

Health Basket for Developing countries: Issues and Challenges

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Task Force for Development of Health Specific PPP, Paris

June 8, 2007



Health PPPS – Relevance for comparisons

- Exchange rates have the tendency to overvalue real consumption in countries with a relatively low price level and undervalue consumption in countries with a higher price level.
- Health PPPs useful to compare the real size of the health sector in two countries e.g health expenditure per capita or
- To compare the health sector in the country relative to GDP with another country if prices of GDP and health baskets change differently

Effect of a different price structure in health and other sectors

	THE	GDP	THE/GDP	PPP _{health}	PPP _{gdp}	THE/GDP _{adj}
Country A	100	1000	0.10	7	5	0.07
Country B	50	1000	0.05	5	7	0.07



Basics required for making GDP PPPs or Health PPPs

- Need to specify items and their characteristics so that one can ensure similar items are being measured across countries
- Item prices have to be collected at different times if seasonal variations are expected
- Prices are to be collected from stratified random sample of outlets that people use the most – rural /urban, formal /informal to get average annual prices
- Need to describe basic headings (lowest level of detail) for which expenditure weight can be provided



GDP PPPs- Defining Standard Product Description (SPD)

Main Expenditure Aggregates of the GDP

Final Consumption Expenditure
Individual Consumption by households
 Individual Consumption by NPI and government
 Collective Consumption by government
 Gross Capital Formation
 Balance of exports and imports

Gross Domestic Product

Examples of Basic Headings for Food

Rice
 Other cereals, flour, and cereal products
 Pasta
 Beef and Veal
 Fresh, chilled or frozen fish and seafood
Fresh milk
 Fresh or chilled fruit
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 Sugar

- List should contain sufficient products representative of the country – included in their CPI

Number of Basic Headings by main categories of Individual Consumption by Households.

Category	Number of Basic Headings
Food and non-alcoholic beverage	29
Alcohol, tobacco	5
Clothing and footwear	5
Housing, water, electricity, gas and other fuels	7
Furnishing, household equipment and maintenance	13
Health	7
Transport	13
Communication, recreation and culture	16
Education	8
Restaurants, hotels, miscellaneous goods and services	12

Standard product Description for Milk

Where sold- Store , at home
 Organic certification
 Type- Cow, Buffalo, goat /
 fortified, not fortified.
 Processing – Fresh, Pasteurised
 Fat content
 Brand

Each SPD has nine sections:

ICP heading
 ICP cluster
 Quantity and packaging
 Source
 Seasonal availability and
 Representatives
 Product characteristics
 Brand
 Other product features
 Comments

Basic Headings for Individual services and Collective services for Health in GDP PPPs

Health benefits and reimbursements

13.02.11.1 Need Price data	Pharmaceutical products
13.02.11.2 Need Price data	Other medical products
13.02.11.3 Need Price data	Therapeutic appliances and equipment
13.02.12.1 Need Price data	Out-patient medical services
13.02.12.2 Need Price data	Out-patient dental services
13.02.12. 3 Need Price data	Out-patient paramedical services
13.02.12.4 Need reference PPPs	Hospital services

Production of health services

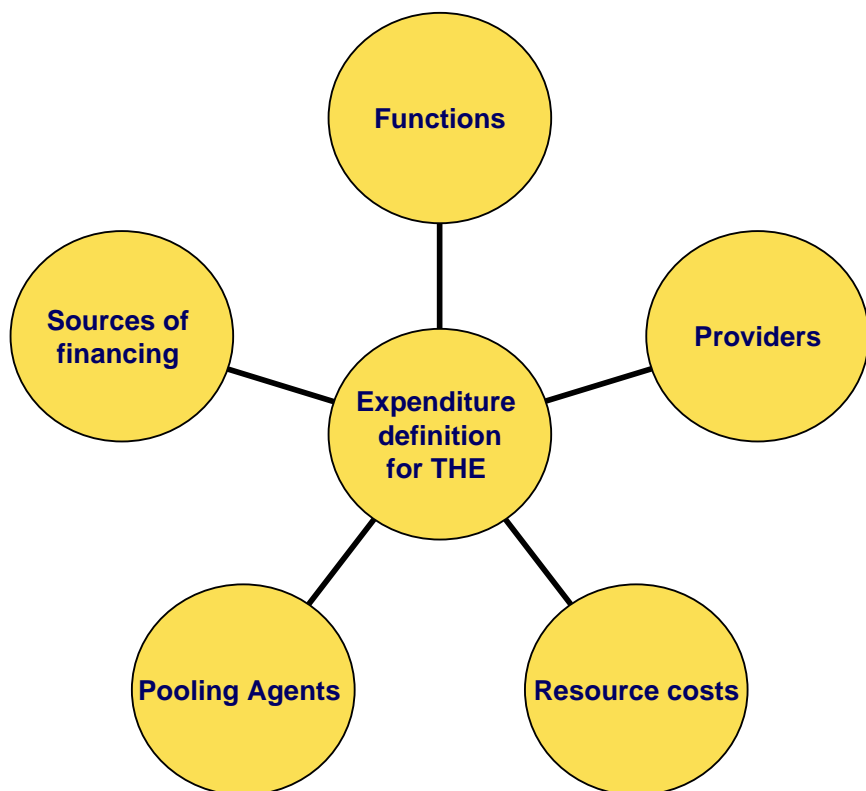
13.02.21 Input prices.1	Compensation of employees
13.02.22.1 Reference PPPs	Intermediate consumption
13.02.23.1 Reference PPPs	Gross operating surplus
13.02.24.1 Reference PPPs	Net taxes on production
13.02.25.1 Reference PPPs	Receipts from sales

COLLECTIVE SERVICES

14.01.11.1 Input prices	Compensation of employees
14.01.12.1 Reference PPPs	Intermediate consumption
14.01.13.1 Reference PPPs	Gross operating surplus
14.01.14.1 Reference PPPs	Net taxes on production
14.01.15.1 Reference PPPs	Receipts from sales



Health sector expenditures



- Expenditure aggregates can be obtained from different headings under each broad category
- Definition of health expenditures is based on **functions** and is for activities and not products.
- Need to define **standard product description/ bundle of activities** for health goods and services on which the value, quantity, quality and prices can be determined and similar characteristic can be defined across the countries.
- The list should be representative of THE in the country

Functions as main expenditure aggregate for total health expenditures

FUNCTIONS (HC)

- HC.1 Service of Curative care
- HC.2 Service of Rehabilitative care
- HC.3 Service of Long-term nursing care
- HC.4 Ancillary services to medical care
- HC.5 Medical goods dispensed to outpatients
- HC.6 Prevention and public health services
- HC.7 Health administration & insurance
- HC.R.1-5 Health related functions
- HC.R.1 Capital formation
- HC.R.2 Education and training
- HC.R.3 Research & Development in health
- HC.R.4 Food, hygiene and drinking water control
- HC.R.5 Environmental health

- Need to define basic headings under each category and find prices e.g.
- **HC.1 Service of Curative care**
 - **Inpatient Curative care**
 - Day Cases of Curative care
 - Out patient Curative care
 - Out patient dental care
 - Outpatient eye care
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 - Services of Curative home care
 - -----
- Usually a difference between who pays, who uses and what value is provided at the end – what is the output and at which level the pricing should be done

Standard product description (SPD) for pricing inpatient curative care

- Output – e.g. Episode of illness (would need to define a list of these)
- SPD would need to define
 - Service Delivery Setting – **Hospital** (size of bed), Outpatient clinic
 - Type of facility – Public, private, NPI,
 - Area for providing care - rural urban - town city village
 - Average length of stay
 - Purpose of visit- Consultation, examination, surgery, follow up
 - Patient type , - e.g. Maternity - mother only , mother and child
 - Lab tests and diagnostic procedures
 - Pharmaceuticals provided
 - Type of surgical procedure
 - Kind of treatment center/ Operating room used
 - Type of care- acute, intensive, emergency
 - Specific therapies – Physical, hydro massage etc.
 - Hospital rooms- private, shared , with/without facilities, with/ without food
 - Domestic patient or tourist



Conceptual issues in pricing hospital services

- GDP PPP use reference PPP for hospital services (PPPs for production of health services by government (before deducting receipts from sales)). These may not be valid in countries with
 - Disparities in government and private services
 - Disparities in government services in the rural and urban areas
- Classification of hospital services could be done
 - Based on inputs for specific output like bed day, per visit or per illness episode
 - Based on most needed procedures in a country that can be defined based on the burden of disease or bulk of visits
 - Based on functional activities for a given output (as done in previous slide)
- Private hospital facilities could vary immensely in countries- market imperfections lead to different prices for similar facilities
- Definitions for health facilities vary in terms of activities and equipments. British Union of architects give standard requirements -validity for developing countries?
- Hospital services for traditional providers – May be very important in some and not valid at all in many countries



Practical problems in imputing prices of hospital services

- For private hospitals if price paid for SPD is used, government may partially or fully pay for services (subsidies), but payment may not be linked to direct output, but the kind of patient (poor/rich) that is using the service, whether the patient is covered by insurance mechanism etc. Should taxes be in PPPs?
- For government hospital services output can be more easily linked to inputs or expenditures by broad functions are available in budget documents. Normally government expenditures can be available by inputs and some functions – how to relate those to the detailed SPD?
- Quality issue: Interventions can be carried out with different inputs and efficiency e.g. tooth extraction can be done with a chair and minimal equipments in developing countries as opposed to a sophisticated costly setup in more developed countries.
- If inputs (human resources, drugs, capital investment) are used as proxy for government output, then the issues relating to pricing HR and drugs are important



Issues in pricing human resources

● Conceptual issues

- Productivity and quality differentials in HR are wide across countries – Like other services and need to take that into account
- Productivity could be very high in some developing countries where a large number of patients are seen by the doctor in a prescribed time.
- But productivity linked to quality would depend on many backup support services.

● Practical Issues

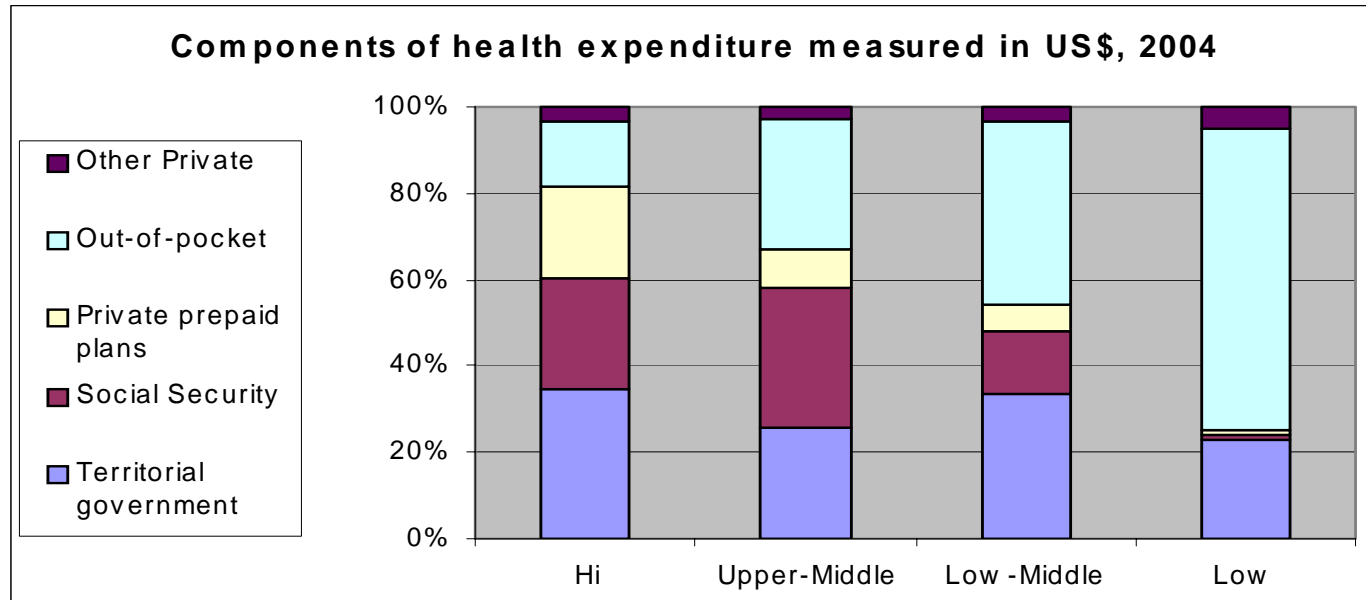
- Problems of imputing values when HR is paid in kind. Normally costs of production are used for house , food etc- Also a problem with GDP PPPs
- Many public sector doctors perform private activities legally and illegally - if it is for the same government output, prices for these need to be imputed and added
- Pricing nursing staff is major challenge – Varies by clinical functions, support, administration, cleaning beds and patients. Pricing change depending on where these nursing staff are used – home care, hospitals, OP clinics, rural/urban areas. Need to link occupation prices with functions and at intervention levels

Issues in imputing prices of pharmaceuticals

- Conceptual issues – SPDs to take account of
 - Most used or most sold pharmaceuticals
 - Branded or generics.
 - Product packaging, size, unit of measure, dosage form, administration and dose for the patients
 - Differences in prices can be due to locally produced equivalent, subsidy, marketing, labelling, point of sale and corruption
 - Traditional medicines
- Practical problems in measurement
 - There can be many generics for a single medicine e.g. 13 generics for Amoxylin in India. Difficult to identify unbranded generics.
 - For purchasing medicines, consumers may not pay the full price, but could be subsidized partly or fully by the government or may be paid through the insurance.
 - The prices could include additional mark-ups and kick backs in some countries
 - Difficult to find the price for the OTC, in many case receipts are not made out



Low income countries have more private sector spending on health



Source: NHA data, health system financing, WHO, www.who.int/nha

For low income countries the expenditures on pharmaceuticals is high: approximately 18 % of total health expenditures and private expenditures on pharmaceuticals are approximately 25% of private HE

Issues in pricing for the private expenditures

- Collecting data from large rural and informal sector a major challenge. Out of pocket payments in many countries are to a large extent informal payments.
- Private insurance markets are really underdeveloped in most low income countries.
- Weak health information system for private sector in low income countries, especially weak facility level information.
- In many cases in low income countries pharmaceuticals are provided by the doctor and included as part of the consultation fee.
- Payment for consultation and drugs can be in form of kind and imputing values can be a challenge



Other emerging areas for pricing

- E health dealing with remote diagnosis and purchase of drugs
- The essential health technology package defines standard set of procedures- linking technology with structures and relating them to functions.
- Pricing for domestic and tourists- does it vary?
- Does pricing vary depending on 'who pays' and how to capture that



Available data sources

- About 100 National Health Accounts (NHA) reports at least for 1 year - could be used to get expenditure aggregates.
- Surveys:
 - HH surveys – budget and health surveys- exist for several countries for different years.
 - Facility surveys – not for many developing countries. Business surveys exist more often, but may not have the detailed information required.
 - WHS surveys for 70 countries for 2002, LSMS in different years.



Data sources for pharmaceuticals

- For pharmaceuticals WHO with HAI collects data on retail price through surveys and information is collected on innovator, most sold, and lowest price generic— a list of about 100 formulations or classes. Need to define the same product list across countries. Some essential medicines used very widely and traditional medicines are missing from the list. However these represent on an average 50-60% of prescribed medicines. Data available for 50 countries.
- Measuring medicine prices for 100 categories under 30 broad classifications (14 global and 16 regional) identified by WHO:
<http://www.who.int/medicines/publications/EML15.pdf>
<http://www.haiweb.org/medicineprices/pdf/PDF%20MP%20Brochure.pdf>
http://whqlibdoc.who.int/hq/2003/WHO_EDM_PAR_2003.2.pdf
- IMS and MSH also collects prices for pharmaceuticals
- World Bank survey on PPPs – use WHO list
- The question of representativeness is important. Need to ensure prices are representative of what and where people purchase.

Using data sources

- Government expenditures in NHA reports are compiled by functions. Would need to compile the quantity information to get indirect prices
- Private payments for public and private facilities can be obtained for drugs, IP care and OP care. Again would need to find the quantities attached to these to proxy for prices.
- Triangulations with different data sources, like sales by retail and whole sellers can give an idea of quantity sold. However would need the information by sales
- Need to standardize the questions in HH surveys to find the quantity consumed and expenditures on a regular basis.
- Standardise facility surveys for collecting basic information.



Health sector complexities- Summary

- Health Sector comprises both private and government consumption (as for GDP PPPs). Health systems vary considerably and therefore expenditure weights important.
- Health goods and services are generally not comparison friendly – for reasons such as market imperfections, non-homogeneous, non market features (collective consumption), quality and productivity differences – Same inputs does not give same output.
- Even if output is defined the pricing is not straight forward in the health sector - Form of payments for products and services differ considerably – rural urban, formal informal, public private provision,
- Prices reflected by consumers may include
 - Partial or full subsidy or taxes from the government
 - Partial or full repayments from the insurance agencies.
 - Payments by external agenciesHence true cost may not be what the prices show, unless taken into account



Thank You

