Global Vaccine Market Report 2025

Slide-based summary
December 2025

Insights across four topics

Volume and financial value

2024 volume of 7.2 billion doses and financial value of US$66.5 billion

- **Total market volumes of 7.2 billion doses** - 7% higher than in 2023
- **Total financial value of US$6.5 billion** - 13% lower than in 2023, with volumes of COVID-19 vaccines falling by 40%
- **HPV and shingles maintained a high compound annual growth rate** (CAGR) in volume (14% and 11% respectively) between 2019 and 2024
- **COVID-19, HPV and PCV** were the highest in financial value
- **A total market value growth rate of >9% between 2019 and 2024 has outpaced the volume rate of 3.5%,** driven by a higher-priced portfolio mix attributed to RSV, COVID-19, MenB

Manufacturing and supply

Market remains highly concentrated

- The **top 10 manufacturers by volume** account for **78% of vaccine doses** and the **top 10 by financial value** account for **84% of the total**
- In 2024, **114 additional manufacturers accounted for the remaining global volumes**
- **About two thirds of doses were procured from manufacturers affiliated with the Developing Country Vaccine Manufacturers Network** (DCVMN) in 2024

Vaccine-specific supply dynamics and supply security

Regions have diverse reliance of vaccine supply

- **Most of the top 20 markets have** a high number of manufacturers per vaccine and **high market-share concentration in two manufacturers**
- **Countries in the WHO African and Eastern Mediterranean regions procure almost entirely** (>95%) **from manufacturers outside of their respective regions**
- **The WHO South-East Asia and Western Pacific regions look highly self-reliant**:
  - 89% of vaccine volumes in the South-East Asia region are supplied though manufacturers in the same region
  - 74% of vaccine volumes in the Western Pacific region are supplied though manufacturers in the same region

Procurement and pricing

Procurement and pricing patterns remain stable

- **Self-procuring middle-income countries (MICs) and UNICEF pooled procurement accounted for large share of global volumes,** representing ~44% and 37%, respectively
- **Vaccine prices within individual markets tend to be tiered** across countries based on their income group
- **HPV, PCV and Rota markets exhibit wide price ranges** due to the several different products in the market

Insights: GVMR 2025

Volume and financial value

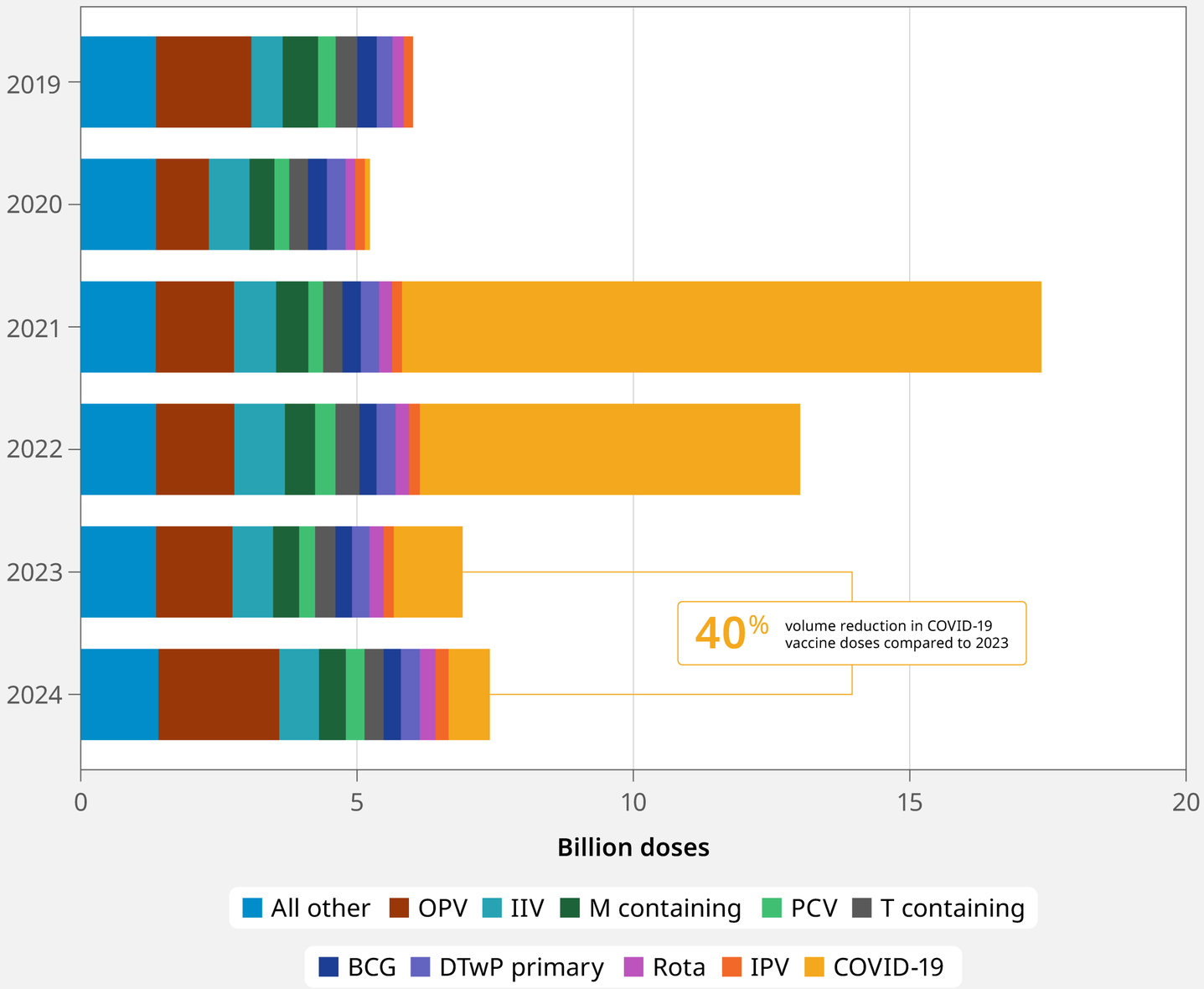
The financial value is calculated as volume (number of doses) x price per dose (US$).
The financial value can be different from revenues reported by individual companies.

Volume and financial value

Total market volumes of 7.2 billion doses, 7% higher than in 2023

- Market volume higher by 0.5 billion doses from 2023, primarily due to **high use of oral polio vaccine (OPV) in 2024**
- **OPV, seasonal influenza (IIV) and COVID-19** together contribute **~50% of volume** in 2024

Vaccine volume (doses) from 2019-2024, showing the top 10 vaccines by volume



World Health Organization | MI⁴A MARKET INFORMATION FOR ACCESS TO VACCINES

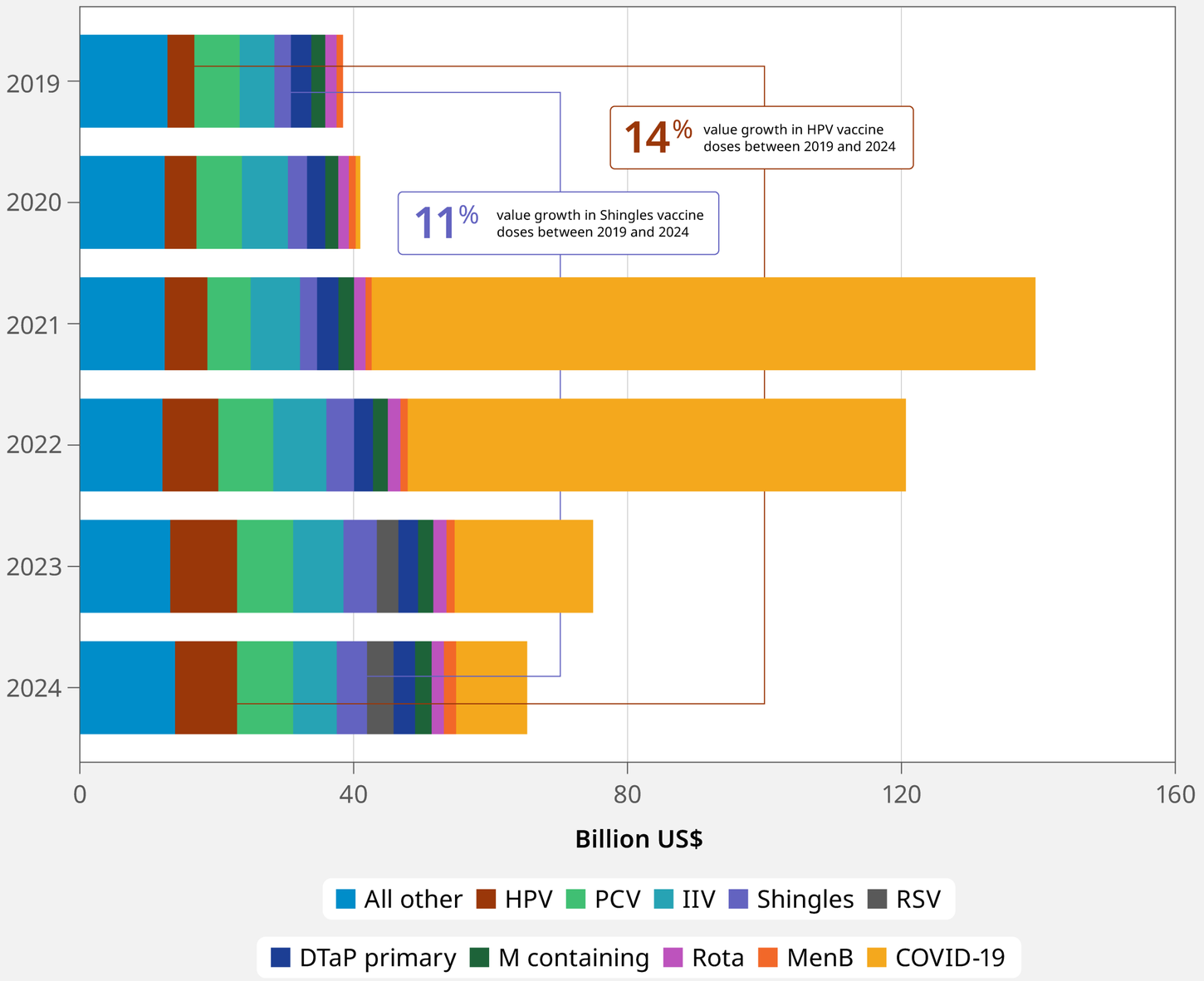
Volume and financial value

Total financial value of US$66 billion was 13% lower than in 2023

- **COVID-19, HPV and PCV** were the highest in financial value
- **COVID-19 accounted for 16% of total value** at US$11 billion
- **HPV and shingles have grown the most** in financial value since 2019*
- **All top 10 vaccines had positive growth rates from 2019 to 2024**, mainly linked to expanding volumes
- **A total financial value growth rate of >9% between 2019 and 2024 has outpaced the volume rate of 3.5%,** driven by a higher-priced portfolio mix attributed to RSV, COVID-19, MenB

*Excluding RSV and COVID-19 that were not available in 2019

Vaccine financial value (US$) from 2019-2024, showing the top 10 vaccines by value



Most vaccines did not experience notable variation, with the exception of COVID-19 and OPV

COVID-19

Value decrease driven by volume decrease:

- 64% in HICs
- 40% in UMICs
- 1% in LMICs/LICs

PPV23

Switches to PCV in US, EUR and WPR HICs

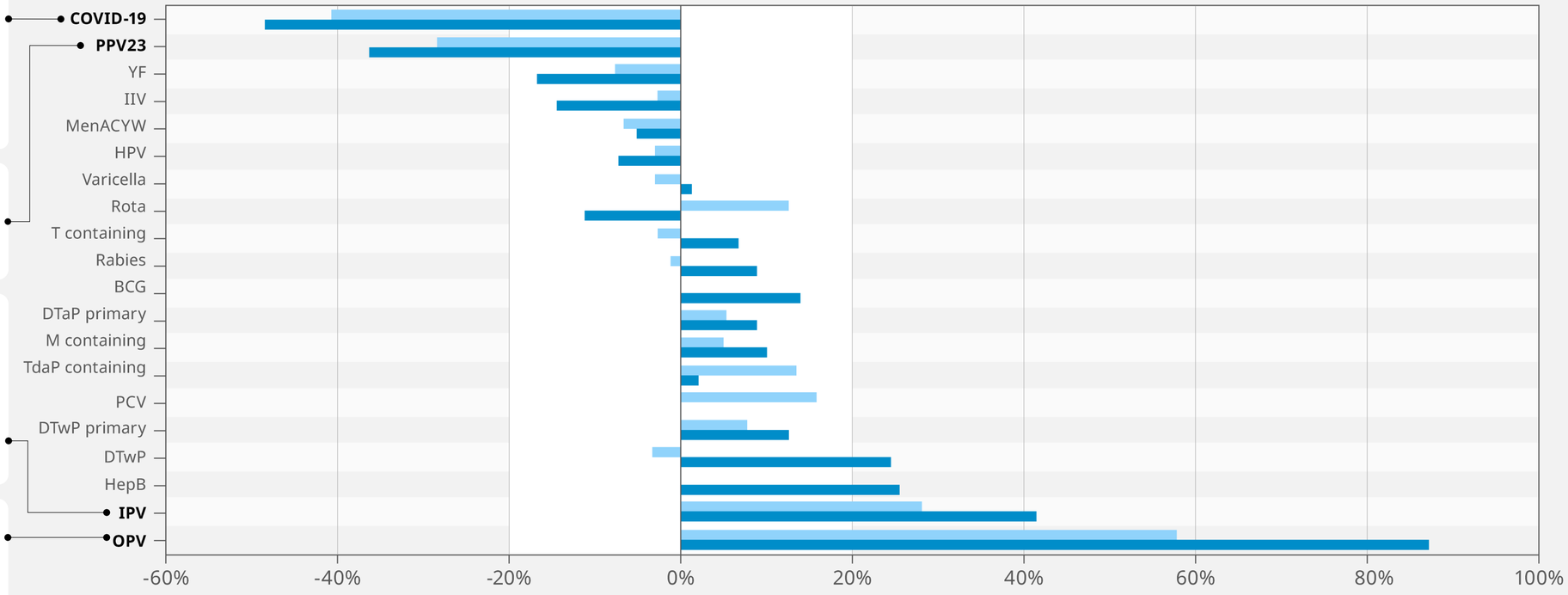
IPV

- 2-dose schedule (eradication)
- 50% China increase
- Larger presentations

OPV

nOPV drives value increase with price ~30% higher than bOPV

Percentage change in the top 20 vaccine markets by volume or value in 2024, showing change between 2023 and 2024



A year-over-year change of + / - 20% is considered within the normal range of variability for most vaccines

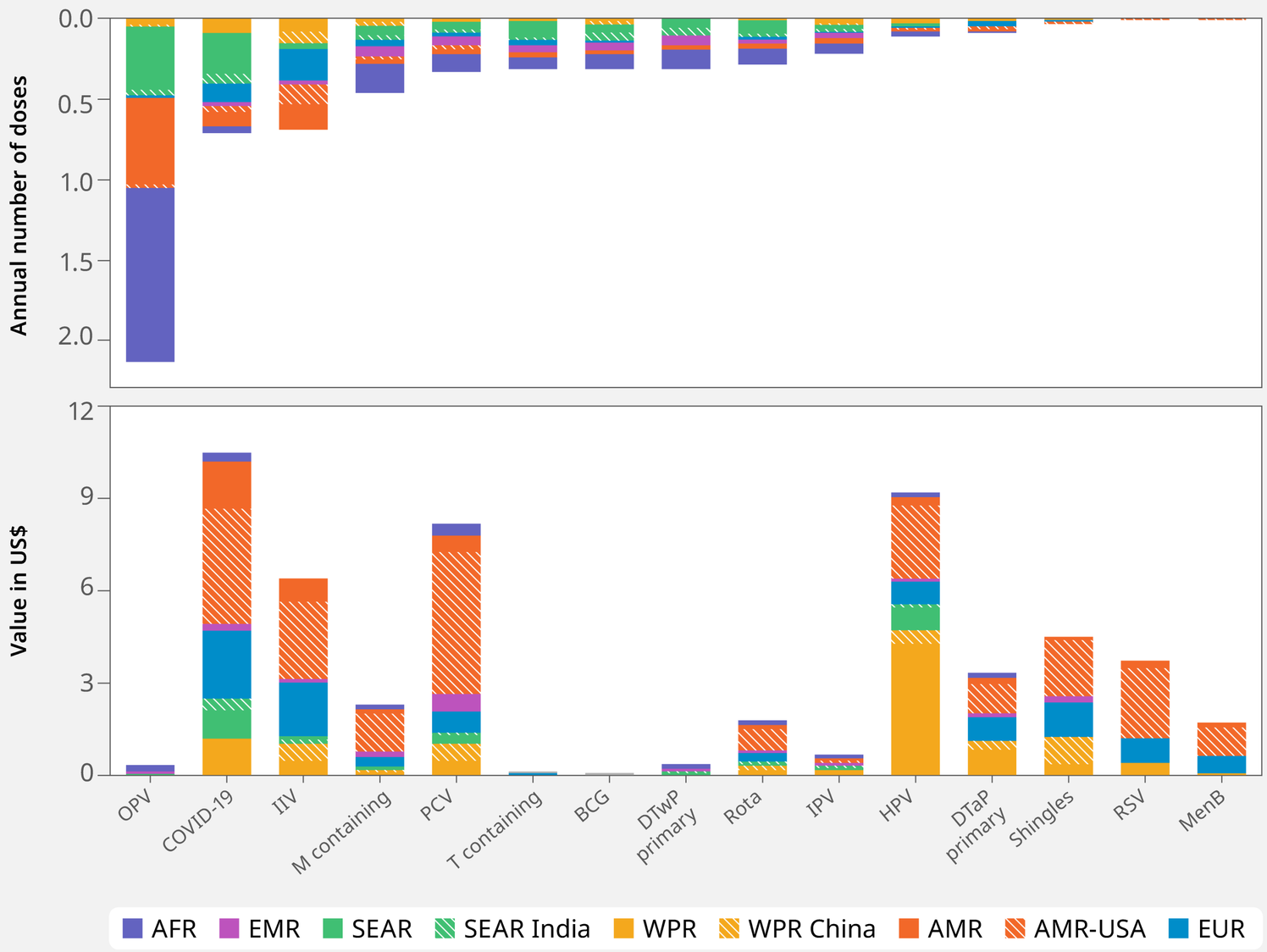
Value in US$ | Annual Number of Doses

Little change in volumes and financial value compared to 2023 except for the COVID-19 decline

- More than half of IIV volumes are in EUR and AMR
- AMR and the US account for ~50% of value for several vaccines (COVID-19, IIV, PCV, M-containing, Rota, Shingles, RSV and MenB)
- In 2024 China accounted for half the financial value of the HPV market, all from the private sector

Seasonal influenza vaccine was renamed in 2024 to separate different types of influenza vaccines. Inactivated influenza vaccine = IIV. M-containing = measles-containing vaccines which includes Measles, MR, MMR, MMRV

Vaccine volume (doses) and financial value (US$) during 2024 by vaccine and region, showing top 20 vaccines by use across countries, sorted by volume



Insights: GVMR 2025

Manufacturing and supply

Manufacturing and supply

More than 78% of total volume was concentrated in the top 10 manufacturers in 2024

- Top manufacturers largely the same as in 2023;
  - Pfizer’s share of volume decreased from 11% in 2023 to 6% in 2024.
  - Moderna, the remaining vaccine producer with only one product (COVID-19) in the portfolio , is no longer top 10.
- SII is the dominant manufacturer by volume, accounting for 2-fold greater volume than the next largest manufacturer
- The top 5 manufacturers affiliated with DCVMN provided 55% of all volume

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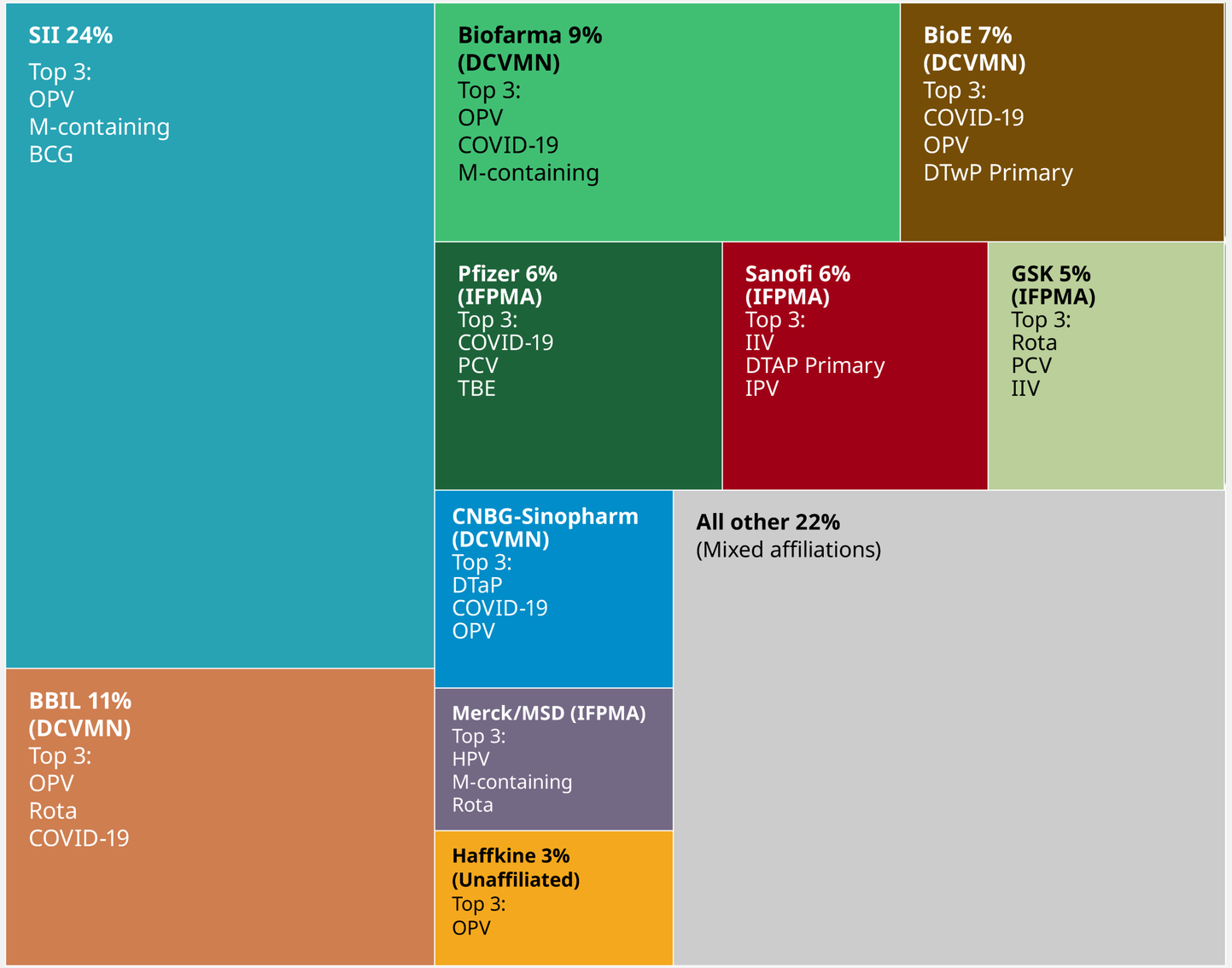
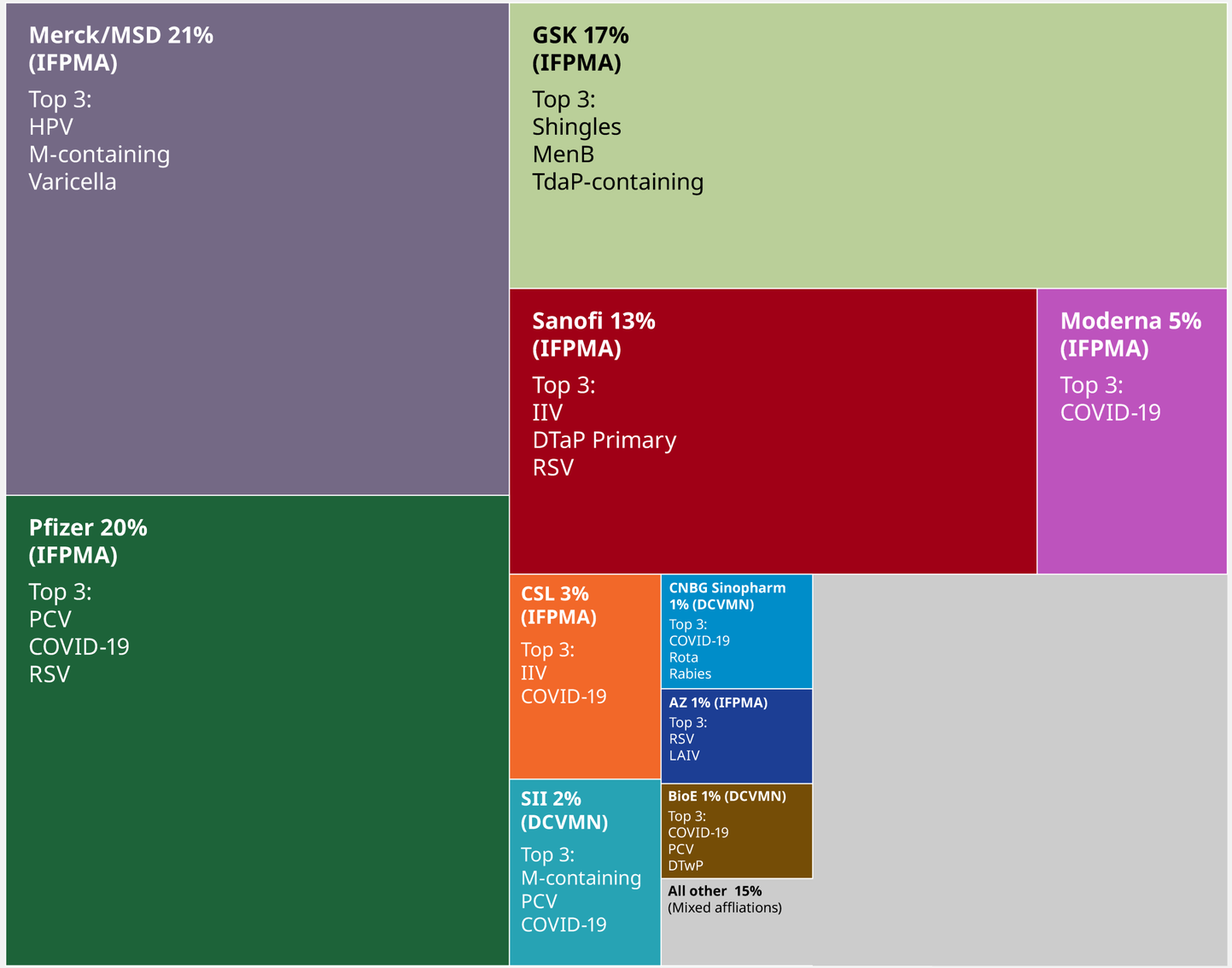
Share of market of **volume** by manufacturer in 2024



More than 84% of total financial value was concentrated in the top 10 manufacturers in 2024

- Top manufacturers largely the same as in 2023;
  - declining COVID-19 vaccine use caused Merck to swap positions with Pfizer;
  - Moderna's share about half of 2023
- Manufacturers affiliated with IFPMA were responsible for 80% of total financial value, about same as in 2023

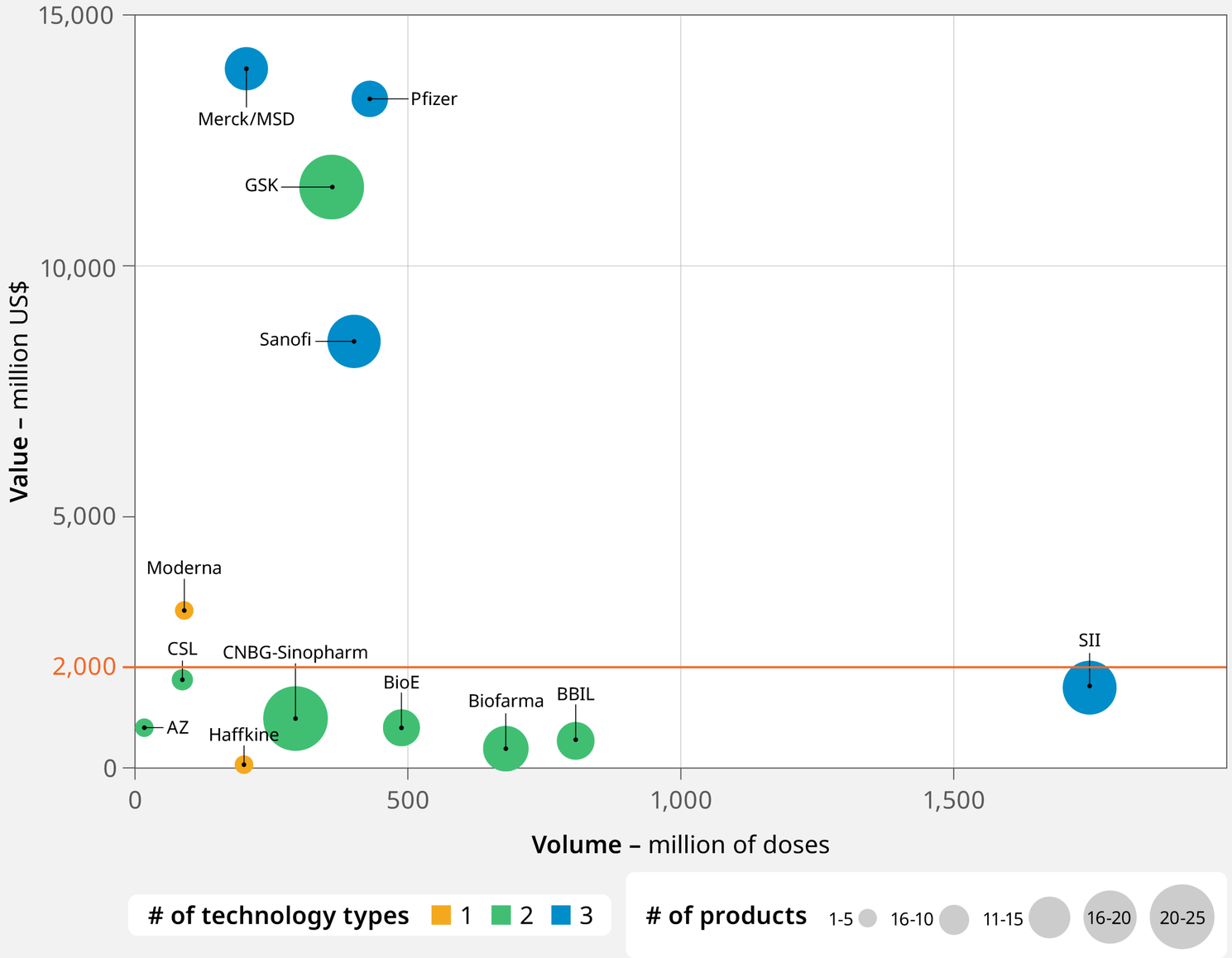
Share of market **by financial value** by manufacturer in 2024



Global vaccine market value split between a few large manufacturers with broad portfolios covering multiple antigens and multiple technology types

- **Pfizer and SII outliers** from financial value and volume perspectives
- **Below the 2 billion US$ line** (mainly) manufacturers HQ'd in India and China, **~60% of total volume and ~10% of total financial value**
- **Above the 2 billion US$ line** four IFPMA-affiliates, **~20% of global volumes and ~70% of total financial value**

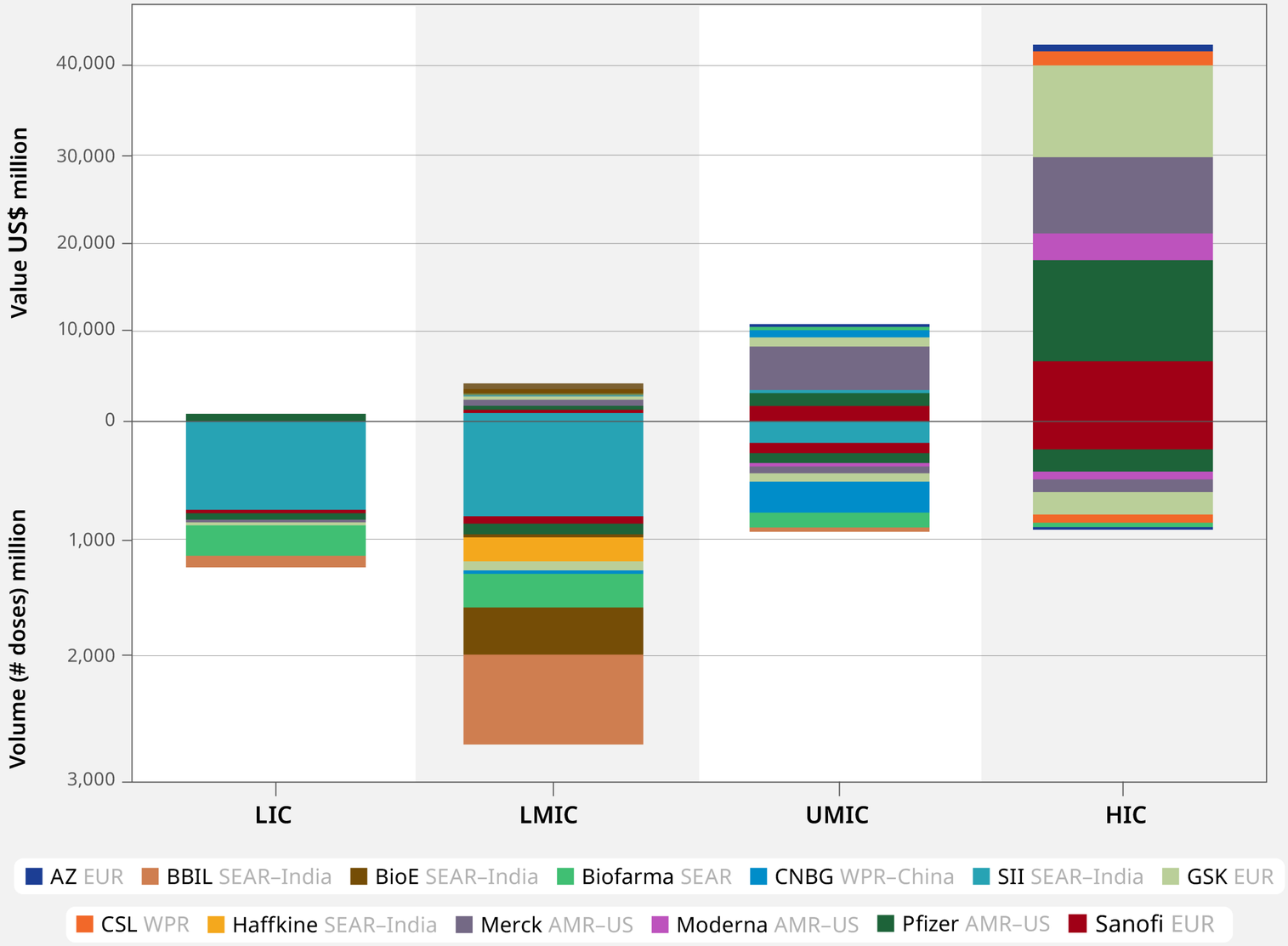
Top 10 manufacturers by **volume or financial value**, portfolio size and technology types uses in 2024



Rapid increase of captured financial value by income group segment

- Financial value increases rapidly by income group…
- … and the highest value manufacturers each have relatively high value in all income group segments
- The largest volume manufacturers to HIC are IFPMA companies HQ’ed in AMR or EUR (~75%), whereas in LMIC and LIC they are DCVMN companies from SEAR (~90%)
- SII is the predominant supplier by financial value and volume in LMIC and LIC

Top 10 manufacturers by volume (# doses in million) or financial value (US$ in million) distributed to each income group in 2024



Insights: GVMR 2025

Vaccine specific supply dynamics and supply security

Vaccine specific supply dynamics and supply security

High number of manufacturers per vaccine and high market-share concentration in two manufacturers in most of the top 20 markets

- As in 2023, 19 of 20 markets had 5 or more global manufacturers
- In only 4 of the 20 markets the top 2 manufacturers had supply concentration less than 50%
- The COVID-19 market is diversified, but some technologies remain concentrated amongst few manufacturers (e.g. for mRNA vaccines, 95% of volume was supplied from 2 manufacturers in 2024)

* Using same metrics as IA 2030 SP6.1 indicator
https://scorecard.immunizationagenda2030.org/sp6.1

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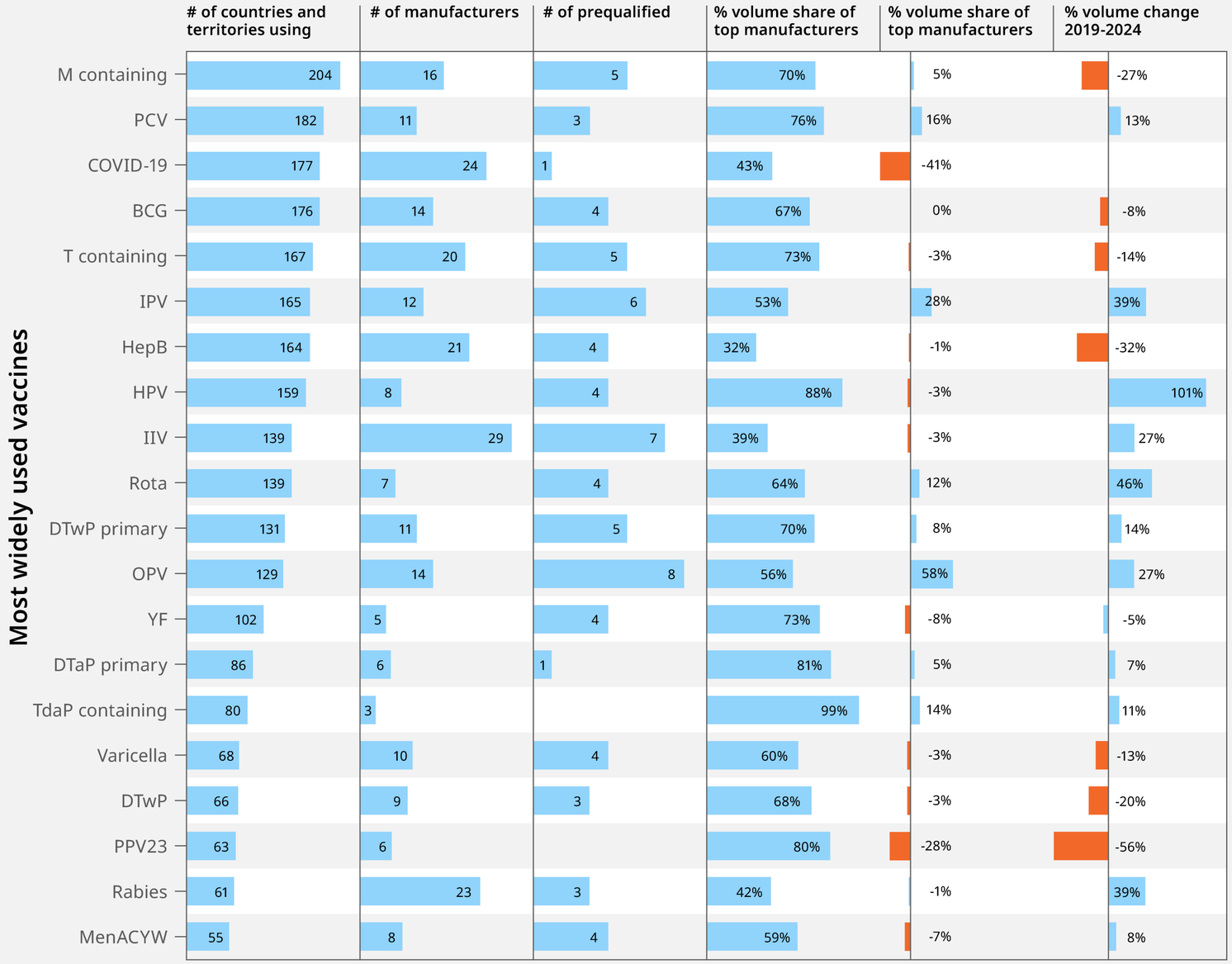
Market characteristics for the top 20 most frequently procured vaccines



Vaccine specific supply dynamics and supply security

Vaccine procurement is highly diverse across different regions

<1% Companies HQ'd in the **AFR region** produce less than 1% of the vaccines AFR procures; >50% imported from companies HQ'd in India

<5% Companies HQ'd in the **EMR region** produce less than 5% of the vaccines EMR procures; >65% imported from companies HQ'd in India

89% Companies HQ'd in the **the SEAR region** manufactured ~89% of the vaccines SEAR procured, with >80% produced by companies HQ'd in India; concentrated market

74% Companies HQ'd in the **WPR region** manufactured ~74% of the vaccines WPR procured, with >60% produced in China; fragmented market with big variety of different vaccines

38% Companies HQ'd in the **AMR region** manufactured ~38% of the vaccines AMR procured, with more than 70% of those produced by companies in the US; in the **EUR region** the percentage of vaccines manufactured by companies HQ'd in EUR is >50%

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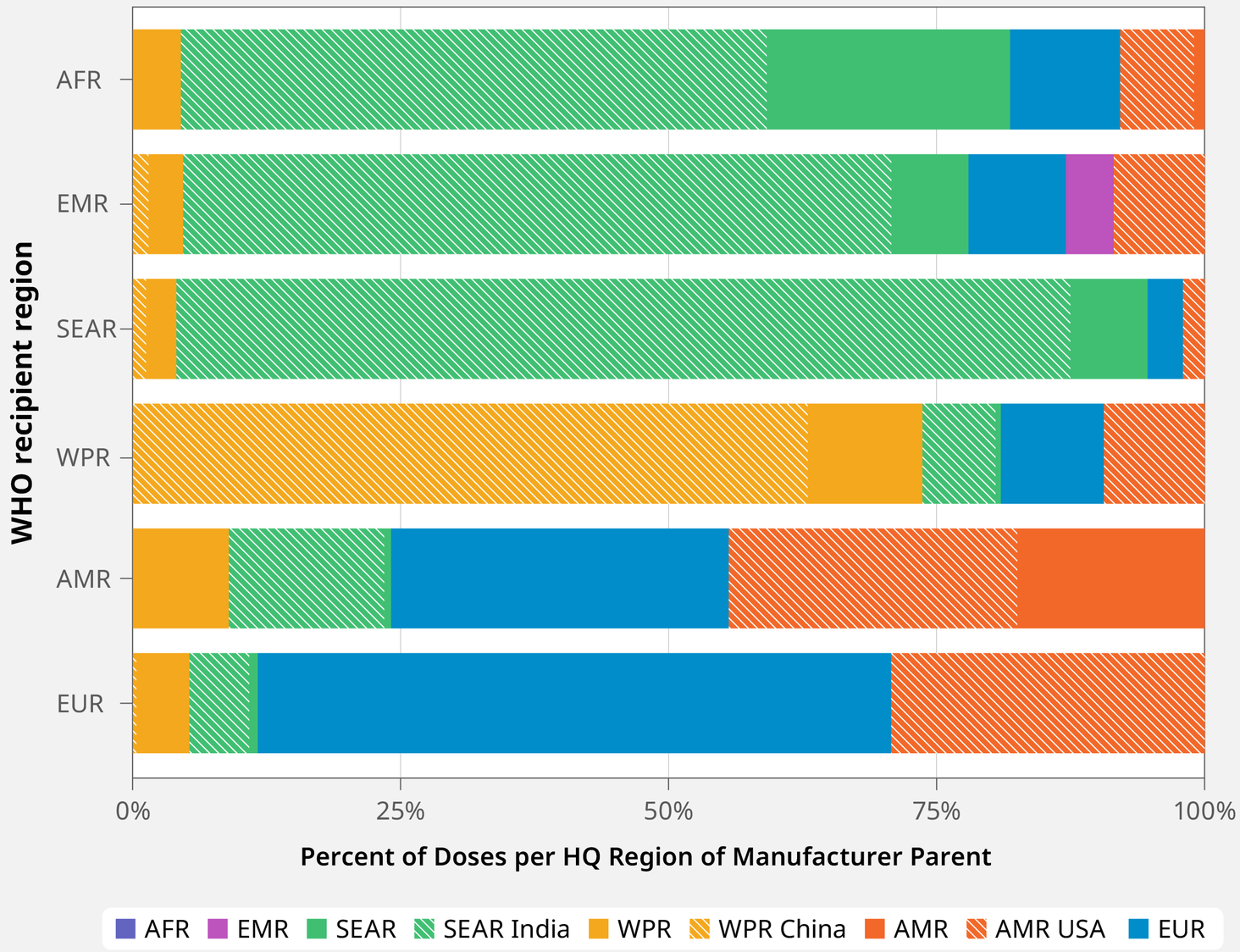
Global distribution of vaccine volumes (%) based on WHO region where manufacturer is headquartered (X-axis) and WHO region where doses are procured (Y-axis), 2024



Insights: GVMR 2025

Procurement and pricing

Instructions for “Procurement and pricing” section

Important notes

- All analysis is performed solely using prices reported from countries through eJRF and the MI4A initiative
- All analysis blends presentation sizes (e.g., 10 dose vials vs 1 dose vials) that can significantly influence costs to manufacturers and pricing
- For many vaccine types, the analysis also blends vaccines characteristics (PCV10 vs PCV20) and manufactures
- The UNICEF (Gavi) procurement mechanism includes all procurement in Gavi-eligible countries, regardless of whether the vaccine is Gavi funded

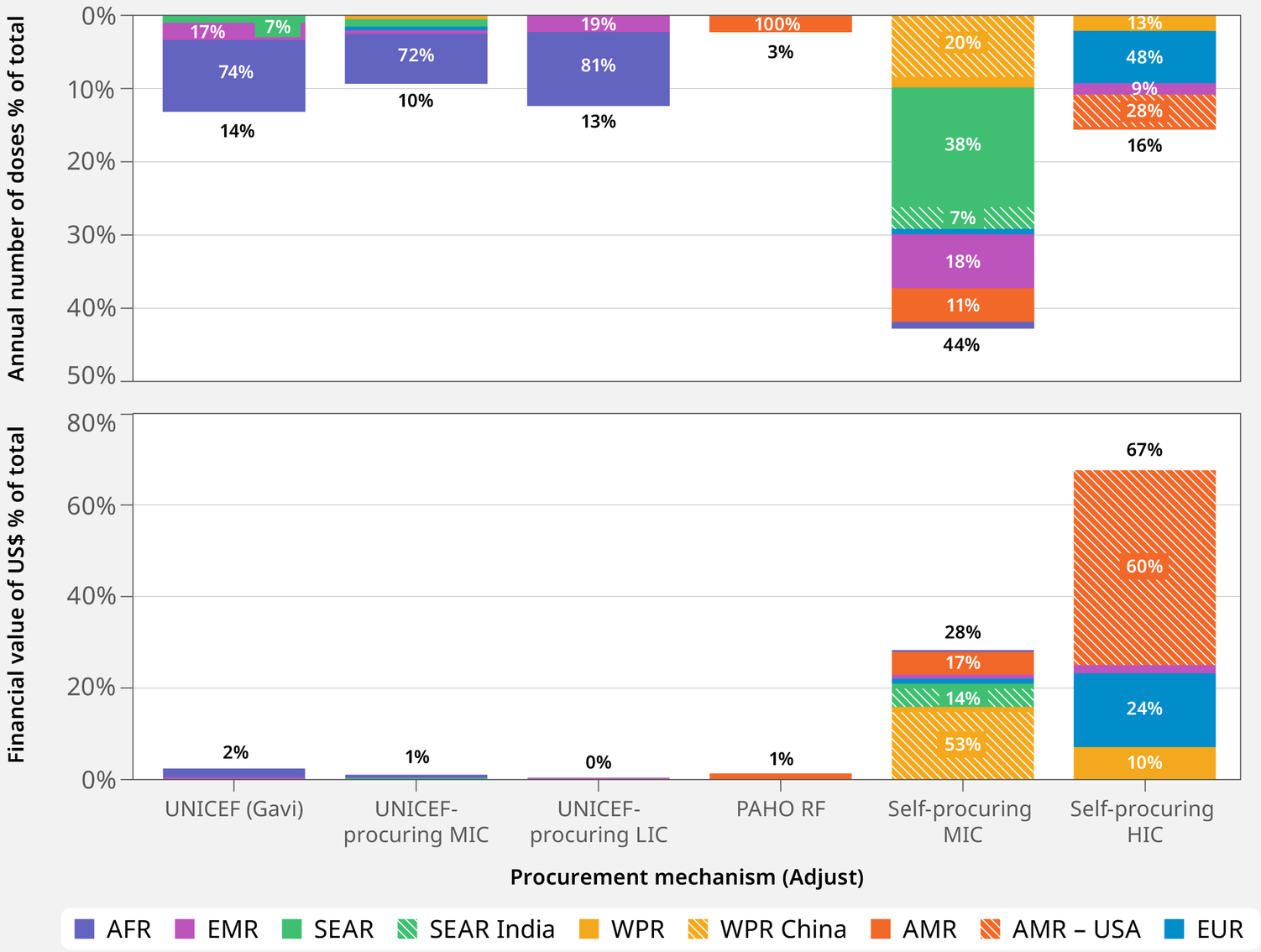
Country grouping

- **Procurement mechanism (UNICEF, PAHO, RF, self-procuring):** Refers to the mechanism by which the vaccine was purchased
- **Country classification by World Bank (LIC/LMIC/UMIC/HIC):** Country categorization into income levels is conducted according to gross national income (GNI) per capita in US dollars.
- **The categories that appear in the vaccine pricing deep-dives** are defined as follows:
  - UNICEF (Gavi): (volume and financial value of) Gavi-eligible vaccines purchased through UNICEF for Gavi-eligible countries
  - UNICEF-procuring LIC / MIC: (Volume and financial value of) vaccines purchased through UNICEF by LICs / MICs
  - PAHO RF: (Volume and financial value of) vaccines purchased by countries through the PAHO RF
  - Self-procuring MIC / HIC: (Volume and financial value of) vaccines purchased by countries through bilateral procurement.
- **Within the LMIC and UMIC categories, Gavi eligibility status (never, former, current)** is **defined** according to country’s eligibility to receive Gavi support for vaccines in 2024 or prior.

Self-procuring MICs led volumes in 2024, followed by UNICEF SD

- Volume distribution was similar to 2023 with the exception of UNICEF (Gavi) which included an additional ~541 million doses of nOPV2 in 2024, which adds ~US$111 million of value
- MIC volume was dominated by China (23% of self-procuring volume) and India (45% of self-procuring volume) who together accounted for about 25% of the global 2024 volume
- UNICEF procurement of some vaccines (OCV, DTwP primary, Ebola, M-containing, OPV, typhoid, and YF) was ≥50% of global volume for each vaccine
- Self-procuring HIC represented 67% of value, down from 72% in 2023 due to less COVID-19 procurement in 2024. Greater value in HIC than in other income groups was driven by higher prices and procurement of vaccines for older adults

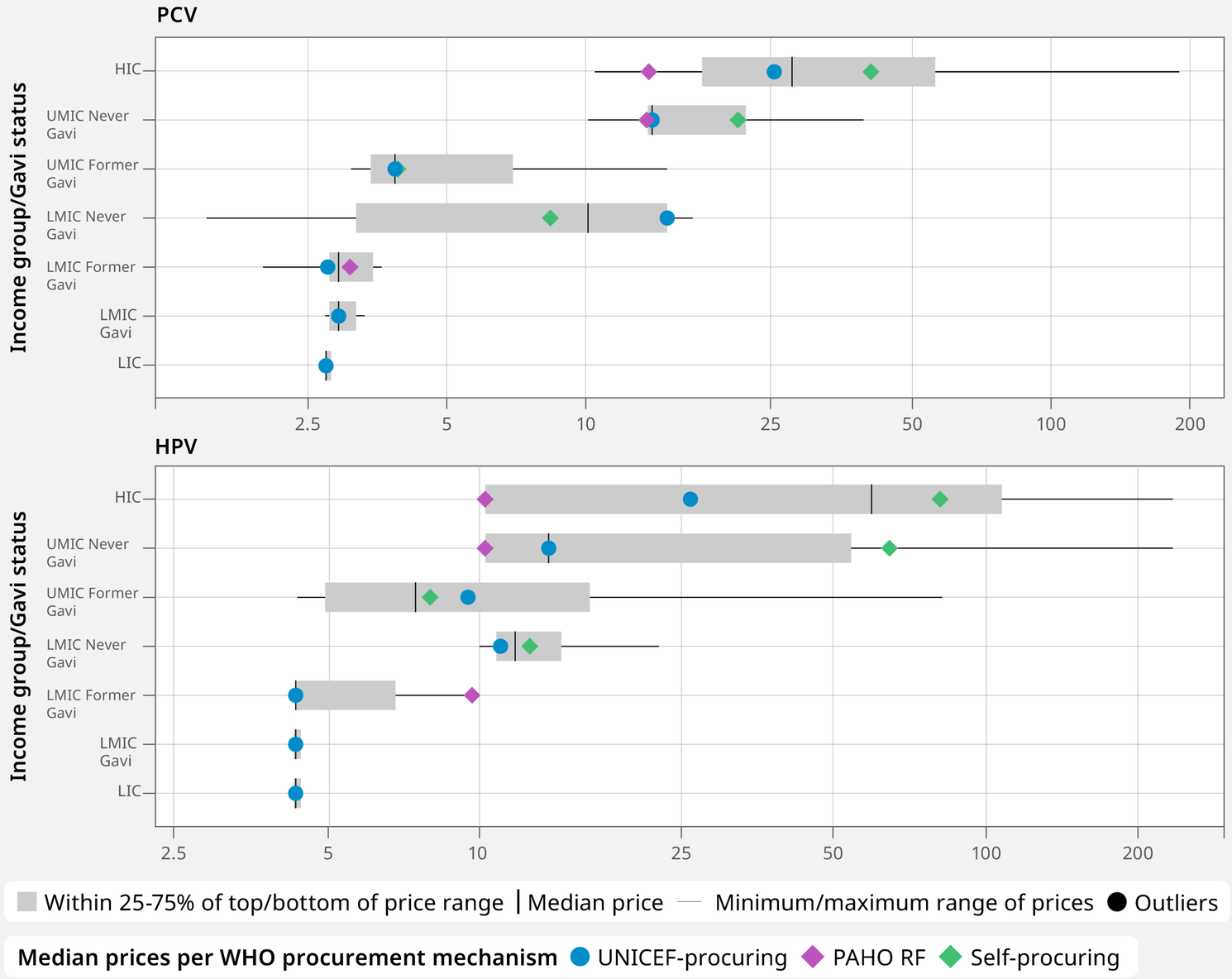
Vaccine volumes (doses) and value (US$) during 2024 by procurement mechanism



PCV and HPV

- **Wide price ranges for both vaccines are consistent with variability in product characteristics** (presentation size – 1 vs 4 dose, and presentation form – vial vs prefilled syringe) within each category
- Higher price and wider price variability of HPV vs PCV price in HIC and UMIC reflects the existing monopoly for HPV in higher-income countries, whereas competition amongst three PCV suppliers lessens the price variability
- All former Gavi countries were eligible for “Gavi” pricing for PCV, through the AMC, while a subset of former Gavi countries were eligible for “Gavi” pricing for HPV

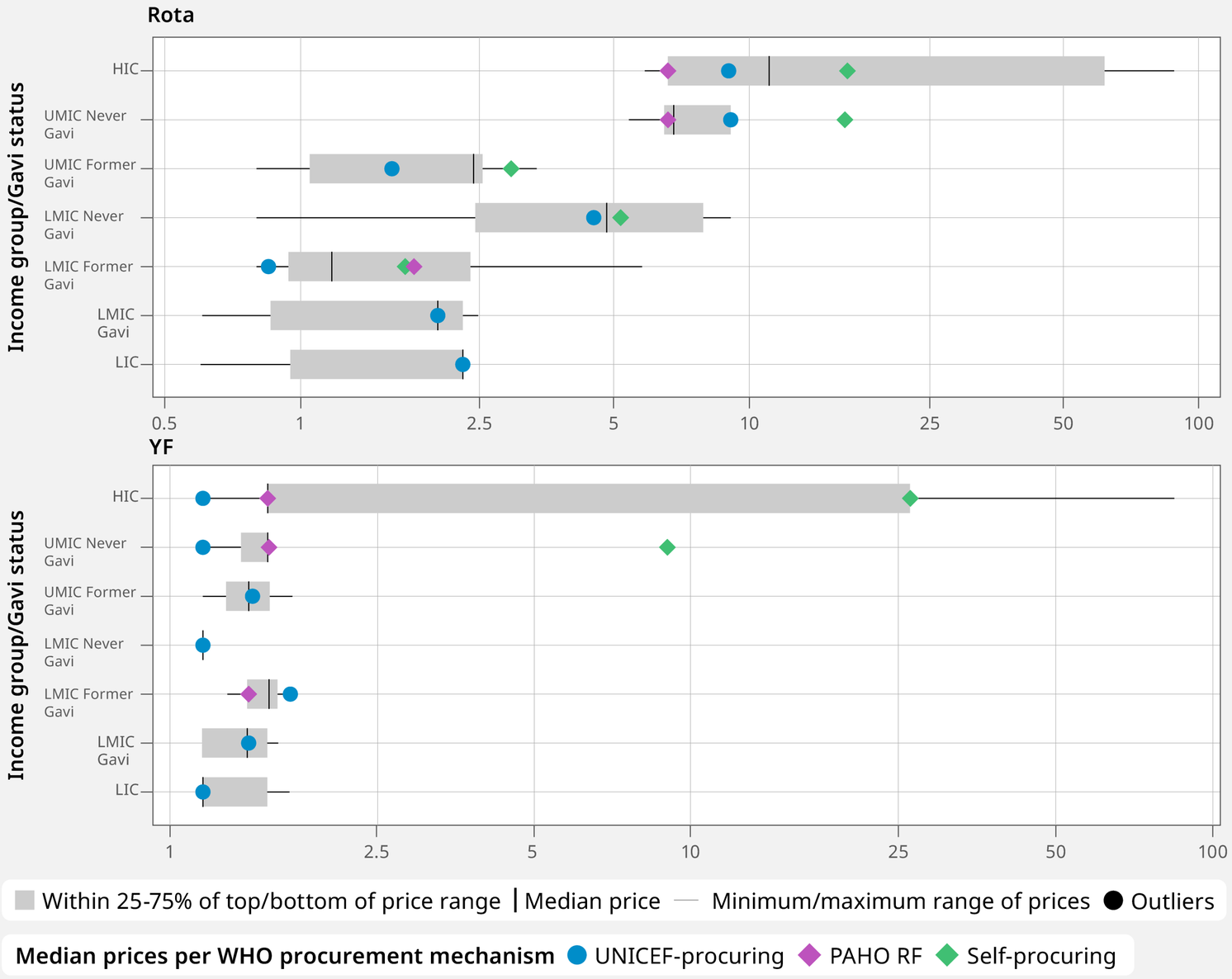
Vaccine prices by procurement mechanism (US$ per dose) by World Bank income group and Gavi status, 2024



Rota and Yellow Fever

- **Rota - wide price ranges** reflected variability in product characteristics, and increased availability of lower-priced vaccine in MIC (down to US$0.60 per dose)
- **YF patterns**
  - Minor variability in lower income categories reflecting the relative lack of differences among vaccines, competition between 3 suppliers, and procurement in routine immunization in many countries
  - Large variability in HIC prices reflective of relatively low volumes, non-routine targeted at risk groups, and the monopolistic market in higher-income countries who purchase from a single supplier

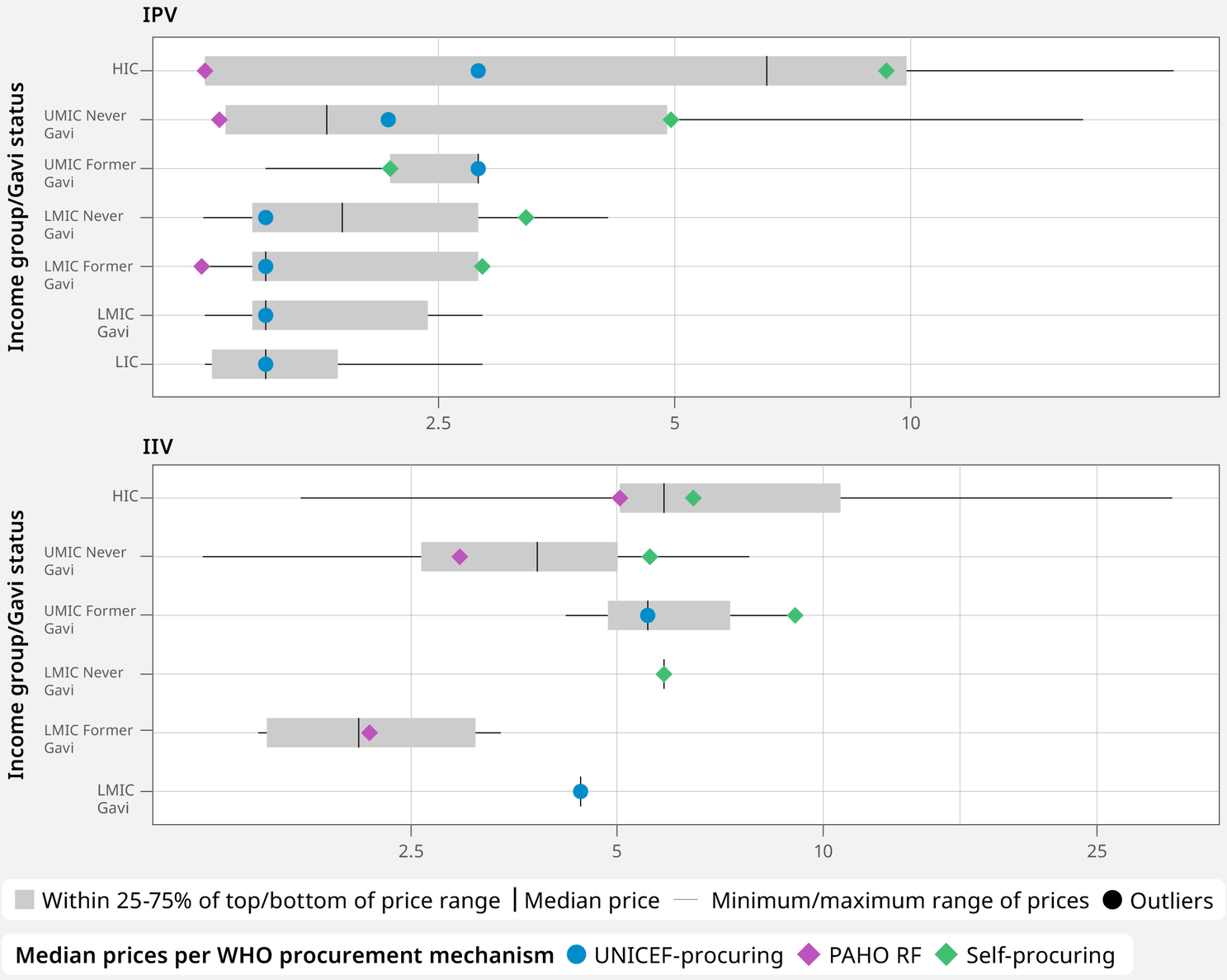
Vaccine prices by procurement mechanism (US$ per dose) by World Bank income group and Gavi status, 2024



IPV and IIV

- **IPV patterns**
  - Relatively little variability among LIC and LMIC reflects both increasing numbers of manufacturers and available vaccines (increasing competition and supply)
  - 46 HIC procured stand-alone IPV in 2024, sourced via 3 global suppliers, exhibiting large price variability that can be attributed to the procurement mechanism
- **Seasonal influenza - patterns break from the typical tiered pricing** because there was no procurement in LIC and little procurement in LMIC (23 countries) and several locally produced and lower cost vaccines procured in UMIC

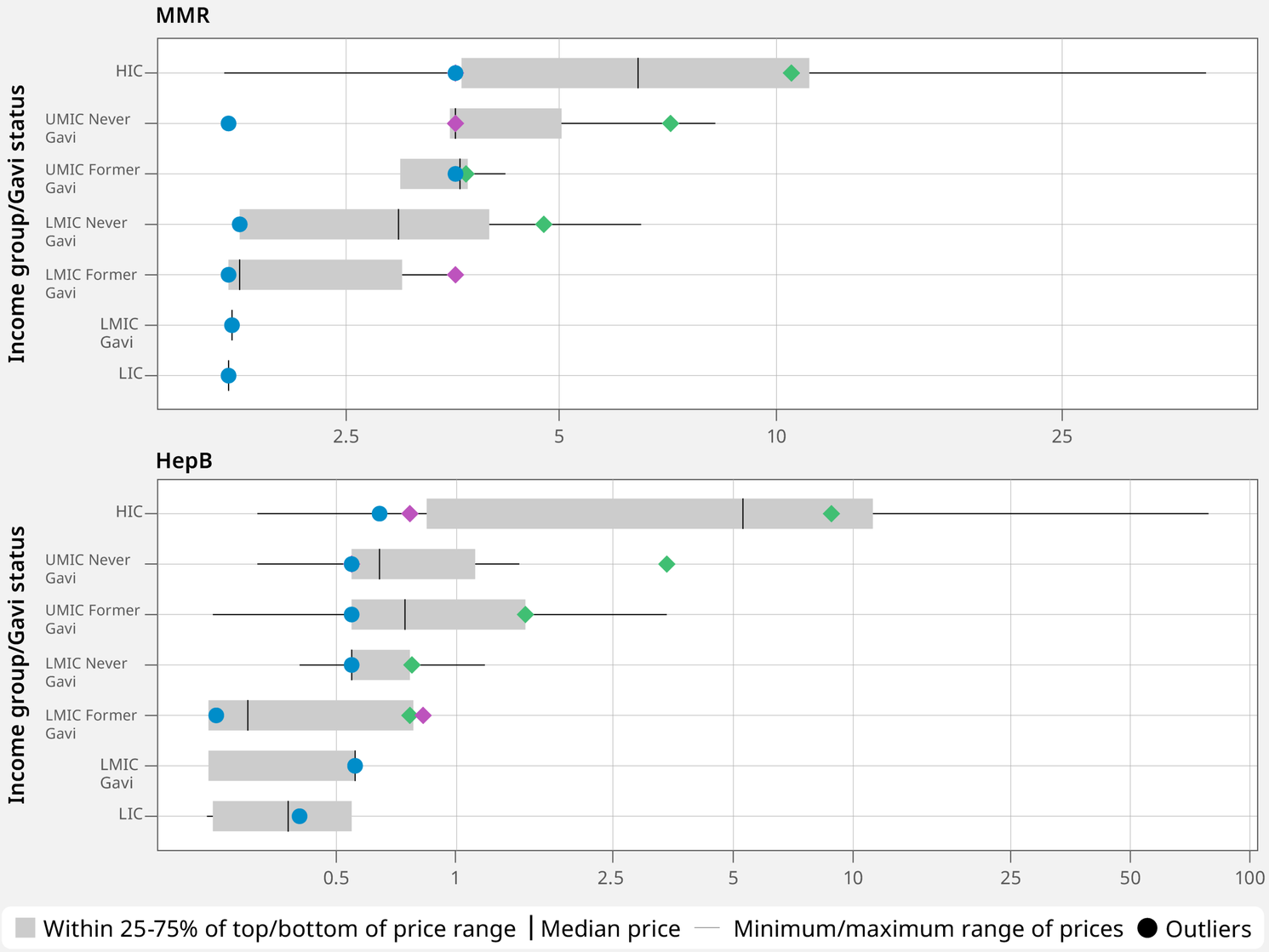
Vaccine prices by procurement mechanism (US$ per dose) by World Bank income group and Gavi status, 2024



MMR and HepB

- **High variability for MMR reflects differences in product presentation**, illustrated by average prices within different income groups and procurement mechanisms
- **HepB patterns**
  - High variability for HepB monovalent vaccine reflects the procurement of specialty adult vaccines in HIC
  - Lower price variability in LICs and LMICs due to predominantly pediatric market, in comparison to adult market in HICs

Vaccine prices by procurement mechanism (US$ per dose) by World Bank income group and Gavi status, 2024

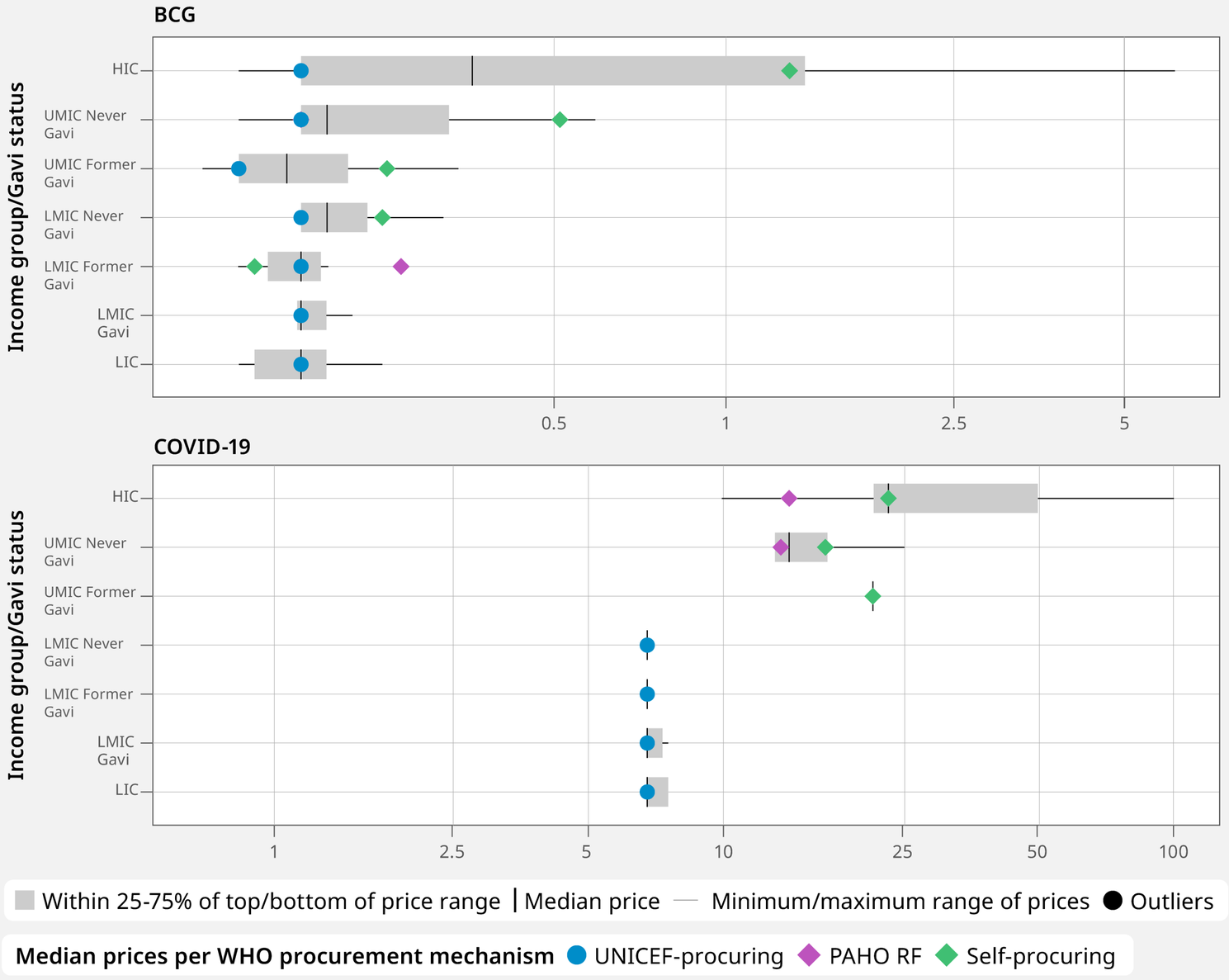


BCG and COVID-19

- Relatively little variability in BCG prices reported reflected procurement volume heavily weighted to pool procurement and low prices
- **COVID-19 prices clearly segmented by income group and by technology platform[1]**:
  - HIC procuring almost exclusively mRNA vaccines.
  - Several LIC and LMIC relied on UNICEF SD pool procurement for supply

1. COVID-19 pricing was based on few reports and should be interpreted with caution

Vaccine prices by procurement mechanism (US$ per dose) by World Bank income group and Gavi status, 2024



Insights: GVMR 2025

Annex

Overview of Analysis

207
countries

115
vaccine products

137
manufacturers

6
years (2019–2024)

Analysis

Additions to fill gaps and align with company reports

Adjustments/corrections

Country-reported procurement through eJRF

Vaccines included

Anthrax: Anthrax subunit, Anthrax live attenuated	**HepA**	**Leptospirosis**	**MMR**	**Rota:** RV1, RV5
BCG	**HepA+B**	**Malaria**	**MMRV**	**Rubella**
Covid-19: C-19 mRNA, C-19 nRVV, C-19 inact, C-19 Subunit, C-19 VLP	**HepB**	**Measles**	**MR**	**Shingles:** Shingles-subunit, Shingles-live attenuated
Dengue	**HepB-Td**	**MenA:** MenA conj, MenA Ps	**Mumps**	**Smallpox/Mpox**
DT	**HepE**	**MenABCYW-135 conj**	**OPV:** bOPV1,3, mOPV1, nOPV2	**T containing:** Td, TT, Td-IPV
DTaP: DTaP, DT1aP, DT1aP-IPV, DT2aP, DT2aP-Hib, DT2aP-IPV, DT3aP, DT3aP-IPV, DT5aP, DT5aP-Hib, DT5aP-IPV	**HFRS**	**MenAC:** MenAC Ps, MenAC conj	**OCV**	**TBE**
DTaP Primary: DT1aP-Hib-IPV; DT2aP-Hib-IPV, DT2aP-HepB-Hib-IPV, DT3aP-HepB-Hib, DT3aP-Hib-IPV, DT3aP-HepB-Hib-IPV, DT5aP-Hib-IPV, DT5aP-HepB-Hib-IPV	**Hib**	**MenACW Ps**	**PCV:** PCV10, PCV13, PCV14, PCV15, PCV20	**TdaP containing:** Td1ap, Td1ap-IPV, Td3ap, Td3ap-IPV, Td5ap, Td5ap-IPV
DTwP	**HPV:** HPV9, HPV4, HPV2	**MenACYW:** MenACYW-135 conj, MenACYW-135 Ps, MenACYWX conj	**Plague**	**Tularemia**
DTwP Primary: DTwP-HepB-Hib, DTwP-HepB-Hib-IPV, DTwP-HepB	**IIV:** IIV-QIV, IIV-TIV, LAIV-TIV, LAIV-QIV, HD-IV, IIV-Adj, Subunit-TIV, Subunit-QIV	**MenB**	**PPV23**	**Typhoid:** TCV, Typhoid Ps, Typhoid-Tetanus
Ebola	**IPV:** IPV, sIPV	**MenC conj:** MenC conj, Hib-MenC conj	**Rabies**	**Varicella**
EV71	**JE:** JE inactivated, JE live attenuated	**MM**	**RSV:** RSV, RSV mAb	**YF**

Data sources

Volume

Country reports via eJRF (see next slide)

- 26% of volume is from unadjusted eJRF
- 18% of volume is from corrected or adjusted eJRF

Ref: https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/who-unicef-joint-reporting-process

Global Vaccine Market Model

- Used as volume source when insufficient country-reported data are available

Ref: https://www.linksbridge.com/our-work

Lot release data from the Chinese regulatory authority

- Used to capture vaccine imported to China and additional volume within China

Ref: https://english.nmpa.gov.cn/database.html

Gavi shipment data

- Used to capture campaign shipments and for triangulation

Ref: https://www.unicef.org/supply/documents/gavi-shipment-reports

UNICEF Market Dashboard

- Used to capture routine and campaign shipments and for triangulation

Ref: https://www.unicef.org/supply/market-notes-and-updates

International coordinating group shipment data

- Used to capture outbreak response shipments

Ref: https://www.who.int/groups/icg

Price and Value

UNICEF pricing data

- Used to complete or adjust eJRFs

Ref: https://www.unicef.org/supply/vaccines-pricing-data;

PAHO pricing data

- Used to complete or adjust eJRFs

Ref: https://www.paho.org/en/documents/vaccine-prices-2024

US Centers for Disease Control and Prevention pricing data

- Used to complete pricing in US

Ref: https://archive.cdc.gov/#/details?q=https://www.cdc.gov/vaccines/programs/vfc/awardees/vaccine-management/price-list/2024/2024-12-01.html&start=0&rows=10&url=https://www.cdc.gov/vaccines/programs/vfc/awardees/vaccine-management/price-list/2024/2024-12-01.html

Annual manufacturer reports

- Used to capture reported sales of 23 manufacturers*

* Abbott, Adimmune, Aim Vaccine Co., AZ, BN, CanSino, CSL, Dynavax, Emergent, GSK, Hualan, Janssen, KMBio, Moderna, Merck/MSD, Novavax, Pfizer, Sanofi, SK Bioscience, Takeda, Valneva, Walvax, Zhifei

Demographics

World Bank Income Group

- Gross national income (GNI) per capita data used to determine the country income level

Ref: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Gavi eligibility

- Used to determine the Gavi-eligibility status of each country

Ref: https://www.gavi.org/programmes-impact/programmatic-policies/eligibility-policy

Gavi Market Shaping Roadmaps

- Used as part of the data validation activities

Ref: https://www.gavi.org/our-alliance/market-shaping/market-shaping-roadmaps

United Nations Office for Project Services (UNOPS)

- Used for converting prices reported in local currency to US$ at exchange rates for 31 December 2024

Ref: https://treasury.un.org/operationalrates/OperationalRates.php

World Health Organization