# ACCESS TO IMMUNIZATION IN MIDDLE-INCOME COUNTRIES



# IMMUNIZATION AGENDA 2030: IN-DEPTH REVIEW

# **EXECUTIVE SUMMARY:**

Each year, 66 million children, half of all children globally, are born in middle-income countries that are not eligible for support by Gavi, the Vaccine Alliance. Of these children, 17 million are not getting all the vaccines they need.

By reaching 90% coverage of vaccines targeted by the Immunization Agenda 2030 (IA2030), tens of thousands of lives could be saved annually, and children's health improved, in these countries. Further, sustainably improving coverage will help avert regional epidemics that overwhelm health system infrastructure and exacerbate inequities.

This brief highlights immunization performance in these countries from 2019 to 2022, visualizing a selection of IA2030 Impact Goals and Strategic Priority indicators from the IA2030 Monitoring and Evaluation Framework and scorecard [1], [2]. It also reviews four bottlenecks slowing progress and highlights major initiatives supporting middle-income countries. The analysis points to striking differences in performance between groups of countries based on their funding eligibility. These findings underscore the imperative for concerted and intensified efforts to address these critical gaps.

# Immunization Performance in MICs: Key Findings

- Immunization systems in non-Gavi-eligible middle-income countries (MICs) are highly reactive to shocks. These countries weathered serious pandemic backsliding in vaccine coverage, although many have recovered thanks to government commitments.
- Non-Gavi-eligible MICs have high and growing internal inequities in vaccine coverage.
- Often due to lagging introductions, coverage of vaccines against pneumococcal disease, rotavirus, and human papillomavirus (HPV) in these countries is much lower than IA2030 targets.
- Non-Gavi-eligible MICs navigate vaccine markets with poor price transparency and comparability, with some countries paying 12 times more than others.

# **CALL TO ACTION**

# 1. Sustain and increase public funding for immunization

Countries to safeguard adequate public resources, including for new vaccines, by including immunization services in the benefit package of essential health services both at the national and subnational level. Countries to also invest—with partner support when needed—in critical areas like supply chains, information systems, procurement, and outbreak response mechanisms.

# 2. Ensure availability and affordability of vaccine supply

Suppliers to work to ensure the availability of affordable vaccine supply for middle-income countries (MICs). Partners to advocate to ensure that MICs have access to a fair, affordable, and sustainable supply of vaccines. Countries to consider procuring vaccines from diverse manufacturing bases and commit to providing sustainable and predictable demand forecasts.

# 3. Strengthen evidence-based decision-making

Countries, with the support of global and regional institutions, to empower National Immunization Advisory Groups (NITAGs) and other health policy, planning, and budgetary stakeholders at the national and subnational level to facilitate predictable, country-owned, and evidence-based prioritization and trade-offs. Partners to work to ensure the availability of relevant market intelligence information at the country level to inform product choices.

# 4. Increase demand for immunization and ensure efficient delivery of vaccines

Countries to regularly collect and analyze behavioural data to tailor interventions that promote vaccine uptake and counteract vaccine misinformation. Countries to strengthen information and surveillance systems overall to monitor outbreaks, reduce inequities, and improve the quality of primary health care systems.

# I. BACKGROUND: WHY FOCUS ON MIDDLE-INCOME COUNTRIES

Of the 130 million infants born each year, half (66 million) are born in middle-income countries that are not eligible for support from Gavi, the Vaccine Alliance (non-Gavi-eligible MICs) (see Table 1 for definitions) [3], [4]. More than one in three zero-dose children, defined as children who have not received a first dose of a diphtheria-pertussis-tetanus-containing vaccine (DTP1), live in non-Gavi-eligible MICs.

**Defining non-Gavi-eligible MICs:** Middle-income countries (MICs) include both lower-middle- and upper-middle-income countries. Countries are eligible for support from Gavi, the Vaccine Alliance, based on their gross national income (GNI). See Table 1 for definitions of country categories described in this brief (Appendix A has a list of all country categorizations). In addition to the Gavi support detailed in the table, since 2023, a number of MICs have become eligible for Gavi MICs support, a catalytic source of funding to introduce new vaccines and strengthen immunization systems.<sup>2</sup> In this brief, the term "non-Gavi-eligible MIC" includes countries that are now eligible for Gavi MIC support since this source of funding did not affect country performance in 2022, the most recent reporting year.

Table 1. Income-based eligibility for support from Gavi in 2024 among countries within the 194 WHO member states\*

Income Grouping	Income Classification (2022 GNI per capita US\$)**	Number of Countries	Level of Gavi Support
Gavi-eligible low-income countries (Gavi LICs)	≤ \$1,135	26	Gavi support - Initial self-financing
Gavi-eligible lower-middle- income countries (Gavi LMICs)	\$1,136–\$1,810	28	Gavi support - Preparatory and accelerated*** transition
Non-Gavi-eligible LMICs (non-Gavi LMICs)	\$1,811–\$4,465	26	No Gavi support****
Upper-middle-income countries (UMICs)	\$4,466–\$13,845	53	No Gavi support
High-income countries (HICs)	> \$13,845	59	No Gavi support

<sup>\*</sup>Niue and Cook Islands are not classified by the World Bank (WB) and are not eligible for support from Gavi. Venezuela is categorized as upper-middle-income based on its World Bank classification.

<sup>\*\*</sup>Based on the World Bank's analytical classification for the FY2024 based on 2022 income data of GNI per capita in US\$

<sup>\*\*\*</sup>Countries in accelerated transition have a GNI per capita greater than US\$1,660 but for less than 3 years

<sup>\*\*\*\*</sup>Not eligible for Gavi support, but may be eligible for catalytic, time-limited support from the MICs Approach

<sup>&</sup>lt;sup>1</sup> In 2024, 79 countries were non-Gavi-eligible MICs, with 53 upper-middle-income countries and 26 lower-middle-income countries.

<sup>&</sup>lt;sup>2</sup> Former Gavi-eligible countries and never Gavi-eligible countries with a GNI per capita below US\$4,000—or countries that are recipients of World Bank International Development Association loans—could also benefit from the Gavi MICs Approach.

Figure 1. Overview of countries based on Gavi eligibility and income group

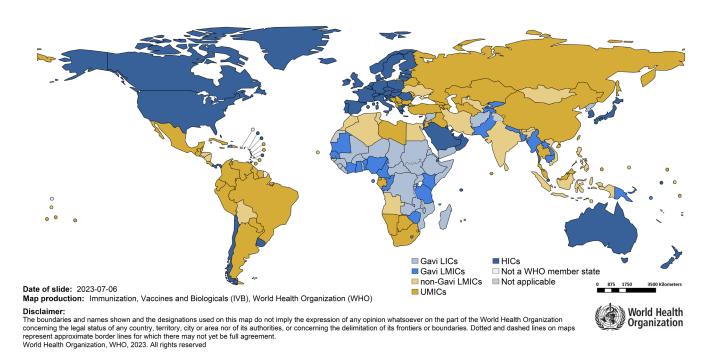
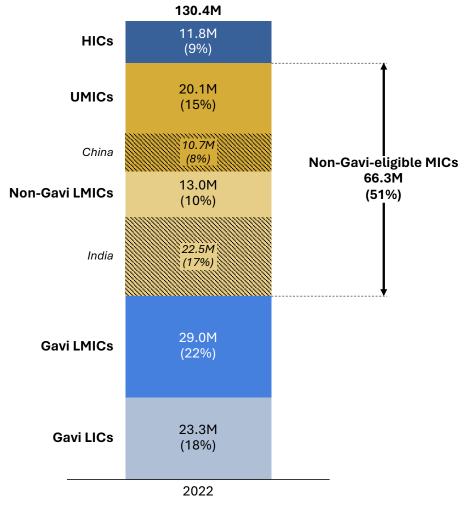


Figure 2. Number and proportion of the global surviving infant population represented in each country group out of 130 million surviving children globally (2022)



Data Source: UN Population Division's World Population Prospects 2022

#### Strategic roadmap

Based on requests from the World Health Assembly and Strategic Advisory Group of Experts on Immunization (SAGE), the World Health Organization (WHO) convened a Middle-Income Country Task Force in 2014 to understand immunization challenges unique to these countries and develop a strategy to address them [5]. The Task Force assessed immunization performance and recommended that efforts to support non-Gavi-eligible MICs should focus on four bottlenecks:

- 1. Decision-making,
- 2. Demand and equitable delivery,
- 3. Sustainable financing, and
- 4. Access to sustainable and affordable supply.

In 2020, the World Health Assembly endorsed the Immunization Agenda 2030 (IA2030), the 2021–2030 global strategy that envisions a world where everyone, everywhere, at every age, fully benefits from vaccines. A Working Group on MICs was established to identify risks and opportunities and ensure partner dialogue to derive solutions [6].

This brief shows a selection of indicators from the IA2030 Monitoring & Evaluation Framework. To view all data by income group, visit the IA2030 scorecard website. For each indicator page, users can filter by World Bank income group.

Scorecard.ImmunizationAgenda2030.org





# II. IMMUNIZATION PERFORMANCE

While Gavi-eligible countries have a greater share of vaccine-preventable mortality, tens of thousands of lives can be saved each year by introducing and increasing coverage of IA2030-recommended vaccines in non-Gavi-eligible MICs [7]. This is because a quarter of all children born in these countries (17 million annually) are not fully protected against deadly and preventable diseases, as measured by the breadth of protection, an indicator of mean coverage for about a dozen WHO-recommended vaccines [8]. Further, with growing internal coverage inequity within many MICs, improving coverage will help abate the risk of outbreaks that threaten regional and global health and stability.

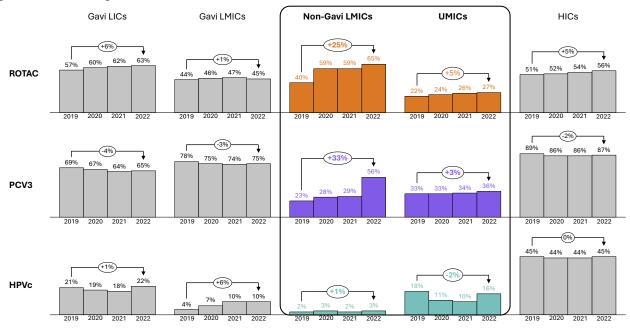
# Coverage of underutilized vaccines

Many children in non-Gavi-eligible MICs lack access to human papillomavirus (HPV), pneumococcal conjugate (PCV3), and rotavirus (ROTAC) vaccines because their countries have not yet introduced these vaccines, which are critical for averting death across the life span.

- While 81% and 93% of Gavi-eligible low- and lower-middle-income countries, respectively, had introduced PCV by 2022, **fewer than 70% of non-Gavi-eligible MICs had introduced PCV.**
- While 79% of Gavi-eligible lower-middle-income countries (LMICs) and 77% of low-income countries (LICs) had introduced rotavirus vaccines in 2022, just 54% of non-Gavi-eligible LMICs and 57% of upper-middle-income countries (UMICs) had introduced rotavirus vaccines.
- While HPV vaccine introductions have gained momentum in UMICs, with about 70% of such countries having the vaccine in their national immunization programmes, coverage remains very low (see Figure 3). Meanwhile, **just 31% of non-Gavi-eligible LMICs had introduced the HPV vaccine by 2022**, while about 40% of Gavi-eligible countries had introduced HPV.

As seen in Figure 3, coverage of these three vaccines is generally lowest in non-Gavi-eligible MICs. For example, coverage of rotavirus vaccine and PCV3 in UMICs is substantially lower than coverage in LICs: 36 percentage points lower for rotavirus and 29 percentage points lower for PCV3. Coverage for rotavirus and PCV3 in non-Gavi-eligible LMICs has increased due to India's phased introductions, which reached 92% and 66% coverage in 2022 for the two vaccines, respectively. Despite the increase in HPV vaccine introductions discussed above, HPV vaccine coverage across all MICs is very low relative to the 90% target and is lower than 5% in non-Gavi-eligible LMICs.

Figure 3. Coverage for rotavirus, PCV3, and HPVc vaccines

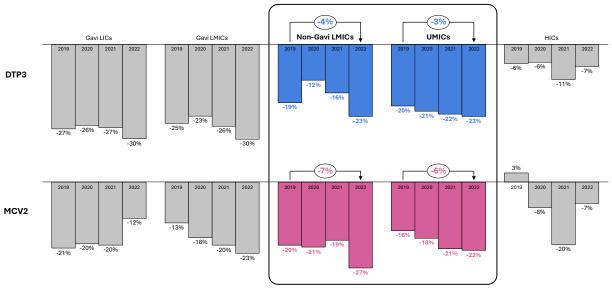


Data Source: WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), 2022 Revision, WHO/UNICEF HPV Estimates 2019–2022

#### **Equity**

In non-Gavi-eligible MICs, the already high inequity in subnational vaccine coverage worsened during the pandemic. As seen in Figure 4, non-Gavi-eligible MICs reported administrative coverage estimates for DTP3 in 2022 that were 23 percentage points less in lower-performing districts than the national administrative coverage estimates. For measles, second dose (MCV2) the non-Gavi-eligible MICs reported coverage estimates in 2022 in the lowest performing quintile of administrative districts to be 27 and 22 percentage points less than the national coverage estimates in non-Gavi-eligible LMICs and UMICs, respectively. For non-Gavi-eligible LMICs, the measles vaccine coverage disparity was much worse than the gap seen in Gavi-eligible countries in 2022. These gaps are masked by improvements in national vaccine coverage, which indicate a good pandemic recovery. As such, these countries are much more vulnerable to measles and other disease outbreaks than their national coverage values would indicate.

Figure 4. The equity gap, DTP3 and MCV2 district-level administrative coverage in the lowest-performing quintile compared to national administrative coverage estimates



Data Source: WHO/UNICEF Joint Reporting Form on Immunization (JRF)

#### Coverage measures of pandemic backsliding

During the COVID-19 pandemic, non-Gavi-eligible MICs experienced significant backsliding in vaccine coverage. DTP3 coverage, a bellwether for immunization service reach, decreased substantially, with non-Gavi-eligible LMICs dropping from 89% coverage in 2019 to 83% coverage in 2021 and UMICs dropping from 91% in 2019 to 86% in 2021. Coverage of MCV2 also decreased by 4% in non-Gavi-eligible LMICs and by 2% in UMICs during the same period. Coverage of both DTP3 and MCV2 recovered in 2022 (see Figure 5), yet pandemic-related declines may have exacerbated inequity, as seen above.

Gavi LICs Gavi LMICs Non-Gavi LMICs UMICs HICs -(-1%)-(-5%) (-6%) (-4%)-95% 94% 94% (-6%) 81% 78% 70% DTP3 2020 (-1%) **-2**%) (-4%) 92% 92% 91% (+8%) 62% 60% +2%)-MCV2 37% 36% 35% Data Source: WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), 2022 Revision

Figure 5. Vaccine coverage for DTP3 and MCV2, 2019-2022

From 2021 to 2022, there was a remarkable decrease in zero-dose children living in non-Gavieligible MICs, thanks to government commitments. However, in 2022, nearly 5 million zero-dose children, or 35% of all such underserved children globally, were living in non-Gavieligible MICs (Figure 6). Further, the number of zero-dose children in non-Gavieligible MICs has decreased only slightly since 2019.

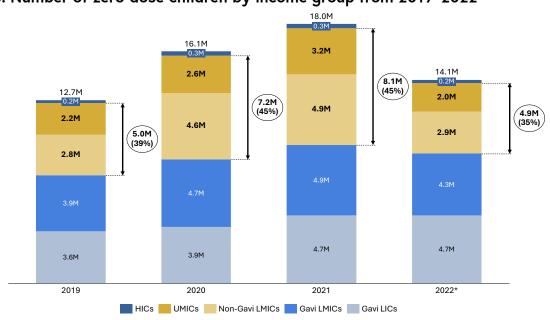


Figure 6. Number of zero-dose children by income group from 2019–2022

Data Source: WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), 2022 Revision, and UNPD population estimates 2019–2022

<sup>\*</sup>In 2022, China (UMIC) had 107,000 zero-dose children while India (non-Gavi-eligible LMIC) had 1.1 million zero-dose children

### Control of vaccine-preventable disease

Dynamics in vaccine coverage described above will negatively affect disease control efforts and the number of lives that can be saved through immunization worldwide. Current performance measures for non-Gavi-eligible MICs in disease control efforts are concerning, particularly for measles.

#### Eliminating disease

One great risk of lowered vaccine coverage is measles outbreaks and backsliding in achieving measles elimination. Progress toward achieving, maintaining, and regaining measles elimination targets has stalled. Figure 7 shows that fewer than half of non-Gavi-eligible MICs had eliminated measles transmission in 2022. Further, disease control efforts in some non-Gavi-eligible MICs are trending in the wrong direction: In 2022, just one new non-Gavi-eligible LMIC attained measles elimination, while four UMICs—up from two in 2021—had a measles control status of "re-established," signaling that the disease was again transmitting endemically after being eliminated in these countries.

Gavi LICs Gavi LMICs Non-Gavi LMICs **UMICs** HICs 26 26 26 53 53 53 59 59 45% (24) 62% (16) 65% (17) 65% (17) 89% (25) 4% (2) 96% (25) 96% (25) (4) (2) 8% (2) (2) (2) 51% (27) 51% (27) 49% (26) 31% (8) 2021 2020 2021 2022 Not Achieved Re-Established Achieved

Figure 7. Progress toward measles elimination in 2022

Data Source: Verification, certification, and disease-specific committee reports

Unsurprisingly, low- and middle-income countries have seen an increase in large or disruptive measles outbreaks in recent years [9]. Achieving and maintaining measles elimination is challenging and requires high, uniform immunization coverage, robust surveillance, and rapid outbreak response.

# III. ASSESSING BOTTLENECKS

While they are a heterogeneous group of countries, non-Gavi-eligible MICs represent a large share of un- and under-protected children because they generally face key bottlenecks in:

- 1. Decision-making,
- 2. Demand and equitable delivery,
- 3. Sustainable financing, and
- 4. Access to sustainable and affordable supply.

These four factors, highlighted in 2015 by the SAGE Task Force on MICs, remain critically important to focus attention and efforts to strengthen immunization systems in MICs. Key measures encompassed by the IA2030 Strategic Priorities show how countries were addressing bottlenecks in 2022.

# 1. Decision-making

It is important to monitor and understand country-level decision-making processes that lead to an increase in coverage or the introduction of a vaccine. Tailored support can facilitate country-owned adaptation of international recommendations and strong advocacy cases to secure sufficient domestic resources for sustainable programmes. Immunization partners have agreed that NITAGs provide important independent contributions to the decision-making process, while recognizing that they are not always sufficient for sound decision making [7].

As shown in Figure 8, non-Gavi-eligible LMICs are less likely to have functional NITAGs than other country groups. This likely hinders their ability to efficiently make evidence-based decisions about key policies, such as new vaccine introductions. Other elements, such as regulatory requirements and procurement and distribution practices, may also constrain decision making.

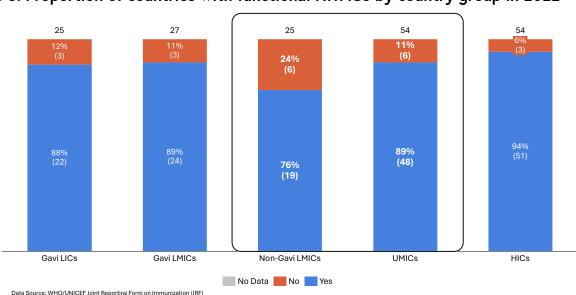


Figure 8. Proportion of countries with functional NITAGs by country group in 2022

# 2. Demand and equitable delivery

To achieve and maintain high uptake, the vaccine community needs to sustain confidence in vaccines and their benefits on the part of the public as well as health providers. Higher health workforce density is positively associated with improved vaccine coverage rates. Yet MICs in the African region have low workforce density, affecting immunization coverage and performance. Vaccine hesitancy, which refers to a delay in acceptance or refusal of vaccines despite the availability of vaccination services, has been identified as an area of concern for many years. Decision makers seeking to address hesitancy often use socio-behavioural strategies [5]. While 65% of non-Gavi-eligible LMICs reported in 2022 that they used socio-behavioural strategies to address under-vaccination and strengthen demand, just 43% of UMICs had these strategies in place.

28 59 12% 15% (3)34% (18)23% (6) 23% (12)31% (18) **65**% 43% (23)27% (16) UMICs Gavi LICs Gavi LMICs Non-Gavi LMICs HICs

Figure 9. Proportion of countries that have implemented behavioural or social strategies (i.e., demand-generation strategies) to address under-vaccination in 2022

# 3. Sustainable financing

Data Source: WHO/UNICEF Joint Reporting Form on Immunization (JRF)

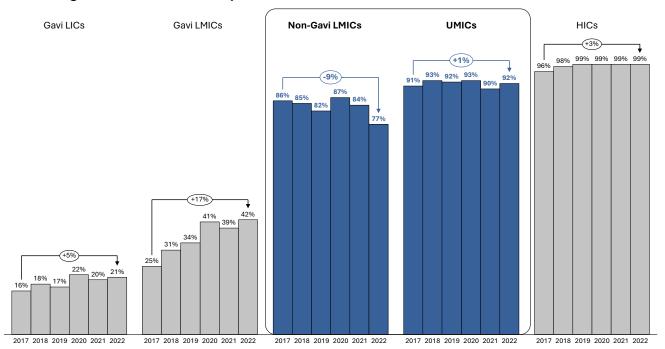
Non-Gavi-eligible MICs should rely increasingly or primarily on domestic public resources to purchase vaccines and fund services for the routine schedule. Inadequate public financing and inefficient use of available resources may limit both vaccine introduction and coverage. During the Global Vaccine Action Plan (GVAP), countries were encouraged to have standard budget line items for vaccines and immunization programmes in their national or health sector budgets [5]. This monitoring approach has been revisited under IA2030 with a focus on the share of routine immunization vaccine expenditure paid with public resources. Financing immunization sustainably requires political commitment and prioritization of government budgets on health and immunization, including investments in health systems.

No Data/No Response No Yes

Data shows that non-Gavi-eligible LMICs are relying more on aid for vaccines used in routine schedules (excluding COVID-19) than before. While Figure 10 implies a decline in financial sustainability, a country-by-country analysis shows that such declines may occur for a variety of reasons, such as when governments in non-Gavi-eligible LMICs de-prioritize immunization in their health budgets or when overall health budgets are reduced. A drop in domestic spending on vaccines used in routine immunization (excluding COVID-19 vaccines) may also be caused by temporary external support to introduce newer, higher-priced vaccines.

For governments to increase spending on immunization, the fiscal environment needs to be conducive to making additional investments. Compared to other country groups, government spending on health in UMICs grew faster than GDP in pre-pandemic years (pandemic-related health spending increases do not reflect a sustainable commitment by governments), indicating favourable conditions for increasing the budget for vaccines [11]. As such, monitoring health spending growth compared to GDP is important in the post-pandemic era. Increases in health spending may offer a signal for opportunities to advocate for increased vaccine budgeting as needed, since overall increases in health spending should enable the strengthening of immunization services, including the introduction of new recommended vaccines.

Figure 10. Percentage of total expenditure on vaccines used in routine immunization (excluding COVID-19 vaccines) paid with domestic resources from 2017–2022

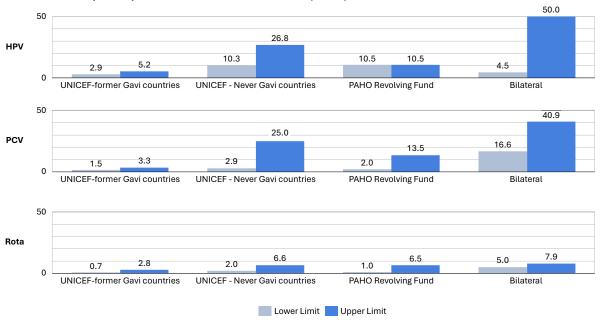


Data Source: WHO/UNICEF Joint Reporting Form on Immunization (IRF) 2017–2022. Data available from a range of 104 and 154 countries depending on the year. Expenditure reported data through JRF is irregular

# 4. Access to sustainable and affordable supply

A key barrier to introducing new vaccines and increasing coverage is the lack of an affordable and sustainable supply of vaccine products. Today, global supply can generally meet demand in quantity, with some challenges remaining for HPV, cholera, and other vaccines. However, there is a need for more transparency and harmonization around pricing for MICs. As seen in Figure 11, the price offered to MICs ranges considerably. For instance, HPV vaccines range from US\$2.90–5.20 for Gavi-eligible and former Gavi-eligible countries up to US\$50 for bilaterally negotiated prices. An even starker contrast can be found in the bilaterally negotiated price of PCV for MICs, which can be 12 times higher (US\$41) than the upper-limit price offered for former-Gavi-eligible countries (US\$3.30). Consequently, increasing coverage of HPV, PCV, and rotavirus vaccines to 90% by 2030 would require countries to increase their current vaccine budgets by 50–100% if current product choices and prices are maintained. Another factor affecting procurement costs is the under-utilization of lower-cost products in non-Gavi-eligible MICs, even though such products could significantly reduce government spending per dose.

Figure 11. Price per dose per procurement channel for non-Gavi-eligible middle-income countries for HPV, PCV, and rotavirus vaccines (US\$) - 2021–2023



Data Source: Gavi DPP, UNICEF, PAHO Revolving Fund, WHO MI4A (incomplete data set, self reported by countries)

Note: Bilateral procurement defined as all countries procuring directly from the supplier (outside UNICEF SD and PAHO Revolving Fund)

# IV. EXTERNAL SUPPORT FOR MIDDLE-INCOME COUNTRIES

Since the SAGE Task Force issued a call for action on MICs in 2015, regional and global leaders have stepped up to provide substantially more targeted support to address the four key bottlenecks. A new landscaping assessment was conducted to capture immunization support efforts in MICs between 2015 and 2023. We collected responses via an online questionnaire and key informant interviews, while also reviewing gray and formal literature. The assessment captured almost 150 efforts supporting MICs in immunization, including over 100 regional and multi-country initiatives with activities in non-Gavi-eligible MICs, as defined by each country's income in 2022.<sup>3</sup> The analysis of the efforts was framed around the four main bottlenecks.

A major development during this period was the launch of Gavi's MICs Approach, which seeks to address threats to the equity and sustainability of routine immunization programmes in LMICs and additional economies-classified as eligible for International Development Association (IDA) support [12]. With a funding allocation of US\$300 million to support vaccine introduction in MICs for the 2021–2025 period, the MICs Approach aims to prevent backsliding in vaccine coverage and drive the sustainable introduction of PCV, rotavirus, and HPV vaccines, providing start-up vaccine financing for eligible countries to cover half of the first targeted birth cohort. Gavi's 6.0 strategy, to be implemented from 2026 to 2030, may aim to continue supporting former and never-Gavi countries, influencing immunization programmes across a range of MICs.

<sup>&</sup>lt;sup>3</sup> The 2023 assessment involved a similar methodology to the first landscaping exercise, including an online questionnaire and in-depth interviews with global and regional representatives of health agencies, technical partners, and funders. Due to limited responses from the WHO Western Pacific Region, these efforts may be underrepresented. Because initiatives engaged more than one country and typically operated for several years, the density and types of initiatives supporting each non-Gavi-eligible MIC were not systemically assessed.

Other regional and multi-country initiatives focused on MICs addressed all four bottlenecks.

Decision-making initiatives typically use technical support, shared learning, and cooperation, for instance, by convening experts, engaging stakeholders, and fostering peer-topeer learning, as in the LINKED Immunization Action Network and UNICEF's Vaccine Procurement Practitioners Network [5]. When compared with the earlier landscape report, the current assessment found many more initiatives supporting country-level decision making. While 15 such efforts were described in 2015, 106 global or regional-level initiatives were identified in 2023.

Demand and equitable delivery activities are often focused on increasing vaccine confidence, generating demand, and integrating programmes. Strategic information and monitoring efforts are notably also prominent with efforts focused on conducting surveillance, research, and data assessments to inform demand and delivery activities in-country. The number of such activities increased substantially from 27 to 95, with many such efforts focusing on COVID-19-related demand and delivery activities.

**Sustainable financing** efforts are concentrated on resource mobilization, advocacy, and fundraising campaigns. The number of multicountry or global financing efforts grew from 20 in 2015 to 60 in 2023, a smaller increase when compared with demonstrated investments in addressing the other bottlenecks.

#### Access to sustainable and affordable supply

is largely targeted through programmes to support procurement and supply chain management. One such initiative is the MICs Financing Facility, which UNICEF's Supply Division launched in 2022 to allow MICs to access advanced payment for vaccine orders and should also facilitate special contracting with suppliers. Meanwhile, the WHO Market Information for Access to Vaccines (MI4A), begun in 2018, aims to foster vaccine price transparency for self-procuring countries.

Global and regional participants interviewed for the landscaping study highlighted diverse, cross-cutting challenges that range from domestic to international in scope:

- Affordability: Poor price transparency and comparability create unfavourable market conditions for investment among MICs.
- **Resource gaps:** MICs experience shortfalls in financial, human, and technical resources. Further, GNI-based eligibility for support and aid transition does not account for broader health system capacity to fully support immunization needs.
- Pandemic-related changes in vaccine demand: Immunization complacency and fatigue on the part of populations as well as governmental stakeholders have affected acceptance and demand, and many participants were concerned about further backsliding.
- Outbreak threats: MICs lack support on outbreak response and preparedness for global health risks.
- **Verticalization of programming:** This affects the sustainability of gains and investments, yet a change would require systemic transformation.

Overall, participants emphasized that MICs are a heterogeneous group of countries, and country and regional support should be tailored and country-driven to address contextual challenges.

# **V. CONCLUSION**

In non-Gavi-eligible MICs, 5 million children received no vaccines at all in 2022, and tens of millions of under-immunized children and adolescents lack critical protection against diseases like measles, pneumonia, rotavirus, and cervical cancer. Suboptimal coverage and inequitable access to vaccines in non-Gavi-eligible MICs highlight the potential for disease outbreaks. Fortunately, government commitments rapidly addressed pandemic-era increases in zero-dose children. Immunization challenges will require further strategic, coordinated, and country-tailored approaches to redress. Non-Gavi-eligible MICs are still facing key bottlenecks identified by SAGE nearly a decade ago in: decision-making, demand and delivery, financial sustainability, and affordable access to supply. One bright spot today is more government spending on health in UMICs, which could lead to greater resourcing for vaccines. Increasing the use of lower-cost products could also considerably decrease the cost of procurement for national vaccine programmes.

Despite the persistence of bottlenecks, a landscaping analysis found diverse sources of technical guidance, learning activities, programming support, and strategic monitoring and information available for MICs. It also found a substantial increase in support for country-led vaccine decision making across non-Gavi-eligible MICs. Further coordination between initiatives may improve efficiencies and help close continued resourcing gaps. Performance disparities between country groups also show a need to better account for equity and vulnerability measures in aid allocations for strengthening institutions. In addition, countries should continue efforts toward integrating immunization with primary health care. In summary, concerted action is needed to address the persistent challenges facing non-Gavi-eligible MICs to bolster health systems and safeguard the well-being of millions of under-protected children worldwide.

Future IA2030 analyses related to middle-income countries will dive into more details on each of the bottlenecks as well as explore country-level data to reflect the large differences within country groups and variations in challenges.

#### About this brief:

Access to Immunization in Middle-Income Countries. Immunization Agenda 2030: In-Depth Review was developed by the Immunization Agenda 2030 (IA2030) Working Group on Middle-Income Countries, co-led by Nathalie Vande Maele (WHO) and Blandine Bourgoin (Clinton Health Access Initiative), with support from Shahira Malm (UNICEF), Cosima Lenz, and the IA2030 Scorecard team, including Rose Weeks, Christine Liang, and Carolyn Inae Kim.

The IA2030 Scorecard visualizes the monitoring and evaluation indicators of the IA2030 Monitoring and Evaluation Framework endorsed in 2020 by the World Health Assembly with the support of countries and partners. The scorecard is a collaborative effort coordinated by USAID MOMENTUM Country and Global Leadership, in partnership with representatives from the IA2030 Monitoring & Evaluation Working Group and IA2030 Communication and Advocacy Working Group, including specialists from the World Health Organization, U.S. Centers for Disease Control and Prevention, UNICEF, International Vaccine Access Center (IVAC), and UN Foundation.

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# Appendix A

Income Classification (FY2024 using 2022 income data) and Gavi Eligibility (2024) for 194 WHO Member States

Country ISO3	Country Name	Income Classification (2022 GNI per capita US\$)	Gavi Eligibility (2024)	MIC Brief Income Classification
AFG	Afghanistan	Low income	Eligible	LICs
AGO	Angola	Lower middle income	Not eligible	non-Gavi LMIC
ALB	Albania	Upper middle income	Not eligible	UMICs
AND	Andorra	High income	Not eligible	HICs
ARE	United Arab Emirates	High income	Not eligible	HICs
ARG	Argentina	Upper middle income	Not eligible	UMICs
ARM	Armenia	Upper middle income	Not eligible	UMICs
ATG	Antigua and Barbuda	High income	Not eligible	HICs
AUS	Australia	High income	Not eligible	HICs
AUT	Austria	High income	Not eligible	HICs
AZE	Azerbaijan	Upper middle income	Not eligible	UMICs
BDI	Burundi	Low income	Eligible	LICs
BEL	Belgium	High income	Not eligible	HICs
BEN	Benin	Lower middle income	Eligible	Gavi LMICs
BFA	Burkina Faso	Low income	Eligible	LICs
BGD	Bangladesh	Lower middle income	Eligible	Gavi LMICs
BGR	Bulgaria	Upper middle income	Not eligible	UMICs
BHR	Bahrain	High income	Not eligible	HICs
BHS	Bahamas	High income	Not eligible	HICs
BIH	Bosnia and Herzegovina	Upper middle income	Not eligible	UMICs
BLR	Belarus	Upper middle income	Not eligible	UMICs
BLZ	Belize	Upper middle income	Not eligible	UMICs
BOL	Bolivia (Plurinational State of)	Lower middle income	Not eligible	non-Gavi LMICs
BRA	Brazil	Upper middle income	Not eligible	UMICs
BRB	Barbados	High income	Not eligible	HICs
BRN	Brunei Darussalam	High income	Not eligible	HICs
BTN	Bhutan	Lower middle income	Not eligible	non-Gavi LMICs
BWA	Botswana	Upper middle income	Not eligible	UMICs
CAF	Central African Republic	Low income	Eligible	LICs
CAN	Canada	High income	Not eligible	HICs
CHE	Switzerland	High income	Not eligible	HICs
CHL	Chile	High income	Not eligible	HICs
CHN	China	Upper middle income	Not eligible	UMICs
CIV	Côte d'Ivoire	Lower middle income	Eligible	Gavi LMICs
CMR	Cameroon	Lower middle income	Eligible	Gavi LMICs
COD	Democratic Republic of the Congo	Low income	Eligible	LICs
COG	Congo	Lower middle income	Eligible	Gavi LMICs
COK	Cook Islands	Uncategorized	Not eligible	Uncategorized

Country ISO3	Country Name	Income Classification (2022 GNI per capita US\$)	Gavi Eligibility (2024)	MIC Brief Income Classification
COL	Colombia	Upper middle income	Not eligible	UMICs
COM	Comoros	Lower middle income	Eligible	Gavi LMICs
CPV	Cabo Verde	Lower middle income	Not eligible	non-Gavi LMICs
CRI	Costa Rica	Upper middle income	Not eligible	UMICs
CUB	Cuba	Upper middle income	Not eligible	UMICs
CYP	Cyprus	High income	Not eligible	HICs
CZE	Czechia	High income	Not eligible	HICs
DEU	Germany	High income	Not eligible	HICs
DJI	Djibouti	Lower middle income	Eligible	Gavi LMICs
DMA	Dominica	Upper middle income	Not eligible	UMICs
DNK	Denmark	High income	Not eligible	HICs
DOM	Dominican Republic	Upper middle income	Not eligible	UMICs
DZA	Algeria	Lower middle income	Not eligible	non-Gavi LMICs
ECU	Ecuador	Upper middle income	Not eligible	UMICs
EGY	Egypt	Lower middle income	Not eligible	non-Gavi LMICs
ERI	Eritrea	Low income	Eligible	LICs
ESP	Spain	High income	Not eligible	HICs
EST	Estonia	High income	Not eligible	HICs
ETH	Ethiopia	Low income	Eligible	LICs
FIN	Finland	High income	Not eligible	HICs
FJI	Fiji	Upper middle income	Not eligible	UMICs
FRA	France	High income	Not eligible	HICs
FSM	Micronesia (Federated States of)	Lower middle income	Not eligible	non-Gavi LMICs
GAB	Gabon	Upper middle income	Not eligible	UMICs
GBR	United Kingdom of Great Britain and Northern Ireland	High income	Not eligible	HICs
GEO	Georgia	Upper middle income	Not eligible	UMICs
GHA	Ghana	Lower middle income	Eligible	Gavi LMICs
GIN	Guinea	Lower middle income	Eligible	Gavi LMICs
GMB	Gambia	Low income	Eligible	LICs
GNB	Guinea-Bissau	Low income	Eligible	LICs
GNQ	Equatorial Guinea	Upper middle income	Not eligible	UMICs
GRC	Greece	High income	Not eligible	HICs
GRD	Grenada	Upper middle income	Not eligible	UMICs
GTM	Guatemala	Upper middle income	Not eligible	UMICs
GUY	Guyana	High income	Not eligible	HICs
HND	Honduras	Lower middle income	Not eligible	non-Gavi LMICs
HRV	Croatia	High income	Not eligible	HICs
HTI	Haiti	Lower middle income	Eligible	Gavi LMICs
HUN	Hungary	High income	Not eligible	HICs
IDN	Indonesia	Upper middle income	Not eligible	UMICs
IND	India	Lower middle income	Not eligible	non-Gavi LMICs
IRL	Ireland	High income	Not eligible	HICs

Country ISO3	Country Name	Income Classification (2022 GNI per capita US\$)	Gavi Eligibility (2024)	MIC Brief Income Classification
IRN	lran (Islamic Republic of)	Lower middle income	Not eligible	non-Gavi LMICs
IRQ	Iraq	Upper middle income	Not eligible	UMICs
ISL	Iceland	High income	Not eligible	HICs
ITA	Italy	High income	Not eligible	HICs
JAM	Jamaica	Upper middle income	Not eligible	UMICs
JOR	Jordan	Lower middle income	Not eligible	non-Gavi LMICs
JPN	Japan	High income	Not eligible	HICs
KAZ	Kazakhstan	Upper middle income	Not eligible	UMICs
KEN	Kenya	Lower middle income	Eligible	Gavi LMICs
KGZ	Kyrgyzstan	Lower middle income	Eligible	Gavi LMICs
KHM	Cambodia	Lower middle income	Eligible	Gavi LMICs
KIR	Kiribati	Lower middle income	Not eligible	non-Gavi LMICs
KNA	Saint Kitts and Nevis	High income	Not eligible	HICs
KOR	Republic of Korea	High income	Not eligible	HICs
KWT	Kuwait	High income	Not eligible	HICs
LAO	Lao People's Democratic Republic	Lower middle income	Eligible	Gavi LMICs
LBN	Lebanon	Lower middle income	Not eligible	non-Gavi LMICs
LBR	Liberia	Low income	Eligible	LICs
LBY	Libya	Upper middle income	Not eligible	UMICs
LCA	Saint Lucia	Upper middle income	Not eligible	UMICs
LKA	Sri Lanka	Lower middle income	Not eligible	non-Gavi LMICs
LSO	Lesotho	Lower middle income	Eligible	Gavi LMICs
LTU	Lithuania	High income	Not eligible	HICs
LUX	Luxembourg	High income	Not eligible	HICs
LVA	Latvia	High income	Not eligible	HICs
MAR	Morocco	Lower middle income	Not eligible	non-Gavi LMICs
MCO	Monaco	High income	Not eligible	HICs
MDA	Republic of Moldova	Upper middle income	Not eligible	UMICs
MDG	Madagascar	Low income	Eligible	LICs
MDV	Maldives	Upper middle income	Not eligible	UMICs
MEX	Mexico	Upper middle income	Not eligible	UMICs
MHL	Marshall Islands	Upper middle income	Not eligible	UMICs
MKD	North Macedonia	Upper middle income	Not eligible	UMICs
MLI	Mali	Low income	Eligible	LICs
MLT	Malta	High income	Not eligible	HICs
MMR	Myanmar	Lower middle income	Eligible	Gavi LMICs
MNE	Montenegro	Upper middle income	Not eligible	UMICs
MNG	Mongolia	Lower middle income	Not eligible	non-Gavi LMICs
MOZ	Mozambique	Low income	Eligible	LICs
MRT	Mauritania	Lower middle income	Eligible	Gavi LMICs
MUS	Mauritius	Upper middle income	Not eligible	UMICs
MWI	Malawi	Low income	Eligible	LICs
MYS	Malaysia	Upper middle income	Not eligible	UMICs
NAM	Namibia	Upper middle income	Not eligible	UMICs

Country ISO3	Country Name	Income Classification (2022 GNI per capita US\$)	Gavi Eligibility (2024)	MIC Brief Income Classification
NER	Niger	Low income	Eligible	LICs
NGA	Nigeria	Lower middle income	Eligible	Gavi LMICs
NIC	Nicaragua	Lower middle income	Not eligible	non-Gavi LMICs
NIU	Niue	Uncategorized	Not eligible	Uncategorized
NLD	Netherlands (Kingdom of the)	High income	Not eligible	HICs
NOR	Norway	High income	Not eligible	HICs
NPL	Nepal	Lower middle income	Eligible	Gavi LMICs
NRU	Nauru	High income	Not eligible	HICs
NZL	New Zealand	High income	Not eligible	HICs
OMN	Oman	High income	Not eligible	HICs
PAK	Pakistan	Lower middle income	Eligible	Gavi LMICs
PAN	Panama	High income	Not eligible	HICs
PER	Peru	Upper middle income	Not eligible	UMICs
PHL	Philippines	Lower middle income	Not eligible	non-Gavi LMICs
PLW	Palau	Upper middle income	Not eligible	UMICs
PNG	Papua New Guinea	Lower middle income	Eligible	Gavi LMICs
POL	Poland	High income	Not eligible	HICs
PRK	Democratic People's Republic of Korea	Low income	Eligible	LICs
PRT	Portugal	High income	Not eligible	HICs
PRY	Paraguay	Upper middle income	Not eligible	UMICs
QAT	Qatar	High income	Not eligible	HICs
ROU	Romania	High income	Not eligible	HICs
RUS	Russian Federation	Upper middle income	Not eligible	UMICs
RWA	Rwanda	Low income	Eligible	LICs
SAU	Saudi Arabia	High income	Not eligible	HICs
SDN	Sudan	Low income	Eligible	LICs
SEN	Senegal	Lower middle income	Eligible	Gavi LMICs
SGP	Singapore	High income	Not eligible	HICs
SLB	Solomon Islands	Lower middle income	Eligible	Gavi LMICs
SLE	Sierra Leone	Low income	Eligible	LICs
SLV	El Salvador	Upper middle income	Not eligible	UMICs
SMR	San Marino	High income	Not eligible	HICs
SOM	Somalia	Low income	Eligible	LICs
SRB	Serbia	Upper middle income	Not eligible	UMICs
SSD	South Sudan	Low income	Eligible	LICs
STP	Sao Tome and Principe	Lower middle income	Eligible	Gavi LMICs
SUR	Suriname	Upper middle income	Not eligible	UMICs
SVK	Slovakia	High income	Not eligible	HICs
SVN	Slovenia	High income	Not eligible	HICs
SWE	Sweden	High income	Not eligible	HICs
SWZ	Eswatini	Lower middle income	Not eligible	non-Gavi LMICs
SYC	Seychelles	High income	Not eligible	HICs
SYR	Syrian Arab Republic	Low income	Eligible	LICs
TCD	Chad	Low income	Eligible	LICs

Country ISO3	Country Name	Income Classification (2022 GNI per capita US\$)	Gavi Eligibility (2024)	MIC Brief Income Classification
TGO	Togo	Low income	Eligible	LICs
THA	Thailand	Upper middle income	Not eligible	UMICs
TJK	Tajikistan	Lower middle income	Eligible	Gavi LMICs
TKM	Turkmenistan	Upper middle income	Not eligible	UMICs
TLS	Timor-Leste	Lower middle income	Not eligible	non-Gavi LMICs
TON	Tonga	Upper middle income	Not eligible	UMICs
TTO	Trinidad and Tobago	High income	Not eligible	HICs
TUN	Tunisia	Lower middle income	Not eligible	non-Gavi LMICs
TUR	Türkiye	Upper middle income	Not eligible	UMICs
TUV	Tuvalu	Upper middle income	Not eligible	UMICs
TZA	United Republic of Tanzania	Lower middle income	Eligible	Gavi LMICs
UGA	Uganda	Low income	Eligible	LICs
UKR	Ukraine	Lower middle income	Not eligible	non-Gavi LMICs
URY	Uruguay	High income	Not eligible	HICs
USA	United States of America	High income	Not eligible	HICs
UZB	Uzbekistan	Lower middle income	Not eligible	non-Gavi LMICs
VCT	Saint Vincent and the Grenadines	Upper middle income	Not eligible	UMICs
VEN	Venezuela (Bolivarian Republic of)	Upper middle income	Not eligible	UMICs
VNM	Viet Nam	Lower middle income	Not eligible	non-Gavi LMICs
VUT	Vanuatu	Lower middle income	Not eligible	non-Gavi LMICs
WSM	Samoa	Lower middle income	Not eligible	non-Gavi LMICs
YEM	Yemen	Low income	Eligible	LICs
ZAF	South Africa	Upper middle income	Not eligible	UMICs
ZMB	Zambia	Lower middle income	Eligible	Gavi LMICs
ZWE	Zimbabwe	Lower middle income	Eligible	Gavi LMICs

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