Access to Immunization in Middle-Income Countries

Immunization Agenda 2030: In-Depth Review

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World Health Organization | IVB

IA2030 In Depth Review

- Joint work from partners supporting MICs through IA2030 MIC Support Group
- Shared at WHA in May 2024
- Online on IA2030 Website

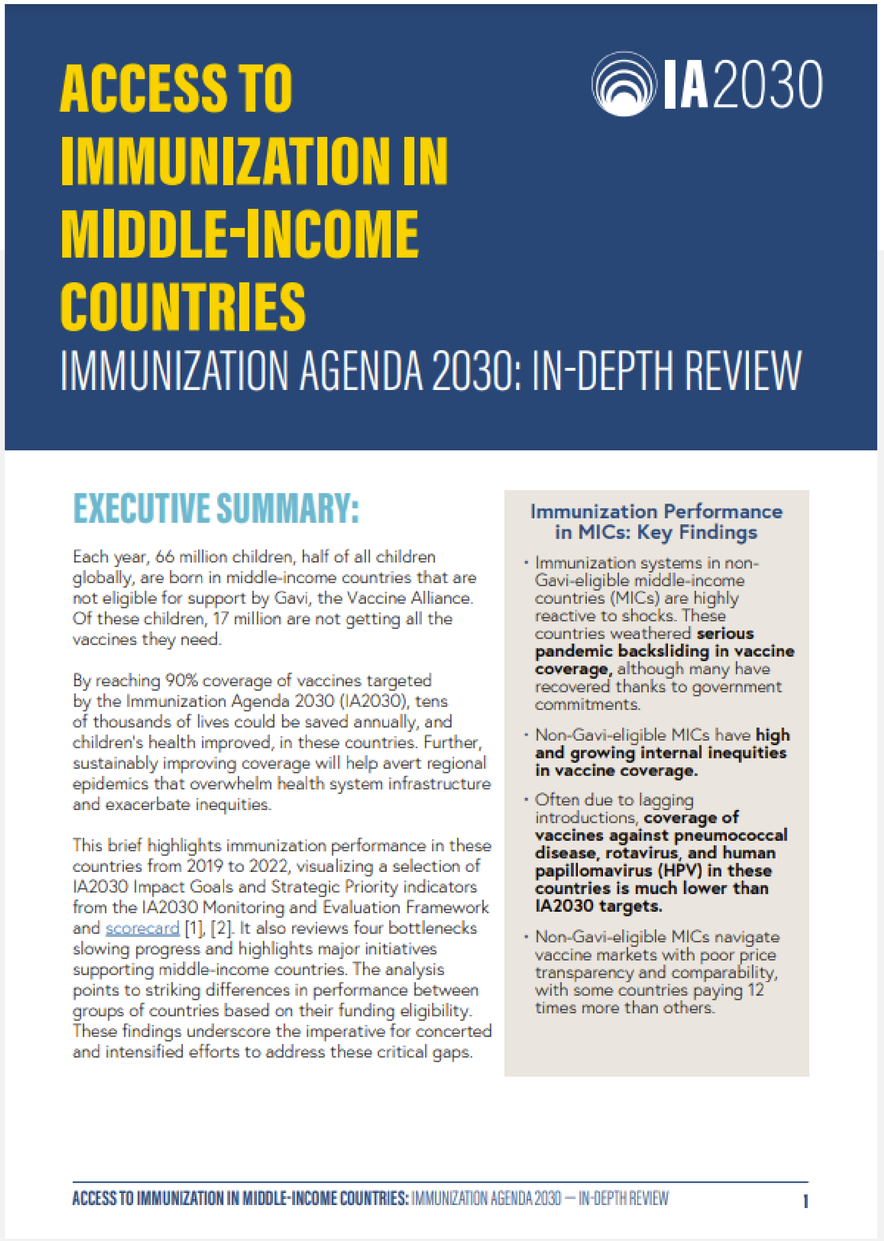
I. Background: why focus on middle-income countries

II. Immunization performance

III. Assessing bottlenecks

IV. External support for middle-income countries

V. Call to Action



ACCESS TO IMMUNIZATION IN MIDDLE-INCOME COUNTRIES

IA2030

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.

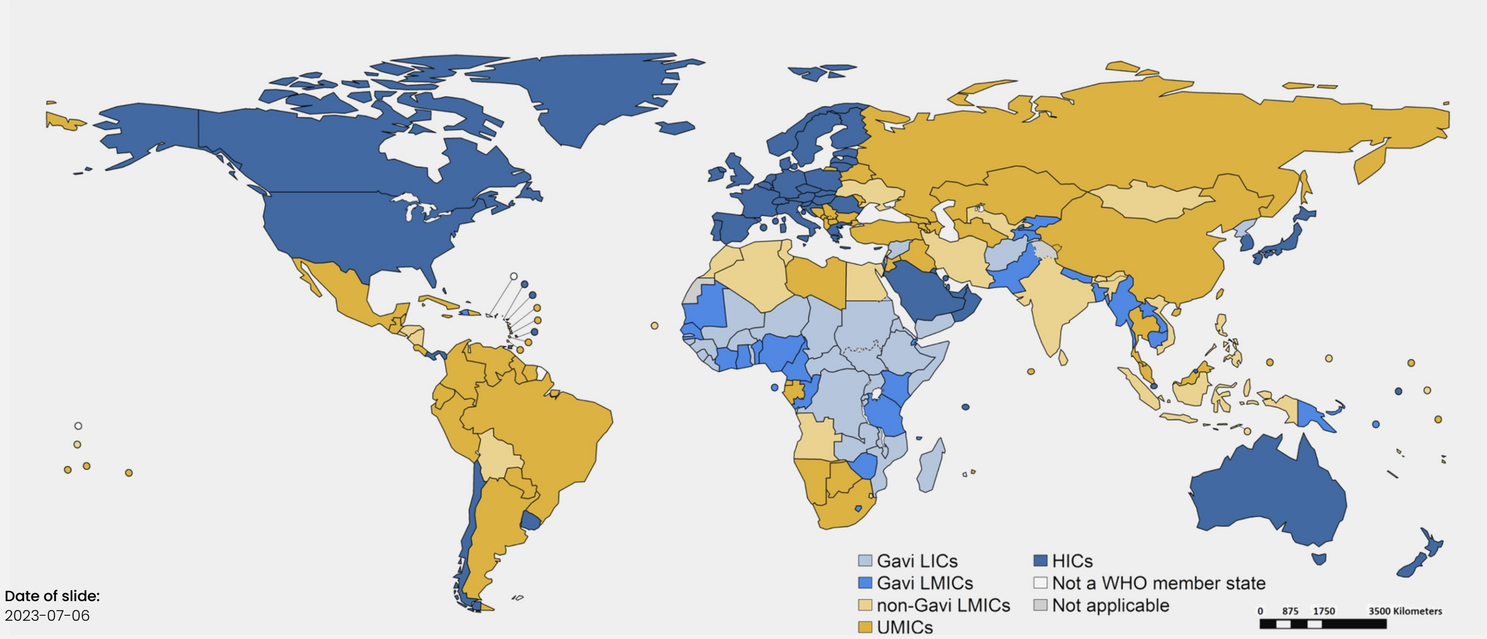
ACCESS TO IMMUNIZATION IN MIDDLE-INCOME COUNTRIES: IMMUNIZATION AGENDA 2030 — IN-DEPTH REVIEW 1

Defining non-Gavi-eligible MICs

Middle-income countries (MICs) include both lower-middle and upper-middle income countries.

1. Some of the LMICs are eligible for traditional support from Gavi, based on their gross national income (GNI) per capita level.
2. Some other MICs receive other type of Gavi support (catalytic support) to introduce new vaccines and strengthen immunization systems.
3. Remaining countries don't receive any types of Gavi support

In this review, we look at "non-Gavi-eligible MICs", i.e., 2 & 3.



Date of slide:
2023-07-06

Map production:
Immunization, Vaccines and Biologicals (IVB), World Health Organization (WHO)

Income Grouping	Income Classification (2022 GNI per capita USD)**	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

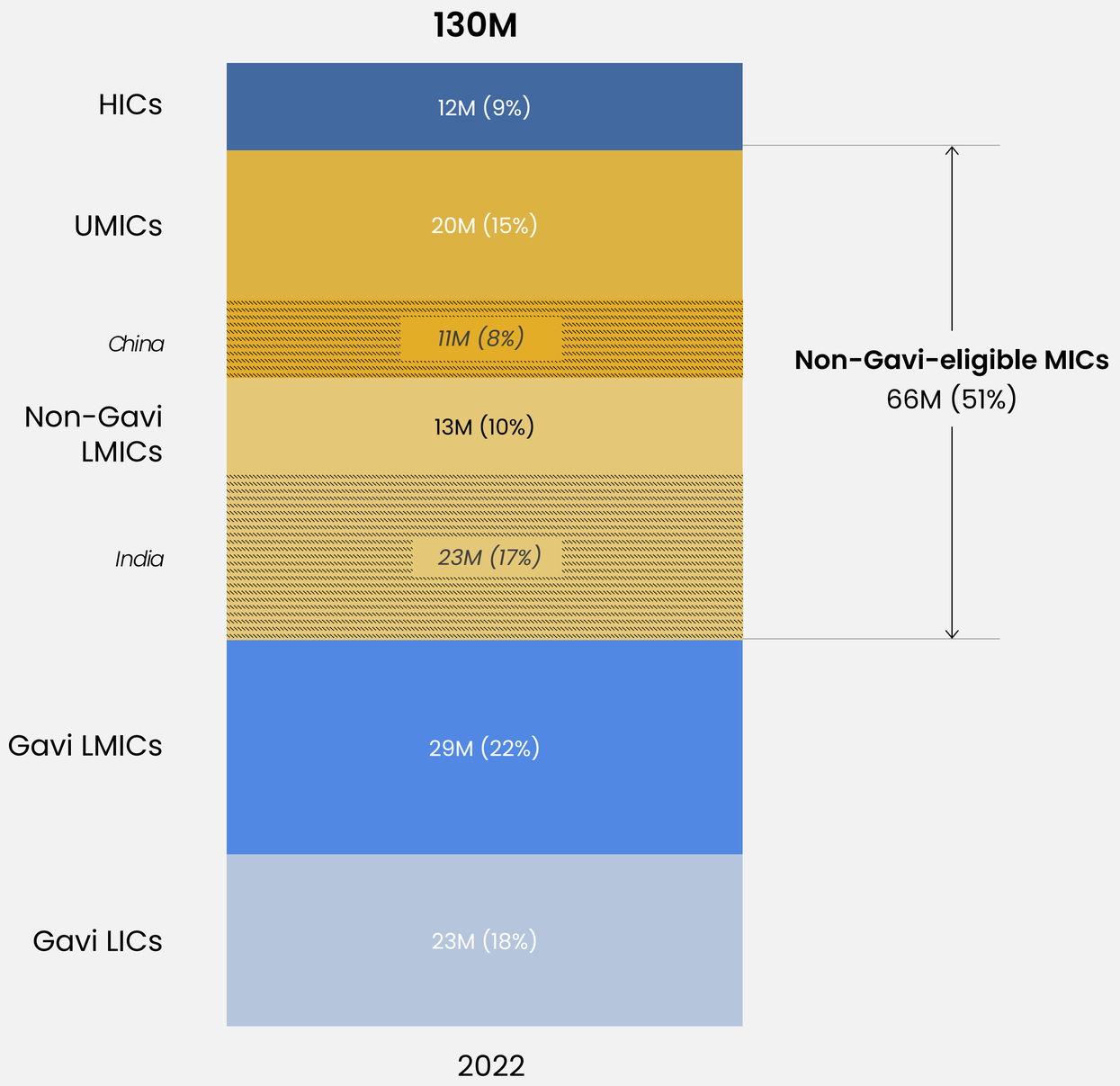
***Countries in accelerated transition have a GNI per capita greater than US$1,660 but for less than 3 years
****Not eligible for Gavi support, but may be eligible for catalytic, time-limited support from the MICs Approach

Why Focus on Middle-Income Countries

Half of 130 million infants born each year are born in middle-income countries that are not eligible for support from Gavi, the Vaccine Alliance.

A third of zero-dose children* live in non-Gavi-eligible MICs

* defined as children who have not received a first dose of a diphtheria-pertussis-tetanus-containing vaccine (DTP1)



Source: UN Population Division's World Population Prospects 2022

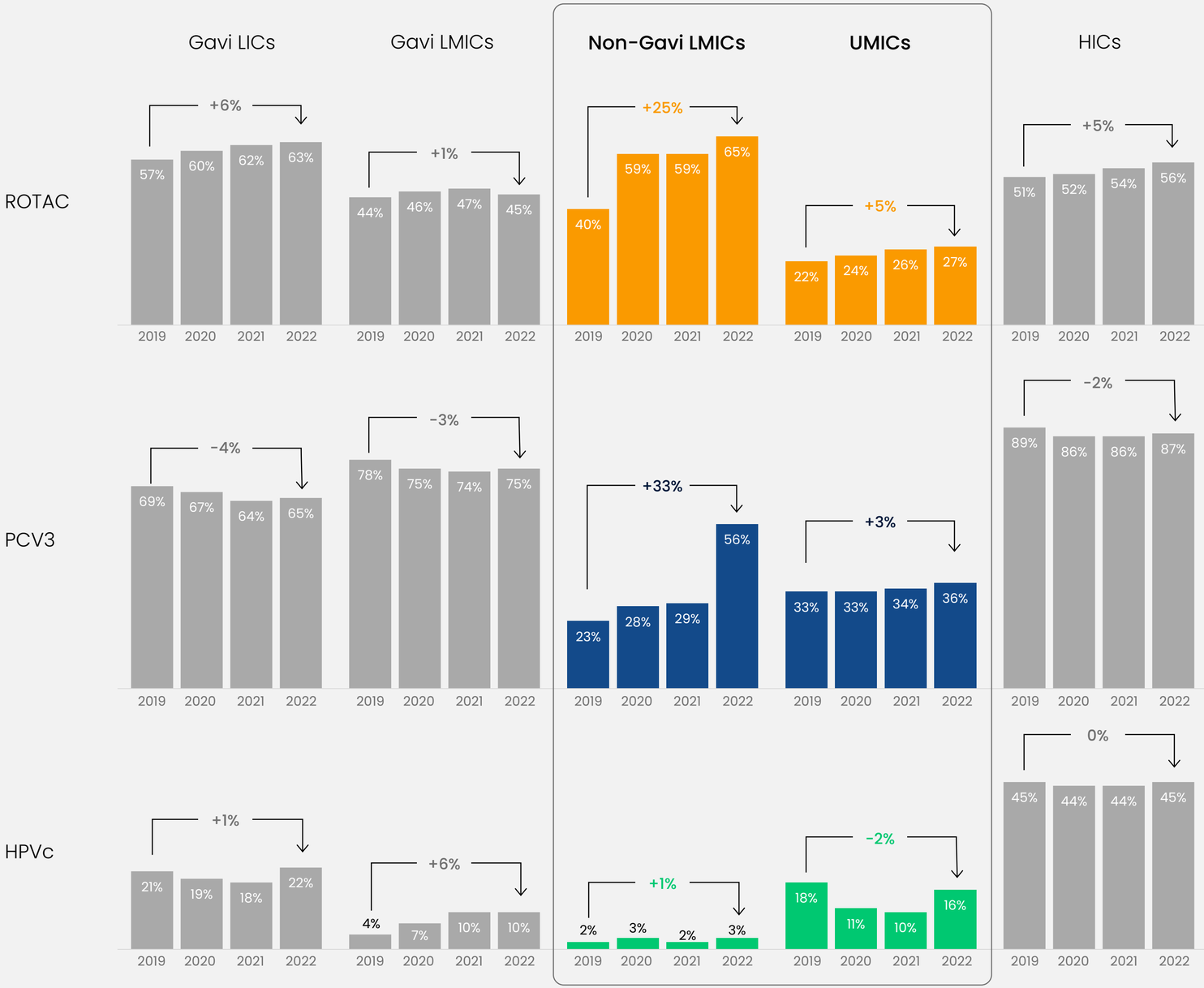
Coverage of underutilized vaccines

Many children in non-Gavi-eligible MICs lack access to human papillomavirus (HPV), pneumococcal conjugate (PCV), and rotavirus vaccines (ROTAC), often due to lagging country's introductions.

By 2022, in non-Gavi-eligible LMICs/MICs,

- Just over 50% had introduced ROTAC vaccines
- Fewer than 70% had introduced PCV
- Just 31% had introduced the HPV vaccine

Vaccine Coverage for Rotavirus, PCV3, and HPVc, 2019 - 2022



Source: WHO/UNICEF Estimates of National Immunization Coverage (WUENIC) 2019-2022, WHIO/UNICEF HPV Estimates 2019-2022

Equity

Non-Gavi-eligible MICs show high inequity in subnational vaccine coverage, which worsened during the pandemic. In 2022,

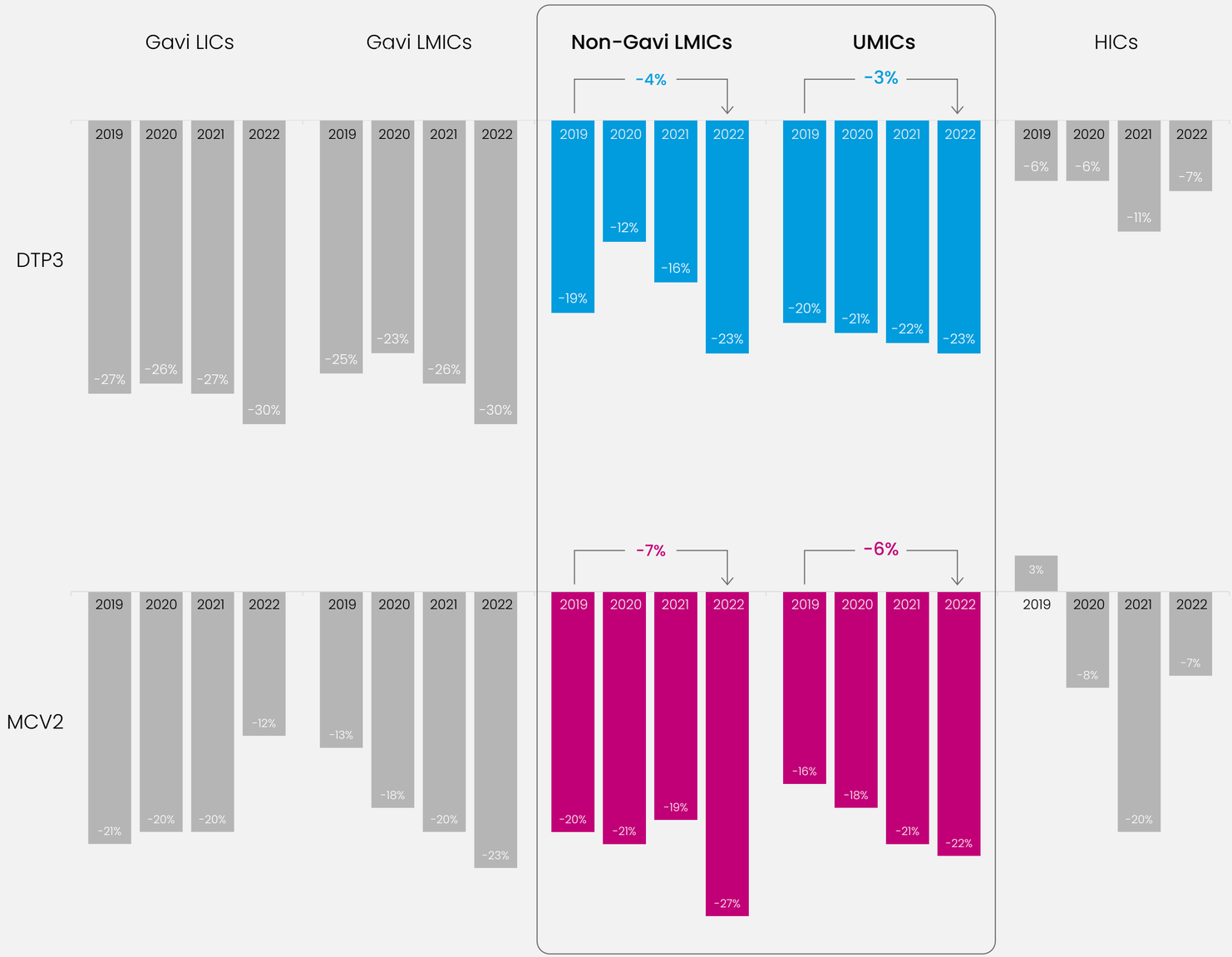
- DTP3 coverage was 23 pt less
- MCV2 was at least 22 to 27 pt less

in least performing districts than national coverage.

Inequity is masked by improvements in national vaccine coverage.

These countries are much more vulnerable to measles and other disease outbreaks than their national coverage values would indicate.

The Equity Gap, DTP3 and MCV2 , 2019 - 2022



Source: WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), 2022 Revision, 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 decreased substantially from 2019 to 2021 with:
  - non-Gavi-eligible LMICs dropping from 89% to 83%
  - UMICs dropping from 91% to 86%
- Coverage of MCV2 also decreased by:
  - 4% in non-Gavi-eligible LMICs
  - 2% in UMICs

Coverage for both recovered in 2022, yet pandemic-related declines may have exacerbated inequity.

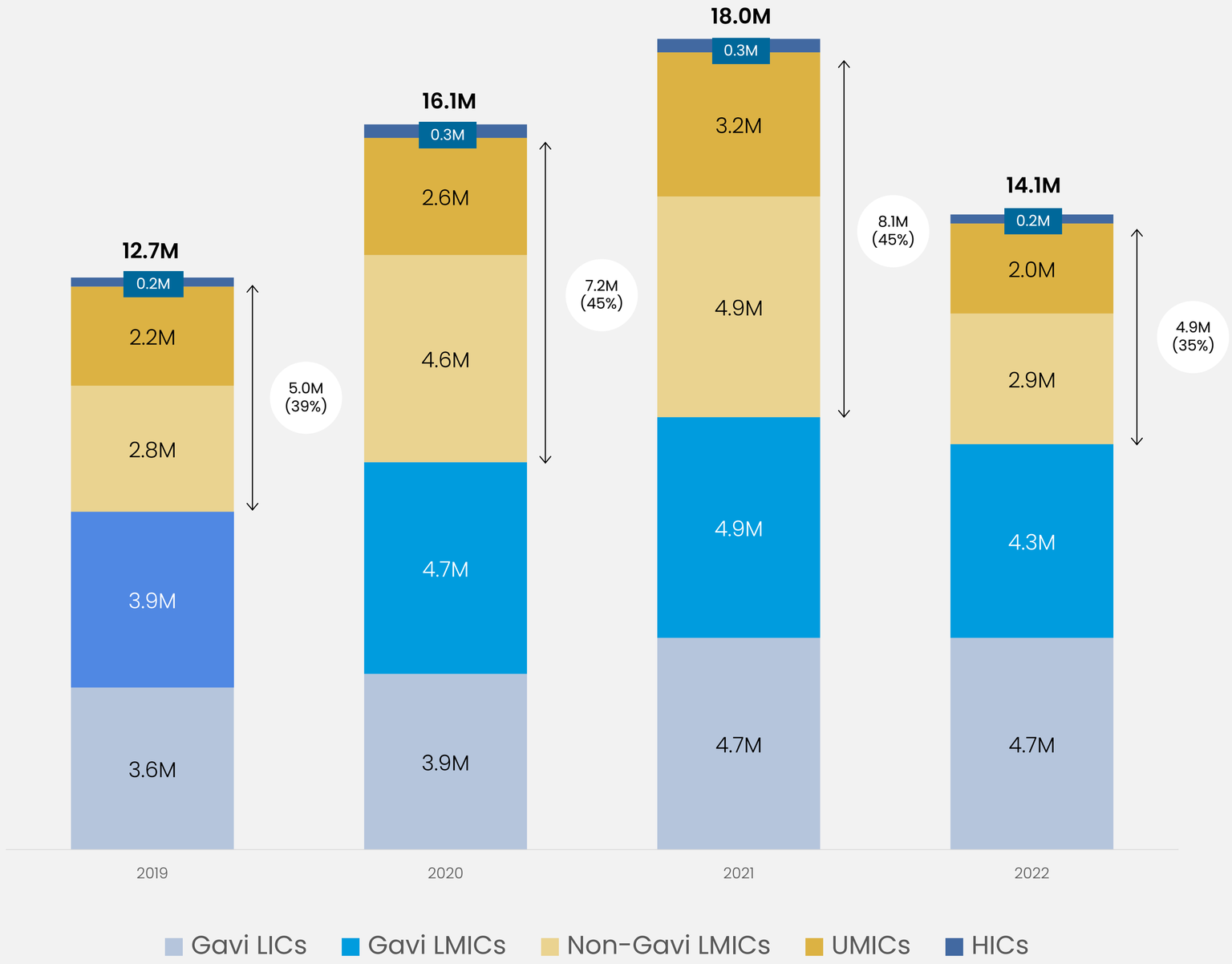
Source: WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), 2022 Revision

Vaccine Coverage for DTP3 and MCV2 , 2019 - 2022

Zero-dose children

- From 2021 to 2022, there was a remarkable decrease in zero-dose children living in non-Gavi-eligible MICs, thanks to government commitments.
- In 2022, nearly 5 million zero-dose children, or 35% of all such underserved children globally, were living in non-Gavi-eligible MICs.
- Yet, the number of zero-dose children in non-Gavi-eligible MICs has decreased only slightly since 2019.

Number of Zero-dose Children, 2019 - 2022



Source: WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), 2022 Revision, and UNPD population estimates 2019-2020

Control of vaccine-preventable disease

Dynamics in vaccine coverage can negatively affect disease control efforts.

Progress toward measles elimination targets has stalled. In 2022:

- Fewer than half of non-Gavi-eligible MICs had eliminated measles transmission
- Just one new non-Gavi-eligible LMIC attained measles elimination
- 4 UMICs - up from 2 in 2021 - had a measles control status of "re-established"

Unsurprisingly, LMICs have seen an **increase in large or disruptive measles outbreaks** in recent years.

Progress toward measles elimination, 2020 - 2022

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

Four key barriers preventing access to vaccines

Identified by the MIC Task Force in 2015 and remaining critically important today

Decision making

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

Demand for and equitable delivery

Vaccine hesitancy (delay in acceptance or refusal of vaccines despite availability of services), has been identified as an area of concern for many years. Decision makers seeking to address hesitancy often use socio-behavioural strategies

Sustainable financing

Non-Gavi-eligible MICs should rely increasingly or primarily on domestic public resources to fund vaccines and services. Inadequate public financing and inefficient use of available resources may limit both vaccine introduction and coverage.

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. There is a need for more transparency and harmonization around pricing for MICs.

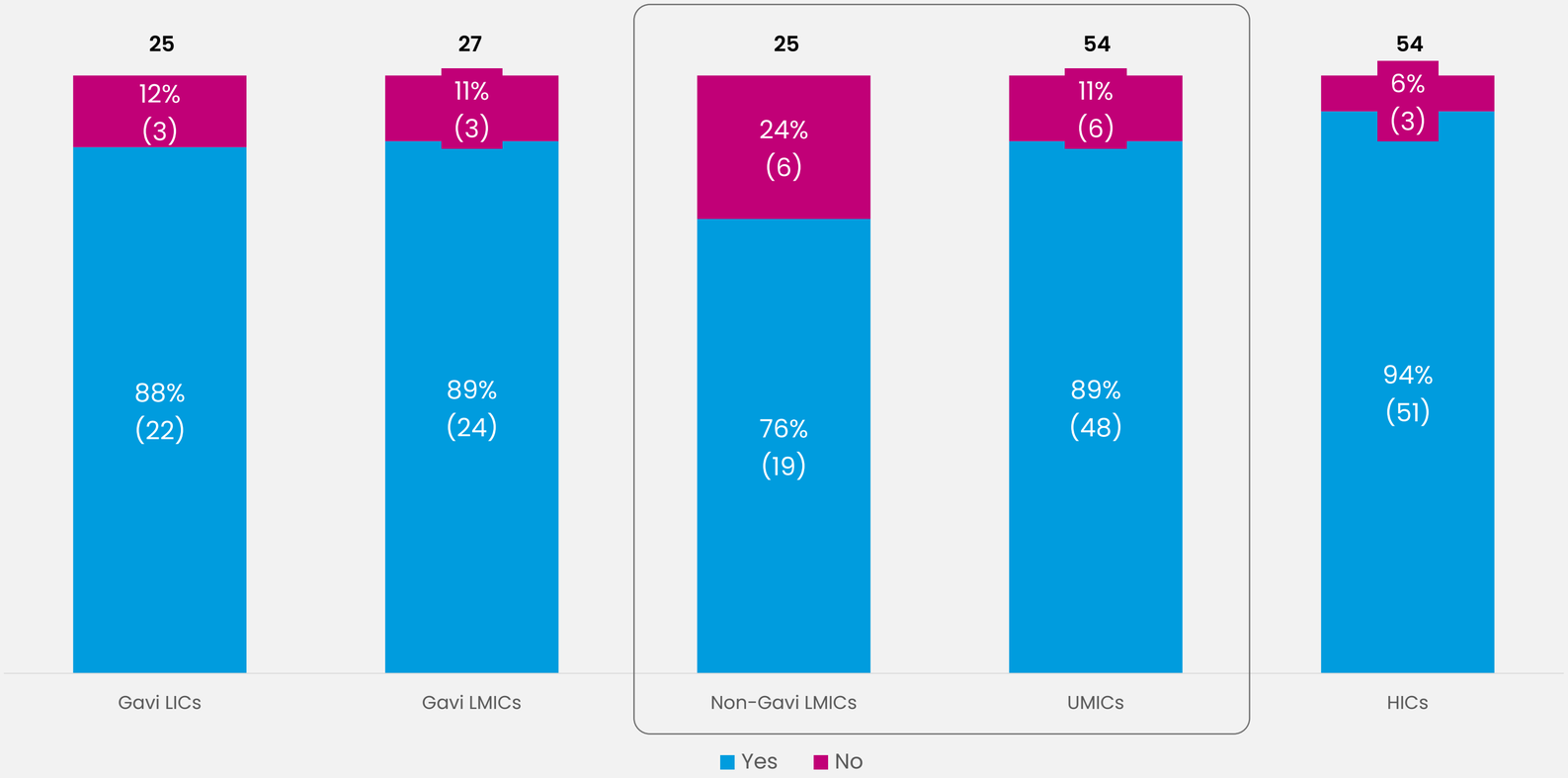
* NITAGs = National Immunization Technical Advisory Group

Non-Gavi-eligible LMICs are less likely to have functional NITAGs than other country groups

Decision making

- NITAGs provide independent contribution to decision-making
- Non-Gavi-eligible LMICs are less likely to have functional NITAGs: likely hinders ability to efficiently make evidence-based decisions such as new vaccine introductions.
- Other elements, such as regulatory requirements and procurement and distribution practices, may also constrain decision making.
- Tailored support can facilitate country-owned adaptation of international recommendations and strong advocacy cases

Proportion of countries with functional NITAGs by country group in 2022



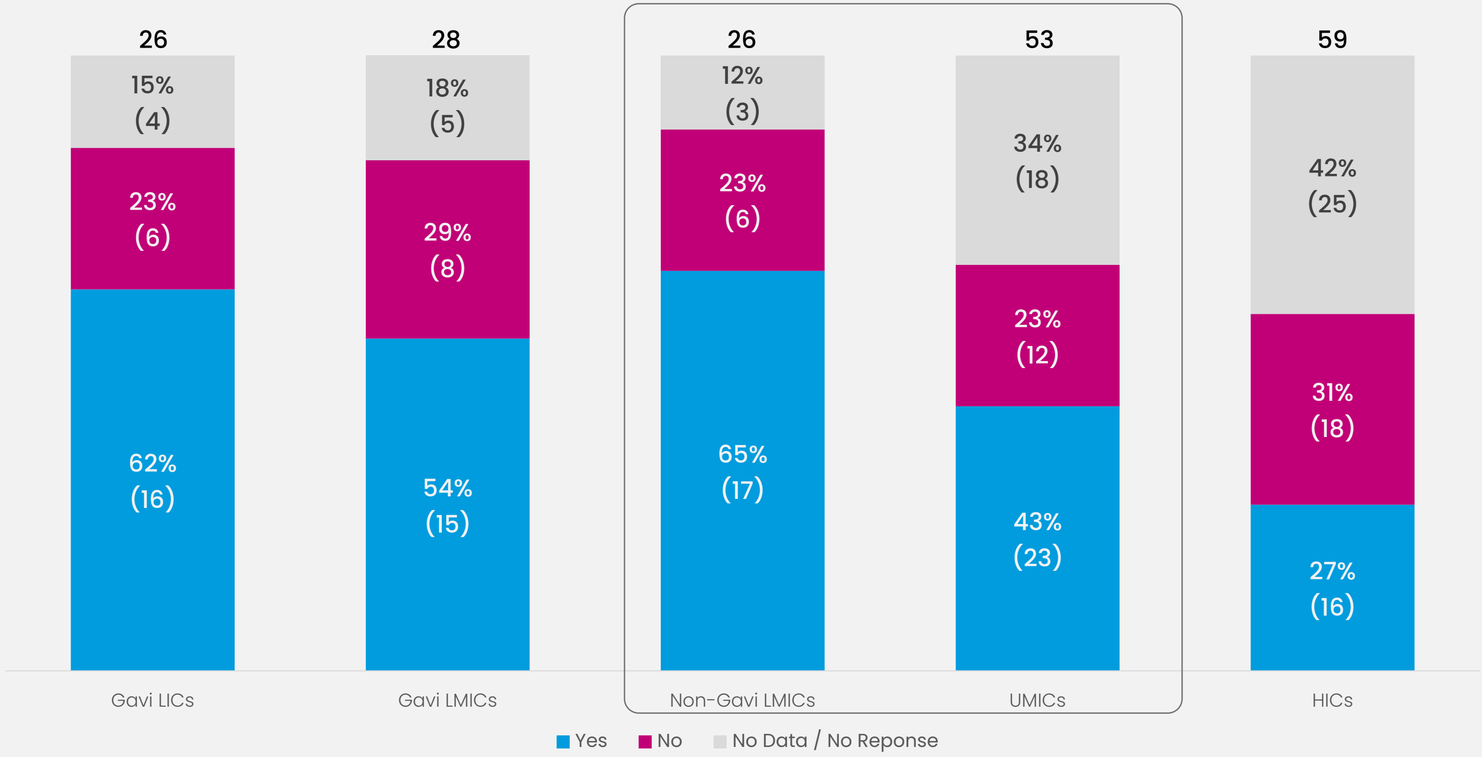
Source: WHO/UNICEF Joint Reporting Form on Immunization (JRF)

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

Demand & delivery

- High uptake requires sustained confidence in vaccines and their benefits
- Decision makers seeking to address hesitancy often use socio-behavioural strategies

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



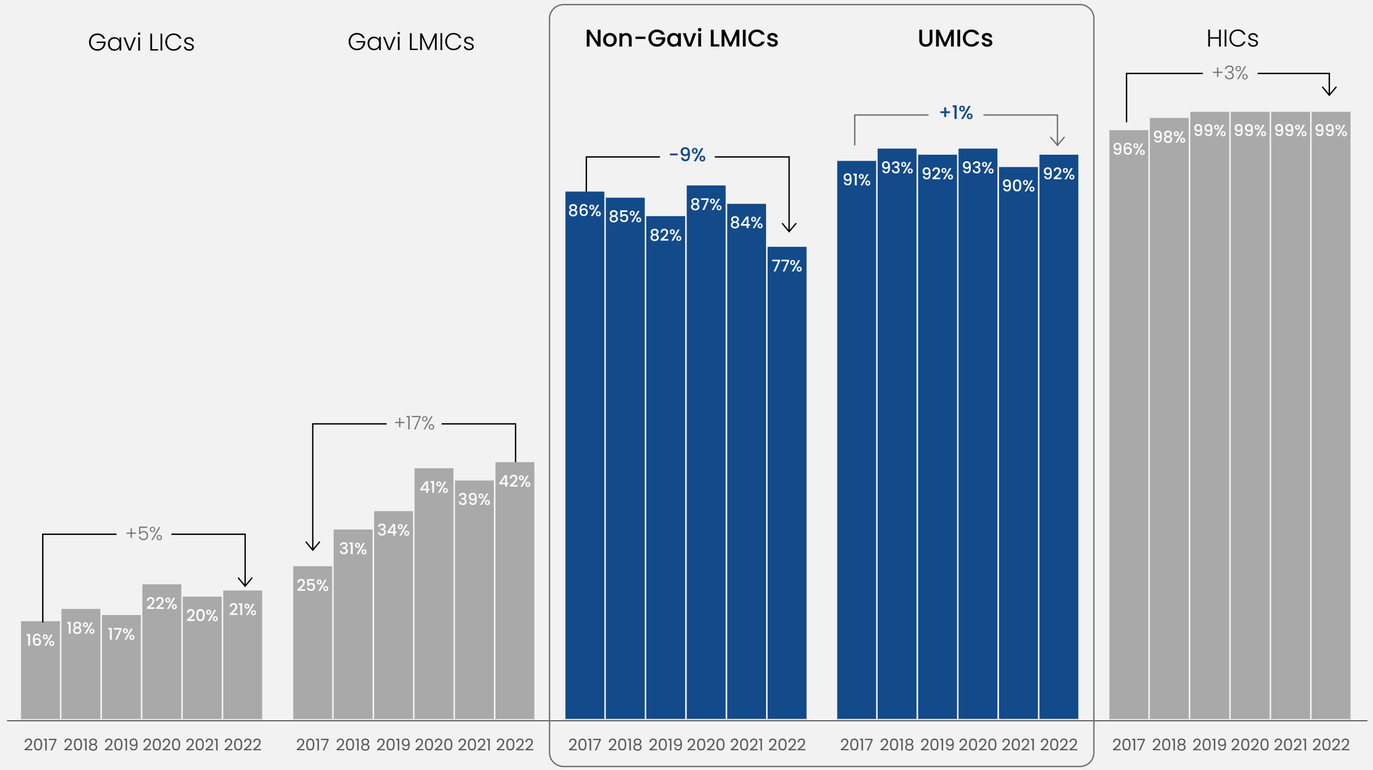
Source: WHO/UNICEF Joint Reporting Form on Immunization

Data shows that non-Gavi-eligible LMICs are relying more on aid for vaccines used in routine schedules (excluding COVID-19) than before

Sustainable financing

- The decline in financial sustainability requires a country-by-country analysis to understand the reasons
- The decline could be the result of government de-prioritization of immunization; overall reduction in health budgets; temporary external support to introduce new vaccine; …
- It is important to monitor budgets for health as they signal opportunities for increased vaccine budgeting

Percent total expenditure on vaccines used in routine immunization (excluding COVID-19 vaccines) paid with domestic resources from 2017–2022



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

Global supply can generally meet demand in quantity, but the price offered to MICs ranges considerably

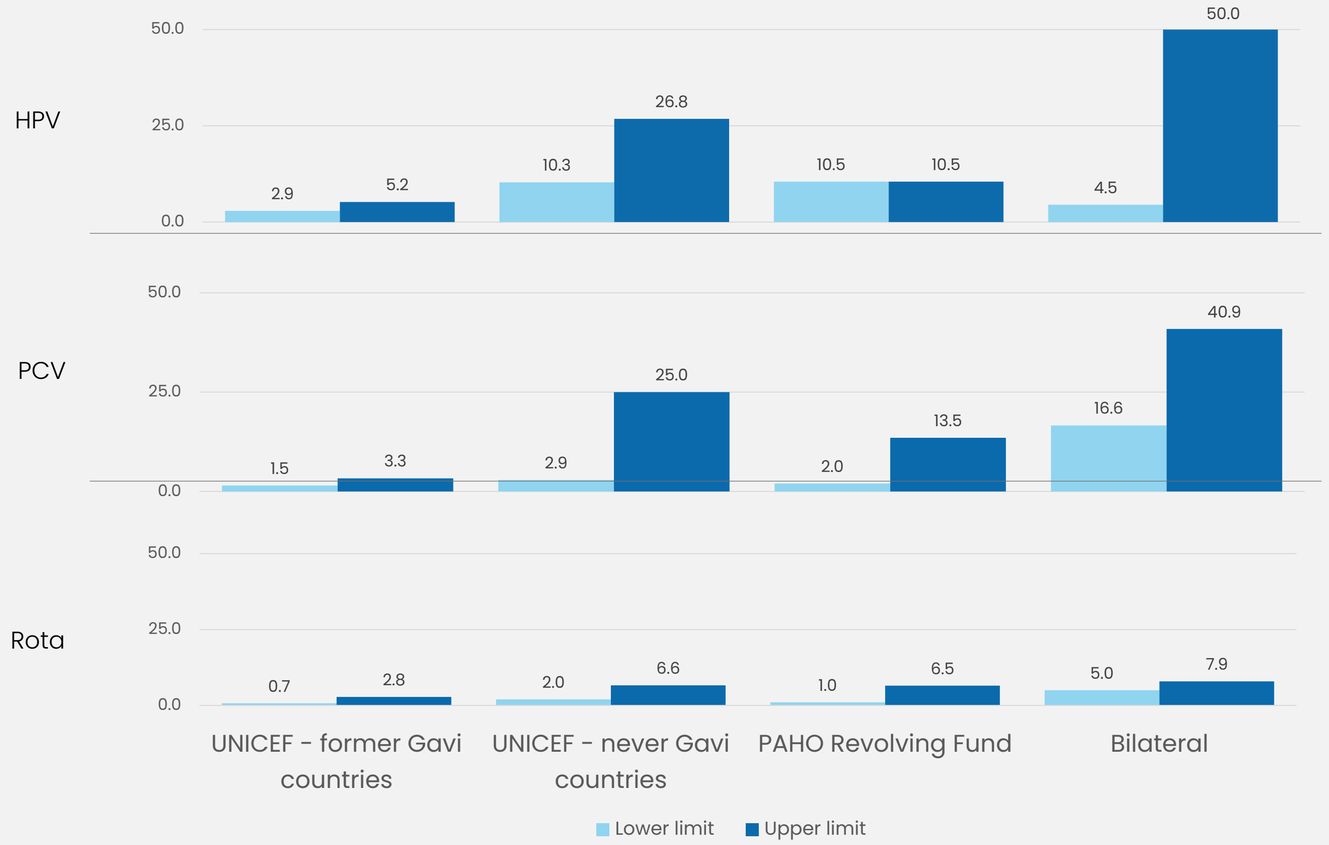
Affordable supply

Prices offered to MICs ranges considerably, e.g.,

- 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.
- Bilaterally negotiated price of PCV for MICs can be 12 times higher (US$41) than the upper-limit price offered for former-Gavi-eligible countries (US$3.30).

Increasing coverage of HPV, PCV, and rotavirus vaccines may require vaccine budgets to increase by 50–100% with current product choices and prices.

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



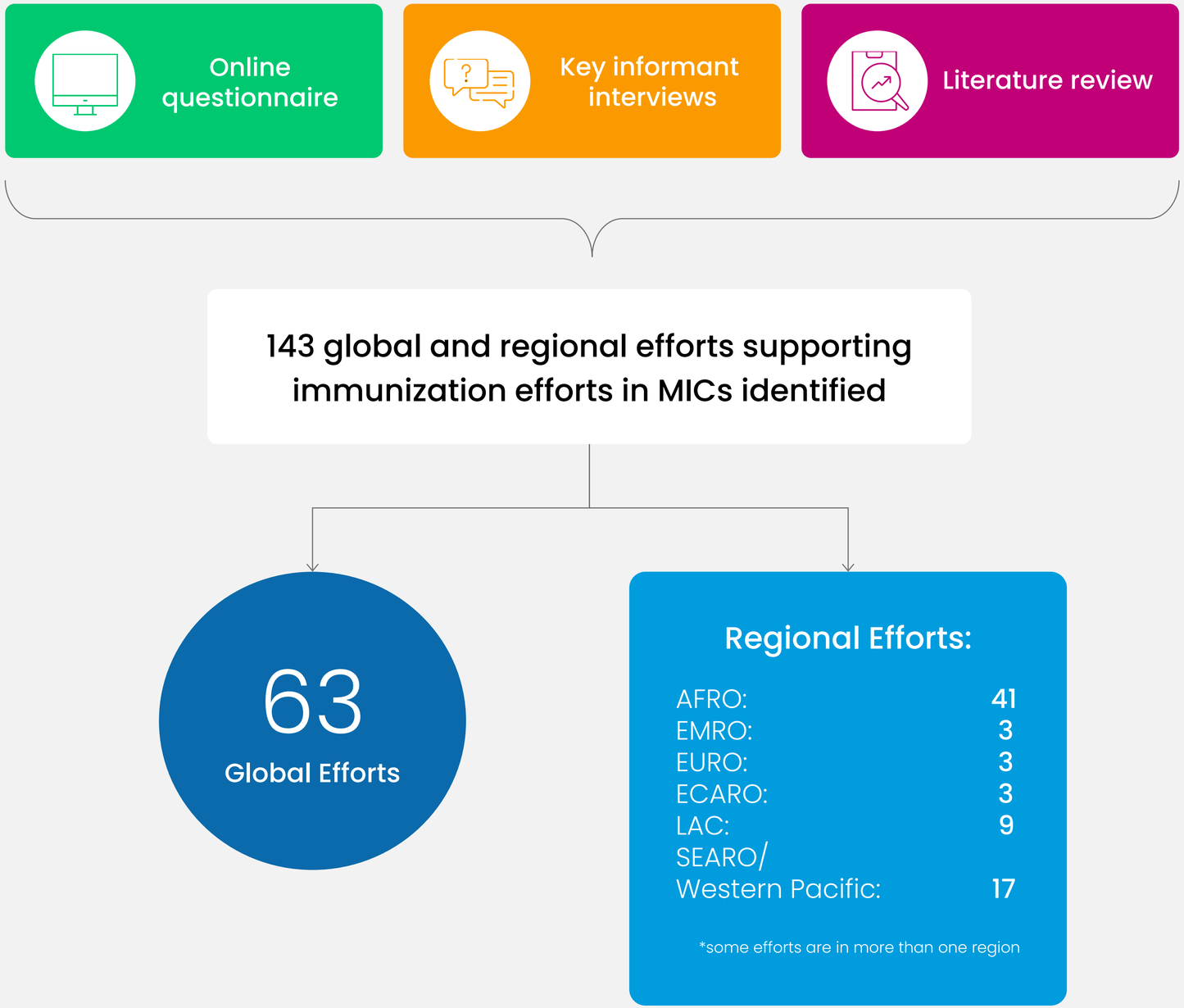
Source: Gavi DPP, UNICEF, PAHO Revolving Fund, WHO MI4A (incomplete data set, self reported by countrie0s)

External Support for Middle-Income Countries

Summary

A new landscaping assessment describes immunization support efforts in MICs 2015–2023.

There is more regional and global support since the MICs Task Force began in 2015.



Highlights of External Support Initiatives

Gavi MICs approach

A significant development over 2015–2023 was the launch of Gavi's MICs Approach.

Includes US$300 million to support vaccine introduction in MICs for the 2021–2025 period.

Aims to:

1. Prevent backsliding in vaccine coverage, and
2. Drive the sustainable introduction of PCV, rotavirus, and HPV vaccines.

Gavi's 6.0 strategy (2026–2030) may continue support for former and never-Gavi MICs.

Other initiatives focused on all 4 bottlenecks

Decision making

Actions:
Convene experts, engage stakeholders, foster peer-to-peer learning

Examples:
- R4D LINKED Immunization Action Network
- UNICEF Vaccine Procurement Practitioners Network

Demand and delivery

Actions:
Generate demand, integrate programmes, deploy surveillance, research, data assessments

Examples:
- JSI/Sabin Behavioral Science Immunization Network Project
- Rockefeller Foundation Global Vaccine Initiative

Sustainable financing

Actions:
Mobilize resources, conduct advocacy, launch fundraising campaigns

Examples:
- ThinkWell Sustainable Immunization Financing
- World Bank Pandemic Fund

Affordable supply

Activities:
Support procurement, supply chain management, price transparency

Examples:
- UNICEF MICs Financing Facility
- WHO Market Information for Access to Vaccines (MI4A)

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.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