, measles second dose, measles-rubella campaigns, rubella routine. Typhoid, preventive cholera, diphtheria, tetanus and pertussis (through Gavi-supported DTP boosters) will be added for Gavi 5.0). While Gavi supports Inactivated Polio Vaccine (IPV) estimates of future averted from IPV are not incorporated due to the difficulty of assessing the counterfactual of no vaccination given most countries are polio-free.
Analysis and interpretation	Future DALYs averted is a mission indicator and reflects one of Gavi's aspirations for the 2021-2025 strategic period. Tracking progress on DALYs annually against the 2021-2025 target (TBD) provides a measure of the ultimate impact of Gavi support and allows for an assessment of whether or not we are on track to achieve our target. As described in its M&E framework and strategy, Gavi adopts a contribution perspective when estimating impact—recognizing that impact numbers reported do not reflect exclusive attribution to Gavi, but a broader impact at country level to which Gavi is one of many contributors, in support of countries and alongside other development partners.
Strengths and limitations	The strength of this indicator is that it broadens the estimated impact of Gavi-supported vaccines to morbidity/disability, alongside mortality reduction. Many vaccine-preventable diseases and their sequalae have a significant impact on non-fatal health outcomes that are captured in DALYs. The primary limitation is substantial measurement error, which is difficult to quantify. Model-based estimates of impact rely on several assumptions that are difficult to test. To some extent, the uncertainty is mitigated by the use of two to three different models per disease to account for uncertainty due to model differences. Further, computing this indicator requires an additional step to estimate years lived with disability (YLDs) , in addition to the uncertainty around disability weight estimates. A second limitation is the indicator estimates impact of Gavi-supported vaccination against a simple alternative scenario of no vaccination rather than a more complex scenario that seeks to determine which countries may have introduced which vaccines in the absence of Gavi support; this may lead to an overestimation of Gavi-related impact. Since the aim of this indicator is to track all DALYs averted through Gavi-supported vaccination, it counts DALYs that would have happened in the immediate future as well as decades into the future. From the communication perspective, the inclusion of the latter can be challenging to explain.
Data source	Publicly available, peer-reviewed disease models are used to estimate future DALYs averted, as described further in Li, Xiang., et al, 2019. The disease models use WHO/UNICEF estimates of immunisation coverage (WUENIC) for coverage and estimates population size from the United Nations Population Division.
Further information and related links	Li, X. et al. 2019. Estimating the health impact of vaccination against 10 pathogens in 98 low- and middle-income countries from 2000 to 2030. medRxiv 19004358; doi: https://doi.org/10.1101/19004358 VIMC website: https://www.vaccineimpact.org/resources/

M.4 Reduction in the number of zero-dose children

This indicator tracks the reduction in the number of zero-dose children in Gavi-eligible countries relative to the number at baseline. Zero-dose children are infants who have not received the first dose of DTP-containing vaccine (DTP1) by the end of their first year of life.

2025 Target

-25%

Strategic objective	NA
Level of reporting	Mission
Numerator	NA
Denominator	NA
Data type	Number
Level of disaggregation	None
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation Team – Corporate Performance Monitoring and Measurement
Rationale for use	The indicator serves as an equity measure, giving an indication of the reach of routine immunisation services to missed communities. The focus on zero-dose is meant to serve as a starting point for addressing inequities in immunisation coverage, with an emphasis on regularly reaching children who are being missed by routine immunisation.
Method of measurement	The indicator is computed as the total number zero-dose children in Gavi-eligible countries in the reporting year minus the total number of zero-dose children at baseline in those countries. The number of zero-dose children in a given year is computed as the total number of surviving infants minus the number of surviving infants who received the first dose of DTP containing vaccine, as estimated from WUENIC immunisation coverage estimates and UNPD population estimates.
Analysis and interpretation	The reduction in the number of zero-dose children is a mission indicator and reflects Gavi's overall vision for the 2021-2025 strategic period to 'leave no one behind with immunisation'. Tracking its progress on annually against the 2021-2025 target (TBD) provides a measure of the outcome of the different strategies and targeted investments specifically aiming to strengthen routine immunisation to extend routine immunisation services to regularly reach missed communities.
Strengths and limitations	The primary strength of this indicator is that it is simple to understand and communicate. It is also calculated using publicly available data, requiring no additional reporting burden from countries. The primary limitation is underlying uncertainty in available coverage and population estimates. The quality of the coverage and population estimates are constrained by the quality and availability of underlying data sources, which have gaps for many countries. In addition, because it looks at a reduction the number of zero-dose, in the context of population growth, it does not clearly demonstrate the need to reach additional children not only to increase reach but also to maintain existing coverage.
Data source	Vaccine coverage: WHO/UNICEF estimates of national immunisation coverage. Population estimates: United Nations, Department of Social and Economic Affairs, Population Division. World population Prospects.

M.5 Unique children immunised through routine immunisation with Gavi support

This indicator tracks the number of children immunised with the last recommended dose of at least one vaccine delivered through routine systems with Gavi support

2025 Target

300m

Strategic objective	NA
Level of reporting	Mission
Numerator	NA
Denominator	NA
Data type	Number
Level of disaggregation	None
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation Team – Corporate Performance Monitoring and Measurement
Rationale for use	This indicator demonstrates the reach of Gavi-supported vaccines through routine immunisation systems.
Method of measurement	This indicator refers to the total number of children reached with the last recommended dose of at least one Gavi-supported vaccine delivered through routine systems, corrected on a country-by-country basis so that children receiving multiple vaccines are not double-counted. Campaigns and supplementary immunisation activities are not included. On a country-by-country basis, the Gavi-supported vaccine delivered through the routine system with the highest level of coverage at national level is selected. In the majority of countries, this is pentavalent vaccine, but theoretically other Gavi-supported vaccines could have higher coverage at national level, or Gavi may not support pentavalent vaccine in a country. Coverage is translated into an estimate of the number of children reached with that vaccine by multiplying the fraction of the target cohort reached, per the WHO/UNICEF estimates of national immunisation coverage, by a target population estimate (for the vaccines included in this indicator, this is the estimate of surviving infants from the United Nations Population Division for the corresponding country and year). The numbers reported against this indicator reflect both where Gavi has provided direct support (i.e. active funding for vaccine programmes in a given year), as well as catalytic support (i.e. in the five-year period immediately following a country's transition out of Gavi support).
Analysis and interpretation	The number of unique children immunised with Gavi support is a mission indicator and reflects one of Gavi's aspirations for the 2021-2025 strategic period. Tracking progress annually against the target of 300 million children immunised between 2021 and 2025 with Gavi support provides a measure of the number of children reached with Gavi support and allows for an assessment of whether or not we are on track to achieve our target.
Strengths and limitations	The strength of this indicator is that it directly estimates the number of children reached with Gavi-supported vaccines using publicly available data, requiring no additional reporting burden from countries.

M.5 Unique children immunised through routine immunisation with Gavi support

This indicator tracks the number of children immunised with the last recommended dose of at least one vaccine delivered through routine systems with Gavi support

2025 Target

300m

The primary limitation of this indicator is underlying uncertainty in available coverage and population estimates. The quality of the coverage and population estimates are constrained by the quality and availability of underlying data sources, which have gaps for many countries. In addition, many other factors in a country influence the number of children reached with routine immunisation coverage.
Another limitation is that the indicator does not provide us with an indication of how many Gavi-supported vaccines each child reached received, nor whether the distribution of coverage is equitable. Coverage and equity dimensions are, however, captured by other indicators in the measurement framework.

Data source

Vaccine coverage: WHO/UNICEF estimates of national immunisation coverage.
Population estimates: United Nations, Department of Social and Economic Affairs, Population Division. World population Prospects.

M.6 Economic benefits generated through Gavi-supported immunisations

This indicator measures the value of averting short and long-term economic costs associated with the diseases that Gavi-supported vaccines protect against.

2025 Target

US$80-100b

Strategic objective	NA
Level of reporting	Mission
Numerator	NA
Denominator	NA
Data type	Number (US dollars)
Level of disaggregation	None
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation Team – Corporate Performance Monitoring and Measurement
Rationale for use	This indicator measures the impact of Gavi-supported vaccines beyond health benefits to include the direct and indirect economic benefits of averting illness, death and long-term disability.
Method of measurement	Estimates of economic benefits generated by Gavi-supported immunisations are computed by an external academic institution, the Decade of Vaccine Economics (DOVE) research group, housed at the International Vaccine Access Center (IVAC) at Johns Hopkins University. DOVE-cost of illness (DOVE-COI) models serve as the primary method for estimating economic benefits. The models calculate the value of averting short and long-term costs associated with the diseases that Gavi-supported vaccines protect against, using as inputs the estimates of cases and deaths averted from the Vaccine Impact Modeling Consortium (VIMC). The short and long-term costs measured by the COI models include: (1) acute treatment costs associated with a specified illness; (2) transportation costs associated with a specified illness; (3) caretaker wages lost because of a child's illness; (4) productivity losses that occur due to premature death; and (5) productivity losses due to disability. The detailed methodology outlined in Sim et al. (2019) and on the Immunisation Economics website. Gavi adopts a contribution perspective when estimating impact—recognizing that impact numbers reported do not reflect exclusive attribution to Gavi, but a broader impact at country level to which Gavi is one of many contributors, in support of countries and alongside other development partners. In order to assess the long-term impact of Gavi support in countries which may not have otherwise funded vaccine programmes, the numbers reported against this indicator reflect both where Gavi has provided direct support (i.e. active funding for vaccine programmes in a given year), as well as catalytic support (i.e. in the five-year period immediately following a country's transition out of Gavi support). Most of the pathogens in Gavi-supported vaccines are included in the calculation, as follows: hepatitis B, Haemophilus influenzae type-b (Hib), pneumococcal, rotavirus, yellow fever (campaign and routine), meningitis A (campaign and routine), Japanese Encephalitis (campaign and routine), human papillomavirus, measles second dose, measles-rubella campaigns, rubella routine. Typhoid, preventive cholera, diphtheria, tetanus and pertussis (through Gavi-supported DTP boosters) will be added for Gavi 5.0). While Gavi supports Inactivated Polio Vaccine (IPV) estimates of economic benefits from IPV are not incorporated due to the difficulty of assessing the counterfactual of no vaccination given most countries are polio-free.

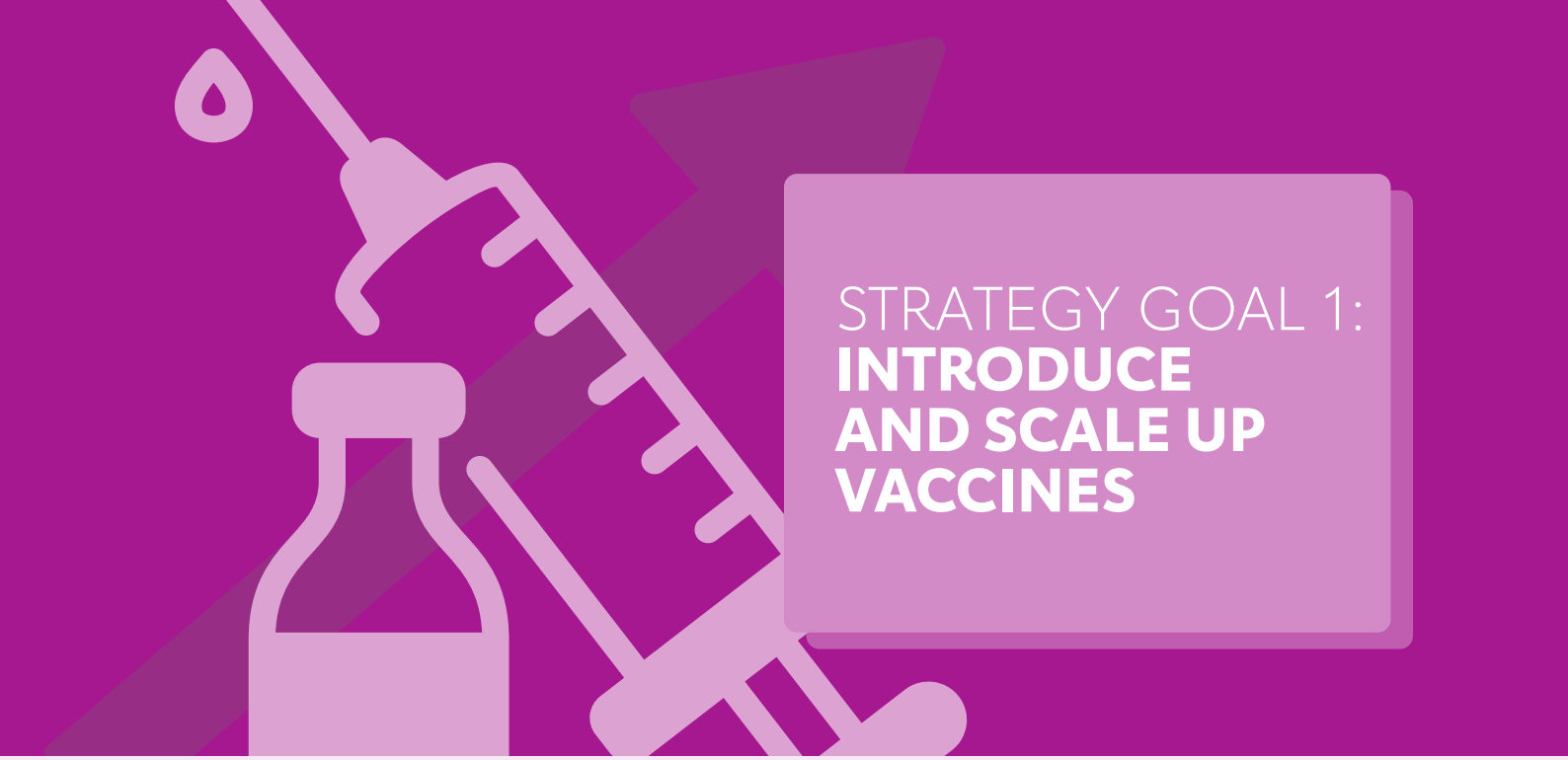
M.6 Economic benefits generated through Gavi-supported immunisations

This indicator measures the value of averting short and long-term economic costs associated with the diseases that Gavi-supported vaccines protect against.

2025 Target

US$80-100b

Analysis and interpretation	Economic benefits generated through Gavi-supported vaccinations is a mission indicator and reflects one of Gavi's aspirations for the 2021-2025 strategic period. Tracking progress annually against the target of 80-100 billion US dollars between 2021 and 2025 with Gavi support provides a measure of the ultimate impact of Gavi support and allows for an assessment of whether or not we are on track to achieve our target.
Strengths and limitations	The strength of this indicator is that it captures the impact of Gavi-supported vaccines beyond just health and includes the economic benefits that accrue as a result of averted direct and indirect costs of illness, disability and deaths. The primary limitation of this indicator is that there is substantial measurement error, which is difficult to quantify. Model-based estimates of impact rely on a number of assumptions that are difficult to test and are sensitive to methodological assumptions about morbidity estimates, life expectancies, and disability weights.
Data source	The DOVE ROI model as outlined in Sim et al. 2019. Additionally, the DOVE-ROI models use health impact estimates from the VIMC. Li, Xiang., et al, 2019.
Further information and related links	Sim, Y. et al. 2019 "Return on Investment from Immunisation Programs Against 10 Pathogens in 94 Low- and Middle-Income Countries from 2011-2030" Immunisation Economics website at http://immunizationeconomics.org/dove-roi Li, X. et al. 2019. Estimating the health impact of vaccination against 10 pathogens in 98 low- and middle-income countries from 2000 to 2030. medRxiv 19004358; doi: https://doi.org/10.1101/19004358 VIMC website: https://www.vaccineimpact.org/resources/



STRATEGY GOAL 1: **INTRODUCE AND SCALE UP VACCINES**

S1.1 Breadth of protection

Average vaccination coverage across all Gavi-supported vaccines in Gavi-supported countries

Strategic objective	SG 1 – Introduce and scale up vaccines
Level of reporting	Strategy
Numerator	Sum of children vaccinated with the last recommended dose of Gavi-supported routine vaccinations in Gavi-supported countries
Denominator	Sum of target populations of each vaccine in Gavi-supported countries
Data type	Percent
Level of disaggregation	None
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation – Corporate Performance Monitoring and Measurement
Rationale for use	Breadth of protection is a summary measure of prioritized vaccine introductions, rate of scale up of newly introduced vaccines, and vaccine coverage. It measures the extent to which Gavi-supported countries have been introduced and scaled up routine coverage of Gavi-supported vaccines.
Method of measurement	This indicator is the population-weighted average coverage of Gavi-supported vaccines. It is computed as the sum of children vaccinated with the last recommended dose of Gavi-supported routine vaccinations in Gavi-supported countries divided by the sum of the number of children eligible to receive each of those vaccines in those countries. Target populations are specific to individual vaccines (e.g. surviving infants, two-year-olds, and adolescents). Campaign delivery is not included. The following vaccines are included: pentavalent, pneumococcal, rotavirus, measles-containing vaccine second dose, rubella, inactivated polio vaccine (IPV) second dose, human papilloma virus (HPV), yellow fever, Japanese encephalitis (JE), and meningitis type A. (Men A). JE, Men A and yellow fever are regional vaccines that are specific to endemic countries, and in some cases, to subnational regions within those countries. The denominator for breadth of protection is adjusted accordingly, taking into account only the relevant target populations.

S1.1 Breadth of protection

Average vaccination coverage across all Gavi-supported vaccines in Gavi-supported countries

Analysis and interpretation	Breadth of protection reflects the effectiveness of the Alliance's support to countries to introduce Gavi-recommended Gavi vaccines and scale up routine coverage. Tracking progress annually against the 2021 - 2025 target provides an indication of the progress countries are making to introduce and scale-up vaccines.
Strengths and limitations	Strengths: - Indicator provides a single composite measure of average coverage with all Gavi-supported vaccines and thus provides a portfolio-level view of the effectiveness of the Alliance's investments to support countries introduce and scale up Gavi-supported vaccines. It is closely related to the measurement of a "fully immunised child", but provides a more sensitive measure that reflects progress on each vaccine. - Publicly available data is used, imposing no additional reporting burden on countries. Limitations: - Lack of available WHO/UNICEF estimates at present for some vaccines in the portfolio (e.g. HPV). For some vaccines, namely JE and Men A, data on coverage is available through the Joint Reporting Forum (JRF), but these data are subject to some measurement error - Indicator does not track co-coverage of multiple vaccines at the unit of the individual (i.e., it does not reflect how many children have individually received each recommended vaccine).
Data source	Vaccine coverage: WHO/UNICEF estimates of national immunisation coverage, WHO Joint Reporting Forum (JRF) for JE and Men A . Population estimates: United Nations, Department of Social and Economic Affairs, Population Division. World population Prospects.

S1.2 Vaccine coverage [SDG indicator 3.b.1]

The target population for given vaccine is defined based on recommended age for administration. The primary vaccination series of most vaccines are administered in the first two years of life.

Strategic objective	SG 1 – Introduce and scale up vaccines
Level of reporting	Strategy
Indicator definition	Coverage of DTP containing vaccine (3rd dose): Percentage of surviving infants who received 3 doses of diphtheria-tetanus toxoid-pertussis containing vaccine in a given year. Coverage of Measles containing vaccine (2nd dose): Percentage of children ages 12-23 months who received two dose of measles containing vaccine according to nationally recommended schedule through routine immunisation services in a given year. Coverage of Pneumococcal conjugate vaccine (last dose in the schedule): Percentage of surviving infants who received the nationally recommended doses of pneumococcal conjugate vaccine in a given year. Coverage of HPV vaccine (last dose in the schedule): Percentage of 15 years old girls received the recommended doses of HPV vaccine.
Numerator	NA
Denominator	NA
Data type	Percent
Level of disaggregation	By vaccine
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation – Corporate Performance Monitoring and Measurement
Rationale for use	This indicator aims to measure access to vaccines, including the newly available or underutilized vaccines, at the national level. Enables Gavi to demonstrate alignment to the Sustainable Development Goals agenda.
Method of measurement	This indicator is measured using annually updated WHO/UNICEF estimates of coverage for DTP3, PCV3, MCV2 and HPV2 vaccines. The vaccine-specific coverage estimates are reported separately (it is not a composite). The overall coverage estimates for Gavi-supported countries are based on the population-weighted average of the coverage estimates from each of the countries, using the target populations for each vaccine as the weight.

S1.2 Vaccine coverage [SDG indicator 3.b.1]

The target population for given vaccine is defined based on recommended age for administration. The primary vaccination series of most vaccines are administered in the first two years of life.

Analysis and interpretation	The coverage estimates will provide insights into the state of immunisation programmes across Gavi-supported countries and inform the following interpretations: Coverage of DTP containing vaccine: measure the overall system strength to deliver infant vaccination Coverage of Measles containing vaccine: ability to deliver vaccines beyond first year of life through routine immunisation services. Coverage of Pneumococcal conjugate vaccine: adaptation of new vaccines for children Coverage of HPV vaccine: life course vaccination
Strengths and limitations	Strengths: - Indicator directly measures coverage of routine immunisation services - Publicly available data is used, imposing no additional reporting burden on countries. - Coverage of the selected vaccines reflect the ability of immunisation programmes to deliver vaccines over the life course and to adapt new vaccines. - Coverage for other WHO recommended vaccines are also available and can be provided. Limitations: - Indicator comprises 4 independent vaccine coverage estimates (one for each individual vaccine). This presents a challenge to succinct interpretability. However, there is strategic and programmatic value in having visibility of how effectively coverage of new and under-used vaccines is scaling up.
Data source	Vaccine coverage: WHO/UNICEF estimates of national immunisation coverage. Population estimates: United Nations, Department of Social and Economic Affairs, Population Division. World population Prospects.

S1.3 Rate of scale up of new vaccines

Coverage of routine vaccines (PCV3, Rotac, MCV2 and yellow fever) relative to benchmark vaccine within reference time frame for new introductions.

Strategic objective	SG 1 – Introduce and scale up vaccines
Level of reporting	Strategy
Numerator	Number of children vaccinated with individual vaccines in countries with mature introductions (2 years for rotavirus and PCV3; and 3 years for MCV2 and yellow fever)
Denominator	Number of children vaccinated with the reference vaccine (DTP3 or MCV1) in countries with scaled-up introductions of the new routine vaccine
Data type	Percent
Level of disaggregation	By vaccine
Frequency of reporting	Annual
Responsible team	Vaccine Implementation
Rationale for use	This metric evaluates whether new introductions are achieving high coverage within a reasonable timeframe as measured by WUENIC data. "Mature introduction" – Internal analyses suggest that it takes, on average, two years post-introduction (three years for MCV2 and yellow fever) for a new routine vaccine to achieve coverage similar (at least 90%) to that of the existing routine vaccine following a similar immunisation schedule.
Method of measurement	This indicator is computed as the number of children vaccinated with the 4 new routine vaccines (PCV3, Rota, MCV2, YF) in countries with scaled-up routine introductions (2 years for Rota & PCV3 and 3 years for MCV2 & YF) divided by number of children vaccinated with the corresponding benchmark vaccine in countries with scaled-up introductions of new vaccine. For the purposes of calculating this indicator, the "year of launch" is defined differently based on which month the vaccine was launched: - If a vaccine was launched within January to September of a given year, the year of launch is the same as recorded in the Vaccine Launches Database; - If a vaccine was launched within October to December of a given year, the year of launch is one year later than that recorded in the Vaccine Launches Database. Notes: - WUENIC coverage for the new vaccine is taken two years (for PCV3 and Rota) or three years (for MCV2 and yellow fever) after the assigned year of launch - WUENIC coverage for the reference vaccine is taken two years (for DTP3) and three years (for MCV1) after the assigned year of launch.
Analysis and interpretation	Evaluate whether new introductions are achieving high coverage within a reasonable timeframe.

S1.3 Rate of scale up of new vaccines

Coverage of routine vaccines (PCV3, Rotac, MCV2 and yellow fever) relative to benchmark vaccine within reference time frame for new introductions.

Strengths and limitations	Strengths: - The indicator provides insight into the time taken for newly introduced vaccines to achieve strong coverage, allowing Gavi to examine where new vaccine introductions are falling behind or exceeding expectations. Limitations: This indicator comprises 4 independent vaccine coverage estimates (one for each individual vaccine). This presents a challenge to succinct interpretability. However, there is strategic and programmatic value in having visibility of how effectively coverage of newly introduced vaccines is scaling up.
Data source	Vaccine coverage: WHO/UNICEF estimates of national immunisation coverage. Population estimates: United Nations, Department of Social and Economic Affairs, Population Division. World population Prospects. Vaccine introductions: Gavi vaccine launches database (internal).

S1.4 Vaccine introductions

Number of introductions of Gavi-supported vaccines into routine immunisation in a given calendar year

Strategic objective	SG 1 – Introduce and scale up vaccines
Level of reporting	Strategy
Numerator	NA
Denominator	NA
Data type	Number
Level of disaggregation	By vaccine
Frequency of reporting	Semi-annual
Responsible team	Vaccine Implementation
Rationale for use	Monitor incremental change in numbers of countries introducing under-used vaccines into the routine immunisation schedule, with Gavi support.
Method of measurement	Count of the number of vaccine introductions is obtained from the Vaccine Launch Database.
Analysis and interpretation	Vaccine introductions are a core driver of Gavi's achievement of strategy goal 1 (introduce and scale up vaccines). Indicator results will inform on the effectiveness of the Alliance's support to countries to introduce under-used vaccines into the routine immunisation system.
Strengths and limitations	Strengths: - Indicator allows for real-time monitoring and reporting of Gavi-supported vaccine introductions. Limitations: - Indicator only measures the first phase of phased introductions and thus does not fully reflect programmatic efforts at country level in the phased scale-up of certain vaccines.
Data source	Gavi vaccine launch database (internal)

S1.5 Country priorisation of vaccines

Percentage of vaccine applications that demonstrate use of evidence to support prioritisation of vaccines appropriate to their context.

Strategic objective	SG 1 – Introduce and scale up vaccines
Level of reporting	Strategy
Numerator	Number of applications for new vaccine support (NVS) reviewed by the Independent Review Committee (IRC) in a given year that demonstrate use of evidence to support prioritisation of vaccines
Denominator	Number of NVS applications reviewed by the IRC in a given calendar year
Data type	Percent
Level of disaggregation	None
Frequency of reporting	Semi-annual
Responsible team	Vaccine Implementation
Rationale for use	This indicator will evaluate the extent to which countries use robust evidence to inform prioritisation of their vaccine programmes.
Method of measurement	This indicator is computed as the sum of the number of NVS applications reviewed by the IRC and determined to sufficiently demonstrate prioritisation divided by the total number of NVS applications reviewed by the IRC in a given calendar year. Country NVS applications will be assessed based on pre-determined criteria by the Gavi Secretariat as part of the pre-screening process and by the IRC as part of the review.
Analysis and interpretation	Strengthening the abilities of countries to use robust evidence to inform prioritisation of new vaccine programmes is a strategic objective of the 2021-2025 strategy. Use of context-appropriate evidence is a critical criterion for judging quality of NVS applications. A quality NVS application reflects the effectiveness of the collective support the Alliance provides to Gavi-supported countries to enable them to generate and use evidence manage their vaccine programmes.
Strengths and limitations	Strengths: - Indicator provides insight on the shared accountability of the Alliance to support countries make evidence-based decisions regarding vaccine introductions and prioritisation of vaccines in relation to other health programmes as per each country's programmatic, epidemiologic and fiscal context. - Directly monitoring quality of NVS applications will enable strategic discussions at the PPC and Board on the key bottlenecks and required actions by the Alliance to support countries manage trade-offs required to prioritise vaccine programmes. Limitations: - Criteria to determine the robustness of the evidence and how effectively it has been used to inform decisions outlined in the application will require both objective and subjective factors. - The indicator does not capture an evidence-based decision to forego an application for Gavi support.
Data source	Gavi Independent Review Committee reports

S1.6 Measles campaign reach

Percentage of under 5 children previously unvaccinated against measles who received an MCV dose in a Gavi-supported preventive MCV campaigns

Strategic objective	SG 1 – Introduce and scale up vaccines
Level of reporting	Strategy
Numerator	Number of under 5 children previously unvaccinated against measles who are vaccinated during Gavi-supported planned preventative MCV campaigns
Denominator	Number of under 5 children previously unvaccinated against measles targeted by a Gavi-supported planned preventative MCV campaign
Data type	Percent
Level of disaggregation	None
Frequency of reporting	Semi-annual
Responsible team	Vaccine implementation
Rationale for use	This indicator will measure the reach and quality of Gavi-supported MCV campaigns.
Method of measurement	For a given year, the percentage of under 5 children previously unreached against measles who receive an MCV dose for each of the Gavi-supported campaigns in that year will be counted towards the indicator. As part of their post campaign coverage survey reports, which are a requirement for all Gavi-supported campaigns, countries will be reporting on the required data points.
Analysis and interpretation	Preventive campaigns are most effective and efficient if they reach unprotected individuals to close immunity gaps. Results will indicate the extent to which Gavi-supported preventative MCV campaigns are enabling countries to progress towards achieving herd immunity for measles.
Strengths and limitations	Strengths: - Indicator will directly quantify the percentage of under 5 children previously unvaccinated against measles reached by Gavi-supported preventative MCV campaigns—a key determinant of the quality of an MCV campaign. Limitations: - Though a requirement, not all countries implementing Gavi-supported MCV campaigns conduct post campaign coverage surveys (PCCS). This may lead to gaps in data for this indicator. However, the Gavi Secretariat is exploring mechanisms to improve compliance to PCCS requirements.
Data source	World Health Organization MCV post campaign coverage survey reports

S1.7 Timely detection and response to outbreaks

Percentage of measles, meningococcus, yellow fever, cholera and ebola outbreaks with timely detection and response.

Strategic objective	SG 1 – Introduce and scale up vaccines
Level of reporting	Strategy
Numerator	Number of outbreaks detected and responded to in a timely manner
Denominator	Number of outbreaks for which there is an outbreak response vaccination campaign
Data type	Percent
Level of disaggregation	By disease (measles, meningococcus, yellow fever, cholera and ebola), by institution (MR&I, ICG, GPEI, WHO)
Frequency of reporting	Annual
Responsible team	Vaccine implementation
Rationale for use	Monitors timeliness of responses to vaccine-preventable disease (VPD) outbreaks for diseases for which there are established outbreak global response mechanisms. Disaggregation by steps in the process, from detection to application to review to shipment to campaign initiation, allows for understanding bottlenecks.
Method of measurement	This indicator is computed as the sum of VPD outbreaks detected and campaign responses initiated within a specified number of days divided by the number of outbreaks for which there was an outbreak response vaccination campaign. Time from onset of outbreak to implementation of vaccination campaign will be determined for each programme area (measles, meningococcus, yellow fever, cholera and ebola) through the IA2030 M&E Framework.
Analysis and interpretation	This indicator measures the efficiency of global outbreak response mechanisms in responding to vaccine preventable disease (VPD) outbreaks in Gavi supported countries.
Strengths and limitations	Strengths: - Indicator may be disaggregated by key steps in outbreak response, across multiple diseases. This will enable the Alliance to systematically identify specific bottlenecks and identify solutions. Limitations: - Indicator combines measurement of outbreak processes and procedures of multiple independent institutions. As a result, the aggregated result may present challenges with regards interpretability. However, disaggregated results will provide actionable insights regarding outbreak response mechanisms for specific vaccines and institutions.
Data source	Routine reports from ICG, MRI, GPEI, WHO, national immunisation and diseases surveillance programmes. Information would need to be systematically collected from national immunisation disease surveillance programs.

STRATEGY GOAL 2: **STRENGTHEN HEALTH SYSTEMS AND EQUITY IN IMMUNISATION**

S2.1 Geographic equity (DTP3 coverage)

Average unweighted DTP3 coverage in the 20% of districts with the lowest coverage in each country

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	The sum of the average coverage of the 20% of districts with the lowest coverage in each country
Denominator	The total number of Gavi supported countries with reporting in a given year
Data type	Percent
Level of disaggregation	NA
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation – Corporate Performance Monitoring and Measurement
Rationale for use	
Method of measurement	Analysis of district-level coverage reported by WHO member states through the WHO/UNICEF Joint Reporting Form. For each country in each year, districts are rank ordered by their DTP3 coverage levels. The 20% of districts with the lowest coverage levels are then selected and average coverage of these districts is computed for each country. Then, an unweighted average is computed across all countries with reporting.
Analysis and interpretation	As this indicator focuses on performance among the lowest coverage districts, it is a measure of how well Gavi supported countries are able to increase coverage in areas with the weakest immunisation services. This indicator is most responsive to prioritization strategies that emphasize targeting of districts based on the percentage of children who are underimmunised, as opposed to the number of underimmunised children, since it focuses on the districts with the lowest coverage levels.

S2.1 Geographic equity (DTP3 coverage)

Average unweighted DTP3 coverage in the 20% of districts with the lowest coverage in each country

Strengths and limitations	Strengths: - Computed directly from country reported data. Limitations: - The quality of subnational administrative data on immunisation coverage is poor in many Gavi supported countries and therefore the interpretation of trends in this indicator can be challenging. - Not all Gavi supported countries have consistently reported subnational administrative data on immunization coverage.
Data source	WHO Joint Reporting Form
Further information and related links	1. IA2030 M&E framework (url TBD)

S2.2 DTP drop-out

Drop-out rate between first and third dose of diphtheria-tetanus-pertussis-containing vaccines

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	Difference between coverage of DTP containing vaccine (1st dose) and coverage of DTP containing vaccine (1st dose)
Denominator	Coverage of DTP containing vaccine (3rd dose)
Data type	Percent
Level of disaggregation	NA
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation
Rationale for use	
Method of measurement	The overall estimate for Gavi-supported countries is calculated as the target population-weighted average of first dose pentavalent coverage and drop-out from first to third dose of DTP containing vaccine. The formula for calculating drop-out is [(DTP1-DTP3)/DTP1] * 100.
Analysis and interpretation	DTP1-DTP3 drop out measures the same delivery systems multiple times, thereby providing into whether there are factors that hinder caregivers to continue utilising a delivery system. Dropout rates show the ability of the system to reach children with the third dose in a series. In strong systems, children have enough contacts with the system at appropriate times to ensure high coverage with three doses of DTP-containing vaccine. Weaker systems may have the ability to reach a child with the first dose in the series, but not the third dose.
Strengths and limitations	Strengths: - Data on DTP drop out, in complement to DTP1 coverage, provides a concrete basis for understanding shifts in access, demand and service delivery over time. First dose coverage provides information on access, while drop-out from first to third dose provides information on demand and service delivery. Limitations: - DTP drop out provides is a non-specific signal: further explorations are needed to understand the drivers of drop-out from first to third dose of DTP containing vaccine.
Data source	Vaccine coverage: WHO/UNICEF estimates of national immunisation coverage. Population estimates: United Nations, Department of Social and Economic Affairs, Population Division. World population Prospects.

S2.3 MCV1 coverage

Coverage of Measles containing vaccine (1st dose) in Gavi-supported countries

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	Number of children under one year of age who have received at least one dose of measles containing vaccine through routine immunisation in a given year
Denominator	Number of surviving infants (children before age of 12 months)
Data type	Percent
Level of disaggregation	NA
Frequency of reporting	Annual
Responsible team	Monitoring and Evaluation
Rationale for use	This indicator aims to measure access to measles containing vaccines through routine immunisation.
Method of measurement	This indicator is measured using annually updated WHO/UNICEF estimates of coverage for Measles containing vaccine (1st dose). The overall coverage estimate for Gavi-supported countries is based on the population-weighted average of the coverage estimates from each of the countries, using the number of surviving infants as the weight.
Analysis and interpretation	Coverage of first dose of MCV highlights the importance of reaching children at the final routine immunisation touchpoint in the first year of life. It will enable tracking progress towards increasing routine coverage of MCV.
Strengths and limitations	Strengths: - Indicator is that it directly measures the reach of routine immunisation services, and thus provides information on the level of coverage achieved by the routine immunisation platform. Limitations: - The primary limitation of this indicator is underlying uncertainty in available coverage estimates. The quality of the WHO/UNICEF estimates is constrained by the quality and availability of underlying data sources, which have gaps for many countries.
Data source	Vaccine coverage: WHO/UNICEF estimates of national immunisation coverage. Population estimates: United Nations, Department of Social and Economic Affairs, Population Division. World population Prospects.

S2.4 Immunisation sessions conducted

Number of immunisation sessions conducted in Gavi countries, in the reporting year.
Immunisation sessions conducted reflects the aggregation of immunisation sessions performed
This indicator will be measured through country administrative data systems. Additional work is needed to understand if and how sessions that may be uncounted by those data systems, e.g., sessions provided by Civil Society Organizations in some contexts, can be measured.
Immunisation sessions should include both outreach and fixed sessions.
This indicator is an aggregation of the results across all Gavi-supported countries.

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	NA
Denominator	NA
Data type	Number
Level of disaggregation	Mode of service delivery (fixed, outreach)
Frequency of reporting	Annual
Responsible team	Health Systems and Immunisation Strengthening
Rationale for use	Increasing immunisation sessions is a key desired output of HSS investments, and an intermediate result in the causal pathway to increasing vaccine coverage.
Method of measurement	Data will be collected through aggregation of district level operational data collected through regular Admin systems and reported at district level through JRF.
Analysis and interpretation	Immunisation sessions are a key operational output of an immunisation system and are needed in order to reach children with life-saving vaccines. In general terms, and in most Gavi supported countries the higher the number of sessions (due to an increase in number of health facilities offering immunisation, or in outreach efforts or even in frequency of fixed sessions) the better the country capacity to reach zero dose children. However, some exceptions apply, especially in some subnational areas where the redeployment of services or demand-related interventions or the implementation of extended hours may increase the number of children immunized with same or less sessions.
Strengths and limitations	Strengths: - Indicator will measure the Alliance's ability to increase service availability—a key ingredient to increasing coverage and equitable reach of vaccines. Limitations: - Successfully conducting an immunisation session reflects the culmination of multiple programmatic elements of the immunisation system (i.e. support for vaccines, vaccinators and vaccines). This indicator will not provide details to ascertain the specific drivers of the reported results. - Gavi will not be the only contributor to immunisation session performance as other funding sources support health facilities activities.
Data source	WHO Joint Reporting Form (anticipated)

S2.5 Stock availability at facility levels

Average over all reporting countries of the percentage of health facilities that reported no stock-outs for the full year for DTPcv and MCV

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	Total number of health facilities with no stock-outs of DTPcv, or MCV, vaccines in a given year
Denominator	Total number of health facilities (public and private) providing immunisation service with EPI provided vaccines and with a system in place to measure and report vaccine availability
Data type	Percent
Level of disaggregation	NA
Frequency of reporting	Annual
Responsible team	Health Systems and Immunisation Strengthening
Rationale for use	This indicator will measure the capacity of countries to forecast and distribute vaccines to health facilities making them available when needed to reach zero dose children.
Method of measurement	Gavi supported countries will monitor and collect facility-level data on DTPcv and MCV full stock availability over a year using existing information system (e.g. LMIS, HMIS, DHIS2, wVSSM or other available information management platforms). The JRF questionnaire will ask countries to report on the percentage of health facilities without full stock availability of DTPcv and MCV separately. The data will be used to compute the average proportion of health facilities that reported no stock-outs for the full year for the two vaccines.
Analysis and interpretation	This indicator is highly sensitive to stockouts at health facility level. If a health facility has a stock out of DTPcv or MCV for just one day in the year, the health facility will be considered to not have full stock availability of that vaccine for the year. For this reason and taking into consideration the capacity of most country systems, the baseline will most likely be low.
Strengths and limitations	Strengths: - This indicator provides a good understanding of country capacity to forecast and distribute vaccines through routine systems and is a good proxy for availability of vaccines at lower levels, which is a key component of EPI systems and the results chain to reach zero dose children. - The use of a tracer vaccines (DTPcv and MCV) makes this indicator comparable across all Gavi-supported countries, as it standardises definitions across all countries. In addition, these antigens are less prone to global supply shortages, being more representative of the capacity of health systems to forecast and distribute vaccines. Limitations: - Indicator will not measure or provide insights of stockouts of other antigens.
Data source	WHO Joint Reporting Form
Further information and related links	1. http://www.technet-21.org/iscstrengthening/index.php/en/resources/indicator-reference-sheets#full-stock-availability 2. IA2030 M&E framework

S2.6 EPI management capacity

Average of country composite score for programme management and coordination of EPI programmes in Gavi-supported countries

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	Sum of EPI management capacity composite scores for each Gavi57 country
Denominator	Count Gavi-supported countries (Gavi57)
Data type	Number
Level of disaggregation	By status of LMC investment in country (Yes, No)
Frequency of reporting	Annual
Responsible team	Health Systems and Immunisation Strengthening
Rationale for use	The indicator tracks two areas defined as the key fields of engagement under the Leadership, Management and Coordination Strategic Focus Area: EPI management capacity and functionality of Inter-agency coordinating mechanisms. Strengthened institutional capacity for programme management and monitoring is on the critical pathway to programmatic and financial sustainability. It is a strategic enabler of Gavi's overall 2021-2025 strategy.
Method of measurement	Data will be collected through an annual assessment of the following areas of a country's capacity to effectively manage the EPI programme and functionality of the Inter-agency coordinating mechanisms. The assessment will be based on an annual survey completed by key stakeholders across the Gavi Alliance. Survey respondents will include representatives from the Gavi Secretariat, technical partners (global and country level) and Gavi-supported countries.
Analysis and interpretation	This indicator will enable monitoring of the effectiveness of Gavi investments to strengthen management capacities of country EPI programmes and determining the level of maturity of EPI programmes—both for a specific country and across the portfolio of Gavi-supported countries. Clear identification of strengths and weaknesses in country management capacity will inform better targeting of Gavi investments (e.g. technical assistance) to support countries effectively implement EPI.
Strengths and limitations	The strength of this indicator is that it begins to address issues of country capacity to implement effective EPI programmes in two areas through objective measurement. The primary limitation is that there is risk of respondent assessments introducing bias to the overall results. This is mitigated, as best as possible through the questionnaire design and ensuring that respondents are representative of all key stakeholders in the Alliance. In addition, findings from the survey will be validated in consultation with members of the Alliance Working Group on institutional capacity, as well as with findings from the Programme Capacity Assessments, which are conducted by independent parties.
Data source	Gavi institutional capacity assessment tool
Further information and related links	Information about the Programme Capacity Assessment: http://www.gavi.org/library/gavi-documents/guidelines-and-forms/frequently-asked-questions-about-the-joint-appraisal/

S2.7 Percentage of countries implementing tailored plans to overcome demand barriers

Percentage of countries with tailored plans implemented to overcome vaccine demand-related barriers in high risk communities

Demand-related barriers are defined as social and behavioural determinants (including social processes, knowledge, and motivation), and environmental or practical factors (including access to quality services, and experience of care), that prevent individuals from seeking and supporting vaccination.

High risk communities are defined as populations identified as vulnerable to un/under-immunisation, falling below coverage targets, high drop-out rates and high numbers of never vaccinated. These communities will benefit from assessment of social and behavioural barriers.

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	Number of countries that have implemented tailored plans to overcome vaccine demand-related barriers in high risk communities in the previous year
Denominator	Number of Gavi-supported countries
Data type	Percent
Level of disaggregation	NA
Frequency of reporting	Annual
Responsible team	Health Systems and Immunisation Strengthening
Rationale for use	Indicator provides insights into root causes of success or failure for vaccination; helps to drive actions.
Method of measurement	The operational definition and method of measurement is pending finalization of the IA2030 M&E framework. One option under consideration is to measure this via a checklist of demand-oriented interventions that illustrate whether or not a country has implemented strategies to address under-vaccination
Analysis and interpretation	As countries and partners are sensitized about the impact and relevance of demand side interventions to immunisation, and prioritise it in their strategic and operational plans, we expect to see an increase in number of countries implementing tailored plans to address reasons for under-vaccination and to overcome demand-related barriers to immunisation.
Strengths and limitations	Strengths: - This indicator allows, to some extent, tracking of country commitment to systematically address demand related barriers to immunisation. and what countries are doing to strengthen services and generate demand. The indicator drives action to effect change. Limitations: - This indicator is process-oriented and does not allow monitoring of programmatic results from implementing the tailored plans. of implemention. Programmatic results of investments in strengthening demand for immunisation will be monitored through indicators developed by the WHO Behavioural and social drivers of childhood vaccination working group.
Data source	WHO Joint Reporting Form

S2.8 Percentage of countries addressing gender-related barriers to immunization with Gavi support

This is a composite indicator that will monitor two components: **(1)** have countries conducted an analysis to identify gender related barriers to immunisation linked to subnational mapping to identify zero-dose and missed communities **(2)** are countries implementing actions to address gender-related barriers to immunisation as part of their annual workplan based on this analysis. To be considered successful, countries would need to fulfil both criteria. The indicator is defined in terms of the proportion of Gavi supported countries that meet these criteria.

Strategic objective	SG 2 – Strengthen health systems to increase equity in immunisation
Level of reporting	Strategy
Numerator	Countries implementing actions to address gender-related barriers to immunisation as part of their annual workplan based on previous analysis of gender related barriers linked to subnational mapping to identify zero-dose and missed communities.
Denominator	Gavi-supported countries with active HSS grants in a given year
Data type	Percent
Level of disaggregation	NA
Frequency of reporting	Annual
Responsible team	Health Systems and Immunisation Strengthening
Rationale for use	This indicator measures the countries capacity to understand, recognize and address gender related barriers to immunization with Gavi support
Method of measurement	This indicator will be monitored on an annual basis by analysis of documents presented in the HSS application and annual joint appraisals (JA/MSD) since the starting year of the HSS grant and compared with the workplan of the previous year. An analysis of gender related barriers to immunisation should include any of the following components: women and girl's access to resources (financial, information or otherwise) to immunize their children; decision making power on vaccination; mobility to get immunization services; time limitation outside work or household chores to bring child to be immunized; community participation and engagement on immunization. Also, adequacy of services to men and women, including men engagement on immunisation, health workforce imbalance or inadequacy in EPI management and service delivery and other gender analysis disaggregated by sex of caregiver or health workforce. This analysis will need to be performed at subnational level and linked with mapping to identify zero-dose and missed communities for it to be compliant. Gender interventions will be tagged in the annual workplan by the Secretariat according to the gender programming guidance. Those interventions may be either gender sensitive or gender transformative and both will be considered as compliant.
Analysis and interpretation	As countries and partners are sensitized about the impact of gender-related barriers to immunisation, and the capacity to understand, recognize and address those barriers increases, we expect to see an increase in number of countries including interventions addressing those barriers based on gender analysis. However, the objective is not to silo gender in the workplan, but that gender thinking is incorporated across interventions—a gender tag will facilitate identifying gender-targeted interventions in the workplan.

S2.8 Percentage of countries addressing gender-related barriers to immunization with Gavi support

This is a composite indicator that will monitor two components: **(1)** have countries conducted an analysis to identify gender related barriers to immunisation linked to subnational mapping to identify zero-dose and missed communities **(2)** are countries implementing actions to address gender-related barriers to immunisation as part of their annual workplan based on this analysis. To be considered successful, countries would need to fulfil both criteria. The indicator is defined in terms of the proportion of Gavi supported countries that meet these criteria.

Strengths and limitations	Strengths: - This indicator will enable Gavi to track if countries conduct analyses to understand gender-related barriers to immunisation and use those analyses to prioritise interventions to address them. It is a proxy for the output and outcome components of the gender theory of change (capacity building, evidence and analysis and prioritization). - This indicator will facilitate harmonised monitoring of interventions addressing gender-related barriers across all Gavi-supported countries without being prescriptive on specific interventions. Limitations: - A gender tag in Gavi workplans will likely be biased by some degree of subjectivity. Gavi's gender programming guidance shall mitigate this by providing a clear list of interventions that may be considered as addressing gender related barriers. - An analysis of application materials and regular country reports will need to be performed on an yearly basis to ensure there are relevant analysis informing the prioritization of those interventions. - A learning agenda to measure gender barriers to immunisation and progress on addressing them will look for more outcome oriented-indicators.
Data source	Gavi Health Systems and Immunisation Strengthening annual financial reports.

STRATEGY GOAL 3: **IMPROVE SUSTAINABILITY OF IMMUNISATION PROGRAMMES**

S3.1 Co-financing fulfilment

Percentage of countries with a co-financing obligation to Gavi that meet their co-financing commitments

Strategic objective	SG 3 – Improve sustainability of immunisation programmes
Level of reporting	Strategy
Numerator	Number of countries with co-financing obligations to Gavi that complete co-financing payments by 31 December of the year in question (or by the end of their fiscal year, if agreed so with Gavi), or that clear default within the 12 months following the due date of the obligation
Denominator	Number of countries with a co-financing obligation to Gavi
Data type	Percent
Level of disaggregation	By co-financing category and timeliness of payment (i.e., proportion paying by December 31 of the year in question or fiscal year and proportion clearing default within the following twelve-month period)
Frequency of reporting	Annual
Responsible team	Immunisation Financing and Sustainability
Rationale for use	The fulfilment of co-financing commitments is a measure of country commitment to financing vaccines. Co-financing serves as a mechanism to support countries on a path toward greater sustainability.
Method of measurement	The numerator is the number of countries that either make their co-financing payments by the end of the year in question (or fiscal year, if agreed so with Gavi), or that clear default within the following twelve months (per the Gavi policy). A country is considered to be in default if it does not make its co-financing payment by December 31 of each year (or by the end of their fiscal year, if agreed so with Gavi). The denominator is all countries with a co-financing commitment to Gavi, per the Board-approved co-financing policy.

S3.1 Co-financing fulfilment

Percentage of countries with a co-financing obligation to Gavi that meet their co-financing commitments

Analysis and interpretation	This indicator will monitor the commitment of Gavi-supported countries to financing vaccines as they progress towards phasing out of Gavi support. The ability to co-finance, in complement to increasing GNI, reflects a country's financial readiness to transition. Co-financing of vaccines is one of the ways in which Gavi-supported countries contribute to their immunisation costs.
Strengths and limitations	Strengths: - This indicator directly measures country fulfilment of co-financing commitments. Including in the numerator any countries that clear default within 12 months allows to differentiate countries with protracted challenges from those who may experience just transient delays in payments. Limitations: - This indicator is not a comprehensive measure of sustainable national financing of all vaccines. Sustainability of national immunisation programmes requires more than investment in Gavi-supported vaccines.
Data source	UNICEF Supply Division, PAHO Revolving Fund and Gavi Secretariat records (for self-procuring countries). Each agency records receipt of country vaccine payments, against the deadline for payment submission.

S3.2 Preventing backsliding in routine immunisation coverage in former-Gavi- countries

Number of former-Gavi countries that maintain or increase DTP3 coverage

Strategic objective	SG 3 – Improve sustainability of immunisation programmes
Level of reporting	Strategy
Numerator	N/A
Denominator	N/A
Data type	Number
Level of disaggregation	N/A
Frequency of reporting	Annual
Responsible team	Immunisation Financing & Sustainability
Rationale for use	The indicator measures the sustainability of immunisation systems in former-Gavi countries, as demonstrated through the capacity to maintain or increase DTP3 coverage following transition from Gavi support. The indicator reflects the objectives of Gavi's new approach to engaging with middle-income countries (the "MICs Approach"), as well as Gavi transition more broadly.
Method of measurement	Former-Gavi countries include those defined by the Board as part of the MICs Approach in December 2020 (N=17). Taking the most-recent two-year period, the indicator captures countries in which coverage was held constant or increased in at least one year compared to coverage in 2019. With this, the indicator results represent countries that maintained or increased coverage over both years, as well as those that experienced a decline in coverage in the first year but recovered at least to 2019 levels in the following year. The countries that remain experienced a sustained reduction in coverage in the most-recent two-year period, signalling a less-sustainable immunisation system. To ensure that the indicator is responsive to meaningful changes: 1. Reductions in coverage are defined with a margin of 1 percentage point (i.e., coverage is considered "maintained" if the reduction bringing coverage below baseline is no greater than 1 percentage point). 2. A distinction is made for countries sustaining coverage above 95%, whereby they will be considered to have "maintained" coverage so long as they sustain coverage at or above 95%.
Analysis and interpretation	Results will reflect the impact of the MICs Approach over the strategic period and provide insight into the state of immunisation system sustainability in former-Gavi countries. Countries experiencing reductions in immunisation coverage will be identified and the contributing factors, both internal and external to the immunisation system, will be investigated.

S3.2 Preventing backsliding in routine immunisation coverage in former-Gavi- countries

Number of former-Gavi countries that maintain or increase DTP3 coverage

Strengths and limitations	Strengths: - The indicator measures trends in coverage, captures meaningful changes, and directly reflects three facets of immunisation system sustainability: (i) capacity to maintain or increase coverage over time (ii) capacity to recover following a temporary shock (iii) capacity to sustain coverage at or above 95%. The indicator utilises a publicly-available data source, imposing no additional reporting burden on countries. Limitations: - The primary limitation is underlying uncertainty in coverage estimates. The quality of coverage estimates is constrained by the quality and availability of underlying data sources, which have gaps for many countries. The measurement method does not capture single-year declines in coverage, as it seeks to observe the capacity of the immunisation system to recover following such declines. The measurement method will also conceal fluctuations in coverage (i.e. increases followed by decreases) that occur above baseline. However, any such changes in coverage will be measured and acted upon as part of the monitoring plan for the MICs Approach.
Data source	WHO/UNICEF estimates of national immunisation coverage

S3.3 New vaccine introductions in former- and never-Gavi eligible countries

Number of new vaccine introductions (PCV, rotavirus, HPV) in former- and never-Gavi countries eligible under the MICs Approach

Strategic objective	SG 3 – Improve sustainability of immunisation programmes
Level of reporting	Strategy
Numerator	N/A
Denominator	N/A
Data type	Number
Level of disaggregation	By vaccine
Frequency of reporting	Annual
Responsible team	Middle Income Country's Approach
Rationale for use	Monitor change in number of middle-income countries eligible under the MICs Approach introducing PCV, rotavirus and HPV vaccines into their routine immunisation schedules.
Method of measurement	Count of the number of new vaccine introductions, specifically PCV, rotavirus and HPV vaccines
Analysis and interpretation	New vaccine introductions are a core driver of Gavi's achievement through the MICs Approach. Indicator results will inform on the effectiveness of the Alliance's support to countries to introduce PCV, rotavirus and HPV vaccines into their national immunisation programmes.
Strengths and limitations	Strengths: - The indicator allows for real-time monitoring and reporting of vaccine introductions supported through the MICs Approach Limitations: - The indicator only measures the first phase of phased introduction and thus does not fully reflect programmatic efforts at country level in the phased scale-up of certain vaccines, nor does it measure the extent to which equitable coverage is achieved. However, these elements will be captured through the monitoring plan for the MICs Approach.
Data source	Gavi vaccine launch database (internal)

STRATEGY GOAL 4: ENSURE HEALTHY MARKETS FOR VACCINES AND RELATED PRODUCTS

S4.1 Healthy Market Dynamics

Number of markets exhibiting sufficient levels of healthy market dynamics

Strategic objective	SG4 – Ensure sustainable, healthy market dynamics for vaccines and immunisation-related products at affordable prices
Level of reporting	Strategy
Numerator	Number of Gavi-supported vaccine and CCE markets assessed to have sufficient healthy market dynamics
Denominator	NA
Data type	Number
Level of disaggregation	By individual vaccine and CCE market
Frequency of reporting	Annual
Responsible team	Market Shaping
Rationale for use	Since 2016, Gavi's market shaping objectives have shifted towards a holistic approach defined by the Healthy Markets Framework (HMF). Under the HMF approach, a fundamental attribute of a healthy market is having sufficient supply security to ensure sufficient and uninterrupted supplies of appropriate vaccines to countries. As markets continues to evolve, additional market attributes such as innovations and competition may contribute towards the achievement of sustainable and appropriate pricing. In contrast with a singular focus on price or innovation, this holistic approach better aligns with Gavi's strategic goals to 1) introduce and scale up vaccines and to 2) improve sustainability of immunisation programmes. The HMF approach gives a holistic view of markets, where market healthy level is determined by the following factors: - Level of supply to meet demand - Level of supply security to mitigate supply risks - Level of long-term competition - Overall programmatic cost and effectiveness due to product characteristics and price per dose - Development of vaccines with improved characteristics that address programmatic needs

S4.1 Healthy Market Dynamics

Number of markets exhibiting sufficient levels of healthy market dynamics

Method of measurement

Semi-quantitative assessment of individual market health, conducted by core Alliance partners (i.e., UNICEF, BMGF, WHO).
Based on assessments of individual Healthy Markets Framework attributes and a holistic overview of each market's programmatic context, markets will be assessed based on the following categories:

Insufficient and requires further intervention	Severe supply security challenges and risks exist No improvement is expected without Alliance intervention
Insufficient with conditions for improvement	Severe supply security challenges and risks exist Improvements possible but requiring further monitoring and lead time to materialise
Sufficient with risks	Limited supply security challenges with unacceptable risks of backsliding Interventions are required to mitigate risks
Sufficient and sustainable	Limited supply security challenges with acceptable risks Monitoring required to ensure risks to not increase

Analysis and interpretation

Impact of analysis:
- Identification of low HMD drivers is needed to identify appropriate interventions to address challenges and mitigate risks
- HMF analysis provides context for changes in supply availability and price trends, and thus guidance on whether the changes are acceptable or require interventions to address

Analysis takes into consideration a multitude of factors required for access to near-term vaccine supplies as well as conditions for long-term sustainable HMD to facilitate long-term country programmes.

Strengths and limitations

Strengths:
- Gives a more holistic view of markets, with considerations of long-term market evolution and risk mitigation
- Has enough flexibility to accommodate the specific needs of different market contexts

Limitations:
- Flexibility comes with added subjectivity that may pose challenges in reaching assessment alignment

Data source

Vaccine procurement data: UNICEF SD MoU reports
Market intelligence data: Gavi MS roadshows, Alliance partner industry engagements

S4.2 Incentivise Innovations

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

Strategic objective	SG4 – Incentivise innovation for the development of suitable vaccines
Level of reporting	Strategy
Numerator	Number of innovative products within the pipeline of commercial-scale manufacturers
Denominator	NA
Data type	Number
Level of disaggregation	By individual products
Frequency of reporting	Annual
Responsible team	Market Shaping
Rationale for use	One of the key objectives of Gavi's market shaping work is to ensure the availability of quality and suitable vaccines products for countries. As the health of markets improve over time with increased supply security, an increasing focus will be placed on product innovations that can better address countries' programmatic challenges. Uptake of innovative products, including those included in the Vaccine Innovations Prioritisation Strategy (VIPS), by commercial manufacturers is intended to measure and demonstrate effectiveness of Gavi's interventions in increasing market attractiveness for manufacturers to invest in the commercialisation and production of new innovations (Strategic Objective 4B). Gavi's supply and procurement roadmaps for individual vaccine markets outline key challenges that countries face and potential innovations that may have a critical impact in improving coverage and equity. Tools for incentivizing the development of such innovations are considered and used in alignment with roadmap targets. Additionally, during the 2016-2020 period, the Vaccine Innovations Prioritisation Strategy (VIPS) was launched to prioritise innovations in vaccine delivery attributes to provide greater clarity to manufacturers and immunisation partners to make investment decisions. Through an Alliance-wide collaboration effort, VIPS analysed 24 vaccine product innovations through thorough evaluation process centered on country needs. The evaluations will result in the prioritisation of 3-4 vaccine product innovations paired with specific antigens. Depending on Gavi 5.0 mandate and resources, the Alliance will consider how to support the prioritised innovations beyond prioritisation and signaling.
Method of measurement	Count of "products" as individual assets, i.e., two independent pipeline vaccine candidates for the same antigen or innovation will be counted as a progress of two. Indicator progresses when any Gavi-supported innovations partner with a commercial-scale manufacturer that is committing to take a product to market.

S4.2 Incentivise Innovations

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

Analysis and interpretation

VIPS-prioritised innovations are expected to be in early phased of product development during the 5.0 period and products may not enter the market until after 2025. In order to assess the impact of Gavi's incentivisation tools, commercial-scale manufacturers committing to taking a product to market may be the most effective proxy for market attractiveness.

By counting individual vaccine candidate instead of general categories of innovations or products, the indicator will be able to track an estimated magnitude of impact of Gavi's incentivization for innovations.

Strengths and limitations

Strengths:

- Allows assessment of whether sufficient incentives are in place for manufacturers to invest in product development.

Limitations:

- Does not track further progress once a pipeline programme is initiated by a commercial-scale manufacturer.
- Difficult to quantify causation that may be attributed to Gavi interventions.

Data source

Market intelligence data: Gavi MS roadshows, Alliance partner industry engagements
VIPS: TBD, pending Board decision on VIPS phase 2

S4.3 Scale-Up Innovations

Number of vaccines and immunisation-related products with improved characteristics procured by Gavi as compared to the baseline year

Strategic objective	SG4 – Scale up innovative immunisation-related products
Level of reporting	Strategy
Indicator definition	Number of vaccines and immunisation-related products with improved characteristics procured by Gavi as compared to the baseline year
Numerator	Number of vaccine and immunisation-related products with improved characteristics procured between 2021 and 2025
Denominator	NA
Data type	Number
Level of disaggregation	Vaccines, CCE, other immunisation-related products
Frequency of reporting	Annual
Responsible team	Market Shaping
Rationale for use	One of the Gavi Alliance's key priorities for the 2021-2025 period is to scale-up innovations. As manufacturers successfully bring innovative products to market, tracking whether these products are procured through UNICEF gives an indication of whether countries are adopting products with improved characteristics for use.
Method of measurement	The procurement process entails an assessment of these trade-offs. If the procurement process determines that the trade-off is worthwhile and the new products is procured, it will be counted towards this indicator. For vaccines, the criteria against which new products can be assessed include the following: - Programmatic suitability of vaccine candidates for WHO prequalification (also known as "PSPQ"). - Vaccine presentation and Packaging Advisory Group (VPPAG) Generic preferred product profile (gPPP). - In some instances, improved characteristics will refer to characteristics not explicitly included in PSPQ or gPPP. In these cases, SAGE recommendations, WHO Position Papers and other objectives reference documents will be used to determine whether the new vaccine meets the definition for "improved characteristics" (e.g., reduction in number of doses required, or addition of serotypes) For other immunisation products, the criteria against which new products can be assessed and sources include the following: 1. WHO Performance, Quality and Safety (PQS) Specifications / Standards 2. PQS Target Product Profiles or "TPPs" 3. Any additional Gavi CCE platform-eligible criteria not reflected in PQS Specifications / Standards and TPPs. 4. Assessment for other immunisation products is less straightforward, given the emerging nature of markets for such products.
Analysis and interpretation	One of the Gavi Alliance's key priorities for the 2021-2025 period is to scale-up innovations. As manufacturers successfully bring innovative products to market, tracking whether these products are procured through UNICEF gives an indication of whether countries are adopting products with improved characteristics for use.

S4.3 Scale-Up Innovations

Number of vaccines and immunisation-related products with improved characteristics procured by Gavi as compared to the baseline year

Strengths and limitations

Strengths:

- Directly tracks the number of innovations in vaccines and immunisation products of immediate relevance to the Alliance and its overall strategy.
- Assesses how successful the Alliance is in translating pipeline products into meaningful and improved products with market demand.

Limitations:

- The primary limitation lies in the lack of objective benchmark for what constitutes "improved characteristics" for all products.

Data source

Gavi-UNICEF Supply Division Memorandum of Understanding reports and key performance indicators.