



# DATA REQUIREMENTS FOR COSTING PRIMARY CARE COMPONENTS OF THE UNIVERSAL HEALTH CARE PROGRAM OF ST. LUCIA

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## **DISCLAIMER**

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# ACRONYMS

<b>AIDS</b>	Acquired Immunodeficiency Syndrome
<b>ART</b>	Antiretroviral treatment
<b>ARV</b>	Antiretrovirals
<b>HC</b>	Health center
<b>HIV</b>	Human Immunodeficiency Virus
<b>HS20/20</b>	Health Systems 20/20 Caribbean Project
<b>MOH</b>	Ministry of Health
<b>UHC</b>	Universal Health Care
<b>USAID</b>	United States Agency for International Development



# I. PURPOSE

This document presents an overview of data points required to conduct a costing analysis that would address the requests of the Ministry of Health (MOH) of St. Lucia, as expressed in a teleconference with the USAID-funded Health Systems 20/20 (HS20/20) project on September 13, 2012. On the call, representatives from the MOH of St. Lucia identified several key questions aligned with their plans for implementing the Universal Health Care (UHC) program, as follows:

1. As follow-up from St. Lucia hospital costing, what would it cost to provide secondary care at the New National Hospital?
2. How should the country define a primary health care package? Once defined, how much would it cost to provide the primary health care package to the population of St. Lucia? Given costs of individual components of the package, what services can the government of St. Lucia afford to cover?

This document provides an overview of the data required to conduct the costing analysis referenced in the second question. This document does not address the processes of defining the primary health care package, but rather presents the kind of data needed to determine the cost of that package once defined. It is meant to provide guidance to the MOH on what to expect for a costing analysis of this type.

# 2. SUMMARY OF DATA NEEDED

Since the desired costing analysis would be used by the government of St. Lucia to prepare a budget for funding primary health care, a micro-costing methodology is recommended. Micro-costing is a valuation method in health economics, where the unit of analysis is the individual or individual service. The method attempts to measure costs of service as accurately as possible, by including all the fixed and variable costs of inputs required to deliver the unit of care.

Once a primary health care package has been defined, consultants can then examine each service and address the following questions: who receives the service(s)? What do they receive? What are the components of the service(s) they receive? And, how often do they receive the service(s)? From this information the consultants can determine the average cost of the output. This is conducted by identifying each input for each unit of service (labor, supplies, drugs, etc.) and attaching a cost to each unit of input.

The costing analysis is thus comprised of identifying all the inputs (labor, supplies, drugs, diagnostic tests, capital costs, transportation, etc.) required to produce each output. These costs are then multiplied by the predicted number of times the services will be used for the upcoming year. Table I presents the data types and the specific data required to conduct this kind of analysis.

The data specified below assumes that the consultant would develop costing spreadsheets that use a top-down costing approach, such as was used for the Victoria Hospital costing. There are other costing tools that could also be use this same data but may require additional inputs not specified in this document. A tool that is being promoted by the World Health Organization for costing an essential health package is the OneHealth Tool. This tool is available online at <http://www.futuresinstitute.org/onehealth.aspx>.

**TABLE I. DATA NEEDS FOR COSTING OF PRIMARY HEALTH CARE PACKAGE<sup>1</sup>  
(FOR CURRENTLY OFFERED SERVICES)**

<b>Data areas</b>	<b>Specific data to collect</b>	<b>Usual/typical sources of data</b>
<b>Recurrent Costs</b>		
Salary and allowances	Staffing positions (by category, number and full time equivalent status) including temporary, hourly-waged, and volunteers	Facility staff log / interviews with facility manager / health office records <sup>2</sup>
	Basic salary per month/year for each staffing category	Civil service pay by grade.
	All other benefits/allowances (e.g., housing, transport, pension, medical insurance) per month/year for each staffing category	Civil service / human resources office
	Amount of time/effort allocated across each of the key services/outputs for each staffing category (i.e. how much time the nurses spend doing administrative work and tending to pneumonia patients). Amount of idle time would ideally also be assessed.	Observation (time-motion studies) or interviews with staff (less accurate).
Medicine and medical/clinical supplies	<ul style="list-style-type: none"> <li>• List of medicines/drugs consumed each month/year for each service.</li> </ul>	Patient records / pharmacy records or stock cards
	<ul style="list-style-type: none"> <li>• Quantity of monthly/yearly consumption for each medicine and medical supplies item for each service. If this is not routinely recorded at health facilities, allocation rules can be generated.</li> </ul>	Patient records, staff interviews, or allocation rules
	<ul style="list-style-type: none"> <li>• Per unit procurement price for each medicine and medical supplies item</li> </ul>	Procurement office or similar
Diagnostic and laboratory test supplies (e.g., specimen holders like tubes or cups, reagents/test kits)	<ul style="list-style-type: none"> <li>• List of diagnostic and laboratory test supplies consumed each month/year for each service</li> </ul>	Lab or pharmacy records
	<ul style="list-style-type: none"> <li>• Quantity of monthly/yearly consumption for each diagnostic and laboratory test supplies item for each service</li> </ul>	Patient or laboratory records
	<ul style="list-style-type: none"> <li>• Per unit procurement price for each diagnostic and laboratory test supplies item</li> </ul>	Procurement office or similar
Non-medical materials and office supplies (e.g., office	<ul style="list-style-type: none"> <li>• List of non-medical materials and office supplies consumed each month/year for each service</li> </ul>	Stores office / pharmacy records / Ministry procurement records

<sup>1</sup> This table was adapted from Routh, Subrata, Josef Tayag. September 2012. *Costing of Primary Health Care and HIV/AIDS Services in Antigua and Barbuda: A Preliminary Report*. Bethesda, MD: Health Systems 20/20 project, Abt Associates Inc.

<sup>2</sup> These are typical sources of data from the authors' experiences. These are highly variable by country and setting are intended to offer only an idea of the number and types of data sources that will need to be available.

supplies/ stationery items, immunization/ health cards & registers, cleaning materials)	• Quantity of monthly/yearly consumption for each non-medical materials and office supplies item for each service	Allocation rules (e.g., size of rooms for cleaning supplies)
	• Per unit procurement price of each non-medical materials and office supplies item	Procurement office or similar
Utility costs (e.g., electricity, water, gas, telephone)	• List of utility services/items consumed each month/year	Facility or Ministry records (accounts office)
	• Quantity of monthly/yearly consumption for each utility service/item	Facility or Ministry records (accounts office)
	• Per unit price for each utility service/item; note that the total amount spent for utilities is also acceptable.	Facility or Ministry records (accounts office)
	• % (proportion) of consumption of the utility services/items, by key services/outputs	Allocation rules (e.g., size of rooms)
Transport operating costs (e.g. fuel, maintenance)	• Fuel cost per month/year	Facility or Ministry records (accounts / transport office)
	• Driver cost per month/year (if not included in staff above)	Facility or Ministry records (accounts / transport office)
	• Repair/maintenance cost per month/year	Facility or Ministry records (accounts / transport office)
	• % (proportion) of consumption of the above transport costs, by key services/outputs	Vehicle log books
Maintenance costs for building, equipment, furniture, etc.	• Monthly/yearly amount of repair and maintenance costs for building or other capital inputs	Facility or Ministry records (accounts office)
	• % (proportion) of the maintenance costs to be allocated to each key service/output	Allocation rules (e.g., size of rooms)
Any other recurrent costs (any rental, service, or other operating costs not included in the above cost categories)	• List of any other recurrent cost items/services consumed each month/year	Facility or Ministry records (accounts office)
	• Quantity of monthly/yearly consumption for each such item/service	Facility or Ministry records (accounts office)
	• Per unit price for each such item/service	Procurement office
	• % (proportion) of consumption of the above item/services, by key services/outputs	Allocation rules
<b>Capital Costs</b>		
Building and construction	• Total floor space/surface area of the HC (in Square Feet or Square Meter)	Records (accounts or grounds keeping) or direct observation
	• Average construction cost of per unit area	Accounts or procurement office
	• Year of construction or approximate age of the building/construction	Ministry of health records
	• Economic life of the building and construction (i.e. how long do you expect the building should last before it needs to be replaced)	Accounts office
	• % (proportion) of building and construction costs to be apportioned to each key service/output	Interviews with staff and allocation rules

Equipment and furniture	<ul style="list-style-type: none"> <li>List of equipment and furniture items, with the corresponding numbers of each item</li> </ul>	Inventory list or direct observation
	<ul style="list-style-type: none"> <li>Year of procurement or approximate age of each equipment and furniture item listed</li> </ul>	
	<ul style="list-style-type: none"> <li>Economic life of the equipment and furniture i.e. how long do you expect the item should last before it needs to be replaced</li> </ul>	Accounts office / manufacturer specifications / assumptions
	<ul style="list-style-type: none"> <li>Per unit procurement price for each of the above equipment and furniture items (current price is best)</li> </ul>	Accounts or procurement office
	<ul style="list-style-type: none"> <li>% (proportion) of equipment and furniture costs to be apportioned to each key service/output</li> </ul>	Allocation rules / discussions with staff
Transport/ Vehicle	<ul style="list-style-type: none"> <li>List of transport/vehicle, with the make, model, year of production and the corresponding numbers</li> </ul>	Transport office / records / observation / interviews with drivers
	<ul style="list-style-type: none"> <li>Per unit procurement price for each of the above-mentioned transport/vehicles (current price is best)</li> </ul>	Accounts / procurement / car dealership
	<ul style="list-style-type: none"> <li>Economic life of the transport vehicle</li> </ul>	Procurement records / interviews with staff / assumptions
	<ul style="list-style-type: none"> <li>% (proportion) of transport/ vehicle costs to be allocated to each key service/output</li> </ul>	Transport logs
Any other capital costs (such as introductory basic training for HC providers, any one-time cost for the HC)	<ul style="list-style-type: none"> <li>List of any other capital cost items, with the corresponding numbers</li> </ul>	Facility or Ministry records
	<ul style="list-style-type: none"> <li>Year of procurement/implementation or approximate time of procurement/ implementation of each item listed above</li> </ul>	Facility or Ministry records
	<ul style="list-style-type: none"> <li>Economic life of other capital costs</li> </ul>	This is usually an assumption; can ask, e.g., how often training needs to be re-done (e.g., how often new guidelines developed)
	<ul style="list-style-type: none"> <li>Per unit price for each of the above-listed capital cost items</li> </ul>	Ministry records
	<ul style="list-style-type: none"> <li>% (proportion) of other capital cost items costs to be apportioned to each key service/output</li> </ul>	Interviews with staff / assumptions
<b>Service Statistics and Other General Information</b>		
Service Stats	<ul style="list-style-type: none"> <li>Definition of each service delivered as part of the primary healthcare package</li> </ul>	Usually accompanies development of the package
	<ul style="list-style-type: none"> <li>At least one historical year of utilization statistics for each service</li> </ul>	Utility summary utilization records / review of registers

It is important to note that the preceding list of data points may be subject to change based on the availability of information. Table I, however, can serve as a starting point for representatives from the MOH of St. Lucia to begin identifying how available these data are. For example, since historical utilization statistics would be needed to project future utilization of services to be covered under the Primary Healthcare Package, the MOH could identify whether these statistics are available and where

they are housed. Alternatively, the MOH may need to collect summary statistics from a representative sample of public health facilities in the country.

Once a primary health care benefits package has been defined, the package may include services that are currently not offered at primary health care centers. In these cases, estimating the costs of these services will be difficult. Alternative data sources include treatment protocols and interviews with staff that may have experience treating the condition (e.g., at hospitals) but the information will not reflect observed behavior. Estimating utilization for new services is even more difficult, and is often based on presumed need from a burden of disease survey or other similar epidemiological study. While these types of analysis are highly speculative, they may provide an order-of-magnitude estimation of the amount of resources needed to include them in the package. However, newly introduced services need follow-up costing activities in order to assess the accuracy of the initial costing.

Cost structures typically change over time. For example, if “slack time” or “down time” is currently high at primary health facilities and if utilization increases over time, then the unit costs for services will decrease because fixed (capital) or semi-fixed (staff) costs will be divided by a greater number of services rendered. Therefore, costing is an activity that merits periodic assessment, re-analysis, and revision.

A final note is that it is sometimes more accurate to ‘group’ services together for the sake of costing. This is especially true when utilization of individual services is very low. For example, “treatment of ear infections” may be more appropriate than dividing this into outer, middle, and inner ear infections.

## 2.1 HIV/AIDS CARE PLANNING

The MOH is currently planning to mainstream HIV/AIDS prevention, testing, and treatment into the primary healthcare program. In addition to collecting the information presented in Table I with reference to HIV/AIDS services, it will be necessary to track the number of patients on each combination of ARV drugs along with costs associated with that ARV combination. To further allocate the costs of co-morbidities or opportunistic infections, incidence rates of these conditions must be assessed and calculated. Further information on how ART will be delivered at health centers may be needed as well to estimate the required staff resources.

# 3. CONTACTS

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