

Organized Session
**Applying Health Economics Principles to
Vaccine Programs**

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TVEE
TEACHING VACCINE
ECONOMICS EVERYWHERE



2.5

Costing new vaccine introduction

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Costing of Immunization Services

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Outline



Why costing studies are needed



Defining immunization costs



Designing a primary costing study



Costing new vaccine introduction

Why costing studies are needed

- Strategic planning and programme budgeting
- Assessing variation in service delivery costs and analysis of programme efficiency or quality
- Developing cost benchmarks
- Conducting cost-effectiveness, cost-benefit, and return on investment analysis to inform resource allocation decisions

Defining immunization costs

Cost definitions and categorizations

- *Economic cost*: Opportunity cost of investing in one programme relative to investing in other
- *Financial cost*: Cash outlays incurred for delivery of the programme
- *Fiscal cost*: Actual expenditure made for delivery of the programme

Designing a primary costing study

Scope:

- *Type of programme:* facility / outreach / supplementary
- *Perspective:* healthcare provider / payer / societal
- *Cost:* economic / financial
- *Time horizon:* retrospective / prospective

Data sources:

Retrospective study: administrative records supplemented with interview with key programme staff

Prospective study: direct observation

Addressing shared costs

Examples:

- A vehicle can be used to supervising an outreach session along with other administrative purposes
- A health worker spends time on immunization services along with family planning services

Allocating shared resources requires developing an “allocation key” or “tracing factor” that serves as the basis for allocation

Example:

- Allocating the use of a vehicle based on the share of mileage per week specific to immunization as proportion of total mileage

Sampling for immunization costing studies

- Sampling is required because of the heterogeneity of costs across geographical areas and between and within facility types
- Sample design should ensure representativeness and should be sufficiently large to generate estimates with acceptable precision.
- Random sampling is preferred when the goal is to have nationally or sub- nationally representative estimates.

Costing new vaccine introduction (NUVI)

Type of vaccine to be introduced:
monovalent, combination

Start-up costs

- Microplanning
- Training of staff
- Purchase of cold chain equipment
- Social mobilization and advocacy

Recurrent costs

- Vaccines and supplies
- Service delivery
- Supervision and monitoring
- Vaccine transport
- Waste management
- Ongoing cold chain expenses

Summary

- Immunization costing studies generate essential strategic information that is required for planning and budgeting, assessing technical efficiency, developing benchmarks, and economic evaluation to inform resource allocation decisions.
- For economic evaluations, economic costs should be estimated, financial cost is more relevant if budget impact is the main policy question.
- Costs for NUVI are incremental to the existing system and can be evaluated as fiscal, financial, or economic costs depending upon the use of the results by decision makers and both start-up and recurrent costs should be estimated.

The Handbook of Applied Health Economics in Vaccines



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