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.
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.
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.

**WHAT IS THE COST OF DELIVERING THROUGH DIFFERENT STRATEGIES?**

Temporary sites: $0.58 - $1.94 - $4.98

School-based: $0.20 - $1.90

Outreach/mobile: $0.44 - $3.73 - $27.77

Facility-based: $0.08 - $1.65 - $22.27

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.
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.

TARGET POPULATIONS

- **Childhood immunization program**: 205 data points
- **Pre-teens (9-12 yo)**: 96 data points
- **Not reported**: 65 data points
- **General population (>1 yo)**: 55 data points
- **General population (>12 yo)**: 45 data points
- **Pre-teens and adolescents (9-18 yo)**: 37 data points
- **Infants and children (<15 yo)**: 37 data points
- **General population (>18 yo)**: 27 data points
- **Children (1-9 yo)**: 17 data points
- **Priority populations**: 13 data points
- **Other**: 12 data points
- **Women of reproductive age (15-49 yo)**: 8 data points
- **Un-/undervaccinated children**: 3 data points

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

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%).
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?**

Temporary sites

- Economic: $0.33
- Financial or Fiscal: $1.77
- Min/Max: $4.98

School-based

- Economic: $0.27
- Financial or Fiscal: $0.74

Outreach/mobile

- Economic: $0.44
- Financial or Fiscal: $1.62
- Min/Max: $9.28

Multiple strategies

- Economic: $0.11
- Financial or Fiscal: $2.71
- Min/Max: $33.18

Facility-based

- Economic: $0.29
- Financial or Fiscal: $22.27

Cost per dose without vaccine (2022 USD)

- 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**

- HPV
- COVID-19
- Malaria
- Pneumococcal
- OCV
- Rotavirus
- TT or Td
- MCV
- DTP+
- TCV
- HepB
- Influenza
- OPV
- YF
- Meningococcal
- BCG
- IPV
- JE

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?

Cost per dose without vaccine (2022 USD)

- **Financial costs**
  - Facility-based: $0.39
  - Multiple strategies: $1.90
  - Outreach/mobile: $4.15
- **Economic costs**
  - Facility-based: $1.04
  - Multiple strategies: $5.61
  - School-based: $33.15

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.
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

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*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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