

Cost Analysis and Efficiency in Health: Lessons of Experience

9TH CARIBBEAN CONFERENCE ON
NATIONAL HEALTH FINANCING INITIATIVES

1

MAGDALENA GRAND, TOBAGO
NOVEMBER 5TH, 2014

CHRISTINE LAPTISTE
PATRICIA EDWARDS-WESCOTT
VYJANTI BEHARRY

HEU, CENTRE FOR HEALTH ECONOMICS
THE UNIVERSITY OF THE WEST INDIES

Introduction

2

- Analysing the costs of a health care programme provides important information about the services being provided.
- In addition to indicating the size of funds likely to be required to continue programmes, it can help decision-makers assess:
 - the way in which personnel is used in delivering health care,
 - the efficiency of putting various inputs to work (Creese & Parker, WHO).

What is Costing Useful For?



- Assess efficiency of programs
 - Helps to determine which one yields the greatest benefit with a given amount of resources
- Identify important cost issues for potential savings
- Strategic planning
- Establish fees

Cost Concepts



- The costing of services is intimately linked to one of the underlying concerns of economics—the issue of scarcity.
- **Opportunity cost:** potential benefit sacrificed or the value of the next best forgone alternative use for a resource.
- Economic cost refers to the entire cost borne by all of society and as such includes opportunity cost
 - For example a volunteer health worker may provide her services free of charge, but she places an opportunity cost on society.
 - Economic costs comprise prices paid for inputs, plus donations (including donations in kind such as volunteer time) and subsidies.

Overview of Costing Methods and Techniques

5

Approaches to Costing Health Services

6

- Two approaches to costing health services can be broadly identified as:
 - **Bottom-up approach**
 - **Step-down Approach**
- The Bottom-Up approach involves the identification and specification and valuation of all the resources that are used by individual patients, departments or service levels.
- This micro-costing method requires detailed information about the inputs used by each patient, department etc.

Approaches to Costing Health Services

7

- The Step-Down Approach is also called the sequential method.
- The approach uses a multi-level cost allocation structure with at least two tiers of cost centres.
- This process of allocating costs involves assigning or adding costs from specific cost centres to other cost centres hierarchically.
- Once a cost centre's costs have been allocated, no subsequent costs are allocated back to that cost centre.

Approaches to Costing Health Services

8

- Cost centres can either be direct or indirect.
- Indirect Cost Centres are main departments of the facilities which are responsible for the day to day management of these facilities.
- Direct Cost Centres refer to the health services delivered by health institutions.
- - Intermediate/ancillary... diagnostic and support services
 - Final ... Final outputs or health services delivered.
- Costs are allocated from indirect and intermediate cost centres to direct cost centres.

Data Sets Required

9

- Hospital Budgets
- Log books, rosters, daily records and requisitions (Primary data)
- Various reports such as the Medical Records report, Departmental reports and the Income and Expenditure report for the period under study (Secondary data).
- Interviews with staff of the various departments, relevant health authority and the Ministry of Health.

Efficiency Gaps Encountered During Costing of Health Services

Efficiency Gaps Encountered During Costing Studies

11

- Cash based accounting system - so in-kind goods and services were not captured in the accounts. Cases of volunteer or cross-institution provision of services that are not captured at particular institutions.
- Instances of fixed assets not recorded in the accounts and so there was no depreciation account. Unit cost analysis normally done inclusive of depreciation costs so these costs may be under-estimated.
- Tracking of staff throughout the health system is sometimes weak. Personnel may be physically working in one institution but on the payroll of another.

Efficiency Gaps Encountered During Costing Studies

12

- Off budget items. In some cases, inputs for specialty surgical procedures for example, knee replacement, are purchased under a separate vote and are not accounted for by the institution where the procedure is offered.

Efficiency Gaps Encountered During Costing Studies

13

- Important to select an appropriate basis for allocating overhead costs as this can significantly affect estimates of unit costs derived.
- With the step-down methodology, floor space (square footage) is often as the basis for allocating overhead expenses, where more detailed information is not available.
- Institutions should carry out studies on intensity of use of utilities, for example, by various cost centres. This will facilitate more accurate cost allocation and improve unit cost estimates.

Efficiency Gaps Encountered During Costing Studies

- Paper-based data capture systems, in some cases improperly stored can reduce efficiency in record retrieval and continuous costing assessments. Need for improved data management through IT systems with appropriate off-site back-up facilities. This will increase the accessibility to data for costing and other purposes as well as improve the validity of the results of future costing exercises.
- A comparison of the cost of laboratory tests at various public sector institutions in one country highlighted wide variances in unit costs. In one instance a particular laboratory test was four times more expensive at one facility.

Efficiency Gaps Encountered During Costing Studies

15

- **This could be indicative of two main things.**
 - Expenditure records may have reflected what was spent as against what was actually incurred. Inordinate delays in actual payments for inputs may have resulted in an under valuation of the cost of laboratory tests during a particular accounting period.
 - The manner in which data relating to all laboratory testing is recorded is not streamlined (profile or individual tests). One institution may report a profile as one test while another separately reports each test in the profile. Implications for utilization and distortions in unit cost estimates.

Recommendations for Increasing Efficiency In Costing

Increase Awareness of Importance of Costing

The main purpose of this objective will be to influence legislation, policies, strategies and legal frameworks to promote health data management and costing analysis

17

Interventions to meet this objective will include:

1. Awareness and advocacy campaigns on data use for priority setting;
2. Set up a rewarding system for good performance in the collection of data that facilitates costing; and
3. Provide feedback at all levels on what needs to be done to improve data collection.

Develop Capacity to Facilitate Costing

- To have a well functioning, comprehensive and quality-based costing system, capacity for data management will need to be built throughout the system.
- This will necessitate the availability of skilled staff, and appropriately equipped facilities to record the relevant data.
- Will also mean that the relevant personnel/departments will need to be resourced and trained appropriately to undertake analyses based on the cost data generated.

Develop Infrastructure for Costing

1. A robust information technology system will be a key requirement.

19

2. Initially the system does not need to be technical very sophisticated in all aspects but can be incrementally built up.
3. However, it needs to be built using a modern computer platform and ideally web-enabled to facilitate the transfer of data.
4. Existing systems that function well can be expanded to cover more geographical areas in order to improve quickly the data collection processes.

Ensure Sufficient Funding for Costing Project

- Sufficient funds need to be made available to ensure that the costing implementation will succeed. This means securing funds for capital development and recurrent/operational budget.
- Some of the existing funding within the health system may be able to be redirected in this regard.
- Other sources of funds may originate from the central line ministries and from international organizations who understand the importance of this capacity building exercise to the health system.
- To convince key decision makers as to the importance of this work there will be a need to ensure that all potential funders are familiar with the goals and objectives of the costing project and its potential to improve the way services are delivered.

Thank You

21