



Mid-Level Management Course for EPI Managers

BLOCK II: Planning/organization

Module 6: Immunization financing



World Health
Organization

REGIONAL OFFICE FOR

Africa



Mid-Level Management Course for EPI Managers

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Abbreviations and acronyms

AD	auto-disable
AfDB	African Development Bank
AusAID	Australian Agency for International Development
AWP	annual workplan
BCG	Bacillus Calmette-Guérin
cMYP	comprehensive multi-year plan
DALYs	disability-adjusted life years
DoV	Decade of Vaccines
DTP3	diphtheria-tetanus-pertussis (third dose)
EPI	Expanded Programme on Immunization
FIC	fully immunized child
GAPPD	Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea
Gavi	Global Alliance for Vaccines and Immunization
GDP	gross domestic product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GHE	government health expenditure
GNI	gross national income
GVAP	Global Vaccine Action Plan (2011–2020)
HIPC	heavily indebted poor country
HSFP	Health Systems Funding Platform
ICC	interagency coordination committee
IEC	information, education, communication
IFFIm	International Finance Facility for Immunization
IHP+	International Health Partnership
IMCI	Integrated Management of Childhood Illness
JRF	WHO/UNICEF Joint Reporting Form
LIC	low-income country
MDG	Millennium Development Goal
M&E	monitoring and evaluation
MIC	middle-income countries
MLM	Mid-Level Management Course for EPI Managers
MOF	ministry of finance
MOH	ministry of health

MNT	maternal and neonatal tetanus
MTEF	medium-term expenditure framework
MYP	multi-year plan
NHP	national health (sector) plan
NID	national immunization day
NIP	national immunization programme
ODA	official development assistance
PCV	pneumococcal conjugate vaccine
PIE	post-introduction evaluation
PPP	public-private partnership
PRSP	poverty reduction strategy paper
RED/REC	Reaching Every District/Reaching Every Community
RI	routine immunization
RSPI	Regional Strategic Plan for Immunization (2014–2020)
SIA	supplementary immunization activity
SWAp	sector-wide approach
SWOT	strengths, weaknesses, opportunities, threats
THE	total health expenditure
THR	total health resources
UNICEF	United Nations Children’s Fund
VPD	vaccine-preventable disease
V3P	Vaccine Product, Price and Procurement (WHO web platform)
WHO	World Health Organization
WPV	wild poliovirus

Glossary

Accra Agenda for Action	Designed to strengthen and deepen the implementation of the Paris Declaration, the Accra Agenda for Action (2008) takes stock of progress and sets the agenda for accelerated advancement towards the Paris targets. It proposes the following four main areas of improvement: ownership; inclusive partnerships; delivering results; and capacity development.
Advocacy	Activities linked to the support for or recommendation of a particular cause or policy.
Aid effectiveness	Aid effectiveness is the effectiveness of development aid in achieving economic or human development (or development targets). Aid effectiveness is a core principle of the Paris Declaration.
Alignment	In line with the Paris Declaration on Aid Effectiveness, donor countries align behind the partner country's development priorities, policies and strategies (policy alignment) and deliver aid through the country's systems for managing development activities (system alignment).
Allocative efficiency	All resources are assigned to projects with the highest profitability.
Antigen	A toxin or other foreign substance delivered through vaccination, which induces an immune response in the body, especially the production of antibodies.
Beneficiary	The individual, group or organization, whether targeted or not, that benefits, directly or indirectly, from the implementation of a programme, project or output.
Budget	An estimation of the revenue and expenses over a specified future period of time.
Budget period	The intervals of time (usually 12 months) into which a multi-year project period is divided for budgetary/funding purposes.
Budgeting	The process of expressing quantified resource requirements in a set timeframe.
Capital costs	Fixed, one-time expenses incurred on the purchase of land, buildings, construction and equipment used in the provision of services.
Co-financing (Gavi)	Countries contribute to the cost of Gavi-supported vaccines by procuring some of the required vaccine doses with non-Gavi funds.
Community financing	Community-based mechanisms for funding services, including micro-insurance, community health funds and revolving funds for drugs.
Consolidation	Bringing together separate parts into a unified whole.

Cost-benefit analysis	Seeks to value and compare all costs and benefits (measured in US dollars or other currencies) that result from alternative interventions. It can be used to compare two or more different health programmes, such as malaria control and immunization, to see which provides the most benefits per unit cost. That is, it is used to determine which programmes offer the most efficient use of resources.
Cost driver	A cost driver is the component of an activity that causes the increase in activity cost.
Cost-effectiveness analysis	Compares different ways of achieving the same objective in an effort to identify the least expensive way of achieving that objective. Cost-effectiveness is measured using one outcome, such as number of lives saved or number of children vaccinated.
Costing	This is the process of determining how much a programme costs during one year.
Costs	The value of the resources, both monetary and non-monetary, used to produce a good or service.
Depreciation	A reduction in the value of an asset with the passage of time, due in, particular, to use.
Direct cost	Expenses that can be traced directly to the immunization programme (e.g. personnel, vaccines, supplies, etc.). Most variable costs are direct cost to interventions.
Earmarking	Designation of funds for a specific purpose.
Economic cost	The gains and losses in money, time and resources of one course of action compared with another.
Economic efficiency	This refers to an economic state in which every resource is optimally allocated to serve each person in the best way while minimizing waste and inefficiency.
Effectiveness	The degree to which an activity or programme achieves its objectives. For example, a highly effective polio programme eliminates polio. An ineffective programme does not decrease the prevalence of polio.
Efficacy	Efficacy is the capacity for beneficial change of a given intervention.
Efficiency	The ability to achieve objectives at least costs possible.
Equity	Refers to fairness or justice in service provision or programming. Horizontal equity refers to treating people with the same needs equally, and vertical equity means that people with unequal needs should be treated unequally.
Evaluation	A process that seeks to determine, as systematically and objectively as possible, the relevance, effectiveness and impact of an ongoing or completed programme, project or policy in the light of its objectives and accomplishments.
Exchange rate	The value one currency converts to another.
Expenditure	The actual amount of money spent on a good or service during a particular time period. For example, the amount of money spent on vaccines in a year.

Expense	The amount of money that is needed to pay for a good or service. Expenses are a subset of expenditure.
Feasibility	The extent to which there is institutional and financial capacity for the implementation of a project or activity.
Finance	The management of large amounts of money by entities such as governments.
Financial cost	This is the monetary value of a good or service used in the delivery of an immunization programme. It is the price paid for resources used (e.g. the cost of vaccines or the salary of the vaccinator). Financial costs should not be confused with economic costs.
Financial sustainability	Financial sustainability refers to the timely mobilization of needed resources to cover the costs of an intervention into the future.
Financing	This refers to the amount and sources of money for an activity or programme. Interchangeable with “funding”.
Fiscal space	The capacity of government to provide additional budgetary resources for a desired purpose without prejudice to or compromise to meeting its current obligations as they fall due.
Fixed cost	Indirect or overhead costs are not dependent on the level of service delivery.
Gap analysis	The comparison of actual situation usually in performance, with potential or desired performance.
Gavi	The Global Alliance for Vaccines and Immunization is a public-private partnership that includes national governments, UNICEF, WHO, the vaccine industry and other partners, that focuses on increasing access to vaccines and strengthening immunization programmes in developing countries.
GNI per capita	Per capita income, also known as income per person, is the mean income of the people in an economic unit such as a country or city. It is calculated by taking a measure of all sources of income in the aggregate (such as the gross national income) and dividing it by the total population.
Goal	The higher order aim to which a measure is intended to contribute; a statement of longer term intent. In planning terminology, the goal usually refers to the highest level achievement of the project or programme. In the context of immunization, this is usually prevention of mortality, morbidity or disability.
Health Systems Funding Platform	Facilitated by WHO, the HSFP was established by the Global Fund, Gavi and the World Bank, in order to coordinate, mobilize, streamline and channel the flow of existing and new international resources to support national health strategies. The platform is based on the principles of the International Health Partnership and related initiatives (IHP+) and in line with the Paris Declaration on Aid Effectiveness.
Heavily indebted poor countries initiative	An initiative that releases additional resources to ministries of finance of heavily indebted poor countries which can be used to fund more public expenditure or reduce debt.

Impact	The overall effect of accomplishing specific results. In some situations, it comprises changes, whether planned or unplanned, positive or negative, direct or indirect, primary or secondary, that a programme or project helped to bring about.
Inflation rate	The percentage increase, usually calculated annually, in the prices of goods and services.
Ingredients approach	When costing the immunization programme, the ingredients approach involves the collection of information on quantities and the prices used to value all resources.
Inputs	Personnel, finance, equipment, knowledge, information and other resources necessary for producing the planned outputs and achieving expected accomplishments.
Interagency coordination committee (ICC)	A committee of immunization partners involved in funding and providing immunization services in a country.
Medium-term expenditure framework	The medium-term expenditure framework is a tool for linking policy, planning and budgeting over the medium term (usually three years).
Milestones	Milestones describe the shorter term and concrete steps to be undertaken towards achieving the longer term objectives of the programme. Collectively, milestones and targets should be monitored using an agreed national monitoring and evaluation framework with agreed indicator definitions.
Mop-up	Mop-up campaigns are door-to-door immunizations that are carried out in specific focal areas where the virus is known or suspected to still be circulating.
Multi-year plan	A multi-year financial plan projects revenues and expenditures for several years into the future.
Mutual accountability	Mutual accountability is a process by which two (or multiple) partners agree to be held responsible for the commitments that they have voluntarily made to each other.
National health plan	This refers to the overall health strategy of the government. The comprehensive multi-year plan (cMYP) can link to this plan or to a related strategy.
Negotiation	Discussions aimed at reaching an agreement.
Objective	Description of an overall desired achievement involving a process of change and aimed at meeting certain needs of identified end users within a given timeframe. A good objective meets the criteria of being impact oriented, measurable, time limited, specific and practical. The objective is set at the next higher level than the expected accomplishments.
Operational costs	Expenses required to maintaining the operation of the immunization programme.
Operational plan	A short-term, highly detailed plan formulated to achieve short- to mid-term objectives. An operational plan is the basis for, and justification of, an annual operating budget request.
Out-of-pocket expense	Medical expenses directly borne by the service recipient.

Outcome	An accomplishment or a result. Objectives relate to programme coverage, and should be measured by programme outcome indicators (e.g. percentage DTP3 coverage) or programme output indicators (e.g. percentage posts filled, percentage of vaccines nationally funded).
Output	A final product or service delivered by a programme or project to end users, such as reports, publications, servicing of meetings, training, advisory, editorial, translation or security services, which a programme is expected to produce in order to achieve its expected accomplishments and objectives. Outputs may be grouped into broader categories, for example, human resource outputs, cold chain and logistics outputs, surveillance outputs, etc.
Overhead costs	The indirect costs or fixed expenses of operating an operation (i.e. costs not directly related to service delivery). Examples include electricity, maintenance and administrative costs.
Paris Declaration on Aid Effectiveness	Put into effect in 2005, the Paris Declaration on Aid Effectiveness is a practical, action-oriented roadmap to improve the quality of aid and its impact on development. It gives a series of specific implementation measures and establishes a monitoring system to assess progress and ensure that donors and recipients hold each other accountable for their commitments. The Paris Declaration outlines five fundamental principles for making aid more effective: 1) Ownership: developing countries set their own strategies for poverty reduction, improve their institutions and tackle corruption; 2) Alignment: donor countries align behind these objectives and use local systems; 3) Harmonization: donor countries coordinate and simplify procedures and share information to avoid duplication; 4) Results: developing countries and donors shift focus for development results and results get measured; 5) Mutual accountability: donors and partners are accountable for development results.
Poverty reduction strategy paper	A document that describes a country's macroeconomic, structural and social policies and programmes, in an effort to promote growth, reduce poverty and identify external financing needs. PRSPs are prepared by governments, in association with development partners, such as the World Bank and the International Monetary Fund.
Projection	An estimate or forecast of a future situation based on a study of present trend. Cost projections provide details and total funds needed for the implementation of a project.
Resource	In finance, the money available for spending.
Resource allocation	The scheduling of activities and the resources required by those activities while taking into consideration both the resource availability and the project time.
Resource mobilization	The process of obtaining the money, personnel and equipment necessary to run an immunization programme.
Rule of thumb	A useful principle having wide application but not intended to be strictly accurate or reliable in every situation.
Shared costs	Expenses that can be allocated to two or more departments or products on the basis of shared benefits.

Situation analysis	The initial planning step that includes identification of strengths and weaknesses of programme performance. A situation analysis identifies threats and opportunities to achievement of programme goals, through examination of both internal and external factors contributing to programme outcomes.
Straight-line depreciation	A depreciation method that charges cost evenly throughout the useful life of a fixed asset.
Strategic planning	Long-term planning (three to five years). cMYP is an example of strategic planning.
Subnational	Levels of government below the national or central government.
Surveillance	The continuous, systematic collection, analysis and interpretation of immunization-related data needed for the planning, implementation and evaluation of immunization practice.
Sustainability	The ability to maintain a system over time in such a way as to achieve programme goals with resources that are likely to be available.
SWAp	Sector-wide approach – an organizational approach, used by some governments, in which donor support and funding is pooled to support a comprehensive vision for the health sector.
SWOT analysis	SWOT stands for strengths, weaknesses, opportunities and threats. A SWOT analysis is a structured planning method used to evaluate internal strengths and weaknesses, as well as external opportunities and threats involved, for example in a project or other form of endeavour.
Synergy	The interaction or cooperation of two or more units to produce a combined effect greater than the sum of their separate effects.
Technical efficiency	This concept refers to obtaining the greatest possible production of goods and services from available resources.
Transaction cost	The costs incurred for making an economic exchange, for example the costs arising from the preparation, negotiation, implementation, monitoring and enforcement of agreements made with donor agencies.
Useful life	In capital costs, the length of time a product (e.g. a vehicle or refrigerator) can be anticipated to operate before it is likely to need replacing.
Variable cost	Costs that change in proportion to the services delivered (e.g. personnel or transport costs).
Vertical delivery system	Vertical programmes focus on one particular disease or group of diseases (such as in a national immunization programme). They consist of three components: intervention strategy; monitoring and evaluation; and intervention delivery. Responsibilities are clearly distributed, with each level being responsible for a specific area or set of duties.

1. Introduction

1.1 Context

The Expanded Programme on Immunization (EPI) is a key global health programme. Its overall goal is to provide effective and quality immunization services to target populations. EPI programme managers and staff need to have sound technical and managerial capacities in order to achieve the programme's goals.

The immunization system comprises five key operations: service delivery, communication, logistics, vaccine supply and quality, and surveillance. It also consists of three support components: management, financing and capacity strengthening.

National immunization systems are constantly undergoing change, notably those related to the introduction of new vaccines and new technologies, and programme expansion to reach broader target populations beyond young children. The EPI programme also faces external changes related to administrative decentralization, health reforms, as well as the evolving context of public-private partnerships (PPPs) for health, among others.

To ensure the smooth implementation of immunization programmes, EPI programme staff have to manage these changes. This requires specific skills in problem-solving, setting priorities, decision-making, planning and managing human, financial and material resources as well as monitoring implementation, supervision and evaluation of services.

National immunization programmes (NIPs) operate within the context of national health systems, in alignment with global and regional strategies. For the current decade, 2011–2020, the key global immunization strategies are conveyed through the Global Vaccine Action Plan (2011–2020) (GVAP) and the African Regional Strategic Plan for Immunization (2014–2020) (RSPI).

These strategic plans call on countries to:

- improve immunization coverage beyond current levels;
- complete interruption of poliovirus transmission and ensure virus containment;¹
- attain the elimination of measles and make progress in the elimination of rubella and congenital rubella syndrome;² and
- attain and maintain elimination/control of other vaccine-preventable diseases (VPDs).

The key approaches for implementation of the GVAP/RSPI include:

- implementation of the Reaching Every District/ Reaching Every Community (RED/REC) approach and other locally tailored approaches and move from supply-driven to demand-driven immunization services;
- extending the benefits of new vaccines to all;
- establishing sustainable immunization financing mechanisms;
- integrating immunization into national health policies and plans;
- ensuring that interventions are quantified, costed and incorporated into the various components of national health systems;
- enhancing partnerships for immunization;
- improving monitoring and data quality;
- improving human and institutional capacities;
- improving vaccine safety and regulation; and
- promoting implementation research and innovation.

The RSPI promotes integration using immunization as a platform for a range of priority interventions or as a component of a package of key interventions. Immunization is a central part of initiatives for the elimination and eradication of VPDs, and of the integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD) by 2025.

It is understood that while implementing the above strategies, EPI managers will face numerous challenges and constraints that they need to resolve if the 2020 targets are to be met. Building national capacity in immunization service management at all levels of the health system is an essential foundation and key operational approach to achieving the goals of the global and regional strategic plans.

In view of this, the WHO Regional Office for Africa, in collaboration with key immunization partners such as the United Nations Children's Fund (UNICEF), United States Agency for International Development (Maternal and Child Survival Program) (USAID/MCSP), and the Network for Education and Support in Immunisation (NESI), have revised the Mid-Level Management Course for EPI Managers (MLM) training modules. These modules are complementary to other training materials including the Immunization in Practice (IIP) training manuals for health workers and the EPI/Integrated Management of Childhood Illnesses (IMCI) interactive training tool.

¹ WHO, CDC and UNICEF (2012). Polio Eradication and Endgame Strategic Plan 2013–2018.
² WHO (2012). Global Measles and Rubella Strategic Plan 2012–2020.

This module (6) titled *Immunization financing* is part of Block II: Planning/organization.

1.2 Purpose of the module

The purpose of this module is to provide guidance for managers to identify and address key issues relating to costing, budgeting and financing, as well as strategic resource mobilization and allocation in order to achieve the major goals of their immunization programmes. Taking into account the trend of increased costs of vaccination programmes, immunization financing has become an even more critical component of the successful implementation of immunization programmes. The content of this module provides guidance to plan, cost and finance the components and activities required for implementation in a challenging environment.

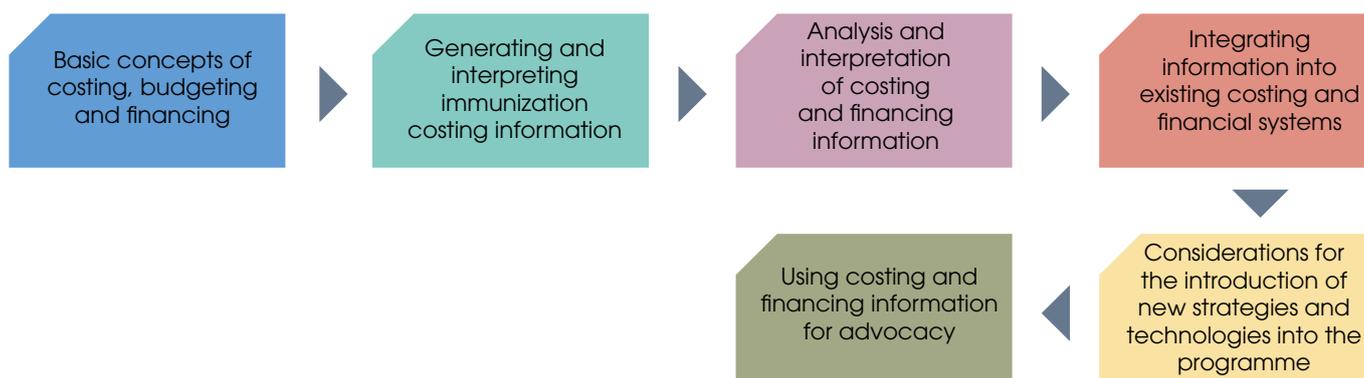
1.3 Target audience

This module is intended for managers of immunization programmes at national and subnational levels. Other staff involved in programme planning and budgeting, including in the ministries of health, planning, finance and education will find it useful too. The module may also be useful for teachers in training institutions that include immunization programme management in their curricula.

1.4 Learning objectives

At the end of this module, participants should be able to:

- discuss and interpret the basis for costing and budgeting for immunization activities;
- explain both internal and external factors influencing programme costs and financing;
- generate programme information required for costing and financing immunization activities;
- maximize the use of costing and financing information as a basis for resource needs for the programme in the short to medium term;
- develop cost and financing information as part of national comprehensive multi-year plans (cMYPs); and
- use the costing and financing information for advocacy and resource mobilization.



1.5 Contents of the module

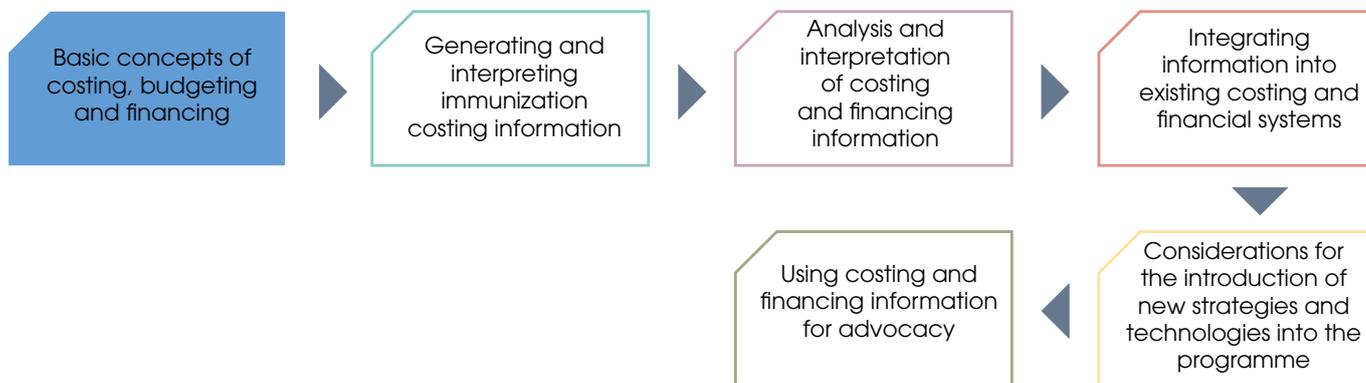
This module contains the sections shown below.

1.6 How to use this module

This module has been designed for self-study and for group work. Each section is introduced by the learning objective. Explanation of key concepts, procedures and tools related to the relevant subjects has been provided. Practical exercises at the end of each section allow users to test their acquired knowledge.

It is recommended that users work through the module step by step in view of the linkages across modules. Each section may also be used independently, allowing users to learn at their own pace. Users are encouraged to read all the sections and complete all exercises to generate the most effective learning results.

Reference to the glossary will be useful for any unfamiliar terms in the module.



2. Basic concepts of costing, budgeting and financing

2.1 Objective

The objective of this section is to provide the user with an understanding of the financial and costing aspects of immunization programme planning, as well as the benefits of such planning processes. This section introduces WHO's comprehensive multi-year plan (cMYP) process as a key tool in the planning, costing and financing of immunization programmes. Explanation of key terms and the interrelationships of concepts will help users gain a clearer understanding of the basic concepts covered in this module.

2.2 Planning, costing and financing national immunization programmes

Essential to the planning process of a national immunization programme (NIP) is the costing and budgeting of scheduled activities. The proper analysis and use of financial information can provide valuable insights that can help develop a comprehensive and sustainable financial plan. Generally, this process helps in:

- Identifying trends in past resource usage in order to estimate future needs.
- Matching available resources to the activities planned by the programme.
- Monitoring the efficient use of resources and identifying potential cost savings within the programme.
- Providing information related to the modification of planned activities and the prioritization of activities and strategies based on available resources (refer to Module 4: *Planning immunization activities*).
- Generating inputs into programme analyses such as cost effectiveness and cost benefit analyses in order to assess the most efficient strategies for improving coverage.

- Providing inputs into resource mobilization and advocacy efforts towards financial and programmatic sustainability.

2.3 The immunization programme planning process

A well-developed plan is a vital management tool to define the goals, objectives and activities of an immunization programme and to monitor its performance over time. A framework for the cMYP for immunization programmes³ has been developed by WHO to support countries in their planning process.

As a strategic plan, the cMYP helps to articulate national goals, objectives and strategies for three to five years based upon situational analysis findings (refer to Module 4: *Planning immunization activities* for more information on situational analyses). Developing a cMYP presents an opportunity to consolidate all intervention plans into a single document that addresses global, national and subnational immunization objectives and strategies, and also evaluates the costs and financing of that plan. The cMYP integrates common activities related to polio, measles, maternal and neonatal tetanus (MNT), injection safety and routine immunization (RI), etc. into one plan to avoid duplication and the need for separate plans.

The cMYP will help countries translates global and regional goals into national programmes. It addresses all components of the immunization system relevant to the country, including service delivery, programme management, human resources, costing and financing, vaccines and logistics, surveillance and reporting, as well as demand generation.

The RSPI recommends countries develop costed comprehensive plans along with annual integrated

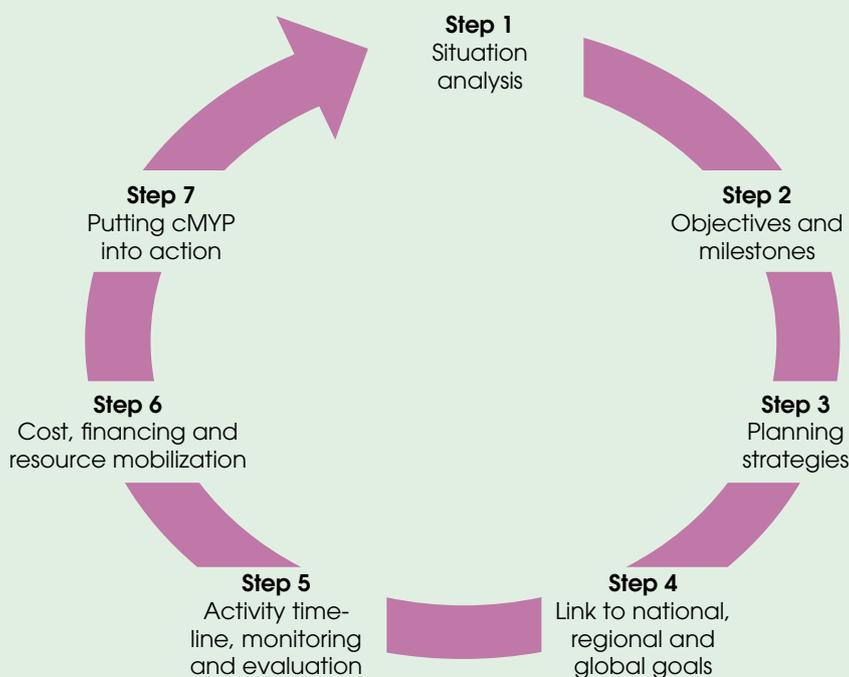
³ http://www.who.int/immunization/programmes_systems/financing/tools/cmyp/en/

operational plans and allocate adequate resources for their implementation. WHO and partners provide technical, financial and material assistance for the development of cMYPs and integrated operational plans.⁴

The cMYP process, as well as the costing and financing tool, has been developed and systematically improved over a number of years, building on feedback provided by countries.

The creation of a cMYP involves seven steps (see Figure 2.1).

Figure 2.1 The seven steps of the cMYP process



Step 1: Situation analysis

The situation analysis lays the basis of the cMYP process. This step involves the collection and review of background information of the country and the health sector in general, as well as the immunization system in particular. Background information such as landscape and climate, administrative and political structure, demography, social and political context as well as public expenditure management are reviewed. Information on the health sector, such as its governance, details about the health workforce, finance and service delivery, also help in determining how well the programme has performed (refer to Module 4: *Planning immunization activities* for more information on situation analysis).

Focusing on the immunization system, the situation analysis is separated into three areas, all of which overlap:

- routine immunization
- accelerated disease control initiatives
- analysis of immunization system performance.

The situation analysis concludes with the development of a SWOT (strengths, weaknesses, opportunities, and threats) analysis summarizing the trends in the country and helping identify priority objectives and strategies for the immunization programme. Evidence for assumptions and projections as well as areas where programme improvements are needed are revealed.

Step 2: Objectives and milestones

The aim of this step is to develop national goals, objectives and milestones, and to prioritize them based on the evidence from the situational analysis. A country's national health plan (NHP) may provide guidance on setting priorities in a country setting. In general, priorities are set according to:

- **Impact:** The long-term effect of the proposed interventions on health (usually measured by reduction in morbidity and mortality).
- **Strategic value:** The extent to which the proposed interventions are supportive of national and international values, goals and strategies.

⁴ For more information about how to obtain such support, please contact the WHO focal points on immunization financing. Further information is available at: http://www.who.int/immunization/programmes_systems/financing/en/

- **Equity:** How the proposed interventions will reduce gaps in coverage between different population groups.
- **Efficiency:** The extent to which the proposed interventions represent value for money, in terms of achieving public health impacts for the lowest costs.
- **Feasibility:** The extent to which there is institutional and financial capacity for implementation.

Setting health priorities enables planners to identify strategic directions (main areas of focus) for the cMYP.

Step 3: Planning strategies

The aim of this step is to determine appropriate strategies and key activities to achieve the objectives. Identified strategies will determine how the objectives and milestones will be achieved.

Building on earlier steps, consideration should be given to how strategies link to health system building blocks and the broader health sector strategy – global, regional and national. The closer these strategies are aligned, the greater are the prospects that immunization strategies will be supported and sustained through policy and financial commitment.

Focusing on the immunization system component, major strategic areas to be considered include:

- programme management
- human resource management
- costing and financing
- vaccines, cold chain and logistics
- monitoring, surveillance and reporting
- immunization services delivery (how to best reach beneficiaries)
- demand side strategy.

Specific activities need to be identified for the various strategic areas, describing how the objectives will be achieved in a defined timeframe.

Step 4: Links to national, regional and international goals

All global and regional and national goals are achieved through local efforts. The aim of this step is to compare and check national immunization activities against those outlined in the GVAP, regional targets and the national health sector strategy, thereby allowing the cMYP to contribute to the achievement of national and international health goals.

Step 4 of the cMYP process supports and facilitates integration by enabling stronger alignment with national, regional and international strategies for immunization and health system strengthening. This step is also a way to check on the quality and alignment of the plan (e.g. by determining whether certain health sector strategies have been overlooked) before proceeding to other, more detailed, steps.

Step 5: Activity timeline, monitoring and evaluation

The aims of this step are:

- To list the main activities identified in earlier steps in an activity timeline.
- To develop a national monitoring and evaluation (M&E) framework that enables the tracking of progress towards the goals and objectives of the cMYP.

Overall, through this process the cMYP is made a live document by enabling annual and mid-term corrections of strategies and activities, based on reviews of milestones and targets.

The M&E framework should demonstrate clear linkages in a results chain that extends from main inputs and activities to system outputs, to coverage outcomes, and finally to health impacts.

Step 6: Cost, financing and resource mobilization

The aim of this step is to estimate the current and future cost and financing of the cMYP objectives, and to conduct scenarios and identify strategies that will improve the financial sustainability of the programme. Definitions of key terms relating to costing and finance are provided in subsection 2.4.

This is a complex step requiring detailed cost information as well as an understanding of a country's economic and health financing context in order to:

- cost the cMYP objectives
- project sources of financing and conduct a gap analysis
- develop alternative costing and financing scenarios
- quantify Gavi co-financing requirements.

Detailed information about input and activity costs is required, including the following components:

- vaccines and injection supplies (routine and campaigns)
- personnel costs
- vehicles and transport costs
- cold chain equipment, maintenance and overheads
- operational cost of campaigns
- programme activities and other recurrent costs
- other equipment needs and capital costs
- building and building overheads.

A well-conducted financial analysis will demonstrate the relationship between resources and EPI outcomes; it presents the consequences of unfilled funding gaps to immunization performance. A good analysis allows the cMYP to be used as an effective instrument for resource mobilization and ensure reliability of such resources when dealing with national officials and partner organizations. One advantage of the cMYP process is that cost and financing are put together. Specifically, what funding is available for which strategy and by which partners is indicated. Financial analysis conducted through the cMYP furthermore allows for more realistic expectations with regard to the availability of resources and increases the chances for country ownership of the planning process.

Step 7: Putting cMYP into action

At step 7, the development stage of the cMYP has been completed. The aim of this step is to put the plan into action. The following actions are useful:

- seeking governmental approval and dissemination;
- creation of an annual plan with full involvement of the subnational level;
- consolidation and integration of activities with other health priorities;
- prioritization of activities for specific geographic areas;
- linking to subnational plans (provincial, regional or state-level immunization plans as well as health facility micro-plans); and
- creation of monitoring and supervision plans allowing for annual review.

Annual immunization plans or annual workplans: As the cMYP is for a multi-year period, an annual implementation workplan (AWP) should be developed. The AWP includes detailed planned annual activities, costs and a total budget for the year. Information is normally aggregated from district micro-plans. The annual plan should be developed with the full involvement of the subnational level, ideally at an annual review and planning meeting.

Annual district immunization micro-plans: This operational plan is derived from annual workplans. It should contain detailed activities for service delivery, and costs, and a total budget for a specific year.

2.4 Costs, costing, budgets and expenditure

The starting point of any financial analysis is cost analysis, which reviews the costing, budgeting and expenditures of immunization programmes. Before moving on to this section, it is necessary to clearly define these terms as they are often confused in the financial planning process.

Cost: What is forgone to acquire an item. In most cases it is the amount that needs to be paid or spent to buy an item, usually denominated in monetary terms.

Total cost is equal to the quantity of the item multiplied by the unit price. Economics distinguishes between financial cost and economic cost. This module focuses on financial costs only, but it is important to have a basic understanding of both concepts.

- **Financial cost** is the monetary value of a good or service used in the delivery of the immunization programme. It is the price paid for resources used (e.g. the cost of vaccines or the salary of the vaccinator). This is the amount often indicated on invoices and recorded in

accounting records. Estimation of financial cost is used for budgeting and financial feasibility analysis.

- **Economic cost** is the value of benefits that would have been obtained if the resources used in a given activity, intervention or programme were invested in the next best alternative forgone. Usually, this is the value of benefits of the opportunities forgone. The concept of economic cost is useful when considering that there are other possible uses of the same resources.

Costing: Immunization services can only realize their potential for improving the health of children with adequate and reliable funding. Strategic planning for immunization requires credible information about how much is being spent on the programme, on what it is spent and from what source, and what resources will be required in the future to maintain the programme. Costing provides an answer to these questions by estimating the actual value of goods or services used for the immunization programme. Costing includes the following steps:

1. Estimating current programme costs by type of costs (e.g. personnel training, vaccines, operations, etc.).
2. Projecting future resource requirements over the planned time horizon.
3. Estimating current programme financing (both sources and amounts).
4. Projecting future financing levels and patterns over the planned time horizon.
5. Estimating financing gaps by comparing resource needs with available financing, identifying strategies for improving financial sustainability.

Example: Expenditure versus cost

Assume your programme spends US\$ 1000 on vaccines in one year, but the amount of vaccines purchased provides for two years of services. In the first year, US\$ 500 worth of the vaccine is used to immunize children. The remainder stays in the warehouse.

In this example, the (annual) cost of the vaccine your programme actually used is US\$ 500. However, your total expenditure is US\$ 1000.

Understanding the costs of your programme and having reliable costing data help programme managers identify the major cost drivers of their programme, relate better to programme expenditures, better plan the future resource requirements and identify possible areas where cost savings can be made (e.g. by improving efficiency).

Budget: A budget is a detailed plan for the future showing which financial resources will be needed, for what purpose and by when. The budget is the formal financial plan that indicates how resources are to be allocated to different activities and areas of the immunization system. Budgeting as a process, involves comparing available financing with the resources needed.

In order to develop a comprehensive immunization budget (i.e. by using the cMYP costing and financing tool), managers need to calculate the full costs of the programme elements that make up a specific immunization service activity, including those that may not be obvious (e.g. costs that are shared with other departments). For a budget to be most useful one must compare it with the actual activities and expenditure at the end of each budgeting period. Questions to be asked at that point include: What amount of money did you actually receive and how did you spend it? What were the major discrepancies? How will this change the budget next time?

Expenditure: This is the amount of money actually spent in a period of time (e.g. the annual amount spent on vaccines or per diems). In order to conduct good financial analysis, it is important not to mix up expenditure and costs.

There are cases in which expenditures may be different from amounts included in the budget. The following scenarios may apply:

- **Expenditure < budgeted amount:** This may be due to the immunization programme receiving insufficient funding; or the programme not receiving sufficient supplies to conduct services.
- **Expenditure > budgeted amount:** This may be due to unplanned purchases not included in the budget having occurred (e.g. due to an epidemic).

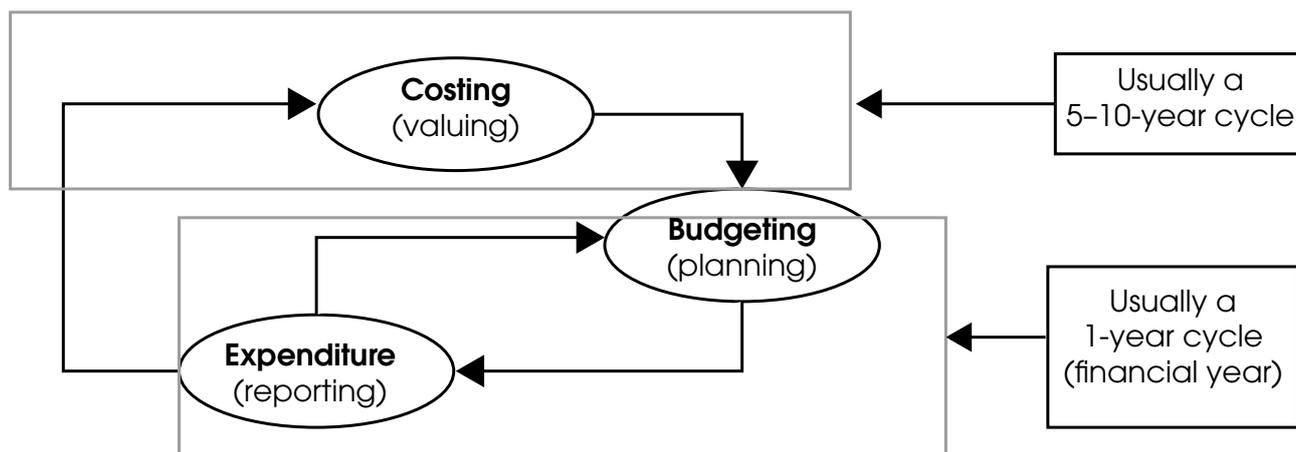
Expenditure is often used as the basis for forecasting the following year’s budget. Caution should be exercised as under-expenditure may lead to under budgeting. An analysis of expenditure provides useful information and can help identify areas where budgeting can be improved. For example, it can indicate fluctuations in spending, possible variations in donor contributions, as well as the regularity of funding flows.

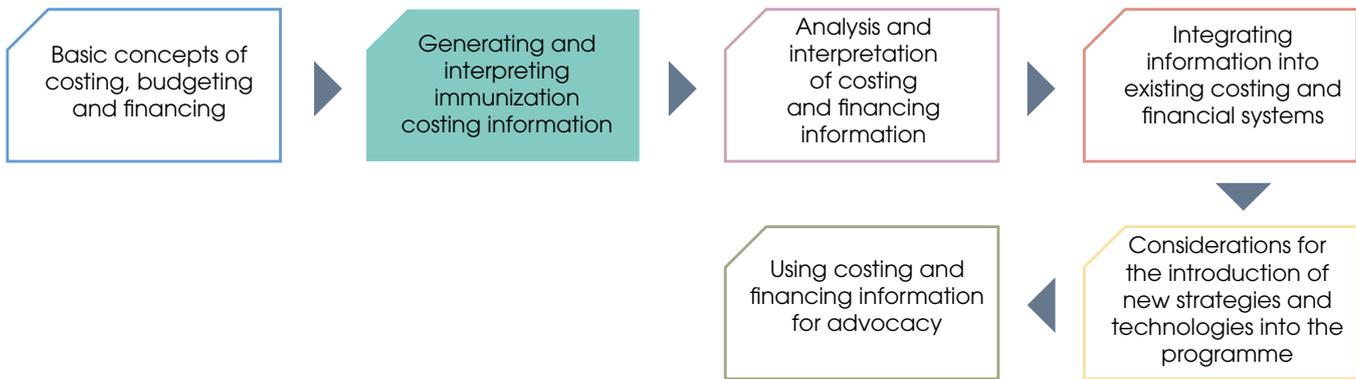
Finance: The set of activities dealing with the collection and use of the programme’s funds, i.e. its money and other assets. Finance also involves determining whether the funds of an organization are being used properly. Through financial analysis, organizations and programmes can take decisions and corrective actions towards the sources of income, expenses and investments that need to be made in order to deliver services they planned.

2.5 Linkages between costing, budgeting and expenditure

Costing, budgeting and expenditure are interlinked and work together. They are part of a cycle (see Figure 2.2) in which information from one process can be used to guide another.

Figure 2.2 Relationship between costing, budgeting and expenditure





3. Generating and interpreting immunization costing information

3.1 Objective

The objective of this section is to introduce the user to different types of costs and show ways of calculating and estimating data required for the costing and budgeting process. The section also introduces the cMYP costing and financing tool that allows for the automatic calculation of inputs from the immunization programme. After completing this section, the user should be able to generate and interpret costing information and have a general understanding of the functions of the cMYP costing and financing tool.

3.2 Generating information on programme costing

Good costing data can provide valuable information for national decision-makers and development partners. At the country level, a good cost analysis can help programme managers prepare a realistic financial plan for a particular year as well as for the long term. Long-term planning may require taking into consideration depreciation or inflation factors.

3.2.1 Costs

Costs can be viewed in several different ways to assist overall programme planning. In particular, programme costs are important when considering the analysis of efficiency, alternative delivery strategies, shared costs, budgetary planning, and the projection of financial needs as the NIP adds new features, including new vaccines. Estimation of the costs of the NIP for the cMYP can be done in the following three ways:

- **Total estimated costs:** The total costs of the NIP, including investment and operating costs, regardless of who bears them or whether they are shared with other programmes. This includes the annual costs of capital investments, spread over the lifetime of the purchased items (see explanation below for more information).

- **Programme-specific costs:** These costs are specifically for the delivery of immunization services, in addition to the costs shared with other health activities, regardless of who pays for them (e.g. vaccines, supplies, cold chain, surveillance).
- **Recurrent costs:** Costs that need to be covered incurred on a continuing basis by the NIP. Usually, this is on an annual basis, either from the ministry of health (MOH) budget or with the assistance of donors or lenders.

There are two types of costs that can be incurred in immunization programmes:

Capital costs: These costs derive from major assets that have a useful life of more than one year. It describes the cost of assets that are not consumed/used up within one year or that have to be replaced every year. Capital cost categories include buildings, vehicles, cold chain equipment and other immunization specific equipment (e.g. waste disposal).

When equipment is procured, the full amount of the price paid is considered a capital expenditure. However, from a costing perspective, capital costs get accounted for on an annual basis by spreading them over the realistically assumed useful life of the equipment, taking into account its decrease in value over time. As equipment is used, its value decreases over years. Depreciation is the process of recognizing this decrease in value. The quick way to calculate depreciation is by dividing the value of the new equipment by its number of useful life years. This is called straight-line depreciation.

Example: Straight-line depreciation of capital costs for a vehicle

Toyota Land-Cruiser 4x4:	Unit price (new)	= US\$ 50 000
	Useful life	= 5 years
	Unit value after five years	= zero
Annual financial cost of a Toyota Land-Cruiser 4x4:		US\$ 50 000/5 = US\$ 10 000

Recurrent costs: These costs correspond to inputs that are consumed/used up or replaced in one year or less. Recurrent costs examples include vaccines, injection supplies, personnel, transport (fuel), maintenance and overhead, training, social mobilization, surveillance and monitoring. The MOH needs to provide resources on an annual basis to cover the recurrent costs for the NIP. Recurrent costs can be further differentiated into variable and fixed costs.

- **Variable costs** are directly related to the number or volume of work. For example, an increase in the number of personnel will mean an increase in costs with each addition. Other examples include vaccines, fuel for vehicles, etc.
- **Fixed costs** remain the same, regardless of more or less busy working periods (e.g. electricity costs for buildings, fuel for cold room generator, etc).

Exercise 1a

Task 1: Review the three pictures below.

Task 2: Determine the immunization programme component each picture represents (refer to immunization programme five components (Module 1: *A problem-solving approach to immunization services management*)).

Task 3: Which capital or recurrent costs can you identify based on the images below and associated with elements of the programme component you have identified? List them in the table under the respective cost column.



© WHO

Picture	Recurrent costs	Capital costs
Left	1. 2 (...)	1. 2. (...)
Middle	1. 2 (...)	1. (...).
Right	1. 2 (...)	1. 2. (...)

3.2.2 Calculating immunization specific and shared costs

The immunization programme operates within a more complex national health system. Some of the inputs and activities used are not solely linked to immunization.

Direct costs/immunization related costs: These costs are directly incurred by immunization specific inputs and activities that are solely used for this purpose. Immunization specific recurring inputs include vaccines, injection supplies, full-time personnel for the NIP (including outreach and supplementary immunization activities – SIAs), transport costs only incurred by the NIP (e.g. fuel and maintenance cost of the vehicles), training activities, social mobilization and disease surveillance. Immunization specific capital inputs will also include cold chain equipment, immunization waste disposal, etc.

Shared costs: These costs involve inputs provided by the general health system in which the involvement of EPI is less than 100% and for which only a portion of the costs is attributable to the immunization programme. This can include the partial costs of a nurse working in a district health centre who provides both immunization services as well as other curative and preventive services. Another example would be cost of vehicles used for outreach services that include other programmes like malaria, nutrition and immunization. It is important to disaggregate the costs among the various programmes that use the resource by determining the proportion of use and calculating the cost according to the share. For our examples this would be done by taking the hours worked or kilometres travelled, and multiplying them with the salary per hour or the cost of fuel per kilometre.

Exercise 1b

You have been appointed as EPI manager of the country of Fictitia. You are to present your budget for the year 2018 to the MOH budget committee. You have in the past been accused of cost overrun, which is why you are determined to present the items below in a way that will indicate the real cost picture for your programme.

Present in a table your classification of these costs either as direct immunization related cost (D/Ic), shared cost (Sc), or not relevant to your budget (Nr).

Exercise 1c

For each classification, state your reason during presentation to the plenary.

List of items for Group 1	Cost type	List of items for Group 2	Cost type
1. Payment for transport of vaccines		16. Payment to the secretary in the office of NRA	
2. Building of structure to house cold store		17. Per diem to supervisors	
3. Cost of walk-in cold room		18. Tax on vaccine carriers	
4. EPI manager salary		19. Cost of EPI review scheduled for 2018	
5. Depreciation on clinic building		20. Procurement of vaccines	
6. Cost of attendance at EPI managers' meeting		21. Salary to cleaners in the health post	
7. Cost of procurement of trucks for vaccine delivery		22. Import duty on trucks for vaccine delivery	
8. Insurance cost for Hon. Minister's limousine		23. Cost of repair of fridge at district office	
9. Depreciation on motor vehicles		24. Cost of transport for the chairman of national certification committee for polio	
10. Fuel for vehicle for delivery of package of drugs and vaccines to health facilities		25. Cost of chairs used in vaccination room at the health facility	
11. Staff salary for nurses who spent 10% of time on immunization		26. Electricity bill at MOH building which also houses the cold store	
12. Cost of conduct of measles SIA		27. Cost of WHO/UNICEF consultant to support coverage survey	
13. Staff salaries for vaccinators at outreach posts		28. Cost of repair of the door to the cold room	
14. 14. Per diem for driver to Hon. Minister		29. Cost of repair for the road leading to the cold room	
15. 15. Cost of procurement of laboratory reagents		30. Cost of conducting post introduction evaluation of PCV	

Exercise 1d

Classify the following items either as capital expenditure or recurrent expenditure.

Use the table below for your presentation to the plenary.

Cost items	Capital expenditure	Recurrent expenditure
1. Cost of building a new cold store		
2. One time cost of training the EPI manager on a two-year masters in public health course in United Kingdom		
3. Procurement of vaccine		
4. Cost of information, education, communication (IEC) materials used for RI and SIAs		
5. Cost of vehicles		
6. Value of depreciation of vehicles		
7. Cost of training nurses for new vaccine introduction		
8. Fuel for vehicles during outreach		
9. Telephone bill for EPI manager		
10. Per diem paid for supervision trips		

In order to be able to truly reflect the total costs of a given immunization activity, it is important to include shared costs in the immunization budget. The advantage of calculating shared cost is that it allows you to demonstrate the synergy that exists between programmes as well as to reflect the true contribution of government to the immunization programme.

3.3 Developing an immunization programme budget

Once the costs of the current immunization programme have been established, the next step is to develop a budget. It is important to develop a detailed and realistic budgeted plan to ensure adequate and timely funding for programme activities/strategies.

The time horizon of an immunization budget can be:

- Short term (less than one year), for a specific project.
- Annual, for programme activities over one year (this is referred to as the AWP).
- Long term for programme activities over several years (this is referred to as the multi-year plan (MYP)).

To achieve the most effective results for the immunization programme, it is suggested to use the WHO cMYP for the development of the budget as it combines best practices in planning and budget development. The cMYP takes into account all programmatic inputs and activities and provides immunization with a clear link

between programme objectives, strategies, activities and their costs. In order to include the most accurate data, the cMYP process should build on extensive discussions within the country and with potential funding partners to facilitate securing the resources needed for implementation.

3.3.1 Budget assumptions

When developing a budget, assumptions are made about the future. Different assumptions will lead to different scenarios and budgets. It is best to clearly document and state major assumptions prominently in your budget. Assumptions are made based on a trade-off between using more complex and changeable assumptions and simpler ones that may not reflect the situation perfectly. Some major assumptions one needs to make are:

- **Prices of vaccines and other products:** These make up a significant portion of programme costs, and it is difficult to predict how prices will change in future years. Some prices, particularly those of traditional vaccines such as BCG, TT and measles, are relatively stable and will not fluctuate as much as others. When reviewing your budget each year, it is important to keep these fluctuations in mind and make modifications accordingly.⁵
- **Inflation:** Use an estimate of the inflation rate for your country based upon figures from the ministry of finance. This rate should be applied to national costs. It is general practice to assume a 2% inflation rate when local inflation rate estimates are not available.

⁵ The Vaccine Product, Price and Procurement (V3P) web platform provides a reference for vaccine prices provided by UNICEF, PAHO and self-procuring countries:

http://www.who.int/immunization/programmes_systems/procurement/v3p/platform/en/

- **Exchange rates:** You should develop your budget in the currency normally used for national planning purposes. However, consider that in most countries some procurements are made abroad; and there is need for conversion of currency between different currencies. The exchange rate will, clearly and consistently apply a fixed estimate of the currency exchange rate throughout the budget. This allows you to make adjustments in the future if that rate changes.

The cMYP costing and financing tool is accompanied by a comprehensive user guide that provides an overview of important concepts, methodologies and definitions. It also provides step-by-step instructions on how to use the tool and guidance on where to find information and how to analyse data and results. The latest version (3.8) of the cMYP costing and financing tool is available in English, French and Spanish. It was released in March 2015 and can be downloaded at:

http://www.who.int/immunization/programmes_systems/financing/tools/cmyp/en/

Table 3.1 Example of inputs and activities for costing in a multi-year plan

Component	Inputs to cost	Activities to cost
1. Service delivery	Human resources/salaries, per diem for outreach, fuel for transport, operational cost of campaigns	Supervision, training, workshops, etc.
2. Advocacy and communication	Communication posters, communication materials and media, venue of meeting with community members, transportation of community members, etc.	Social mobilization, IEC, developing of advocacy and communication plan
3. Surveillance	Surveillance equipment, lab equipment, reagents, vehicles (for active surveillances), costing the cold chain for specimen transportation, etc.	Surveillance reviews
4. Vaccine, supply, quality and logistics	Vaccines, auto-disable (AD) syringes, safety boxes, other injection supplies, cold chain equipment, vehicles, spare parts, incinerators	Monitoring, vaccine stock management activities, carrying out cold chain inventories and reviews
5. Programme management	Computers, office supplies, etc.	Meetings, planning, research, data management, EPI reviews

3.4 Costing and financing a cMYP

A multi-year plan costed with detailed and credible information is a key step in the planning process of your NIP. The recommended cMYP process includes costing and financing assessments linked to the relevant planning cycle as well as with other programmes, and includes scenarios and strategies for financial sustainability.

3.4.1 The cMYP costing and financing tool

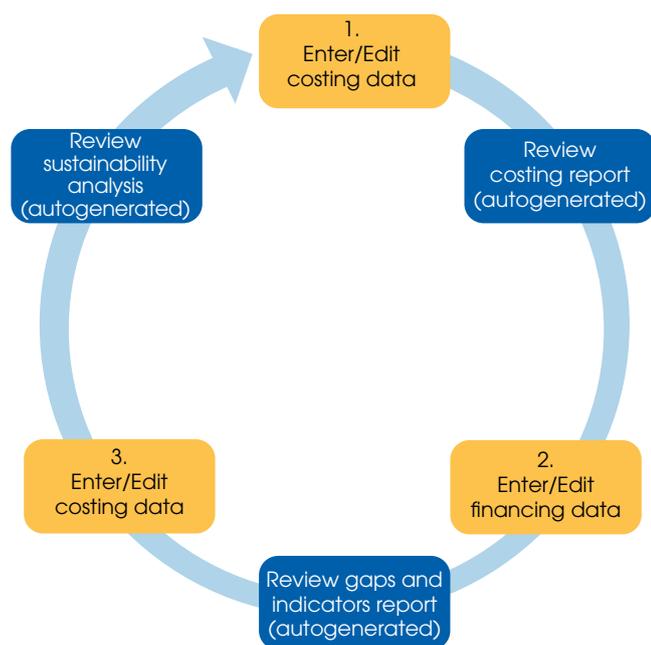
The cMYP costing and financing tool, was designed to help countries undertake the costing and financing of a cMYP with the least amount of effort. The purpose of the tool is to make it easier for the planner to estimate the past costs and financing of a NIP, and to make projections of future costs, future resource requirements and future financing needs to achieve programme objectives, and to analyse the corresponding financing gaps.

The cMYP costing and financing tool contains 17 work sheets allowing for:

- Input of data related to information about the country and its immunization programme, Gavi co-financing and future financing of the programme.
- Auto-generated outputs providing results of calculations and analyses.
- References providing information about the tool, navigation guides and other information.

Figure 3.1 illustrates the different steps for entering and reviewing data through the cMYP costing and financing tool.

Figure 3.1 Steps involved in entering and reviewing data in the cMYP costing and financing tool



A narrated introduction providing a detailed explanation of all the functions of the cMYP costing and financing tool and the steps required to enter and interpret data is available at the same WHO web resource as the cMYP costing and financing tool itself.

3.4.2 Basic methodologies for costing the cMYP

When providing information to the cMYP costing and financing tool, estimations have to be made to account for likely expenses in the future. The costing and financing tool uses three methods for costing the multi-year plan. These are summarized in Table 3.2.

The first method relates to key components or “ingredients” of the immunization programme. Vaccines, injection supplies, personnel, transport, vehicles and cold chain equipment account for the bulk of the cost (about 80% in total). Considerable emphasis is given to assessing these inputs accurately, to avoid inaccuracies in estimation which will translate into a significant over- or underestimation of total costs.

The second method is to estimate the costs of certain categories of inputs based on some agreed “rules of thumb”. This is done automatically in the tool and applies to injection supplies, cold chain and vehicle maintenance, as follows:

- The use of resources for injection supplies is estimated according to immunization practices for each antigen and the number of doses of vaccines administered. For example, one dose of measles would require one AD syringe, one mixing syringe for reconstituting a 10-dose vial, and the portion of a safety box for disposing of the syringes used. Using the unit costs of each of these injection supplies, an approximate cost of supplies per measles dose administered can be calculated.
- Costs for cold chain maintenance are estimated by applying a set percentage of the capital cost of this equipment. The recommended value is 5%, but this amount can be changed when more accurate local information is available.
- For vehicle maintenance the rule of thumb is to estimate the likely maintenance costs as a percentage of fuel costs. Fuel for vehicles is likely to be the single most important input for transportation; with reasonably good records available (e.g. drivers’ log books) this is easy. Using a percentage on fuel rather than the capital cost of this equipment takes into consideration the utilization of the vehicles (more fuel consumption implies higher utilization and therefore higher maintenance needs). The recommended value is 15% but this amount can be changed when more accurate information is available.

The third method: In the costing and financing tool inputs such as training, social mobilization, IEC, surveillance and others, the rule of thumb approach is not used. Although it is possible to use the ingredient approach by counting the numbers and multiplying it with the unit cost, usually an estimation is applied based on previous costs.

Table 3.2 Summary of methods used in the cMYP costing and financing tool

Name of method	Methodology	Inputs	Activities
Ingredients approach	Quantities x price x % share of use immunization	Vaccines, personnel, transport, vehicles, cold chain equipment	
Rules of thumb	Immunization practice; fixed % of the value of cold chain equipment; fixed % of fuel costs	Injection supplies, cold chain maintenance, vehicle maintenance	
Past spending	Lump sum spending	Ice packs for outreach activities, vaccination cards, other inputs	Planning, meetings, training, social mobilization, IEC, surveillance and other activities

3.4.3 Suggestions on the costing procedure

Collaboration with colleagues in the MOH, the ministry of finance, as well as development partners supporting immunization data collection and analysis, increases the reliability of the costing exercise. Continuous involvement of the interagency coordinating committee

(ICC) will be vital to complete these diagnostic sections and validate the costing and future funding availability.

Below are some suggestions for how the cMYP drafting team might proceed:

1. Read the manual to the cMYP costing and financing tool to understand the methodologies, key concepts and terms, or refer to the narrated introduction to the tool. Follow the step-by-step instructions on how to use the tool and where to find data. The cMYP costing and financing tool and manual, as well as the narrated introduction, are available at: http://www.who.int/immunization/programmes_systems/financing/tools/cmyp/en/

2. Review the “data entry” sheet of the cMYP costing and financing tool to determine what data are needed and how best to collect them. The team might find it easier to print the entire worksheet and use it as a data collection instrument. Refer to the summary table of data and data sources included in Annex I to the cMYP costing and financing tool guides.

Figure 3.2 The cMYP data entry worksheet

3. Once all the data have been collected, these should be entered in the appropriate tables of the data entry worksheet of the tool. Review the “costing” worksheet carefully.
4. Make sure that the information entered in the cMYP costing and financing tool is guided by the national objectives and strategies identified in the multi-year plan (refer to step 3 of the cMYP user guidelines). Make sure to enter information on the costing of inputs and activities.
5. Review the results of the costing in the costing worksheet. It is possible that this will trigger strange results. This could be due to errors in the data, data entry mistakes or omissions of required data inputs. In this case, data should be reviewed and rectified.

Figure 3.3 The cMYP costing worksheet

cMYP Component	Line Item	2012	2013	2014	Future (and Negotiated) 2015-2019
Vaccine Supply and Logistics (online only)	1	289,887,800	317,824,500	318,897,844	388,348,000
Service Delivery	2	28,988,000	34,196,380	39,046,573	90,593,000
Advocacy and Communication	3	22,099,800	22,212,480	22,222,288	82,488,000
Monitoring and Evaluation Surveillance	4	18,300,000	18,648,000	18,996,000	82,488,000
Programme Management	5	18,300,000	18,648,000	18,996,000	82,488,000
Supplemental Immunisation Activities (SIA) (includes vaccine and operation costs)	6	340,963,075	333,810,888	326,658,736	318,198,000
Shared Health Systems Costs	7	3175,813,810	3281,551,200	3387,289,594	3388,738,000
Grand Total		3,888,074,000	3,928,445,000	3,918,740,738	3,888,738,000

Cost Management Unit	Line Item	2012	2013	2014	Future (and Negotiated) 2015-2019
Vaccines (online vaccine only)	1	289,887,800	317,824,500	318,897,844	388,348,000
Traditional	2	28,988,000	34,196,380	39,046,573	90,593,000
Traditional	3	22,099,800	22,212,480	22,222,288	82,488,000
New	4	18,300,000	18,648,000	18,996,000	82,488,000
Injection supplies	5	18,300,000	18,648,000	18,996,000	82,488,000
Personnel	6	18,300,000	18,648,000	18,996,000	82,488,000
Salaries of full-time NF health workers (immunisation specific)	7	18,300,000	18,648,000	18,996,000	82,488,000
Fee-for-service outreach activities/mobile teams	8	0	0	0	0
Fee-for-service for supervisors and monitoring	9	0	0	0	0
Transportation	10	17,887,800	18,086,000	18,284,200	81,798,000
Field site strategy (incl. vaccine distribution)	11	11,600,000	11,701,000	11,802,000	47,100,000
Outreach strategy	12	6,490,000	6,580,000	6,670,000	26,800,000

6. Double check the work sheets as often as necessary. Remember to save your work frequently to ensure that you do not lose data once they are entered in the tool. It is also recommended to save different versions of the costing and financing tool to enable you to go back to earlier versions.
7. Once you have finalized the costing of your cMYP, it is essential to meet with colleagues at the MOH, ministry of finance and international partners to provide them with the results of the cMYP costing for their comments and suggestions and discuss the availability of future funding to cover the costs of your multi-year plan.
8. Once all the financing information has been collected, enter these in the “financing” worksheet and review the funding gaps in the “gaps & indicators” worksheet.

Figure 3.4 The cMYP financing worksheet

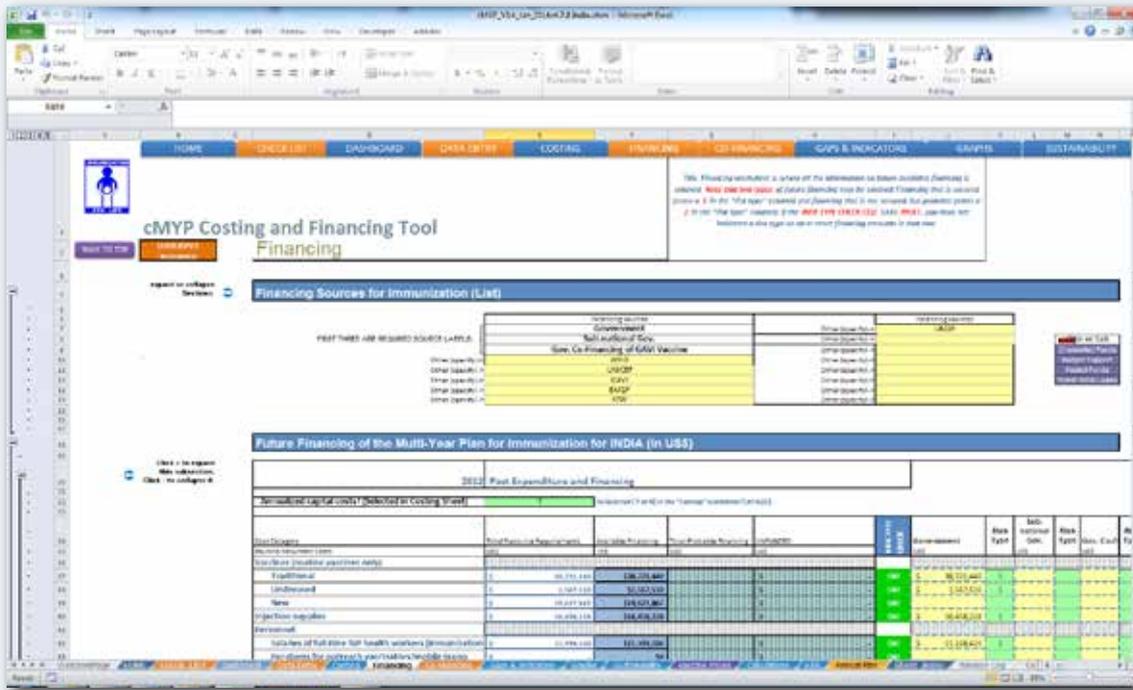
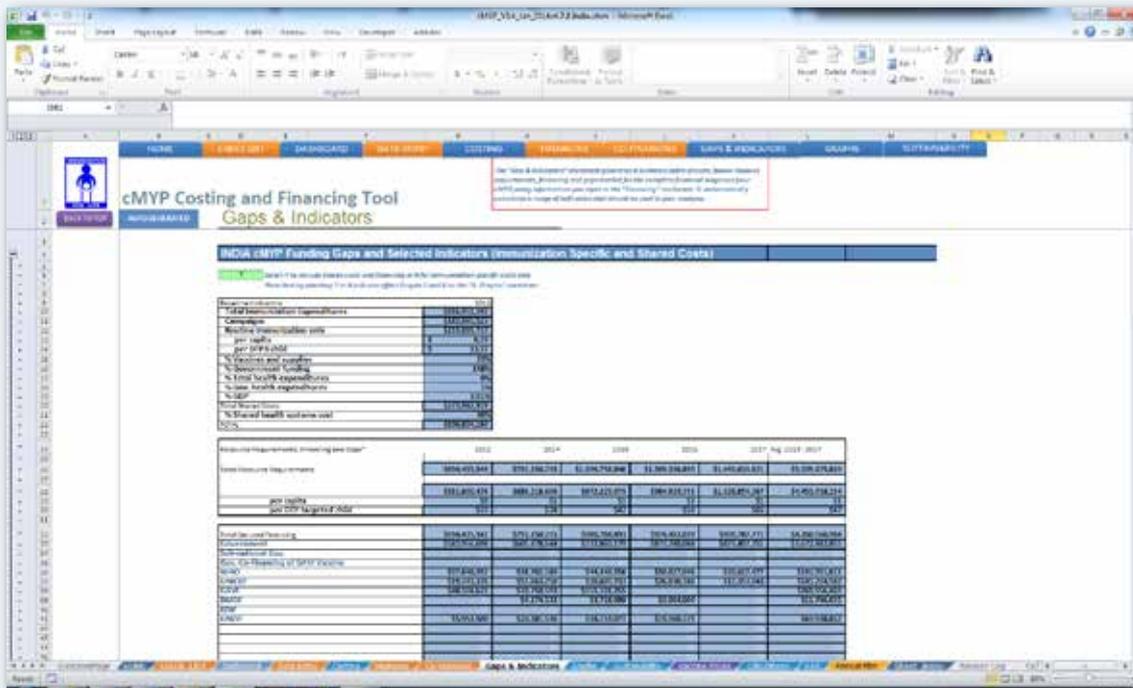


Figure 3.5 The cMYP gaps and indicators worksheet



9. Discuss the funding gaps during ICC meeting and explore funding possibilities with partners.

Tips on costing the cMYP

In order to develop a realistic and useful budget, it is crucial to work closely with administrative and budgeting staff, either within the immunization programme or the MOH finance or planning departments. When developing your budgets, you need to know and take into consideration funding procedures, rules and regulations, cash flows and funding cycles, as well as available resources.

In order to avoid errors, it is further important to remember the following:

- Be realistic and expect to make several revisions to your budget according to different funding and programme scenarios.
- Make sure that you are using the most recent official demographic data for your budgets.
- Do not use a budget to estimate cost-per-child indicators. A budget is the money you need per year, not the cost of services in a year.
- While spreadsheets are very reliable, you should always double check your numbers.
- Ask yourself if the numbers “feel” or “sound” correct based on past experience.
- Make sure that all the calculations are correct.

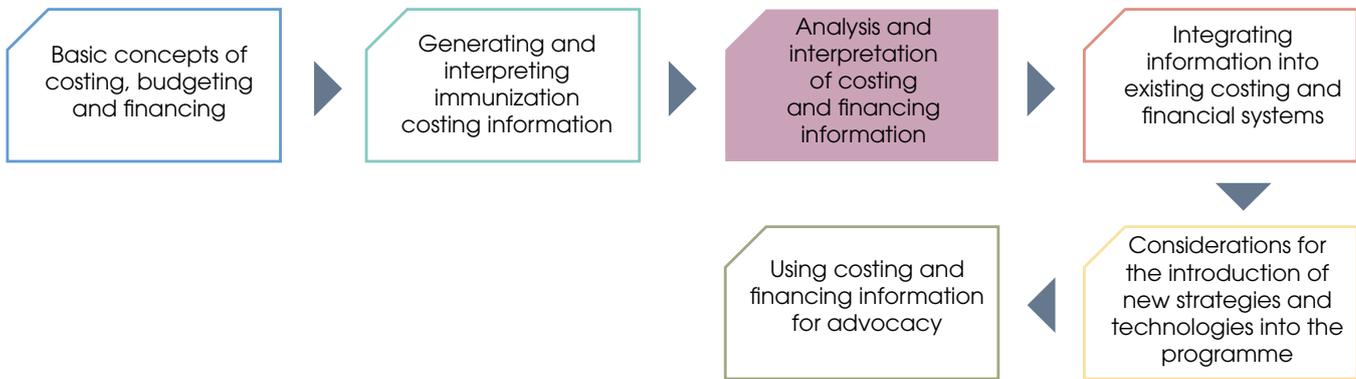
Exercise 2

Download the cMYP costing and financing tool and the narrated introduction to the tool from the WHO website at: http://www.who.int/immunization/programs_systems/financing/tools/cmyp/en/

Task 1: Watch and listen to the narrated introduction to the tool.

Task 2: Form small subgroups within your groups and review the tool to familiarize yourself with it.





4. Analysis and interpretation of costing and financing information

4.1 Objective

The objective of this section is to guide the user through the analysis and interpretation of costing information generated by the cMYP to determine the future funding needs of the NIP. After introducing the concept of financial sustainability, the user will learn how to use costing and financing information to identify, develop and prioritize different strategies and activities.

4.2 Financial sustainability of the immunization programme

Financial sustainability is the ability of a country to mobilize and efficiently use domestic and supplementary external resources on a reliable basis to achieve current and future target levels of immunization performance in terms of access, utilization, quality, safety and equity. Immunization financing should be adequate, predictable and results based.

Understanding the general funding of the health sector helps in relating to the available funding space for immunization. It is useful to know what is being spent on the programme in comparison with other health programmes. Some of the questions to consider are:

- What is the government's expenditure on the immunization programme per person targeted?
- How does the government's expenditure on the immunization programme per person targeted compare with government expenditure per person served on other health programmes?

- Has expenditure on your programme per person targeted increased or decreased since last year?
- What percentage of total government health expenditure is directed towards the NIP? Has this been increasing or decreasing over time?

4.3 Impact of funding on the sustainability of the programme

There are many factors that can have substantial implications on sustainability.

The source of funding: This may have a direct impact on the sustainability of the programme. Some partners do not have a mandate or sufficient financing for long-term support. Still, their contribution can be used to finance activities that are planned for the first year of the programme.

The time limit of the support: In general, the longer the time of the support, the better the prospects for sustainability. Some sources of funding, such as national tax revenues, may not have a time limit (in financial terms, they are available in the long term), while others, such as project grants, may be limited in time.

Predictability of the source of funds: A project whose funding is negotiated year on year brings a lot of uncertainty as opposed to a project that is fixed over a longer term. Thus, a five-year donor-supported project provides more sustainable financing than a one-year donor-supported project.

Exercise 3

Task 1: Review the potential sources of financing presented in the table below.

Task 2: Discuss within your group and reach consensus about which are the common sources supporting your immunization programmes (e.g. government, WHO, Rotary, etc.).

Task 3: Continue the group discussion to find out which of the available sources meet the following criteria of sustainability:

- ease of mobilizing resources and making use of funds
- funding has a potential impact on programme needs
- funding source is currently contributing to long-term financing of the programme.

Task 4: Make an assessment of the intensity of the criteria using the following scale: X insufficient/poor; XX sufficient/good; XXX excellent.

Task 5: Give your presentation to the plenary using the format provided below.

Financing source	Ease of mobilizing resources and making use of funds	Funding has a potential impact on programme needs	Funding source is currently contributing to long-term financing of the programme

4.4 Analysis of past information and future funding requirements deriving from the cMYP

Following the process of collecting data and entering it into the cMYP tool, you can begin to look at the findings and analyse the results that are automatically calculated by the tool. Information provided enables the user to:

- Determine the financial needs of the NIP based on different scenarios, e.g. extension of coverage of NIP, adding new technologies, renewing investments, pursuing new strategies such as national immunization days (NIDs), mop-up campaigns or adding new antigens.
- Determine the sources of financing of different components, including national or local government funds, donor or lender assistance or payment through insurance mechanisms or out of expenses.
- Determine financing gaps for the programme.



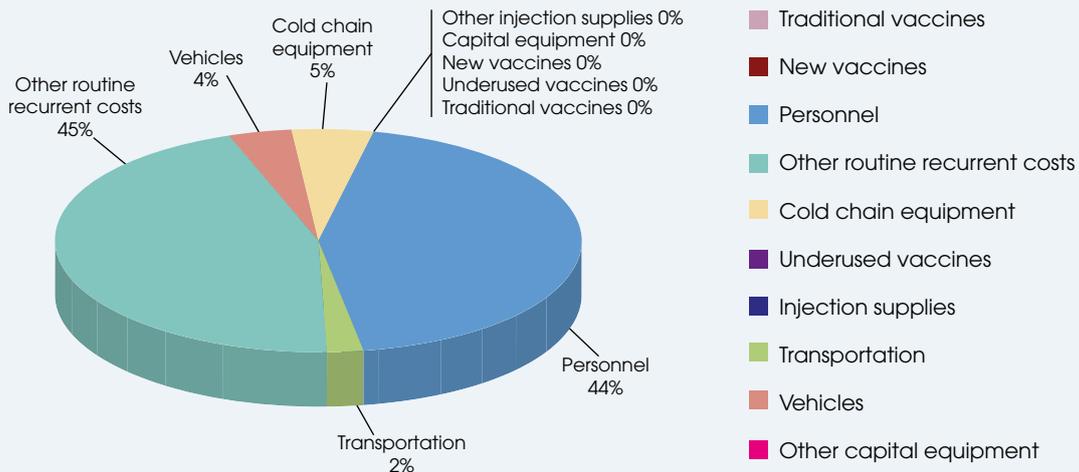
4.4.1 Analysis of past costing and financing

Once the costing and financing worksheets of the cMYP costing and financing tool are completed, a number of basic analyses can be undertaken to provide a picture of the main cost drivers to the programme, the main sources of funds, as well as potential funding gaps.

Cost profile graphs (see Figure 4.1) determine the structure of immunization costs in dollar amounts and in the relative share of the total. The information provided will help you identify the major cost drivers of your NIP and any changes across the years.

Figure 4.1 Key immunization programme costs

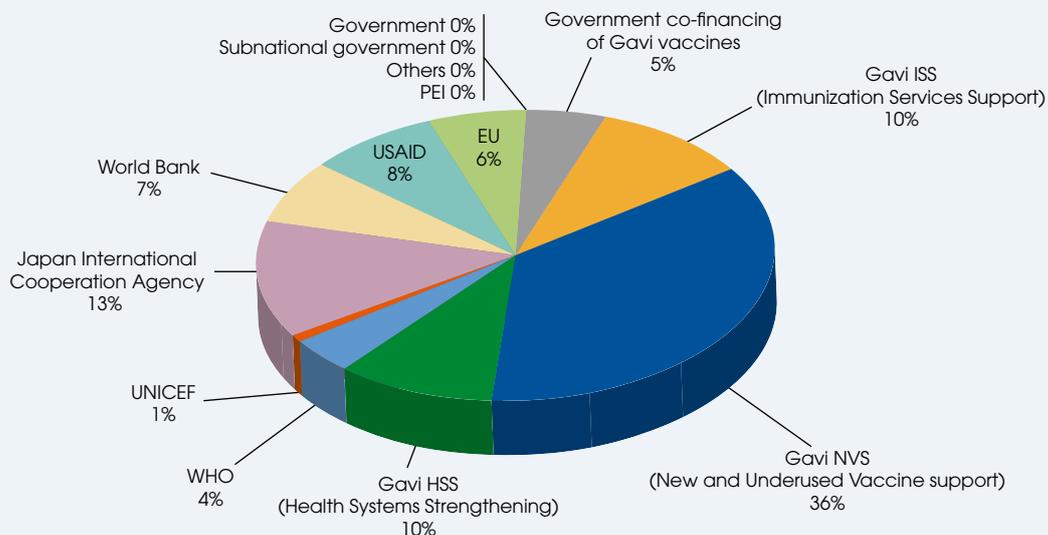
Baseline cost profile (shared costs and campaigns excluded)



Financing profile graphs (see Figure 4.2) determine the structure of NIP financing in dollar amounts and in the relative share of the total. The information provided will help you identify the major sources of funding of your NIP and provide details about any relevant changes across the years.

Figure 4.2 Example immunization programme financing profile

Baseline financing profile (shared costs and campaigns excluded)



4.4.2 Analysis of future resource requirements, financing and gaps

Once the cMYP costing and financing worksheets are completed, a number of basic analyses can be undertaken to inform about the future resource drivers of the NIP (e.g. are vaccines the main resource requirements?), the main sources of secure funding, the way resources are mobilized and spent, and provide information on the potential gap between your resource needs and the available financing of the programme.

Financing gaps may arise from improvements to the NIP in terms of coverage, equity, safety or the addition of antigens, whilst it is also feasible that simply maintaining the current NIP could lead to funding gaps. Additional immediate financial gaps may be identified as a result of the need to replace an ageing cold chain, the need to

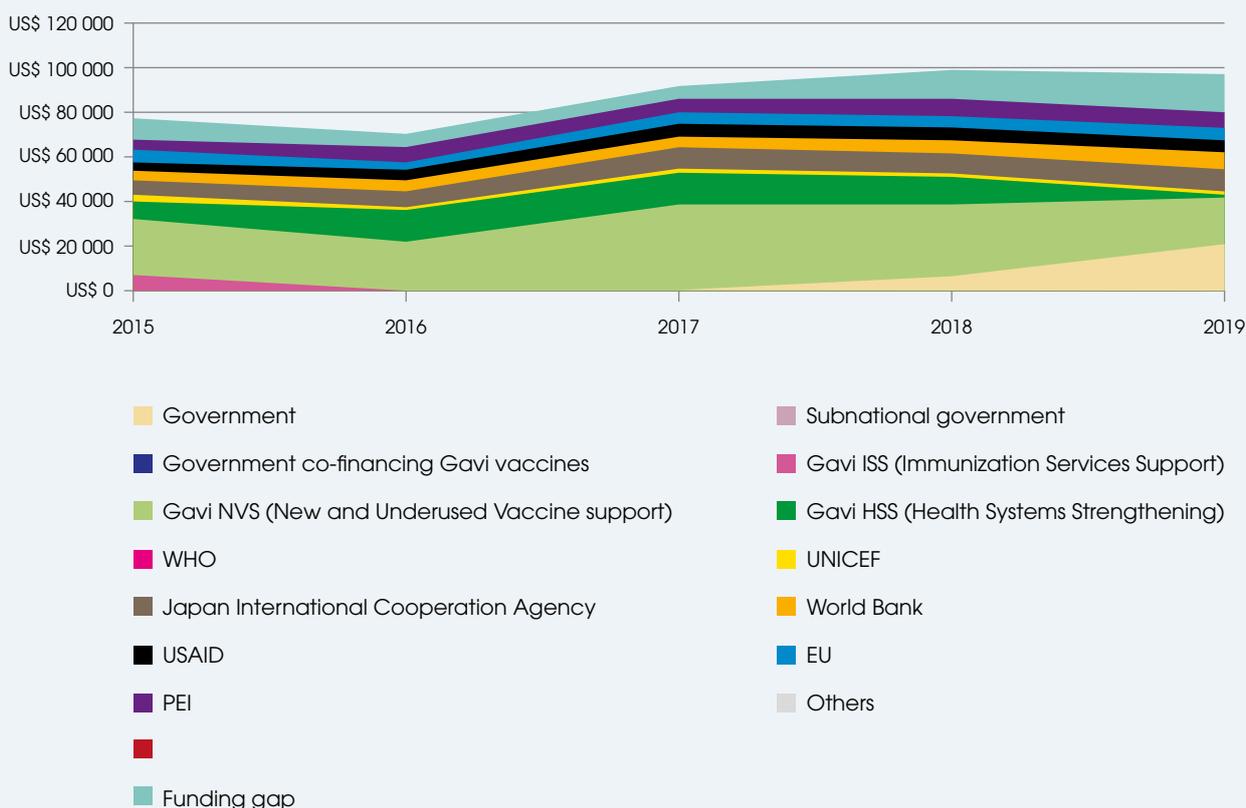
replace expiring donor or lender funding or the need to ensure the availability of adequate foreign currency to purchase imported inputs (e.g. vaccines).

The identification and bridging of funding gaps is a critical step for all NIP. With increased immunization costs due to the introduction of new vaccines, sustainable financing will be a high priority for NIP in the African Region.

Once the estimates of the NIP costs and budgets have been made, you need to consider how much money is available to implement the programme. Existing funding gaps require the mobilization of additional funding resources. Ultimately, the funds available to pay for the programme must closely match the budget for it to reach its current and future objectives.

Figure 4.3 Future secure financing and gaps

Future secure and probable financing and gaps (shared costs excluded)



4.5 Identifying feasible strategies for sustaining the programme

There are several strategies that may help improve the financial sustainability of immunization programmes. Some practical ways to consider that can help move towards sustainable financing include:

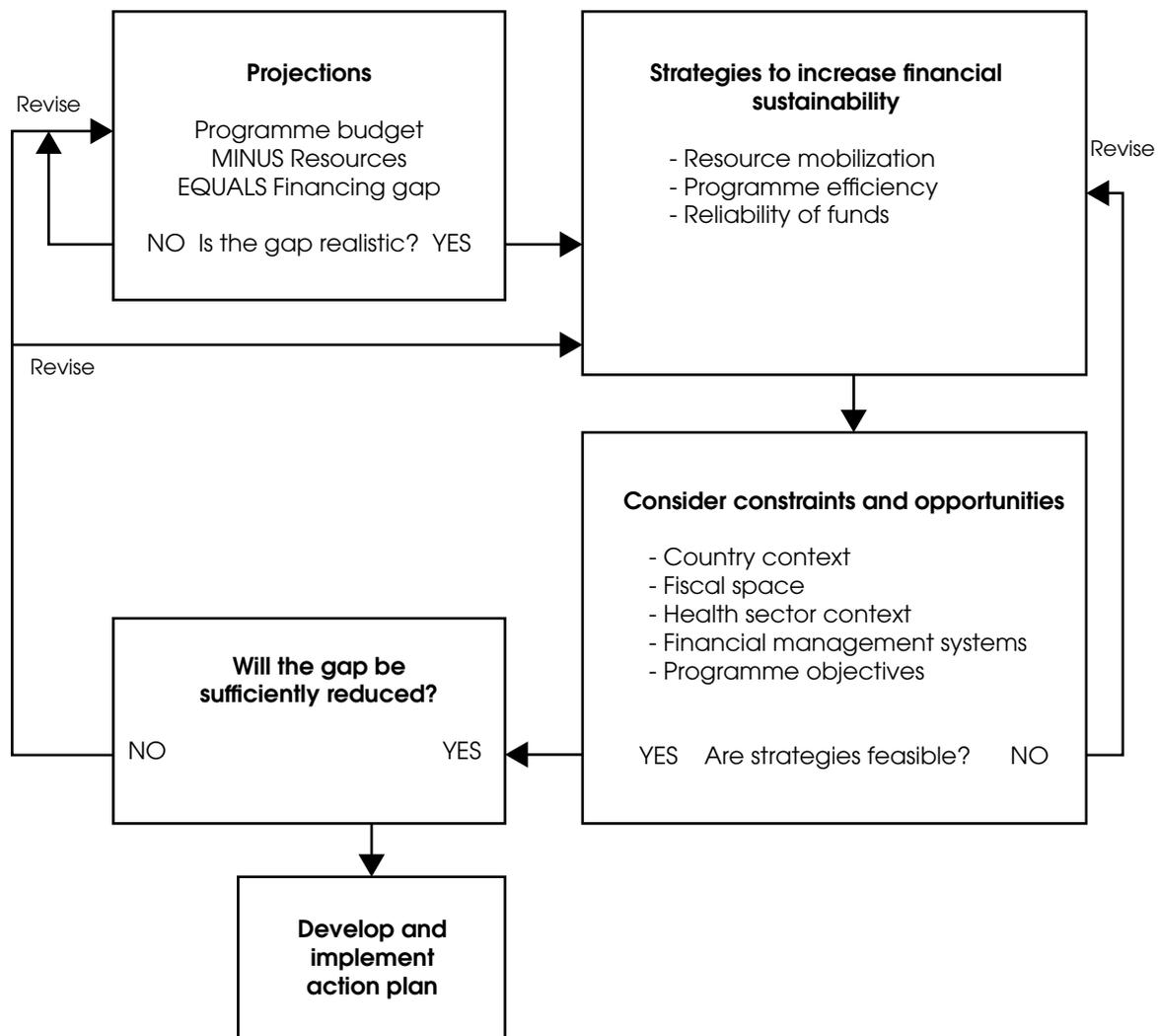
Use existing resources more efficiently: Identify main areas of inefficiencies that can be improved, including vaccine wastage, transport fleet management, vaccine procurement, etc. Purchase vaccines efficiently (through international or national competitive mechanisms). Take advantage of economies of scale.

Mobilizing resources:

- Obtain a mandate for baseline funding such as a separate budget line item for immunization (if not already in place) or the protection of a minimum budget for immunization.

- Set up a memorandum of understanding between the government and the ICC.
- Push for the allocation of resources for immunization based on cost-effectiveness of an intervention and that it provides economic and social benefits for the whole society, not just individuals.
- Commission and disseminate economic studies, such as studies on cost-effectiveness, economic burden of non-immunized population, etc.
- Engage development partners in an informed discussion of resource needs and seek structured commitments to fill key funding gaps.

Figure 4.4 Processes leading to resource gap reduction



4.6 Developing financial sustainability strategies and activities

Building on the analysis of information from cMYP and other plans, including the medium-term expenditure framework (MTEF), cost drivers and financing possibilities can help identify feasible strategy options. In some cases, following the assessment of strategic options available, you may decide to propose revising the programmes objectives to align them with available financing.

SWOT analysis can be conducted to identify internal and external factors that have positive or negative effects on the immunization programme. A SWOT analysis includes the following steps (see Table 4.1 for an example):

- **Identify strengths:** Focusing mainly on the analysis of sources of financing, make lists of existing sources of funding and what they have contributed in both value terms and categories of costs. Find out which sources of funding are most reliable or timely.
- **Analyse weaknesses:** List those sources that are unable to make longer term commitments to funding, as well as any inefficiency that exists in the programme, particularly vaccine wastage rates, etc.
- **Consider threats:** Include the phasing out of a donor, changes in government priorities away from health, declining economic fortunes for the country, etc.
- **Identify opportunities:** Consider financial sustainability, the availability of additional or increased donor partners, global initiatives.

Table 4.1 Example SWOT analysis

<p style="text-align: center;">Strengths</p> <ol style="list-style-type: none"> 1. Four donors have supported 70% of NIP programme-specific costs over the past five years. Three additional donors have made smaller contributions. 2. The MOH budget includes a line item for the NIP that covers 20% of programme-specific costs. 3. Vaccine wastage rates have been reduced by 7% over the past two years. 4. Basic EPI coverage has steadily increased from 55% in 1991 to 83% in 2014. 	<p style="text-align: center;">Weaknesses</p> <ol style="list-style-type: none"> 1. One of the major donors is likely to end its support for the NIP in 2017. 2. The African Development Bank (AfDB) loan that has supported measles vaccine purchases ends in 2016. 3. Vaccine wastage is 42% according to a study 4. conducted with the assistance of AusAID – higher than the regional average of 29%. 5. One of the five major donors is often late in providing the funding for outreach activities, disrupting them and raising the cost of maintaining high coverage. 6. Following the newly decentralized system, local government allocations of funds for supervision are irregular, causing schedules to be erratic.
<p style="text-align: center;">Opportunities</p> <ol style="list-style-type: none"> 1. The “common basket” approach to financing the MOH by donors offers an opportunity to draw on the resources of donors that have not previously supported the NIP. It also means that decisions on resource allocation will be made locally, not in distant capital cities of donor countries – so advocacy targets are likely to be nearer. 2. The MOH is beginning to negotiate with the AfDB for a new loan; support for immunizations could be built into it. 3. The poverty reduction strategy papers (PRSP) should mean a bigger share of government and donor spending coming to health and more of that money going to preventive health services for children, especially those in the poorest quintile – our target for increasing coverage. 4. The projected economic stabilization (related to stable cotton prices) should make government allocations more reliable. 	<p style="text-align: center;">Threats</p> <ol style="list-style-type: none"> 1. Additional donors may put their funds into the “common basket” rather than making their support specific to the NIP. We may be ineffective in convincing the donor-MOH decision-makers to allocate more resources from the common basket to the NIP. 2. The MOH may not include support for the NIP in the new AfDB loan. 3. The funding gap is so large that it will just frighten decision-makers rather than galvanize them into action. 4. Despite positive projections, the decline in cotton prices may continue, making government, especially the ministry of finance, reluctant to make any commitments to increase funding for programmes. 5. There is scepticism among some community leaders regarding the safety of vaccinations. 6. MOH is sceptical about the benefits of hepatitis B and Hib vaccines.

The SWOT analysis may be used to formulate some preliminary strategy options. In many cases attractive options clearly stand out in the SWOT. The goal of the exercise is to build on strengths, shore up weaknesses, take advantage of opportunities, and mitigate or at least account for threats in the options identified. Strategies can be formulated within a framework of mobilizing additional resources to address funding gaps (while ensuring that funds are available from a reliable and sustainable source), and to improve efficiency of use of resources (see Table 4.2).

4.7 Considerations for the prioritization of strategies and activities

Further review of the strategies will be needed to enable prioritization. This is based on:

- projected financial impact of each option
- projected programmatic impact of each option
- projected resources required to implement each option
- projected feasibility (likelihood of success) of each option.

For ease of comparability, each strategy is best assessed on a score of 1 to 3, with 1 being the highest and 3 the lowest score. This helps make it easier to compare across the strategies for which to prioritize.

The result of your screening, refinement and prioritization is the order of importance that you should attach to the different strategies. The highest priority strategies should be those that give you the best chance of attaining the programmatic objective with sufficient national and external resources. These strategies are then included in the country's multi-year and annual plans (including cMYP and MTEF) to support activities for implementation.

4.8 Exploring options for additional resource mobilization

Existing funding gaps can require the mobilization of additional funding resources, which may be available from various different sources, both domestic and external, some of which may be new to the programme and require the involvement of other government departments. Tables 4.3 and 4.4 provide examples of potential resource mobilization opportunities, both from established sources and through innovative strategies

Table 4.2 Example strategies to address the financing gap

Component	Programme efficiency (reduce the gap)	Resource mobilization (fill the gap)
New vaccines	Improve stock management Reduce wastage Change vial presentation Review procurement contracts	Target donors that specifically fund new vaccines Target donors that fund vaccines
Cold chain improvements	Ensure preventative maintenance in place Provide training on repairs and maintenance Implement central monitoring system	Target donors that specifically fund cold chain equipment
Tetanus programme	Ensure micro-planning implemented at the local level Use existing and successful social mobilization materials	Consider in-kind donations from the private sector Approach radio and TV stations for free air-time Approach multilateral agencies for donations

Table 4.3 Potential sources of financing for immunization services

	Domestic	External
Public and non-profit sector	<ul style="list-style-type: none"> Increasing central government budget allocations for the immunization programme Expanding the role and budget allocations of local governments in financing immunization services Exploring cross-subsidization mechanisms and prepayment schemes 	<ul style="list-style-type: none"> Mobilizing NGOs in expanding their support for the programme Expanding the participation of multilateral banks and donors in specific areas (e.g. financing for new vaccines or renewing the cold chain)
Private sector	<ul style="list-style-type: none"> Increasing the involvement of health insurance institutions Mobilizing the private sector in expanding their support for the programme 	<ul style="list-style-type: none"> Mobilizing the private sector in expanding their support for the programme

Table 4.4 Long-term strategies for additional resource mobilization Immunization

	Domestic	External
Public sector	<ul style="list-style-type: none"> National tax revenues Subnational tax revenues Debt repayment revenues, such as heavily indebted poor country (HIPC), bilateral debt relief initiatives Social health insurance Special levies (tax on tobacco, air tickets, solidarity levy on mobile phones) 	<ul style="list-style-type: none"> Project grants from bilateral/multilateral agencies Developmental loans (grant portions) Budget support
Private sector	<ul style="list-style-type: none"> User charges Organized private sector donation Community financing Private health insurance 	<ul style="list-style-type: none"> International NGOs (such as Rotary International, Red Cross etc.) Project grants from philanthropic institutions

In many cases there is more than one option available to help close funding gaps. Depending on the country context, a mix of possible financing options can be identified, taking into account the effects and characteristics of the various options.

In order to address identified funding gaps, it is recommended to review the immunization programme objectives, financing strategies and sources of funding. This helps identifying the most financially realistic strategies and activities for programme implementation.



Exercise 4

You are preparing for the introduction of pneumococcal conjugate vaccine (PCV) in your country. You have developed the cost file below. Gavi has pledged to give US\$ 1 370 000 to PCV introduction activities.

Task 1: Distribute the Gavi grant among the categories in the table.

Task 2: Justify why you allocate funds to a particular cost category (under comments).

Task 3: Calculate the funding gaps and indicate how you wish to meet your funding requirement.

Task 4: Present your group work to the plenary.

Cost category	Item	Total PCV introduction cost requirement (US\$)	Gavi PCV grant (US\$)	Secured funding from government (US\$)	Funding gap (US\$)	Comments
Training	Develop and print training manual Cascade training from national to district level	1 239 167		221 333		
Social mobilization, IEC and advocacy	Meetings with leaders, printing media, IEC	1 127 173		20 000		
Cold chain maintenance and logistics delivery	Distribution of vaccine and logistics, maintenance repairs	52 993				
Vehicles and transportation	Drivers, fuel, car hire, maintenance	500 000		106 582		
Programme management	Planning and coordination meetings, post-introduction evaluation (PIE)	178 260		170 070		
Surveillance, monitoring	Support supervision, monitoring tools	188 018		86 484		
Waste management	Orientations, refurbish autoclave and pits	182 186		132 186		
Micro-planning	Health unit and district micro-planning	194 093		99 651		
Per diem	Payment to Hon. Minister and Director-General to supervise micro-planning activities at district level	12 000				

4.9 Ensuring efficiency of resource use

National immunization programmes are responsible for using resources as efficiently as possible, while at the same time meeting standards for quality and safety, and reaching increasing numbers of hard-to-reach children. Programme costs can be kept in check by, for example, adopting the most cost-effective strategies to immunize children.

Efficiency is related to the mix and use of inputs and outputs. Impact and outcomes could include, reduced mortality rates, or increase in number of surviving infants. Efficiency has three dimensions: technical, economic, and allocative.

Technical efficiency: Obtaining the greatest possible output of goods and services from the available resources. Technical efficiency indicators allow comparing countries with respect to how much they get for what they invest in health. Technical efficiency addresses the question: How much does country A spend on health per capita compared with country B to achieve a specific level of health output? Some managers confuse the push for technical efficiency with reduction in resources for immunization. However, the aim is not to minimize resources but to ensure that these resources are effectively utilized when available.

Economic efficiency: The production of a unit of good is considered to be economically efficient when that unit of good is produced at the lowest possible cost. For example, a health facility uses a mobile strategy to reach the population living not too far from the facility (8–10 km) instead of using outreach visits to immunize the same number of target children, i.e. the same output. In this case, the economic efficiency of this facility is low as the mobile visits use up more team member per diems and more fuel for vehicles.

Allocative efficiency: A condition when all resources are assigned to projects with the highest profitability; in other words, only the projects with the highest potential profitability receive funding with the precise amount that is needed. Applying this to an immunization programme means that allocation of resources is done to the activity that guarantees the most coverage – boosting results.

A number of different methods can be used to identify areas with potential cost savings.

4.10 Monitoring progress towards sustainability

Once you have agreed on the strategies, it is necessary to use appropriate indicators to monitor progress against established targets. Examples of financial sustainability monitoring indicators include:

Percentage of government funding on immunization: This indicator refers to the proportion of government financial spending on immunization against total spending on immunization irrespective of the funding source. A similar indicator can be calculated for specific cost categories, for example the percentage of government funding for vaccines or the percentage of government funding to support the RI strategy. Note that this indicator is a very sensitive tool to use when analysing shared costs of the programme. External partners usually place high importance on seeing the share of the government's contribution in financing a programme, which could lead to them being more generous in the allocation of their share.

Immunization cost per capita: This indicator links total immunization cost or resource requirements to total population in the country and provides a sense of affordability of the immunization programme. This indicator can be compared with the total per capita spending on health in order to give a sense of the relative importance of the immunization programme within overall health sector spending.

Cost per DTP3 immunized child: This indicator links total immunization cost to the total number of children under one year of age that received their third dose of pentavalent vaccine. The number of children immunized with DTP3 is calculated by multiplying the total number of surviving infants by DTP3 coverage. A child under one year who receives DTP3 is considered to be a fully immunized child (FIC). The cost per DTP3 child is used as an approximation of the value of resources required to fully immunize a child.

Resource requirements, financing or gaps per DTP3 target child: The future resource requirements, financing and gaps per DTP3 target child are the ratios of the total projected resource requirements, financing or gaps divided by the total number of future target children to receive three doses of pentavalent vaccine. The number of pentavalent target children is calculated by multiplying the projected number of surviving infants by DTP3 coverage targets. This indicator is used to measure future resource requirements and gaps in a way that permits easier interpretation than looking at absolute values.

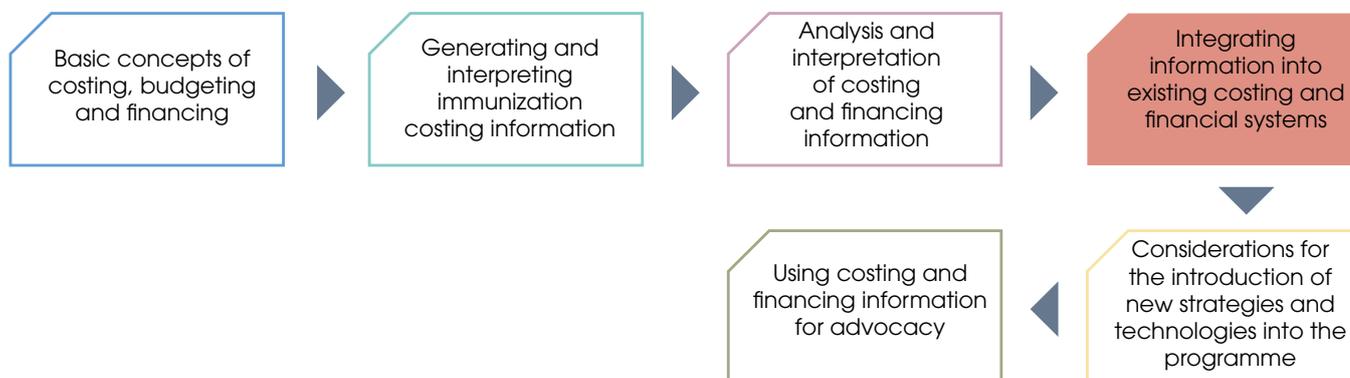
References

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World Bank (2010). Immunization financing toolkit: A resource for policy-makers and program managers.







5. Integrating information into existing costing and financial systems

5.1 Objective

The objective of this section is to provide the user with a comprehensive understanding of how information about the immunization programme is integrated into existing national health planning systems. The section provides an introduction to the linkages between the NIP and the health sector planning process. Following an introduction on the medium-term expenditure framework (MTEF), the user will learn the importance of linking the cMYP with national health plans and the MTEF and understand the differences between traditional budgeting and the MTEF approach.

5.2 Health sector reforms and health sector planning

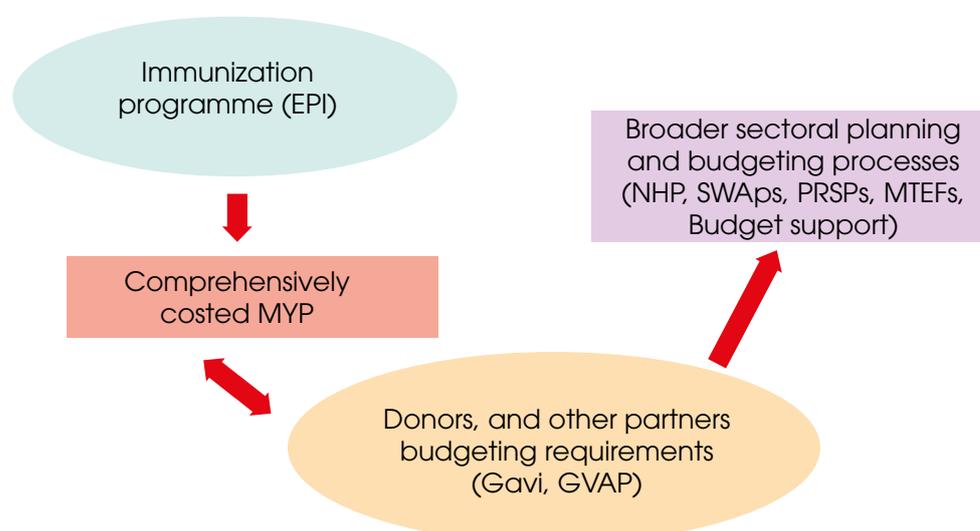
Many countries implement reforms in the health sector. These reforms include shifts to decentralized service provision and greater emphasis on devolved planning, and budgetary and expenditure responsibilities for local authorities. In parallel, many international donors have

adopted budget support of sector-wide approaches to development funding, allowing governments to allocate donor funds within an overall sector framework according to local priorities. In this new environment heavy reliance on direct donor support has rendered immunization operationally and financially vulnerable in many country settings. Every country has an overall health plan which is often known as the national health sector plan (NHP). All government priority activities in the medium term are reflected within the health sector plan. The NHP is a key document to be considered while developing your cMYP.

5.3 Linkages between NIP and health sector planning processes

The relationships between the NIP and planning, costing and financing processes, as well as relevant government processes are illustrated in Figure 5.1. It emphasizes the need for better alignment of programme costs and financing with broader health budgeting and financing processes.

Figure 5.1 Immunization programmes linkage to financing and costing requirements



The costing, financing and gap analysis information derived from the cMYP process is important information for advocacy and resource mobilization purposes for any immunization programme. This information needs to be updated on a regular basis, ideally annually. The exact length and start of the planning time period is for the country to decide, but decisions should take the following into consideration:

- The budgeting cycle of government and other donor partners to ensure alignment.
- The preparation and planning for the introduction of new vaccines or any other major changes to the NIP or when the country needs costing information for advocacy.

5.3.1 Integrating cMYPs into NHPs

The integration of the cMYP into the NHP allows for streamlining of the country's immunization and general health strategies. The cMYP could be considered to be fully integrated into the NHP if all of the following conditions are fulfilled:

1. The cMYP and NHP planning cycles cover the same time period.
2. The cMYP situation analysis provides the same information with regard to VPD as the NHP situation analysis.
3. Key immunization goals and objectives are included in the NHP.
4. Key immunization specific milestones are reflected in the NHP.
5. cMYP immunization M&E activities and indicators are incorporated into national M&E process indicators.

5.3.2 Linking the cMYP to the MTEF

The MTEF is a transparent governmental process, and economic planning tool for linking policy, planning and budgeting over the medium term (usually three years). The MTEF process combines a top-down resource envelope with a bottom-up estimation of the current and medium-term costs of existing policies. It involves an annual roll-over exercise to reflect shifts in policy and new initiatives. If successfully applied, the MTEF can improve a country's macroeconomic balance by developing a multi-year resource framework; assist in improving resource allocation between and across sectors; and improve predictability of funding for line ministries, such as health. There are three main benefits of an MTEF:

- increase in the country's macroeconomic control
- more logical allocation of resources than provided for by an annual budget
- greater confidence in all levels of government to effectively plan services.

Ideally, in countries that implement the MTEF, the cMYP for immunization will be developed within the appropriate

timeframe, so that information on programme cost and financing can be reviewed and incorporated along with other health sector funding requirements into the annual updating of the MTEF.

The MTEF allocations will largely follow traditional allocations, unless any disruptive event causes a change in this established pattern. Strong technical and political arguments for increasing efforts in health interventions other than those covered by EPI (e.g. an increased focus on fighting malaria) may move resources away from the NIP.

The actual budgeting process occurs on an annual basis. However, if the government is using a multi-year budgeting horizon, the process will follow a rolling budget period, i.e. the existing budget model will be extended once the current budget period runs out. Most countries have moved to the MTEF multi-year budgeting process. The process takes a variety of different forms in different countries. However, some basic steps occur, that define the sequence of events in all countries:

1. The budgeting process usually commences with a public expenditure review, in which a review of spending is done for the entire government. The individual health programmes provide inputs into the health sector contribution to the review. Initial top-down funding estimates of the coming year's MTEF and initial budget ceilings within which the different sectors are to operate are provided to the sector at this stage.
2. A cabinet paper (or budget strategy paper) is produced in some countries, which highlights the key focus of the government in the years covered by the budgeting process.
3. A subnational consultation on activities to be included is done as the first step in deriving the bottom-up estimates of activities to be included. This occurs at the implementation level (i.e. district level), followed by provincial levels, should such exist.
4. National level consultations, ideally based on the findings from subnational consultations, are carried out. Direct national level programme input is usually requested at this stage.
5. Development of the comprehensive MTEF is done under the coordination of the planning department.
6. Regular reviews of the MTEF draft, usually based on updated information. These reviews occur up to the budget day when budgets are officially presented to parliament.

This process usually takes the full year, with activities continuing throughout. A comparison between traditional budgeting and MTEF approach is given in Table 5.1.

Table 5.1 Comparison between traditional budgeting and the MTEF approach

Area of comparison	Traditional budgeting	MTEF approach
Fiscal discipline (keeping expenditure within the means).	Focused on short-term macroeconomic concerns (with international agencies providing the discipline in many countries).	Situates short-term macroeconomic concerns within a medium-term macroeconomic and sector perspective (three years). Involves building domestic macroeconomic modelling capacity.
Government capacity to prioritize expenditures.	Very weak because policy choices are made independent of resource realities. Spending patterns may not reflect government priorities.	Policy-making tightly disciplined by resource realities. Stronger link exists between policy-making, planning and budgeting. Spending reflects the stated priorities of government.
Performance and service delivery.	Incentives for results in terms of outputs and outcomes are generally low because emphasis is on input control.	Emphasis is on the delivery of agreed outputs and outcomes with available resources. Incentives are structured to increase the demand for evidence of good performance (accountability of sector managers for results).

5.4 Government budget processes

Government budgets are prepared according to an annual cycle. However, in order to be formulated well and to contribute to high-quality, sustainable services, they must take into account events outside the annual cycle, particularly:

- macroeconomic realities, i.e. the economic performance of the country
- expected government revenues
- longer term needs of programmes and expected government spending policies.

This is why annual budgeting cannot be performed properly in isolation but has to be linked to planning, in the context of a multi-year framework (e.g. MTEF).

5.4.1 How are resource allocations made?

Resource allocations are made in a number of different ways. In many cases, allocations are based on a historical basis. If the health sector has traditionally been receiving 10% of the total government budget, the chances are high that it will receive the same share in the coming budgetary year. On the other hand, if immunization has not been regularly receiving funds from the government in the past, it will most probably not be included in the coming budget/expenditure plan.

At times, overwhelming information on political and/or technical aspects can lead to increased resource allocation in a sector. One example is the increased financing of HIV/AIDS activities, largely due to the high political focus on the disease and its management. External pressure may also lead to modification of historical allocations. For example, an increase in resources to the social sector (including health) in countries receiving debt relief under the HIPC initiative.

It is important for immunization programme officers to generate evidence that will enable them to convince decision-makers to allocate funds for their programme. This can be achieved through continuous dialogue.

EPI allocation within the national budget cycle: The following steps apply:

1. Budget proposal

- The initial budget is proposed by the EPI manager (ideally the total amounts are derived from the latest updated cMYP).
- The adjusted proposed budget is reviewed by the MOH, the council of ministers or other budget review institutions. The revised amount is then submitted for parliamentary approval.

2. Budget approval

- The final version of the immunization budget is approved by parliament.
- The total amount of funds is approved for immunization and any additional (supplementary) budget increases are allocated to EPI during the year.

3. Disbursement

- The funds are disbursed by the treasury to the MOH for immunization.
- Funds are actually allocated by the MOH to the immunization programme.

4. Expenditure and reporting

- The available funds of the actual RI programme are spent by the EPI programme.
- The full amount of government routine EPI expenditure is reported within the accounting system and reported in the WHO/UNICEF Joint Reporting Form (JRF).

Exercise 5

Track EPI resources through the budget cycle in your country for the most recent fiscal year, by using the template below and comment on the findings.

Budget processes	Description of phase	Amount in US\$ or local currency
<p>Phase I: Proposed budget</p>	<p>1 The initial budget proposed by EPI (ideally from the latest cMYP, amount of routine recurrent government projected costs).</p>	
	<p>2 The adjusted proposed budget after review by the MOH, council of ministers or other budget review institution(s). The amount submitted for parliamentary approval.</p>	
<p>Phase II: Approved budget</p>	<p>3 The final version of the immunization budget approved by parliament.</p>	
	<p>4 Total amount of funds approved for immunization and any additional (supplementary) budget increases made during the year.</p>	
<p>Phase III: Disbursement</p>	<p>5 The amount of funds disbursed by the treasury to the MOH for immunization.</p>	
	<p>6 Amount of funds in Box 5 actually allocated by the MOH to the immunization programme.</p>	
<p>Phase IV: Disbursement</p>	<p>7 Amount of actual RI programme expenditures captured by the EPI programme. This amount includes expenditures from the supplementary budgets in Box 4.</p>	
<p>Phase V: Reporting</p>	<p>8 Amount of government routine EPI expenditures reported for Indicator 6730 of the WHO/UNICEF Joint Reporting Form (JRF) for the reporting year.</p>	

5.5 Donor trends and opportunities for linkages with the NIP processes

Existing donor initiatives offer a range of opportunities for linkages with the NIP processes.

5.5.1 Sector-wide approach

A sector-wide approach (SWAp) represents a shared approach by development partners to support country-led programmes, the scale of which is larger than traditional projects, and usually encompasses an entire sector or a large part of one. The SWAp is usually associated with social sectors of countries which have many active donors. A SWAp is neither a lending instrument nor a donor product. The SWAp is a mechanism by which development agencies and governments collaborate to support agreed sectoral programmes, which are based on a country's long-term vision for its development. SWAps have evolved as a means of strengthening development cooperation in a sectoral context, as they aim to strengthen government ownership and coordination of projects, facilitate budgeting of sufficient funds to cover operating costs, integrate capital investments into the overall budget framework, and support policies and efforts to build country capacity.

5.5.2 Budget support

This is an outcome from the SWAp process, whereby the partners provide their funds for the agreed priority of activities as elaborated in their multi-year plans. The budget derived from the activities in the sector plan reflects the costs of the agreed priorities, which the partners commit to fund. Funding is provided through a common framework; usually the government funding mechanisms. This is the preferred option of many donors and has the potential to decrease transaction costs. However, this option relies on adequate systems and financial management, and assumes an implicit acknowledgement of limited flexibility in the use of funds.

5.5.3 Poverty reduction strategy papers

Poverty reduction strategy papers (PRSPs), describe a country's macroeconomic, structural and social policies and programmes that promote growth and reduce poverty. PRSPs are prepared by governments through a participatory process involving civil society and development partners. Five core principles underlie the development and implementation of poverty reduction strategies. Strategies should be:

- **Country-driven:** Involving broad-based participation by civil society and the private sector in all operational steps.
- **Results-oriented:** Focusing on outcomes that would benefit the poor.

- **Comprehensive:** Recognizing the multi-dimensional nature of poverty.
- **Partnership-oriented:** Involving coordinated participation of development partners (bilateral, multilateral, and nongovernmental).
- **Sustainable:** Based on a long-term perspective for poverty reduction.

With respect to immunization, many PRSPs and national development plans include immunization coverage rates (e.g. DTP3) as measures of performance. However, given that the process is steered by the ministry of finance, and not the MOH, there are some challenges involved for immunization in the PRSPs process:

- Lack of awareness and ownership for immunizations.
- Lack of analytical work on pro-equity approaches to providing immunizations.
- Lack of evidence on how well current immunization strategies are reaching the poor.
- Lack of tools and capacity to plan and monitor immunization financing within the PRSP framework.

5.5.4 The IHP+ framework

The International Health Partnership and related initiatives (IHP+) seeks to achieve better health results by mobilizing donor countries and other development partners around a single country-led national health strategy, guided by the principles of the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action.⁶ Launched in September 2007, the IHP+ aims to better harmonize donor funding commitments, and improve the way international agencies, donors and developing countries work together to develop and implement NHPs.

5.5.5 The Health Systems Funding Platform

Another opportunity for immunization to link up and get a critical part of its operations funded is the Health Systems Funding Platform (the Platform). The Platform is based on the principles of IHP+ and, in line with the Paris Declaration on Aid Effectiveness, it aims to promote national ownership, alignment with national systems, harmonization between agencies, managing for results, and mutual accountability among partners, donors and countries. Through the Platform, countries are enabled to benefit from international development funding for health systems strengthening.

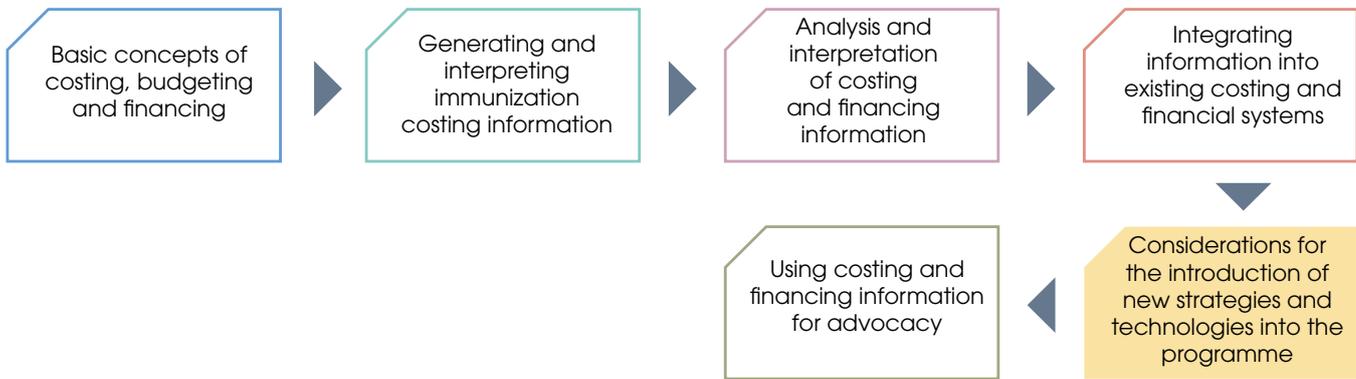
In practice, this will work differently from country to country. Work has already begun among a number of countries and Platform partners to establish baselines, benchmarks and indicators that better align health planning and programming with national priorities and existing processes.

⁶ For more information on the Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008), refer to the glossary and: <http://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm>

References

WHO (2013). WHO-UNICEF guidelines for comprehensive multi-year planning for immunization. Geneva: World Health Organization. http://www.who.int/immunization/programmes_systems/financing/tools/cmyp/en/

OECD (2005/2008): Paris Declaration on Aid Effectiveness and Accra Agenda for Action. <https://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm>



6. Considerations for the introduction of new strategies and technologies into the programme

6.1 Objective

The objective of this section is to introduce the considerations to be made when introducing new components (i.e. strategies or technologies, such as vaccines) into the immunization programme. The user will learn about the financial impact on the programme of the introduction of new components and will get an understanding of the available indicators that can be used to determine the affordability of new scenarios. Recommendations are made specifically on how newly introduced vaccines can be accommodated in established programmes by introducing them into the national planning and budgeting processes.

6.2 Introducing new programme strategies

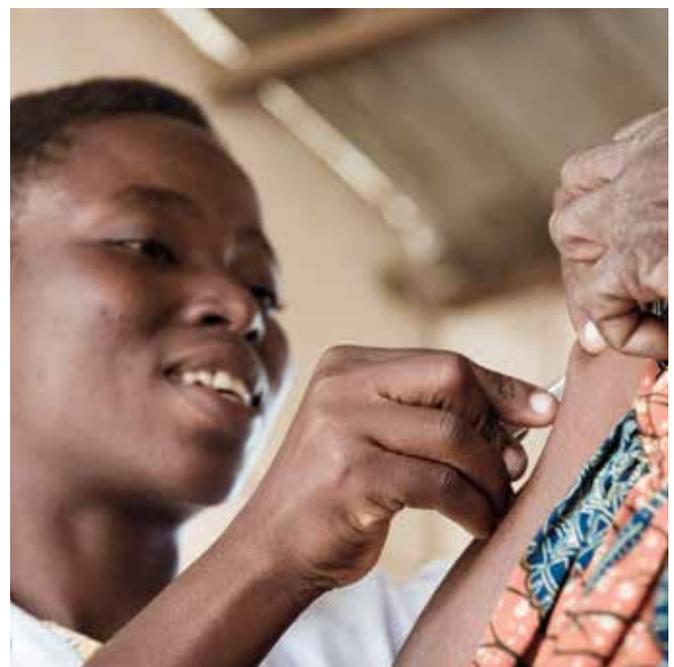
Immunization programmes are expected to continually try to improve on the scope of technologies and implementation approaches they put in place. As new approaches always have an implication for the cost of service delivery, it is important that they are thoroughly assessed financially. Examples in the recent past include the introduction of new antigens (pentavalent vaccine, PCV and rotavirus) and service delivery strategies (such as the RED and REC approaches) and acceleration of approaches (such as the increased use of SIAs). Each of these can be costed out in advance, because the actual activities and technologies needed are already known before their introduction. The review of new approaches and technologies should also include a review of appropriate financing, in order to illustrate which activities are already financed (and, from which source), and which activities need additional funds for specific years.

The expected impact of such changes to the programme should be assessed as well. This may include an increase in coverage or number of children reached with the new technology. This is important to know so that

costs can be related to impact. Again, the review of this information generates results that can then be compared against either the approach being replaced or other interventions. This costing and financing review is best done for the immediate period and the medium term, so that the full financial implications are appreciated, and appropriate strategies to mobilize required funds are instituted early enough.

When introducing new programme components into the NIP, the basic principles of deriving budgets remain the same. It is important to look at this in the form of a series of steps:

- Step 1: Identify the objective you want to achieve with the new strategy.
- Step 2: Outline how the objective will be achieved (strategies).
- Step 3: Outline the activities that will be done to achieve the objective.
- Step 4: Identify the inputs, and their unit costs needed to achieve each of the activities.



Exercise 6

Task 1: Read the text below.

Task 2: Develop a five-year budget for the introduction of the RED approach in the district, taking into account the most cost-effective option.

Task 3: Give a presentation of your budget to the plenary according to each component of RED.

The EPI programme is planning to introduce the RED strategy in Kapere district in 2018. This will be done by the provision of vaccinators with bicycles, logistics equipment (vaccine carriers and ice packs) and per diems to conduct outreach services in underserved areas. All vaccinators are known to be very skilled bicycle riders.

The EPI programme will procure a Land Cruiser for supervision. The useful life of the Land Cruiser is expected to be five years. This vehicle will travel approximately 100 km per month and will use 10 l of fuel for every 50 km.

Vaccinators will initially be trained on the provision of adequate immunization services in a five-day workshop. Kapere district has 100 health facilities, covering 500 villages. It is estimated that one vaccinator will be required for each facility. Each vaccinator will need one bicycle, one vaccination carrier with ice packs and one bicycle repair kit. Bicycle repair kits will be procured through WHO at a cost of US\$ 15 per unit. The cost of vaccine carriers is US\$ 4 per unit while ice packs will be given as a donation from Rotary International.

When deployed, these vaccinators will carry out one outreach session per village per month. All capital equipment will depreciate on average at 10% per year.

Government regulation stipulates that during training sessions for all government staff, they will be paid US\$ 10 per day. However, US\$ 1 will be deducted for their lunch which is usual provided at such trainings, while they will be given tea and coffee that costs the government US\$ 2 per participant.

The Land Cruiser will cost US\$45 000 and be procured through UNICEF. Each bicycle repair kit costs US\$ 15. The cost of a bicycle in Kapere district is US\$ 60. The seller of bicycles in Kapere has promised to train the vaccinators on effective bicycle riding for free as part of the package. Normally such training would cost US\$ 10 per person. However, a bicycle costs US\$ 45 in Mashland district and an additional US\$ 2 per unit to transport it to Kapere district. It is expected that all bicycles will be replaced at the end of the third year while the Land Cruiser will be replaced in year five. The cost of fuel is US\$ 1.50 p/l.

This activity is expected to take place every year for five years. It is government policy to always procure from the most competitive source.

6.3 Economic and financial considerations for new vaccine introduction

Traditional immunization programmes represented one of the best investments in the health sector – significant health impacts could be achieved literally for pennies per dose. Investments in immunization programmes remain a very good use of government and donor resources. However, new vaccines are more expensive than traditional vaccines, and the burden of disease prevented or reduced by these vaccines is often not well known in the beginning. For these reasons it is important to carefully evaluate the costs and benefits of new vaccines, as well as measure their potential impacts on limited national health budgets.

Assessing the economic and financial implications of new vaccines can provide valuable information for decision-making for both governments and their development

partners. Answers to the following questions are important for decision-making:

- Will a particular vaccine be cost effective relative to alternative uses of scarce resources?
- What will be the long-term resource requirements of the new vaccine and how will this compare with government budgets?
- What will be the magnitude of the potential funding gap for a new vaccine and could additional domestic or external funding be mobilized to fill this gap?
- What will be the potential prospects for financial sustainability of the new vaccine introduction?

6.3.1 Evaluation of fiscal impact

The decision to introduce a new vaccine should ideally be based on the consideration of the affordability of the vaccine to countries (governments and their partners), and the magnitude and timing of future funding gaps.

Affordability is a subjective concept and relates to whether a new vaccine can be introduced and absorbed into a government's budget over the medium to long term without significantly affecting available resources for other public health priorities.

Depending on the country, the introduction of new vaccines can incur different levels of costs. This is related to factors such as the effectiveness of a country's immunization system, the quality of its infrastructure, as well as the salary level of health staff. Costs occur both regarding the introduction of the vaccine, which involves training of staff, IEC campaigns, etc., and the recurrent costs, including mainly transport, storage and personnel costs.

Analysis of the fiscal impact of the introduction of new vaccines begins with an evaluation of expected programme costs with the new vaccine, as well as estimates of future programme resource requirements. Immunization programme costs are often divided into programme-specific costs and shared costs, either for the total NIP or also for each individual delivery strategy. Programme specific costs reflect the value of resources used 100% for the immunization programme, and include: health personnel who spend 100% of their time on immunization, vaccines, injection supplies, cold chain equipment, vehicles which are used 100% of the time for immunization, etc. Shared costs reflect the value of resources used by the immunization programme, but which are also shared with other health services and interventions. Labour is shared between programmes; buildings, equipment, vehicles and other inputs may also be shared. The methods for estimating programme costs as in costing multi-year plans such as cMYP are standard and governments are encouraged to follow these approaches.

While the cost of labour used to account for the greatest proportion of total traditional immunization programme costs, the cost of new vaccines can represent more than 60% of total cost for countries that have introduced them. For example, the cost per DTP3 per child has risen significantly in programmes that have introduced new vaccines. However, as the prices of new vaccines decline in the future, programme cost requirements will also decline.

Once programme or strategy costs including the new vaccines are estimated, they can be compared with a range of indicators to approximate affordability and fiscal impact:⁷

Per capita estimates of programme costs with and without the new vaccine. This indicator links total immunization cost or resource requirements to total population in the country and provides a sense of affordability of the immunization programme. It can be compared with the total per capita spending on health to give a sense of the relative importance of the immunization programme within overall health sector spending. If this indicator is going to be used to make cross-country comparisons, it is recommended that the total routine cost is used as a numerator.

- **Programme costs per DTP3 per child with and without the new vaccine.** This indicator links total cost of immunization to the total number of children under one year of age that received their third dose of DTP vaccine. The number of DTP3 immunized children is calculated by multiplying the total number of surviving infants by DTP3 coverage. Children under one year of age who receive DTP3 are considered to be fully immunized children. The cost per DTP3 child is used as an approximation of the value of resources required to fully immunize a child. If this indicator is going to be used to make cross-country comparisons, it is recommended the total routine cost is used as a numerator.
- **Programme costs as a proportion of total government health budget or government health expenditure (GHE) for a particular year with and without the new vaccine.**
- **Programme costs with and without the new vaccine as a proportion of total health expenditure (THE) including private sector expenditure.**
- **Programme costs with and without the new vaccine as a proportion of gross domestic product (GDP).**

Ideally these indicators should be compared with those for other public health interventions and programmes to have a better sense of relative impacts. However, if the programme-specific costs with a new vaccine represent a substantial share of total government health budget or expenditure in a particular year, the programme may be pushing the limits of affordability and will require significant efforts to mobilize resources and sustain the new vaccine in coming years. In most countries immunization programmes, even with new vaccines, still represent a small fraction of the total GDP of a country.

⁷ For more information, refer to the WHO/UNICEF Guidance note for strengthening country reporting on immunization expenditures in the Joint Reporting Form (JRF), available at: http://www.who.int/immunization/programmes_systems/financing/data_indicators/JRF_guidance_note_march2015.pdf?ua=1

6.3.2 Evaluating the cost-effectiveness of new vaccines⁸

Once it is determined that the new vaccine under consideration seems affordable, it is important to evaluate whether particular investments represent the best use of scarce resources. Cost-effectiveness analysis is a tool that is used to evaluate and compare among alternative uses of scarce resources. This approach can help determine whether US\$ 1 of investment in a new vaccine achieves greater or lesser health outcomes relative to investment in another type of vaccine presentation or public health programme, such as malaria prevention.

In cost-effectiveness analysis, the cost of an intervention in US\$ is divided by the intervention's effectiveness, resulting in a cost-effectiveness ratio, such as the cost per death averted, or the cost per disability-adjusted life years (DALYs). Interpretation of these ratios needs to be done on a relative basis in comparison with other estimates. A general rule of thumb is that a cost-effectiveness ratio which is less than three times the GNI per capita of a country would be a worthwhile investment overall. From an economic perspective, interventions with lower cost-effectiveness ratios are better investments than those with higher ones.

When evaluating the cost effectiveness of introducing new vaccines, it is important to be clear about which costs and which effects to estimate. When comparing the introduction of a range of new vaccines, it is appropriate to evaluate the total incremental costs additional to the costs of the immunization programme associated with each alternative. These costs are likely to include vaccines (associated wastage and buffer stocks), associated injection supplies, expected training and social mobilization, additional cold chain requirements, and additional time spent by health workers to administer the new vaccine.

However, when comparing the introduction of a new vaccine relative to using the same level of resources for another health programme, it is not incremental cost that is the basis for comparison but the full cost.

For instance, if a donor or the ministry of finance has an additional US\$ 1 million to invest, comparing the cost effectiveness of alternative uses is the most appropriate approach. Total costs for new vaccines may be compared with the potential cost savings as a result of reduced treatment for disease. Evaluating the effectiveness of new vaccines is often the most challenging aspect of a cost-effectiveness evaluation. In many cases, country-specific epidemiologic data may not be available, and it will be more difficult to estimate the number of DALYs prevented or the number of healthy years of life lost.

Countries can use epidemiological data from neighbouring countries or regional estimates, as long as these data are generalizable and relevant to other contexts. Whatever approach is taken, given the number of assumptions that go into estimating cost-effectiveness ratios, it is useful to evaluate and report a range of estimates that take into account variation in key parameters.

The results of cost-effectiveness and fiscal impact analyses are important to share with policy-makers and the donor community to provide convincing evidence about the cost worthiness of investments in new vaccines.

Cost-effectiveness data can be used for advocacy within governments, particularly the ministry of finance. However, it should be noted that economic and financial information need to be weighed against other criteria for decision-making, such as the importance of the disease, and the safety and effectiveness of the vaccine.

6.3.3 Financial sustainability of new vaccine introduction

The prospects for financial sustainability should be considered as part of the decision-making process for new vaccine introduction. As mentioned in Section 4, financial sustainability refers to the timely mobilization of needed resources to cover the costs of an intervention into the future. Financial sustainability is only one aspect of sustaining an immunization programme, which also requires sufficient human resources and government commitment, among other factors.

Potential sources of funding for new vaccines, which remain to be explored (in addition to Gavi) include funding from local governments, resources from debt relief, development loans, the private sector (foundations and NGOs), and social insurance, among others.

Ensuring the reliability and predictability of financing is an area which focuses on improving and strengthening disbursement of funds (either government or donor), as well as smoothing of resource flows over time, away from "peak and valley" financing.

Having a better picture of future budget requirements (through an estimation of resource needs in the future), can aid in better planning and budgeting. Decision-makers need to assess whether they would be introducing a new vaccine into a system with irregular and unreliable funding. If this is the case, careful consideration needs to be made as to how the new vaccine financing will be sustained, and procurement regularized, under these conditions.

⁸ For more information, please refer to the following web resources:

<http://www.who.int/choice/en/>;

http://www.who.int/immunization/research/implementation/health_economics/en/index1.html

6.3.4 Sustainability of vaccine procurement

Long-term sustainability of vaccine procurement should be a central consideration for any government. Interrupting the use of a vaccine in the infant immunization schedule can have serious implications for health outcomes. For instance, interrupting the continuous supply and procurement of rubella vaccine will result in risking a greater disease burden than would have resulted without the temporary use of the vaccine!

In most cases, there will be negative consequences on the perception of the NIP from the public and health-care workers as well as the costs associated with switching products. There may also be the loss of funding for traditional vaccines (e.g. pentavalent components of a combination vaccine with HepB and/or Hib). Therefore, if there are doubts about the sustainability of introducing a new vaccine, the introduction should not proceed unless it is clear that short-term use of the new vaccine will not have negative consequences if eventually discontinued.

The consequences of no longer being able to afford and sustain the vaccine need to be considered carefully. Since it is expected that prices will decline as demand increases and market forces are brought to bear, this situation needs to be re-evaluated as new information becomes available. The price of hepatitis B vaccine dropped over time, especially when developing country manufacturers entered the market.

Countries may also want to consider reviewing the efficiency of their procurement system and explore the possibility of cooperating with neighbouring countries in pooling some of their vaccine procurement or in sharing market information. Furthermore, participating in initiatives like the Vaccine Product, Price and Procurement (V3P) web platform at WHO enables predominantly Gavi-graduating and self-procuring middle-income countries (MIC) to benefit from a better understanding of vaccine prices, allowing them to make more informed decisions about vaccine procurement.

References

Levin A, Wang SA, Levin C, Tsu V, Hutubessy R (2014). Cost of introducing and delivering HPV vaccines in low and lower middle income countries: Inputs for GAVI policy on introduction grant support to countries. *PLoS ONE* 9(6): e101114. doi:10.1371/journal.pone.0101114.

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Websites

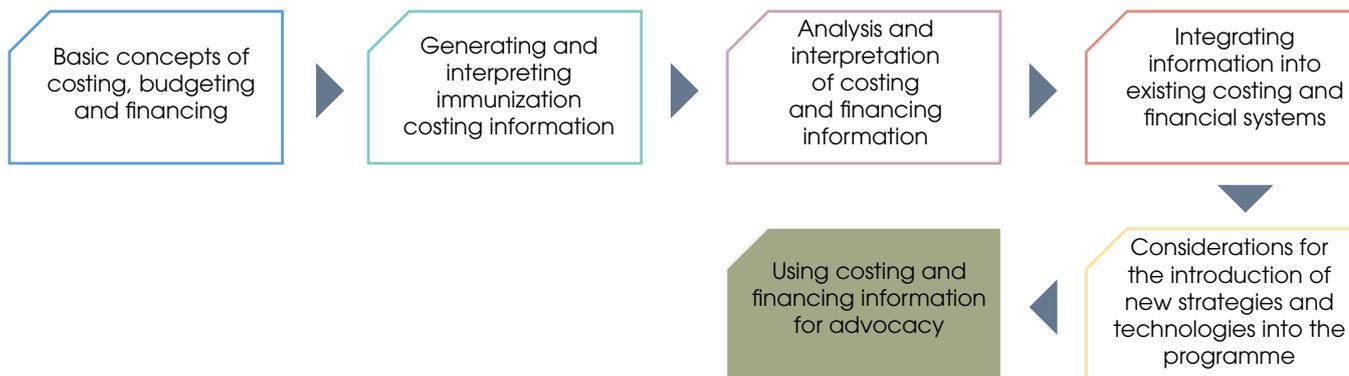
WHO – vaccine procurement website (V3P): http://www.who.int/immunization/programmes_systems/procurement/en/

WHO – Cost effectiveness and strategic planning (WHO-CHOICE): <http://www.who.int/choice/en/>

WHO – Guidance on cost effectiveness:

http://www.who.int/immunization/research/implementation/health_economics/en/index1.html





7. Using costing and financing information for advocacy

7.1 Objective

The objective of this section is to introduce the user to the concept of advocacy and how to use costing and financing information to highlight the importance of immunization programmes for social and economic benefits as well as health. The user will learn how to define advocacy objectives, identify target audiences and shape key messages according to their needs. Having completed this section, the user will understand of how to effectively identify and convey the needs of the immunization programme to the appropriate audience.

This section focuses on how the NIP should undertake the advocacy process to be able to successfully realize its goals of better financing. Advocacy is about influencing people, policies, structures and systems in order to bring about change, influencing those in power to act in more equitable ways. Advocacy work includes many different activities such as negotiation, mobilization, education, research and networking.

Advocacy is an effort to obtain or strengthen the support of key stakeholders and influence the public and media agenda with the goal of ensuring long-term and sustainable funding of the immunization programme. Advocacy in the financing context can be viewed as an effort to influence policy- and decision-makers to make appropriate decisions that will support the immunization programme moving towards sustainable financing. Anyone can be an advocate (including staff not belonging to the NIP, such as the health focal points of other government departments such as the ministry of planning or the ministry of finance), but the stewardship of the process needs to come from the immunization programme. All advocacy efforts need to be well thought through, and require careful planning, commitment and resources.

The advocacy process should proceed in a stepwise manner. Note that these steps may occur concurrently,

but are presented in separate steps for you to be aware of the breadth of issues that need to be taken into account:

- defining advocacy objectives
- identifying and targeting your audience
- presenting key information tailored in a suitable way for specific audiences
- achieving results and monitoring outputs of advocacy.

7.2 Defining advocacy objectives

Advocacy objectives should describe how you want to change the status quo; they should specify what needs to change, who will make the change, to what extent, where and when. The objectives should be specific and measurable rather than being general statements. You should limit your objectives to as many as you can realistically manage.

Check your objectives to ensure they meet the following criteria:

- Do qualitative and quantitative data exist to show that achieving the objective will improve the situation?
- Will the objective gain the support of many people (who are the most likely opponents)?
- Is the objective achievable, even with opposition from likely opponents (which needs to be identified)?
- Will you be able to raise resources (financial and human) needed to carry out the objective?
- Is the objective clear and easy to explain (in just one or two sentences)?
- Can the objective be achieved in a realistic timeframe?
- Do you have the necessary alliances with key individuals/organizations to reach your objective, and how will it help build new alliances?

Exercise 7

Task 1: Working individually, review the following objective in line with the criteria based on your country situation: “To have Ministry of Health senior management allocate annual incremental increases in the health sector allocation for vaccine purchase up to 8% of the total recurrent allocation within four years”.

Task 2: Share your views with your colleagues and with your facilitator.

7.3 Identifying and targeting your audience

Advocacy can be applied to different parties who are the focus of advocacy. These typically include the people whose trust and support are needed to be obtained in order to ensure sustainable long-term financing for your immunization programme:

- Government
- Ministries of health, finance, family, economy, development, etc.
- Financial department of the various ministries, including department heads and key technical staff who prepare documents for the minister
- Local government stakeholders
- National budget committee
- Members of parliament (spokespersons in relevant fields)
- Regional and local health departments
- Local leaders, religious leaders
- Other politicians
- Government implementation and funding partners
- Targeted private sector organizations.

It is recommended to group decision-makers into high- and low-priority groups. After reviewing the list, the primary advocacy focus will be on those belonging to the high-priority group. Less influential decision-makers may still become important at a later stage in the advocacy process, so it is important to keep them informed.

Advocacy is reliant on a good understanding of your audience. Different audiences (e.g. government officials not linked to the NIP, donor representatives, partner organizations, etc.) require different ways of shaping your messages to make these messages more effective. In order to identify how to best approach different audiences, it is useful to understand your audience and familiarize yourself with their interests, constraints, and operating procedures. Useful questions to ask include:

1. What are the funding priorities of the target audience?

- Does the targeted audience have a set of funding priorities?

If yes:

- What are these priorities, and which areas do they cover?

- How were these priorities determined?
- Where were the funding priorities established (at local, regional or headquarters level)?
- What are the major selling points for the immunization programme relative to those priorities?
- What evidence can be used to demonstrate how the target audiences’ increased support for immunization will help them meet their priorities?

If no:

- What are the major selling points for the immunization programme that can be used to raise interest the audience?

Are there funding activities in other areas/ sectors that can be used indirectly to provide support for immunization programmes? For example, could a project on improved management effectiveness use the immunization programme as one of its focal points?

2. Who are the key decision-makers?

- Who is responsible for making funding decisions to increase support for immunization programmes?
- Is the recommendation of that decision-maker reviewed before it is finalized? If so, by whom?
- What are the criteria or considerations used for deciding on what to fund?
- At what level are funding decisions finalized and agreed upon?

3. What is the timing of the funding cycle?

- What is the timing of the funding cycle of the particular audience?
- What activities occur during a funding cycle during which advocacy efforts could be most effective?
- When are funding allocations finalized and when are funds released once they are approved?
- Is there any opportunity for “off-cycle” funding allocations? For example, can unused funds at the end of a year be reallocated to another programme?
- What is the procedure for requesting access to such reallocated funds?

4. What are the funding trends/what is the focus of the target audience?

- What have been the trends in funding for immunization provided by this audience? Have they been increasing or decreasing?
- Have the funding priorities shifted, or are they planned to shift from current priorities. If so, how and why?

The message should be short, simple, interesting and understandable. Global statements may be good at the global level, but decision-makers will usually expect messages that focus on their particular local situation, and appropriately address their legitimate concerns. As such, developing the messages needs to take into consideration the local context within which the information needs to be relayed, as well as the concerns of the audiences. It is important to develop a framework to address this issue. An example is provided in Exercise 8.

7.4 Preparing key information for specified audiences

Once the objectives have been described, and the target audiences clearly identified and characterized, it is time to tailor available information to these audiences. This is done by creating messages and materials for the specific information needs of the audience.

Exercise 8

Think of possible messages for each of the specific audiences that would address their potential concerns related to the introduction of new vaccines.

Audience definition	Target	Potential concerns	Possible messages
Top level government and political leaders	President/prime minister Minister of health Minister of planning Minister of finance Parliament	Budgetary implications Public opinion Opportunity to show leadership and take credit for success Liabilities of inaction	
Top level technocrats (responsible for allocations)	Permanent secretary/ health line director in ministry planning/budget section	Budgetary implications Where will additional funds come from? Feasibility of implementing strategy with existing activities Feasibility of integration with other activities Sustainability of strategy Liabilities of inaction	
Funding partners	EPI-supporting multilateral agencies Direct funding bilateral partners Budget support partners	Ability to produce and document results Cost effectiveness of strategy Feasibility of integration with other activities Role they can play in influencing internal government allocation decisions	

7.4.1 Presenting your message

Appropriate materials will need to be produced to accurately convey your message. Professionally made materials will be useful when presenting the case of the NIP to your audience. These materials include:

- **Background sheet:** A simple one- or two-page overview that highlights the key messages, including how concerns are catered for.
- **Question and answer sheet:** A document covering key concerns, providing an opportunity to pre-empt criticism before it becomes an obstacle.
- **Facts about immunization:** A summary document on the status of immunization in the country, including coverage trends, economic analyses, comparison assessments, etc.
- **Immunization success stories:** Highlights of key successes with resources provided. For example, how many children have been saved from measles through RI and other activities.
- **Information on diseases and outbreaks:** A brief overview on outbreaks due to VPDs.
- **PowerPoint presentations summarizing your case:** These can include the information of one or a combination of several of the documents listed above.

Individuals doing advocacy on behalf of the immunization programme need to have good negotiation skills in order to achieve the desired results. For more details, please refer to Module 2: *The role of the EPI manager* and Module 3: *Communication and community involvement for immunization programmes*.

When communicating with donors for the purpose of seeking funding support it is important to remember the following points:

- Donors are overwhelmed with information so one needs to focus on the essential information.
- Donors have short attention and retention spans, so it is essential to be concise and persuasive.
- The purpose of an interaction with a donor is to persuade and move them towards action.
- The donor's perception of you is more important than the other way around.
- When you make a presentation to a donor, use compelling arguments such as the number of deaths averted through a vaccination programme or the monetary savings that your suggested intervention will make. One rule of thumb is to ensure that your presentation meets the MARIA test, i.e. that it is:
 - Memorable
 - Attention grabbing
 - Relevant
 - Impact oriented
 - Activating.

7.5 Achieving results and monitoring outputs of advocacy

Having started the advocacy process, it is important to cultivate relationships with your stakeholders. Make sure to keep them informed about important developments in your programme, and interact with them whenever possible. Maintain relationships even when results do not materialize instantly. Your contacts may become an important resource and by building a network you are creating a powerful resource that may be very useful in the future.

Advocacy is usually difficult to evaluate and without careful follow up the efforts can be lost. There are several tools that can be developed, which can be useful in the monitoring process.

- **Process documentation:** A written account is best to determine how well advocacy efforts are progressing, whether you are reaching the right people with the right message, and whether you have achieved your objectives. This can be done monthly or quarterly, depending on the amount of work being done. The frequency will be based on the frequency of reporting on other programme activities.
- **Outcome evaluation:** This measures how well you are meeting your objectives. Outcome evaluation entails a biannual or annual review of the objectives in terms of how far you are going towards achieving them while highlighting any major hindrances/success stories. You may need to modify your objectives based on this review to better fit the circumstances on the ground. This is best done in line with the annual review of the programme.
- **Impact evaluation:** This is best done after a few years, usually when you are reviewing your multi-year plan. It looks at your progress towards the bigger picture. This, for example, may look at how far the effort has taken the programme towards financial sustainability, and forms the basis for a new set of objectives in line with the multi-year planning period of the programme.

7.5.1 Basic concepts and current trends to guide advocacy and resource mobilization efforts

It is important to understand the principles that guide the donor community in providing support for immunization programmes. There are discernible trends in international financing for health, of which the following points are particularly noteworthy for the African Region.

- **Donors favour Africa:** The African Region continues to receive significant donor attention.

With the Region being host to some of the countries in the world with the weakest health infrastructure, the WHO Regional Office for Africa is centrally placed for the execution and support of bilateral and regional initiatives.

- **Donors earmark their support:** Many donors choose to earmark their contributions to align with their national priorities for development aid and/or facilitate accountability.
- **Donors are decentralizing their support:** Analyses of donor funding trends clearly indicate that there is a distinct shift towards decentralization, bypassing global and, in most cases, also regional structures.
- **Donors demand accountability:** The increased level of interaction at country level has also engendered a demand for increased accountability and more onerous requirements on reporting on outcomes.
- **Donors demand results:** Donor agencies are increasingly under scrutiny from their own constituencies and have to justify international development strategies to taxpayers, internal pressure groups and civil society organizations. As a result, there has been a significant increase in hands-on involvement and an emphasis on results and impact.

Many low-income countries (LIC) receive funding from Gavi, a public-private global health partnership committed to increasing access to immunization in poor countries. Gavi is funded by direct contributions of Member States as well as innovative financing mechanisms such as the International Finance Facility for Immunization (IFFIm). Gavi provides support for the introduction of new and underused vaccines, the provision of immunization services, as well as in health systems strengthening. Countries are eligible for Gavi support provided their GNI per capita (as of 2015) is below or equal US\$ 1580. Through its co-financing policy, Gavi encourages countries to co-finance a portion of the cost of the requested vaccines.

The objective of co-financing is to assure that the decision-making to introduce new vaccine requiring co-financing has been very well considered and helping countries achieve eventual financial sustainability for their NIPs. With co-financing, countries and their partners are expected to make greater investments in immunization, putting countries on a path to financial sustainability.

Alongside the Bill & Melinda Gates Foundation, Gavi is well known as the major funding agency for vaccines and immunization. However, countries are encouraged to explore opportunities among bilateral, multilateral, foundation, civil society and private donors for support for their specific needs and contact potential donors to start the dialogue.

Role play

The following role plays are suggested to help amplify some of the concepts already discussed in resource mobilization.

EPI Manager (and Minister of Finance)

- The economy has been in recession for two consecutive years.
- Disease burden of cervical cancer attributable to HPV infection is high.
- You have received HPV vaccine donations from a manufacturer (doses enough for vaccination in one region).
- National introduction of HPV vaccines will cost US\$ 1 441 024 in vaccine costs alone.
- Total budget allocation to health sector is US\$ 11 000 000.
- You have been mandated by the Minister of Health to present your case for special funding for national scale up of HPV vaccine introduction to the Minister of Finance.

What will you say to the Minister of Finance?

Minister of Finance (and EPI Manager)

- As Minister of Finance you have received a request from Ministry of Agriculture at the same time you received the request from EPI programme for special funding for HPV vaccine introduction.
- The economy has been in recession for two consecutive years. You know the economy might not pick up in the near future.
- You are aware that HPV vaccine will be given to nine-year-old girls to prevent cervical cancer.
- You have a nine-year-old daughter who might benefit from the vaccination programme.
- You are concerned with long-term sustainability of the whole immunization programme.

What is your response to the EPI Manager?

Chairman of the Parliamentary Committee on Health (and Speaker of Parliament)

- You are from the same political constituency with the Principal Secretary MOH.
- Budget allocation to immunization in proportion to other health intervention has been on the decline in the past two years.
- You were at a social function and you were seated next to the Principal Secretary MOH who already informed you of the increasing cost of immunization in the country. You had informed the audience that you have another function and must depart in 30 minutes.
- The Principal Secretary needs to mobilize resources to complete cold chain upgrade in your district. He has sought your facilitation.
- Suddenly the Speaker of the Parliament arrives at the function.
- You are aware of the preference in parliament for funding projects like roads and construction of schools that can be used for the next election campaign.
- You want to encourage health development, including immunization, showing the political capital and gains for election purposes to be made from it.
- This is an opportunity to discuss the Principal Secretary MOH's request with the Speaker of Parliament.

What will you say to the Speaker?

Speaker of Parliament (and Chairman of the Parliamentary Committee on Health)

- Budget allocation to immunization in proportion to other health intervention has been on the decline in the past two years.
- As Speaker you had ruled in Parliament to accord more funding to the productive sectors of the economy such as agriculture, industry and tourism.
- Your constituency members had sent a delegation to you two weeks earlier that their children could not access immunization as health workers complain of stock-out of vaccines due to poor storage.
- You listened to the Chairman advocating for additional allocation of resources to health, especially immunization.

You will be your response to the Chairman?

Recommended reading

Gordon G (2002). *Understanding advocacy*. Teddington, United Kingdom: Tearfund.

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World Bank, GAVI Alliance (2010). *Immunization financing toolkit: A resource for policy-makers and program managers*.

Websites

Gavi: <http://www.gavi.org/>

IFFIm – Supporting Gavi: www.iffim.org

WHO/UNICEF: cMYP – http://www.who.int/immunization/programmes_systems/financing/tools/cmyp/en/

WHO – Immunization, Vaccines and Biologicals: <http://www.who.int/vaccines-diseases/epitraining>

WHO – Cost effectiveness and strategic planning: <http://www.who.int/choice/en/>

WHO – Health economics research: http://www.who.int/immunization/research/implementation/health_economics/en/index1.html

WHO – VPD monitoring system (2016 global summary): apps.who.int/immunization_monitoring/en/globalsummary/countryprofileresult.cfm

WHO – Immunization, Vaccines and Biologicals (immunization supply chain and logistics): http://www.who.int/immunization/programmes_systems/supply_chain/en/

WHO – V3P project (vaccine product, price and procurement data and information): http://www.who.int/immunization/programs_systems/procurement/v3p/platform/en/V3Pdatabase



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