NHA: Its uses and issues for institutionalization

Ravi P. Rannan-Eliya

Promoting the Institutionalization of National Health Accounts

New Delhi

December 11-12, 2008

Outline

- Introduction
  - A short history
  - What is NHA?
  - International standards
- How is NHA used
  - Approaches
  - Examples
- Issues in institutionalization

History of NHE Estimation

1940-60s: Academic studies in a few countries

Costing of UK NHS (Abel-Smith and Titmuss, 1956)

1960-64: USA Medicare

Establishment of US National Health Accounts

1963-67: First cross-country studies

WHO (Abel-Smith, 1963-67)

1970s: OECD mandate

OECD co-operation to control health spending ⇒ OECD Health Data ⇒ Comparative analysis of determinants of health spending

1990s: Shift from NHE to NHA & Extension of NHA outside OECD region

China, Philippines, Thailand, Egypt, Russia, Hong Kong, Sri Lanka . . .

What Are National Health Accounts?

A statistical system comprising descriptive accounts that describe the totality of expenditure flows in both the government and non-government sectors. They describe the source of all funds utilized in the sector and the destination and uses of those funds.

Typical Health Account Table

Example: Functions by sources (%)

	Government	Employers/ Insurance	Out-of-pocket	TOTAL
Inpatient care	25	2	7	34
Outpatient care & medicines	12	3	37	53
Public health services	6	0	0	6
Other	6	1	0	6
TOTAL	50	6	44	100

Total spending, Sri Lanka (2006) = 4.2% of GDP, $57 per capita

A "System of Health Accounts" OECD (2000)

Developed by OECD:

- To provide standard reporting tables for international comparison
- To provide an internationally harmonized boundary for health care activities
- To provide a consistent framework for analyzing health systems
- To provide a rigid framework for building NHA to permit consistent reporting over time
- Endorsed by WHO for international reporting

Features of OECD SHA

- Provides explicit and comprehensive boundary of health and health-related production
- Analyzes health expenditures in three dimensions: *sources*, *providers* and *functions*
- Detailed sets of classifications for the uses of spending: providers and functions
- Linkages with other international classifications, including SNA
- Basis for adaptation to meet specific national requirements

Reporting National Spending

HC.1 Services of curative care
HC.2 Services of rehabilitative care
HC.3 Services of long-term nursing care
HC.4 Ancillary services to health care
HC.5 Medical goods dispensed to out-patients
HC.6 Prevention and public health services
HC.7 Health administration and health insurance
HC.R.1 Capital formation
HC.R.2 Education and training
HC.R.3 Research and development
HC.R.4 Food, hygiene and drinking water control
HC.R.5 Environmental health
HC.R.6 Social services in-kind
HC.R.7 Health-related cash-benefits

Total Current Expenditure on Health

Total Expenditure on Health (TEH)

General Expenditure on Health (GEH)

A System of Health Accounts

HEALTH

OECD

Guide to producing national health accounts

with special applications for low-income and middle-income countries

WORLD BANK

WORLD HEALTH ORGANIZATION

THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

How is NHA used?

Uses of NHA

NHA statistics

- Monitoring of trends
- Diagnosing financing problems
- Monitoring reforms
- Geographical disparities
- International comparisons

NHA data and tools

- Explaining trends
- Cost projections
- Looking at impact of spending
- Designing reforms
- Equity
- Efficiency

NHA Uses: International Comparisons of Levels

USA
UK
Hong Kong
Malaysia
Thailand
China
Sri Lanka
India
Bangladesh

0 2 4 6 8 10 12 14

Public Private

% GDP

NHA Uses: International Comparison of Trends 1990-2002

Public expenditure (% GDP)

8
7
6
5
4
3
2
1
0
-1

1990 2002

Sri Lanka Thailand Malaysia China Hong Kong Taiwan Japan USA

NHA Uses: Geographical Disparities

Figure 16: Total public health expenditure per capita by province (Rs), 2005

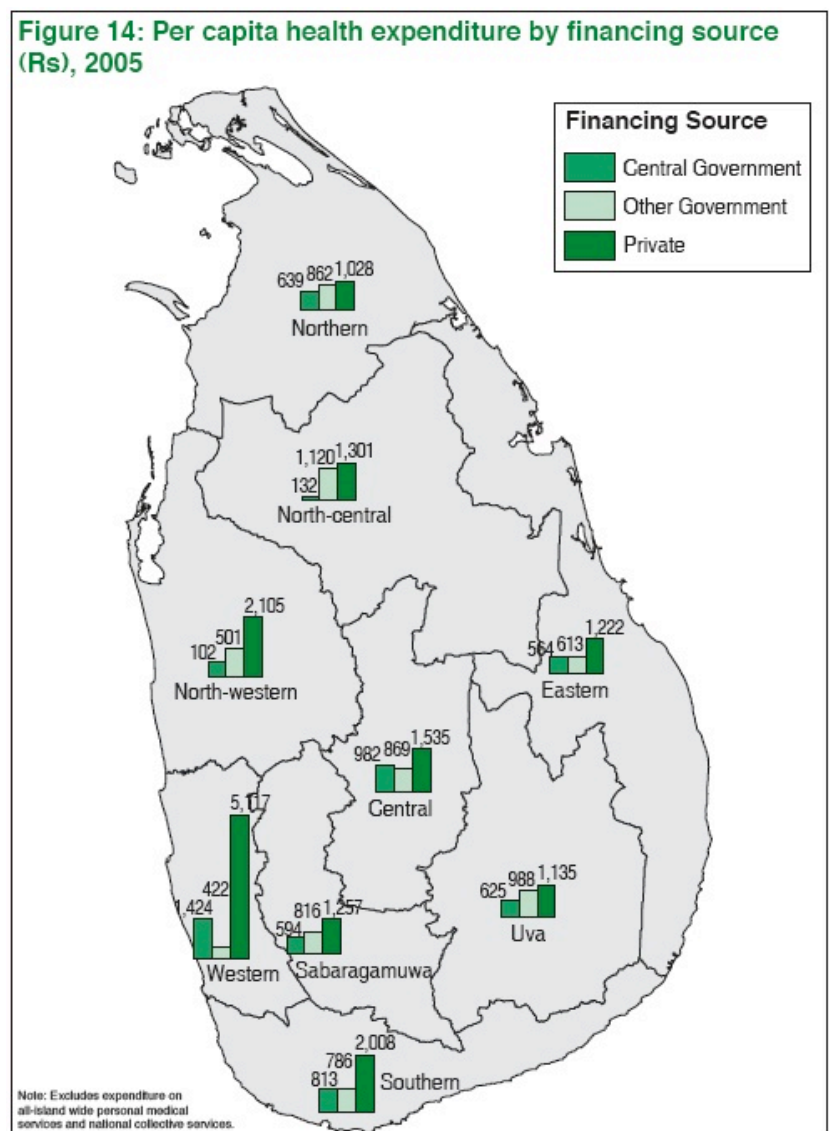
Expenditure ranges (Rs)

- 1,177-1,200
- 1,201-1,400
- 1,401-1,600
- 1,601-1,800
- 1,801-2,000

Northern
North-central
Eastern
North-western
Central
Western
Uva
Sabaragamuwa
Southern

Note: Excludes expenditure on all-island wide personal medical services and national collective services.

Figure 14: Per capita health expenditure by financing source (Rs), 2005



NHA Uses: Analysis of Spending by Age, Sri Lanka (2005)

Expenditure per capita by age & sex (Rupees)

10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-

Male
Female
Female excluding (maternal conditions)

0-4 | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 74-84 | 85+

Age(years)

NHA Uses: Sri Lanka Cost Projections

Expenditures as percentage of GDP

7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%

0-14 | 15-59 | 60-74 | 75+

0.4%
2.0%
0.9%
0.9%
2.4%
0.7%
1.3%
2.3%
0.6%
1.2%
1.6%
2.7%
0.8%

2001 2006 2011 2016 2021 2026 2031 2036 2041 2046 2051 2056 2061 2066 2071 2076 2081 2086 2091 2096 2101

NHA Uses: Analysis of future cost drivers of spending 2000-2025, Sri Lanka (% GDP)

Changes in NHE as % GDP from baseline level in 2005

Cost driver	Upper bound	Lower bound
Ageing	0.4%	
Outpatient demand	0.5%	0.2%
Inpatient demand	0.3%	-0.1%
Public sector productivity	0.4%	-0.4%
Private medical price inflation	0.4%	0.0%
Public-private balance	1.4%	-0.23%

NHA Uses: Analyzing trends in spending on public health, Sri Lanka PER 2004

45%
40%
35%
30%
25%
20%
15%
10%
5%
0%

1990 1991 1992 1993 1994 1995 1996 1997

Central MOH Provincial DOHs Local goverments

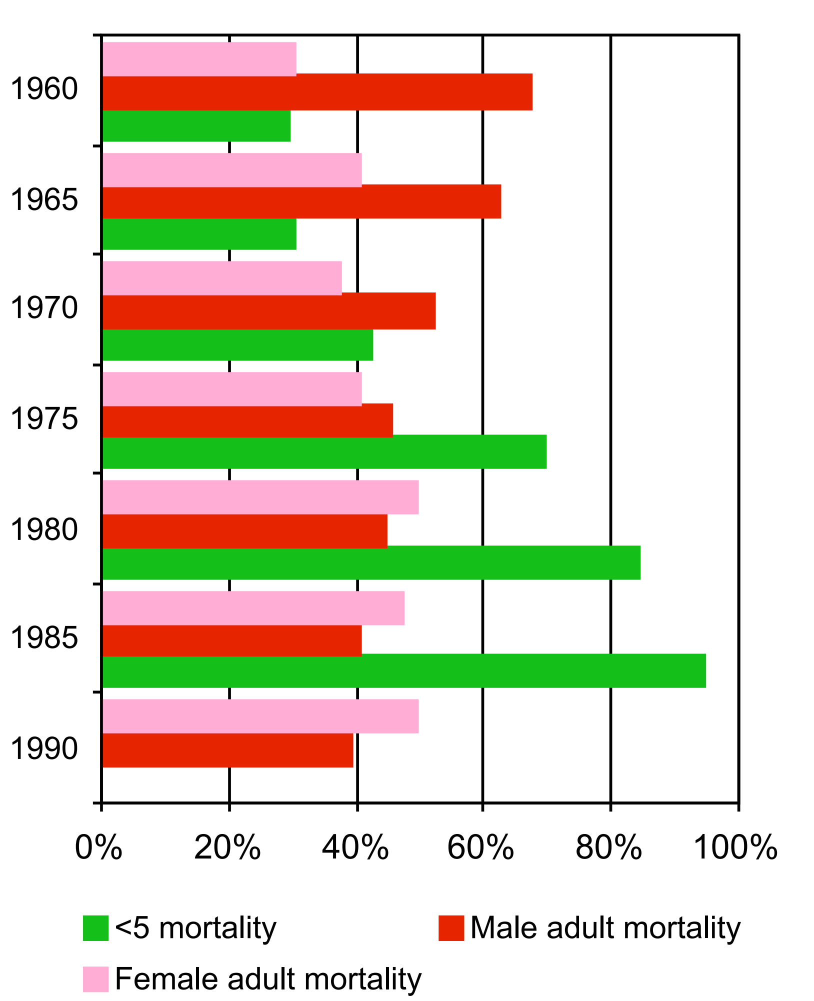
NHA Uses: Explaining changes in spending on public health, Sri Lanka PER 2004

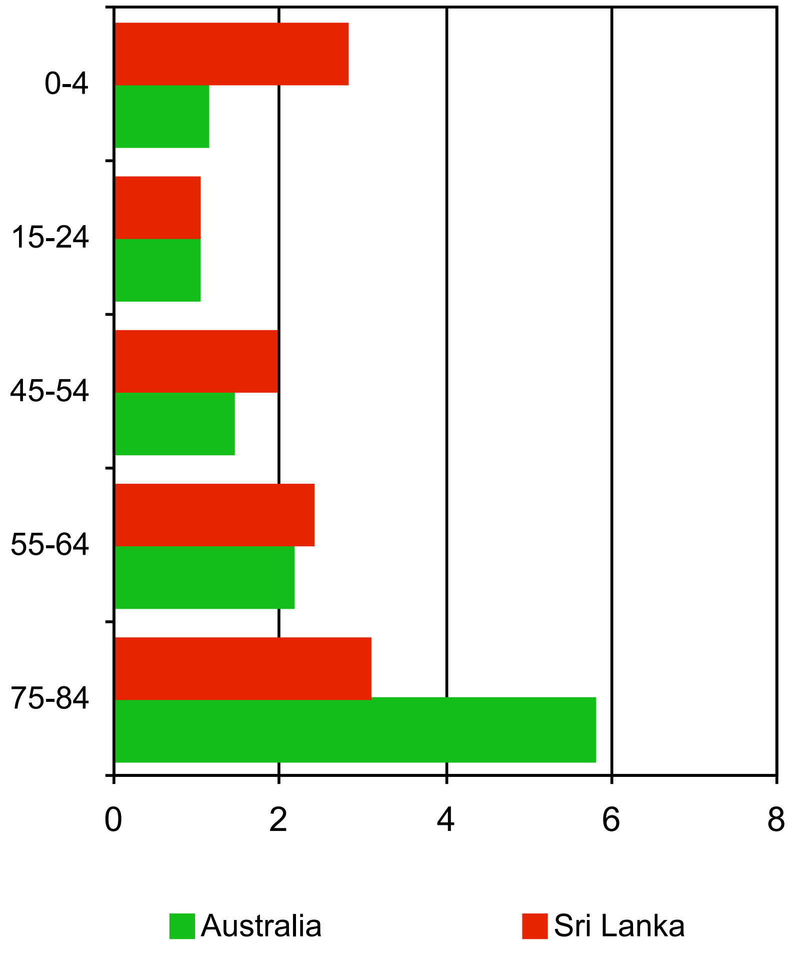
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45

Percent (%)

Education & Training
CD Control
HIV/AIDS
Family Health
Anti-Malaria Campaign

NHA Uses: Analysis of Expenditures vs. Perfomance





IHP INSTITUTE FOR HEALTH POLICY

NHA Uses: Spending by Disease, Sri Lanka (2005)

10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-

0 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90-94 | 95+

- Acute Respiratory Infections
- Benign Neoplasms
- Cardiovascular Disease
- Chronic Respiratory Disease
- Congenital Anomalies
- Diabetes Mellitus
- Diseases of the Digestive System
- Endocrine & Metabolic Disorders
- Genitourinary Diseases
- Ill-defined conditions & other Contacts
- Infectious & Parasitic Diseases
- Injuries
- Malignant Neoplasms
- Maternal Conditions
- Mental Disorders
- Musculoskeletal Disorders
- Neonatal Causes
- Nervous System & Sense Organ Disorders
- Nutritional Deficiencies
- Oral Health
- Other Anaemias and Blood/ Immune Disorde
- Skin Diseases
- Unspecified Abnormal Clinical & Laborato

Issues in NHA Institutionalization

Benefits from institutionalization

Production of NHA

- Reduced cost
- Improved technical quality
- Consistency in numbers
- Improved timeliness
- Retention of critical capacity

Use of NHA

- Ability to use NHA as monitoring tool
- Credibility of estimates
- Familiarity of users with NHA
- Feasibility of interactive interrogation of NHA data
- Capacity to extend NHA to secondary analyses

1. Lower annual costs

- Typically $20-75,000 per year compared with $100-300,000 per intermittent NHA project
- Regular NHA estimation is usually cheaper
  - Methods rely more on use of routine, existing data than special data collections/surveys (e.g., no dedicated household surveys)
  - Respondent cooperation better
  - Continuous process allows for incremental reduction in cost of methods
  - No need for repeated development of methods
  - Easier to retain human resources/technical capacity

2. Better quality of estimates

- Estimates more likely to be consistent in methodology across time
  - Especially for private spending
  - Greater reliance on non-survey methods
- Potential for incremental improvements in quality of methods
- Increased retention of technical staff and learning-by-doing

3. Uses of NHA data and estimates

- Regular production allows monitoring of trends in expenditure
  – Usually more important to policy-makers
- Increases familiarity of policy-makers and users with NHA
- Technical capacity associated with institutionalized NHA more likely to be able to undertake secondary analyses
  – But may depend on competencies of NHA unit and its location

Institutionalization: Sri Lanka Timeline

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
TIMELINE	Phase 0		Phase 1 - Development				Phase 2 - Consolidation				Phase 3: Annual updating		

COVERAGE: 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 | 2000 2001 2002 2003 2004 | 2005 | 2006 | 2007 2008

National Health Expenditure Sri Lanka 1990-2006

IHP Health Expenditure Series No 1

NHA Extensions → Cost projection model; Disease accounts; Linkage to GIS

Use of NHA in policy & planning → Health Master Plan; PER 2004; MTEF 2008/09

Some conclusions

- Institutionalization's main benefits are better quality, lower cost estimates
- If institutionalization is within a technical agency with health systems research skills, then more likely to obtain added value
- Improving NHA systems and use is a long-term process

Thank you