THE IMMUNIZATION DELIVERY COST CATALOGUE

THE STATUS OF EVIDENCE ON IMMUNIZATION DELIVERY COSTS IN LOW- AND MIDDLE-INCOME COUNTRIES

WHAT IS THE IMMUNIZATION DELIVERY COST CATALOGUE?

The Immunization Delivery Cost Catalogue, or IDCC, is the most comprehensive, current, and standardized database on the cost of delivering vaccines in low- and middle-income countries. The IDCC is based on a systematic review of over 22,000 publications, that present primary data from low- and middle-income countries. It includes 1,156 unique unit costs from 119 publications published between January 2005 and May 2024. More information on the definitions used in this brief can be found on page 9, and details on the methodology used for the IDCC are available here.

WHO IS IT FOR?

National and sub-national planners and policymakers, researchers, and international partners supporting country immunization and health system policy. Data may be useful for budgeting, planning, policymaking, research, advocacy, and beyond.

WHAT IS IN THIS BRIEF?

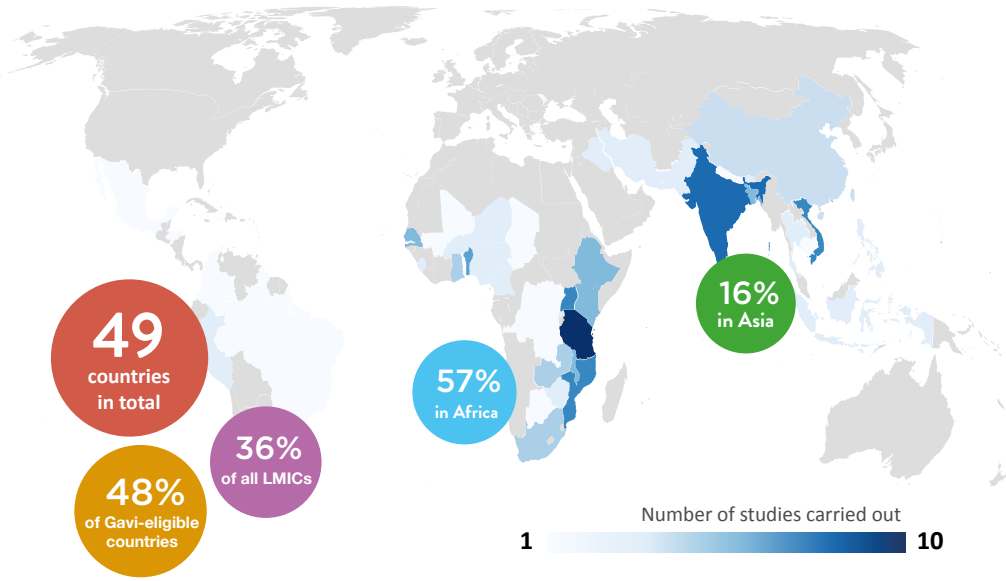
This brief presents a descriptive analysis of the IDCC, showing what evidence on the cost of immunization delivery is available and what are the current evidence gaps. The brief also illustrates delivery cost per dose for routine and supplementary immunization activities (SIAs), key antigens, delivery strategies, and target populations.

WHAT'S NEW IN THE IDCC

The 2024 update adds 607 unit costs from 62 country studies—including from 12 countries previously not represented in the IDCC—published in 52 resources.

- **15** Studies on delivering **HPV vaccines** at scale
- **11** Studies on **C19 vaccine** delivery
- **8** Studies on the new **malaria vaccine**
- **28** Studies for **supplementary immunization activities**
- **9** Studies covering more than one **delivery strategy**

FOR WHAT COUNTRIES DO WE HAVE COST EVIDENCE?

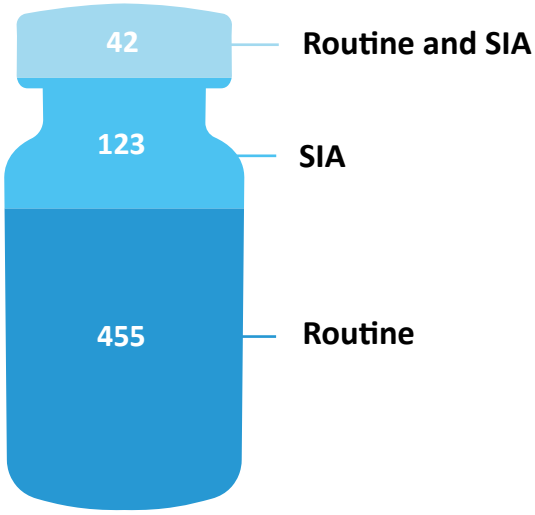


For country specific data, jump to page 9 .

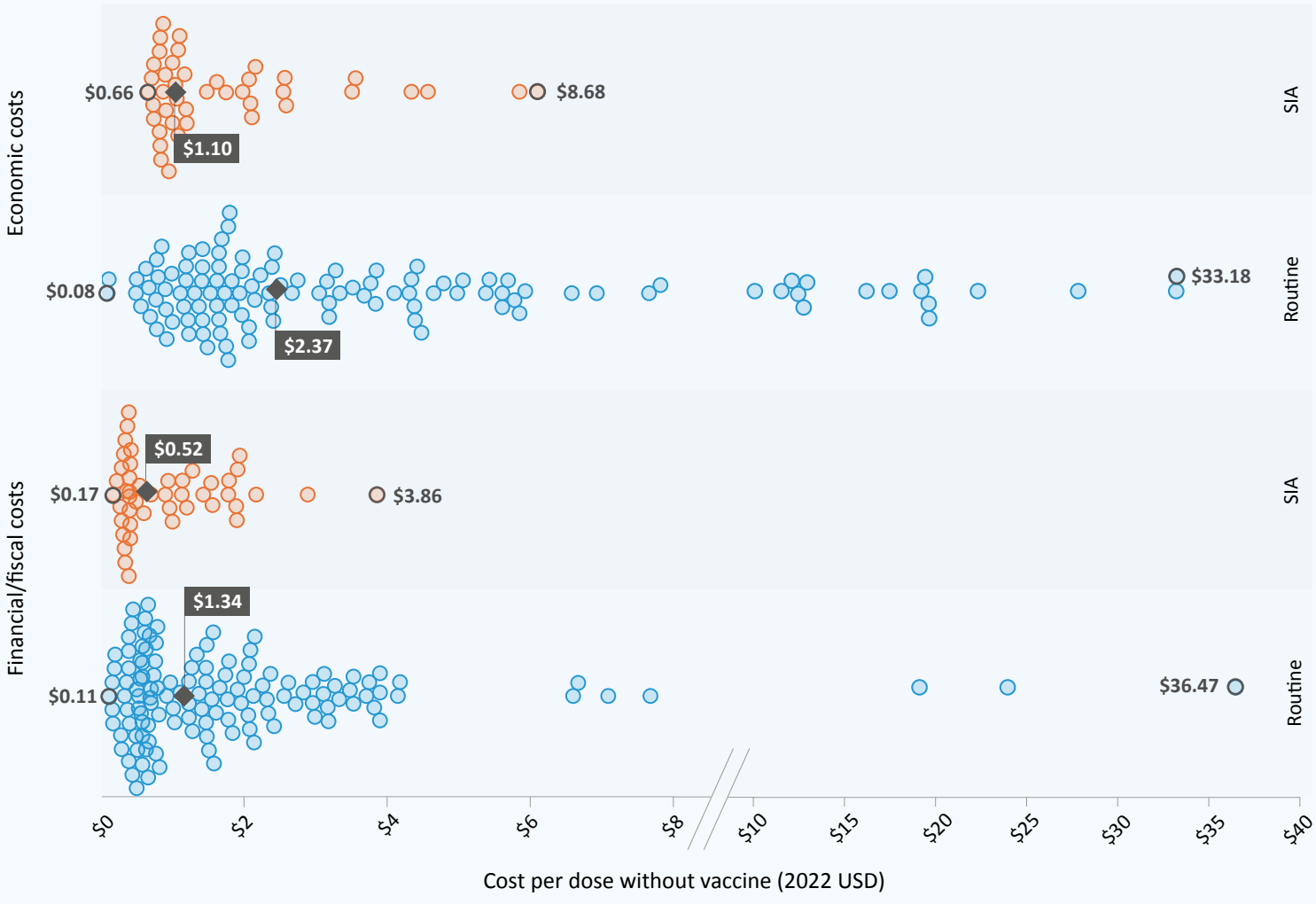
DOWNLOAD THE IDCC DATABASE HERE

ROUTINE DELIVERY AND SUPPLEMENTARY IMMUNIZATION ACTIVITIES

73% of the data points cover routine delivery, while 20% are for supplementary immunization activities (SIAs)

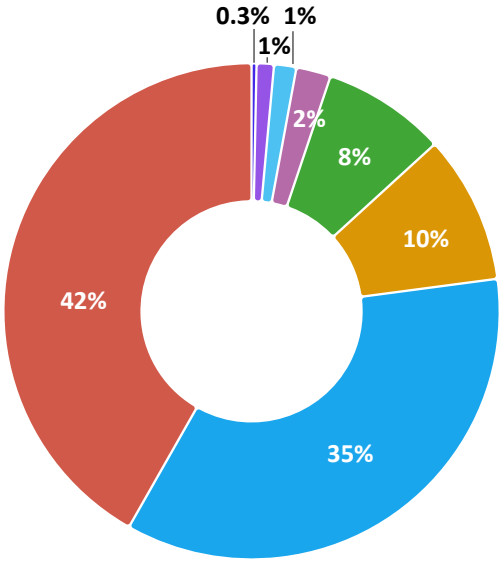


WHAT IS THE COST OF DELIVERY THROUGH ROUTINE OR SIAs?



Includes cost per dose only. Excludes pilot delivery costs for: HPV, C19, Malaria, OCV and Rotavirus. Methods and cost components included in the studies may differ significantly. For the full set of data, and an explanation of what is included in each study, please refer to the IDCC.

DELIVERY STRATEGIES

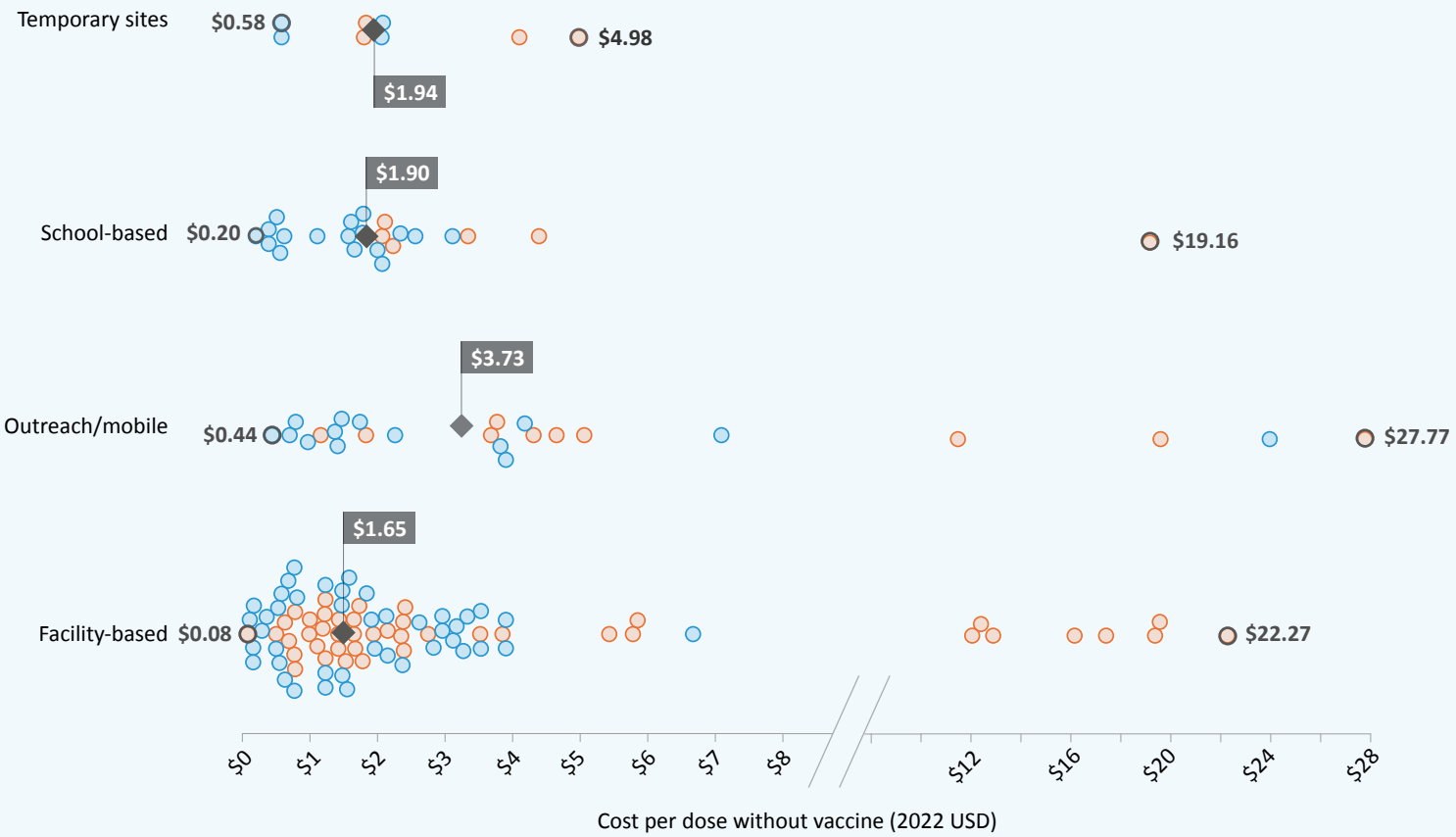


Most of the evidence in the IDCC estimates costs for a combination of delivery strategies (42%) or for facility-based delivery (35%)

Only **16% of the country studies** in the IDCC present separate unit costs for more than one strategy, allowing for a comparative analysis of the cost-efficiency of different strategies in the same country context. Only **8% of the evidence** is for outreach and mobile delivery, key strategies employed to reach zero-dose children.

Multiple strategies
Facility-based
School-based
Outreach/mobile
Temporary sites
Not reported
Vaccination posts
Mop-up

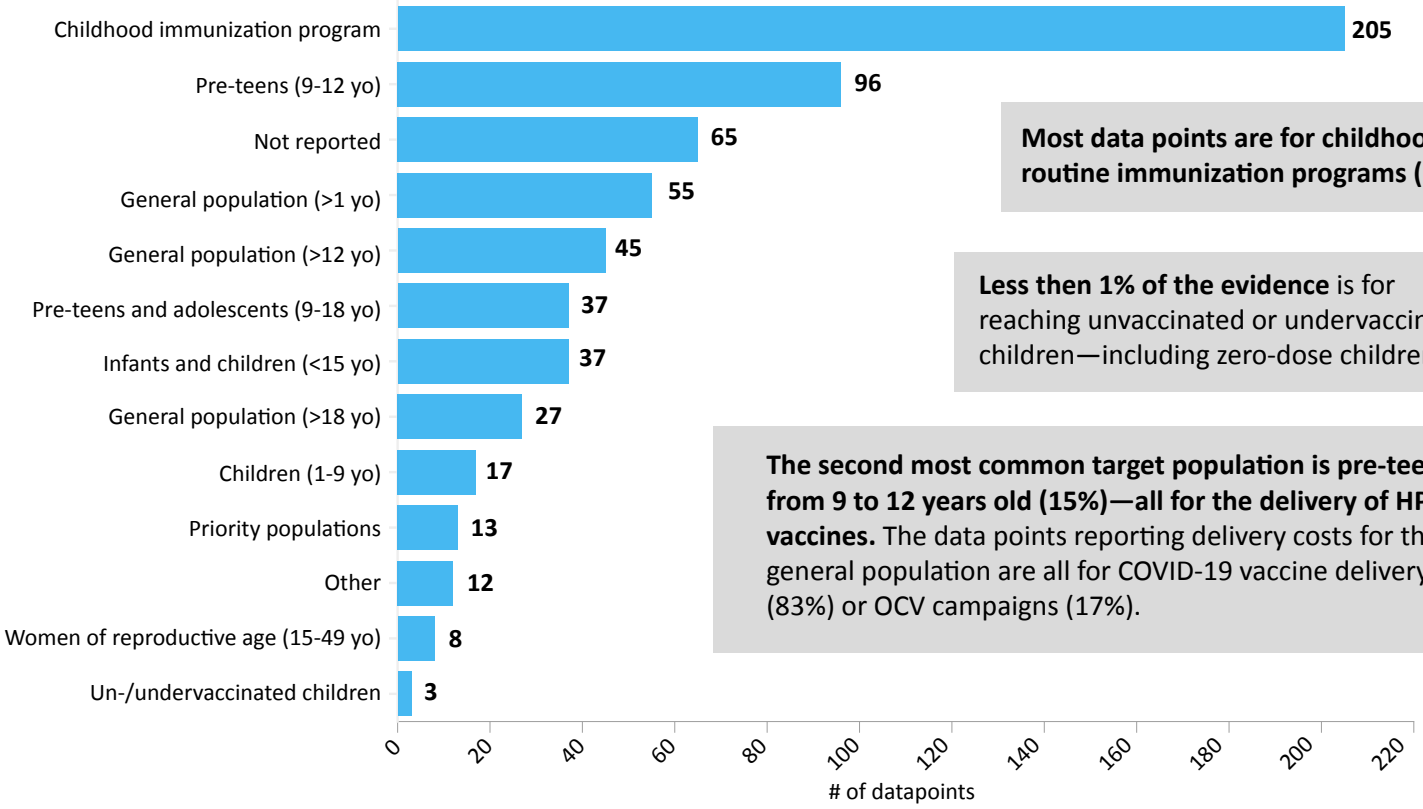
WHAT IS THE COST OF DELIVERING THROUGH DIFFERENT STRATEGIES?



Economic
Financial or fiscal
Min/max
Median

Includes cost per dose only. Excludes pilot delivery costs for: HPV, C19, Malaria, OCV and Rotavirus. Methods and cost components included in the studies may differ significantly. For the full set of data, and an explanation of what is included in each study, please refer to the IDCC.

TARGET POPULATIONS

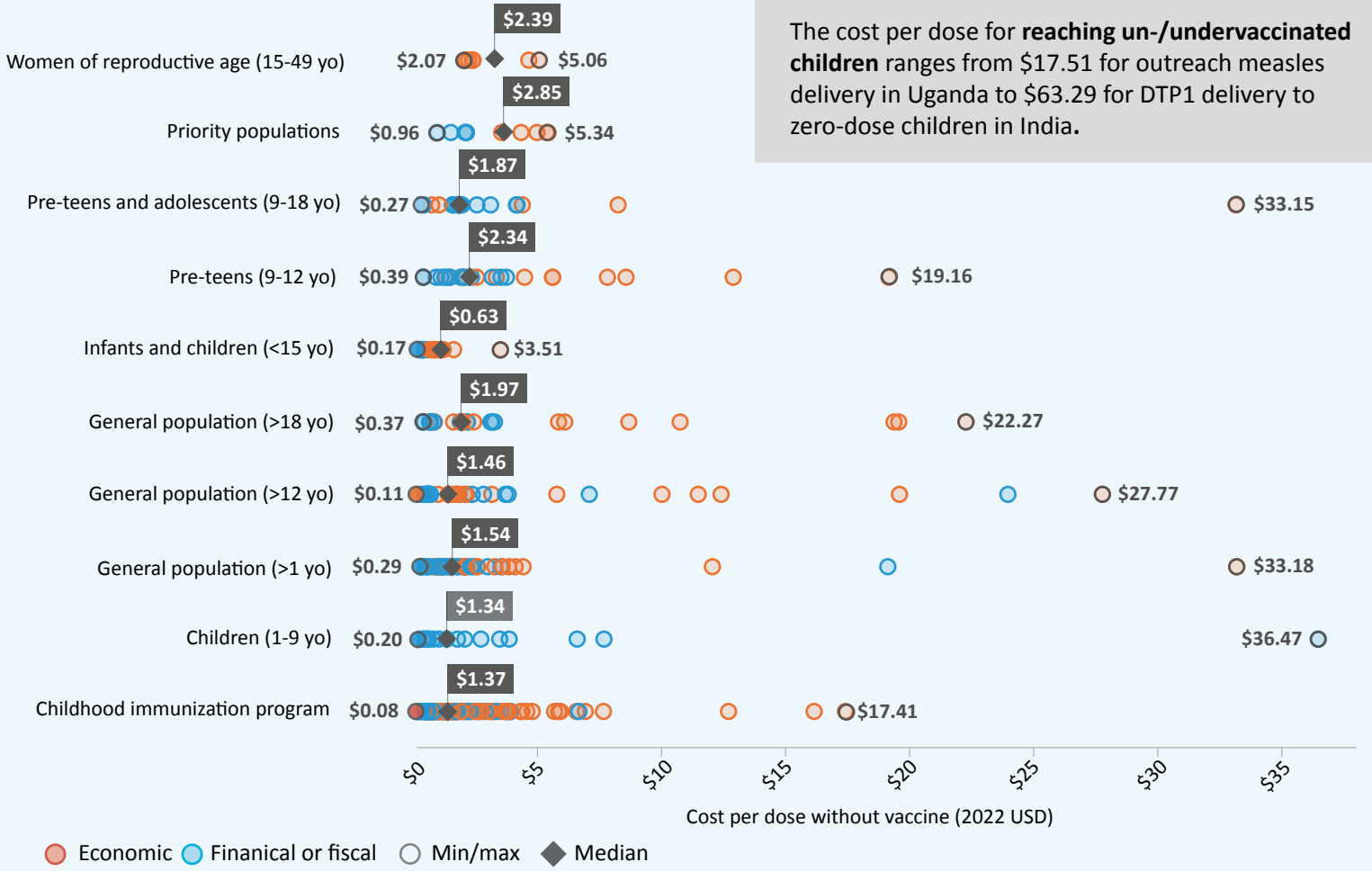


Most data points are for childhood routine immunization programs (33%)

Less then 1% of the evidence is for reaching unvaccinated or undervaccinated children—including zero-dose children.

The second most common target population is pre-teens from 9 to 12 years old (15%)—all for the delivery of HPV vaccines. The data points reporting delivery costs for the general population are all for COVID-19 vaccine delivery (83%) or OCV campaigns (17%).

WHAT IS THE COST OF DELIVERING VACCINES TO DIFFERENT TARGET POPULATIONS?



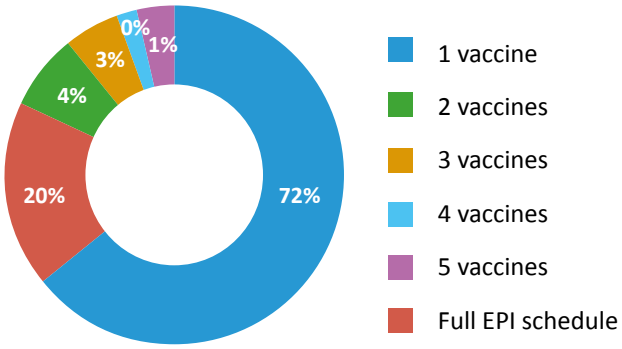
The cost per dose for **reaching un-/undervaccinated children** ranges from $17.51 for outreach measles delivery in Uganda to $63.29 for DTP1 delivery to zero-dose children in India**.**

Includes cost per dose only. Excludes pilot delivery costs for: HPV, C19, Malaria, OCV and Rotavirus. Methods and cost components include in the studies may differ significantly. For the full set of data, and an explanation of what is included in each study, please refer to the IDCC.

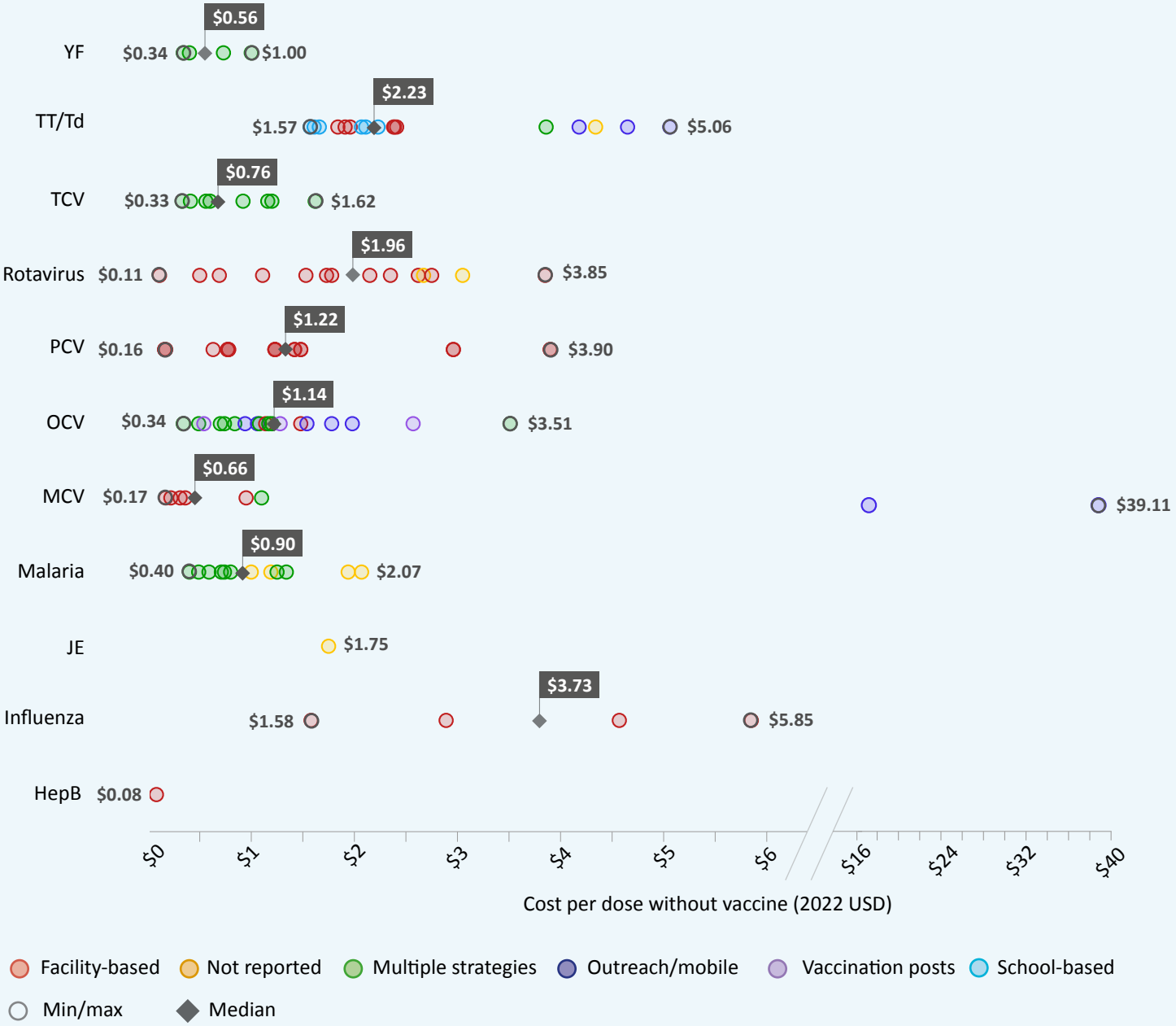
DELIVERY OF A SINGLE VACCINE

72% of the evidence is for the delivery of a single vaccine, while 20% are for the delivery of an entire EPI schedule

Only two studies cover integrated delivery during supplementary immunization activities.

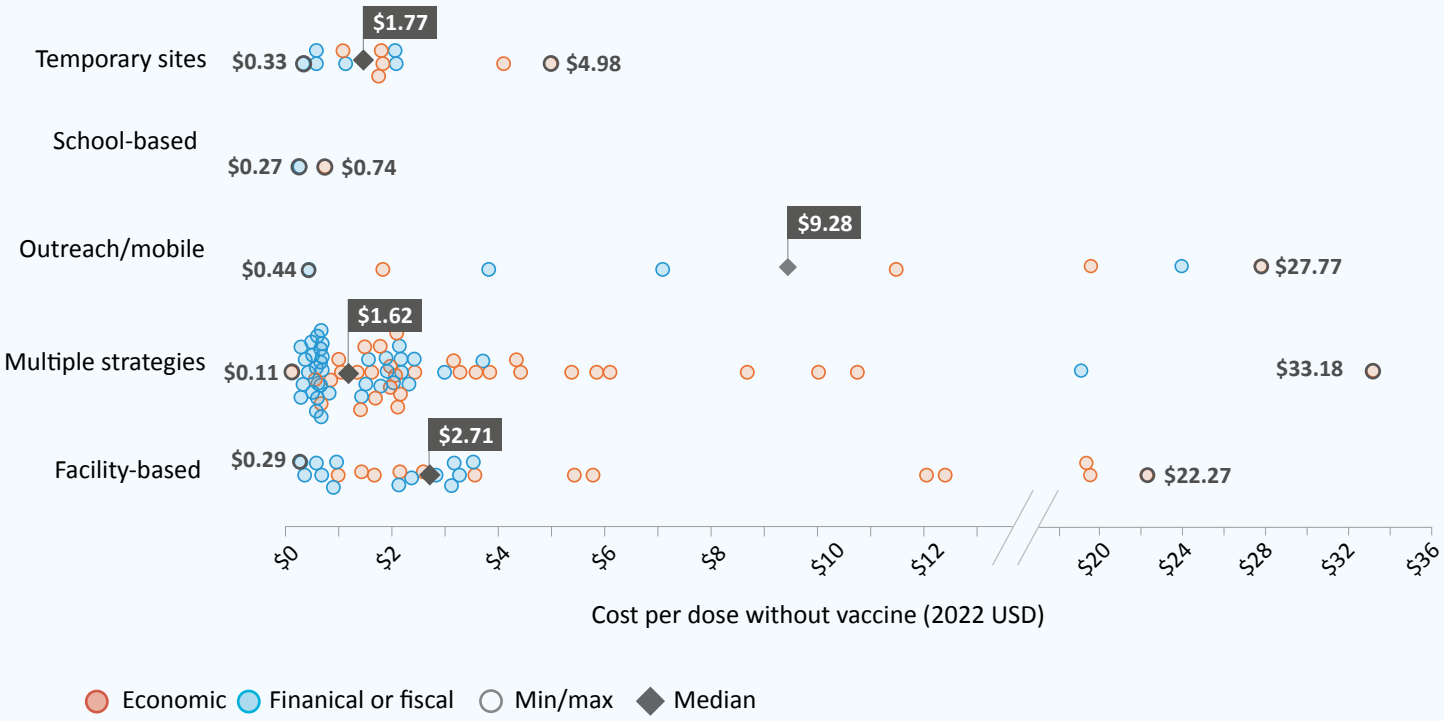


WHAT IS THE COST OF DELIVERING A SINGLE VACCINE?



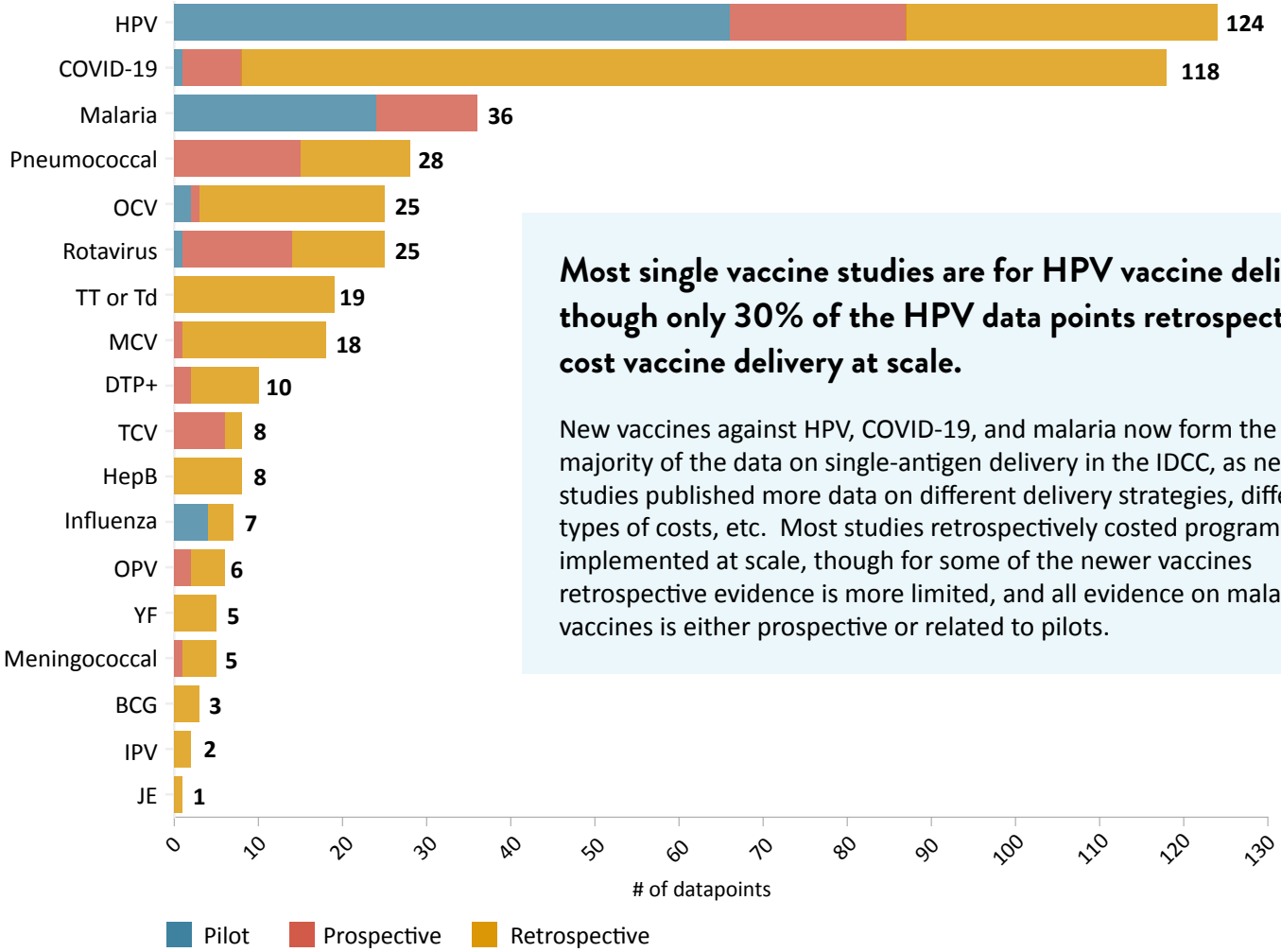
Includes cost per dose only. Includes both economic and financial costs. Excludes pilot delivery costs for: Malaria, OCV and Rotavirus. Methods and cost components included in the studies may differ significantly. For the full set of data, and an explanation of what is included in each study, please refer to the IDCC.

WHAT IS THE COST OF DELIVERING COVID-19 VACCINES?



Includes cost per dose only. Includes both routine and SIA delivery. Excludes delivery costs for pilot projects. Methods and cost components included in the studies may differ significantly. For the full set of data,and an explanation of what is included in each study, please refer to the IDCC.

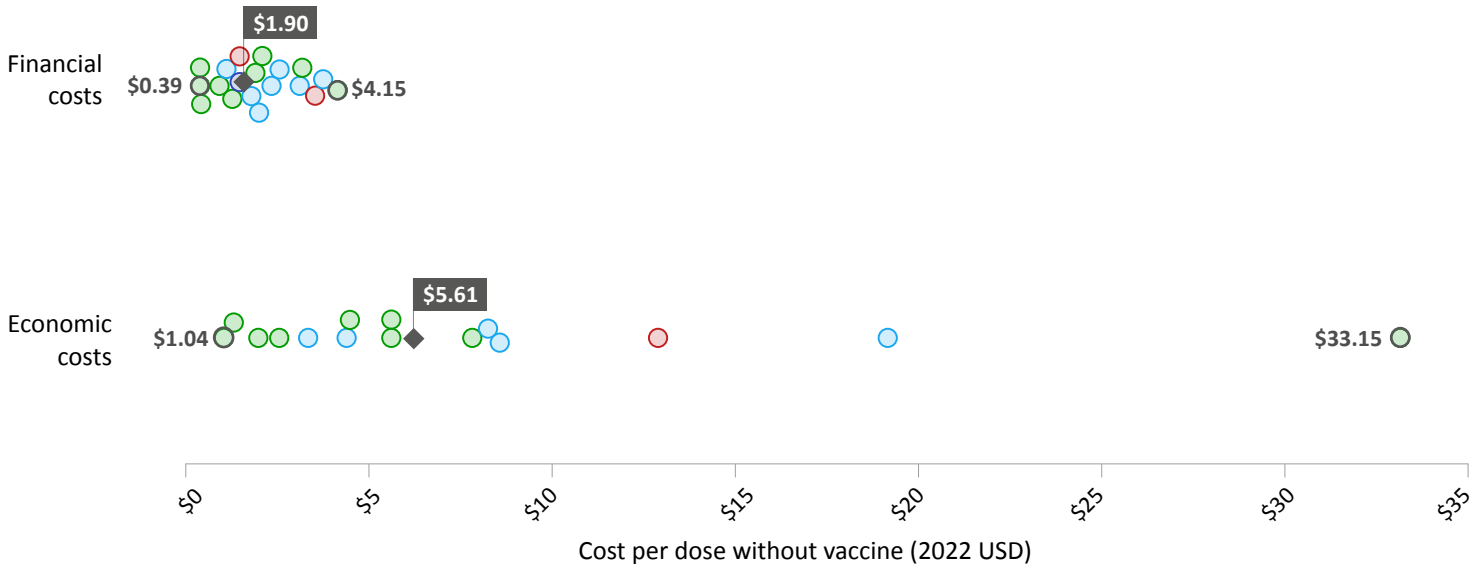
PILOT PROJECTS VS. DELIVERY AT SCALE



Most single vaccine studies are for HPV vaccine delivery, though only 30% of the HPV data points retrospectively cost vaccine delivery at scale.

New vaccines against HPV, COVID-19, and malaria now form the majority of the data on single-antigen delivery in the IDCC, as newer studies published more data on different delivery strategies, different types of costs, etc. Most studies retrospectively costed programs implemented at scale, though for some of the newer vaccines retrospective evidence is more limited, and all evidence on malaria vaccines is either prospective or related to pilots.

WHAT IS THE COST OF DELIVERING HPV VACCINES?



Includes cost per dose only. Includes both routine and SIA delivery. Excludes delivery costs for pilot projects and estimates from Simuyemba et al, which found the cost per dose in Zambia to range from $4.56 for financial costs for school-based delivery, to $522.89 for economic costs for facility-based delivery. Methods and cost components included in the studies may differ significantly. For the full set of data, and an explanation of what is included in each study, please refer to the IDCC.

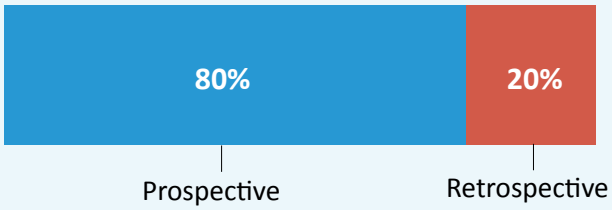
GAP ANALYSIS: WHAT EVIDENCE ON IMMUNIZATION DELIVERY COSTS IS STILL MISSING?

MORE EVIDENCE IS NEEDED...

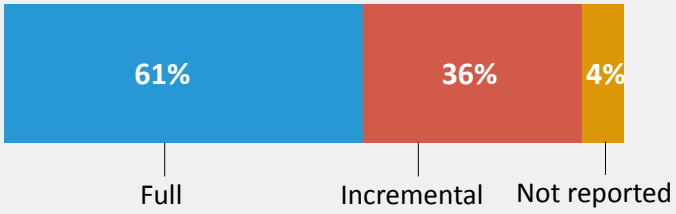
- On the cost of reaching **zero-dose children** and other specific target population groups such as **out-of-school girls** and the **elderly**.
- On the cost of delivering vaccines through **different strategies**.
- On the cost of delivering vaccines through **supplementary immunization activities**.
- For the **28 Gavi-eligible** and **86 low- and middle-income** countries for which delivery cost evidence is currently unavailable.

ABOUT THE STUDIES INCLUDED

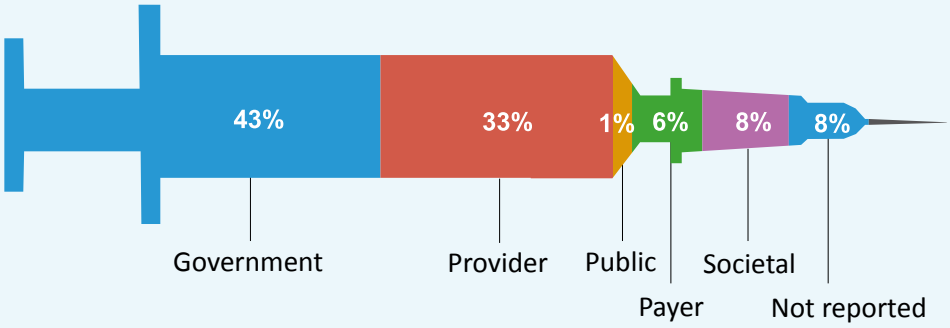
Most studies were **retrospective** (80%) while 20% were **cost projections**.



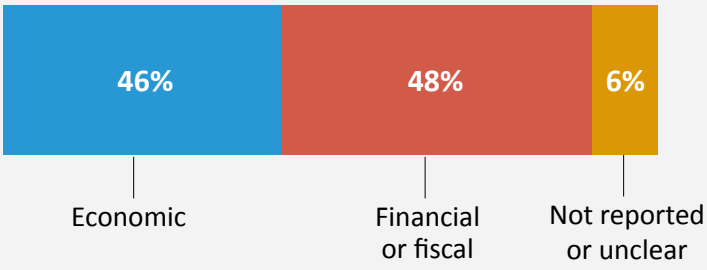
61% of data points represent **full costs** while 36% are **incremental costs**.



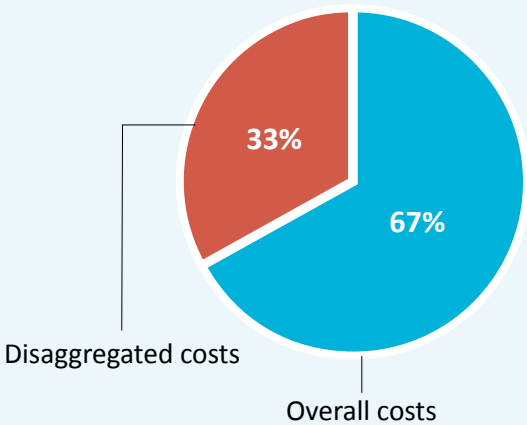
Government and **provider perspectives** make up 76% of all evidence and few studies take a **societal perspective**.



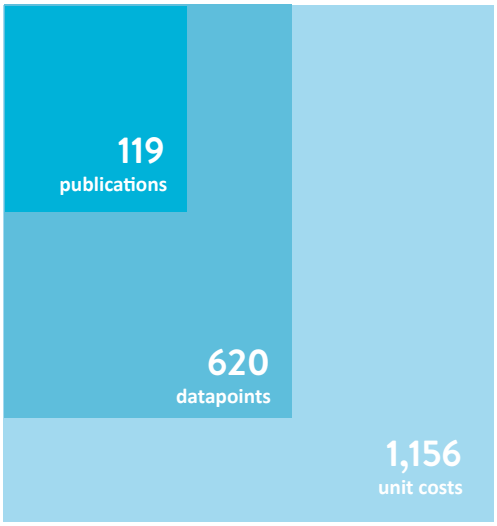
48% of data points are **financial or fiscal costs,** while 46% are **economic costs.**
Most studies estimated both economic and financial or fiscal costs (47%), while 34% only estimated economic costs and 20% only presented financial or fiscal costs.



Only 67% of the studies report costs disaggregated by **resource types** or by **activity**.
And even those that do, often only report on broad categories covering many different activities and resource types. Vehicles, transport and fuel, and social mobilization are the cost categories most often included in the cost estimates.



WHAT KINDS OF DATA ARE INCLUDED IN THE IDCC?



Data from 119 publications in peer-reviewed journals (91) and reports (28), covering **138 country studies.**

Most studies estimate multiple costs—such as **economic** and **financial** costs, **recurrent** and **startup** costs, for different time **periods** and **delivery strategies**—bringing the total number of **datapoints** in the IDCC to **620.**

Many publications estimate more than one unit cost—such as **cost per dose**, **per targeted person**, and **per fully vaccinated person**, with and without vaccine costs—which means the IDCC includes a total of **1,156 unique unit costs.**

EVIDENCE PER COUNTRY

Country	# studies	# data points	Country	# studies	# data points	Country	# studies	# data points	Country	# studies	# data points
Bangladesh	5	20	Ethiopia	5	14	Mali	1	6	Sierra Leone	2	21
Benin	6	17	The Gambia	1	4	Mexico	1	2	South Africa	4	20
Bhutan	2	4	Ghana	4	14	Moldova	1	11	Sri Lanka	2	4
Botswana	1	2	Guyana*	1	2	Mozambique	7	19	Tanzania	10	57
Brazil	1	5	Haiti	1	3	Nepal	1	2	Thailand	2	4
Burkina Faso	2	7	Honduras	1	2	Niger	2	7	Togo	1	2
Cambodia	1	6	India	8	31	Nigeria	2	8	Uganda	7	38
Cameroon	2	4	Indonesia	2	30	Pakistan	2	2	Vietnam	7	61
Chad	1	2	Iran	2	9	Palestine	1	2	Zambia	4	18
China	3	14	Iraq	2	2	Peru	2	4	Zimbabwe	2	14
Colombia	1	1	Kenya	5	15	The Philippines	2	24			
Côte d'Ivoire	3	10	Lao PDR	2	19	Rwanda	2	8			
DRC	1	14	Malawi	5	20	Senegal	5	15			

*While Guyana is now classified as high income, it was classified upper-middle income at the time of the study

FOR MORE DETAILS

- Methodology note
- Codebook and definitions
- Learn more about the IDCC

DOWNLOAD THE IDCC DATABASE HERE

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Contributors: Flavia Moi, Syed Najibullah, Christina Banks, Afroja Yesmin, and Laura Boonstoppel. This analysis was supported by the Bill & Melinda Gates Foundation.