
How to do (or not to do) . . . translation of national health accounts data to evidence for policy making in a low resourced setting

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Abstract

For more than a decade, the Organization for Economic Co-operation and Development (OECD), the World Health Organization (WHO) and the World Bank have promoted the international standardization of National Health Accounts (NHA) for reporting global statistics on public, private and donor health expenditure and improve the quality of evidence-based decision-making at country level. A 2010–2012 World Bank review of NHA activity in 50 countries found structural and technical constraints (rather than cost) were key impediments to institutionalizing NHA in many low- and middle-income countries (LMICs). Pilot projects focused resources on data production, neglecting longer-term capacity building for analysing the data, developing ownership among local stakeholders and establishing routine production, utilization and dissemination of NHA data. Hence, genuine institutionalization of NHA in most LMICs has been slow to materialize. International manuals focus on the production of NHA data and do not include practical, incremental and low-cost strategies to guide countries in translating the data into evidence for policy-making. The main aim of this article is to recommend strategies for bridging this divide between production and utilization of NHA data in low-resource settings. The article begins by discussing the origins and purpose of NHA, including factors currently undermining their uptake. The focus then turns to the development and application of strategies to assist LMICs in ‘unlocking’ the hidden value of their NHA. The article draws on the example of Fiji, a country currently attempting to integrate their NHA data into policy formulation, despite minimal resources, training and familiarity with economic analysis of health systems. Simple, low cost recommendations such as embedding health finance indicators in planning documents, a user-friendly NHA guide for evaluating local health priorities, and sharing NHA data for collaborative research have helped translate NHA from raw data to evidence for policymaking.

Key words: Data utilization, evidence-based policymaking, Fiji, health finance, health systems strengthening, national health accounts, NHA institutionalization, NHA institutionalization, transparency

Key Messages

- National Health Accounts (NHA) track the flow of money across all health sectors to monitor, compare and evaluate health system financing.
- Over the past decade, low- and middle-income countries (LMICs) have been slow to institutionalize NHA. International support has focused on pilot projects producing NHA data, neglecting the equally important dimensions of translating and disseminating the data for policy relevant analysis, strengthening local ownership and demonstrating the utility of NHA to stakeholders.
- NHA manuals recommend using ‘standardized tools’ to translate data for policy analysis but don’t provide practical, incremental strategies to guide the process. Without these clear procedures, health ministries in LMICs often lack the capacity to fully utilize their NHA data for health system analysis.
- Since 2010, Fiji’s cross-sectoral NHA committee, led by the Ministry of Health with local technical assistance, has reported NHA data covering 2007–2012. Simple, targeted and low cost strategies like embedding health finance indicators in planning documents, a user-friendly NHA guide for evaluating local health priorities and sharing NHA data for collaborative research have helped progress the institutionalization of NHA.

Introduction

Tracking the flow of money through the health system is critical for measuring health system performance especially in relation to goals of equity and efficiency. The internationally agreed methodology, *A System of Health Accounts* (SHA) (OECD 2000, revised 2011) measures where money comes from (public, private and external revenue sources), how it is managed and distributed (financing schemes), where money is spent (providers of health services) and what types of treatments or services are delivered (health functions). A full round of National Health Accounts (NHA) ideally includes four dimensions: collating and producing the data using the SHA methodology; dissemination; translating the data for policy use; and generating demand for policy-relevant analysis (Maeda *et al.* 2012:xxxii).¹ ‘Institutionalized’ NHA, defined as ‘routine government-led and country-owned production and application of an essential set of policy relevant health expenditure data using an internationally accepted health accounting framework’ (Maeda *et al.* 2012: xxxviii, emphasis added)—highlights the vital link between producing and utilizing data. ‘Institutionalization’ is achieved when all four dimensions are routinely implemented.

Since the SHA manual (OECD 2000; WHO 2003) was released, institutionalization of NHA in low- and middle-income countries (LMICs) has been slow to materialize. By 2012, 130 countries (including more than 100 LMICs) had produced at least one set of NHA but only 41 countries continued to produce accounts on a regular basis, mostly members of the Organization for Economic Co-operation and Development (OECD) (Maeda *et al.* 2012: 25–26; USAID 2013). Following consultations with more than 50 countries, a World Bank review questioned the effectiveness of supporting pilot projects with external consultants that focused resources on data production but neglected utilizing the data further (Maeda *et al.* 2012). A key constraint identified in the report was ‘the failure to recognize the equal importance of each dimension of the NHA institutionalization cycle’ causing ‘the weak link between data production and its application by key stakeholders’ (Maeda *et al.* 2012: xxxviii).

Since 2010, Fiji has become an exception among LMICs attempting to institutionalize NHA by rapidly building local capacity for the production, dissemination and integration of NHA data in their policy cycle. Initially, a 2009–10 World Health Organization (WHO) pilot (ADB 2008) provided technical assistance for two rounds of NHA (FMoH 2010a, 2011) but no direct financial

support. A strong collaborative partnership between the Fiji Ministry of Health (FMoH), absorbing the production costs, and the Centre for Health Information, Policy and Systems Research (CHIPSR) at Fiji National University (FNU), providing on-going technical expertise, has driven continued production. The cross-sectoral government team, having entrenched NHA production over three rounds of biennial accounts covering 2007–2012 (FMoH 2010a, 2011a, 2013a), are now prioritizing improved data utilization. The strategies used may be relevant to other countries interested in developing their NHA data and include: embedding health finance indicators in policy and planning documents, developing a user-friendly NHA guide to help planners integrate NHA data with other data sources, and using NHA data in collaborative studies with external agencies to strengthen policy analysis and build local capacity.

This article describes how governments with modest financial and human resources, and limited experience analysing health systems from a financing perspective, can utilize their NHA data for evidence-based decision-making. The article begins with a brief introduction to NHA and common constraints to their institutionalization in developing countries. Then it goes on to describe the Fiji experience, concentrating on strategies for translating data into the policy cycle to improve health sector analysis and influence policy development.

Background to NHA

SHA framework

The standardized SHA methodology (OECD *et al.* 2011) tracks all revenues and expenditures into, through and out of the whole-of-health sector: public, private (including households), external assistance (donors), and not-for-profit organizations. The core accounting framework organizes expenditure according to three broad categories (OECD *et al.* 2011, Ch4) First, *financing schemes and agents* track the annual expenditure by government, insurance organizations, not-for profit institutions and households. Secondly, *health providers* tracks annual expenditure by the type of organization that delivers health care goods and services, either as their primary function (e.g. hospitals, clinics, pathologist) or as part of their business (e.g. waste management). Finally, *health functions* tracks expenditure based on the type of health service (e.g. curative, preventive, financing administration). Total expenditure in each category

remains constant [equal to Current Health Expenditure (CHE)] allowing one category (say, health finances) to be cross-referenced with another (say, health functions) to ascertain where the money came from and how it was spent.

SHA2011 also includes an extended accounting framework that complements the core framework and encourages more detailed investigation, particularly for program and policy analysis (OECD *et al.* 2011: Ch4; USAID 2013). Appendix 1 gives detailed descriptions and policy applications for the core and extended frameworks.

To compile a set of accounts, each transaction is classified using International Classifications for Health Accounts (ICHA); approximately 500 precisely defined, mutually exclusive classifications intended to minimize omissions or double counting.³ Countries need not enter data if the classification does not apply to their health system and expand others to provide more detailed information on important policy issues. Linking the core and extended frameworks provides more targeted policy analysis (Figure 1) that includes specific ICHA for both the core and extended frameworks, e.g. ICHA-HP for health providers and ICHA-FA for financing agents.

Why are NHA important?

The SHA methodology can be applied to any health system, irrespective of the level of complexity or organizational type. SHA requires health expenditure data to be collected as close to the point of consumption as possible, giving analysts a set of NHA that most accurately reflects what is spent on health. This is more accurate than tracking budget commitments or funding promises that may not be forthcoming, fully spent or over spent during 1 year (USAID 2013). Using a standardized methodology based on a rigorous classification system, analysts can confidently compare 1 year's data to another to determine national and international trends. This information can also help to address important questions such as: does the current system match policy intentions; is money fairly distributed across demographic groups; what trends can be detected and how can the system be improved? More specifically, NHA are recognized as an ideal data source for calculating the progressivity of a health system (i.e. whether the poor make larger payments for health care as a share of income than the better off) (O'Donnell *et al.* 2008) and estimating the risk of catastrophic and impoverishing health costs, a

key indicator for measuring progress towards universal health care coverage (WHO-WB 2014).

Common challenges producing NHA in LMICs

Regular production of NHA is the first criteria used to measure NHA institutionalization (Maeda *et al.* 2012: 294). The WHO Global Health Observatory lists health expenditure for 84 non-OECD countries, of which, 64 are based on NHA reports (WHO 2014a)⁴. In resource constrained settings it is easy to blame financial barriers for the limited implementation of NHA. However, in practice, producing NHA costs a tiny fraction of the total health budget. The budget for the well-established NHA team in Thailand represents 0.0006% of health expenditure and in the highly constrained setting in Burkina Faso, 0.02% (Maeda *et al.* 2012: 25). For Fiji, NHA represents 0.02% of annual government health expenditure and 0.01% of total health expenditure (communication with FMOH). This suggests technical and structural constraints obstruct progress towards institutionalization rather than financial barriers alone. Externally driven pilot NHA projects often fail to build critical linkages between producing and using NHA data (Maeda *et al.* 2012: xxxviii). Cementing country ownership of the data and securing sustainable capacity before short-term donor funding and external technical support is withdrawn is critical.

Institutionalization of NHA in Fiji

Since a 2009–10 pilot project supported by the Asian Development Bank (ADB) and WHO (ADB 2008) Fiji has made significant progress institutionalizing NHA. Strategies such as embedding NHA production as a key performance indicator in annual FMOH work plans, establishing a permanent NHA-health financing unit within the policy division of the FMOH and having permanent access to local technical expertise have helped build production capacity, demand and institutional knowledge about NHA. Key achievements are built on a core set of replicable activities providing lessons for other LMICs (see Table 1).

Comprehensive NHA reports disseminate public data (FMOH 2010a, 2011a, 2013a) and more detailed analysis is regularly used at the executive level for tracking health expenditure and budget

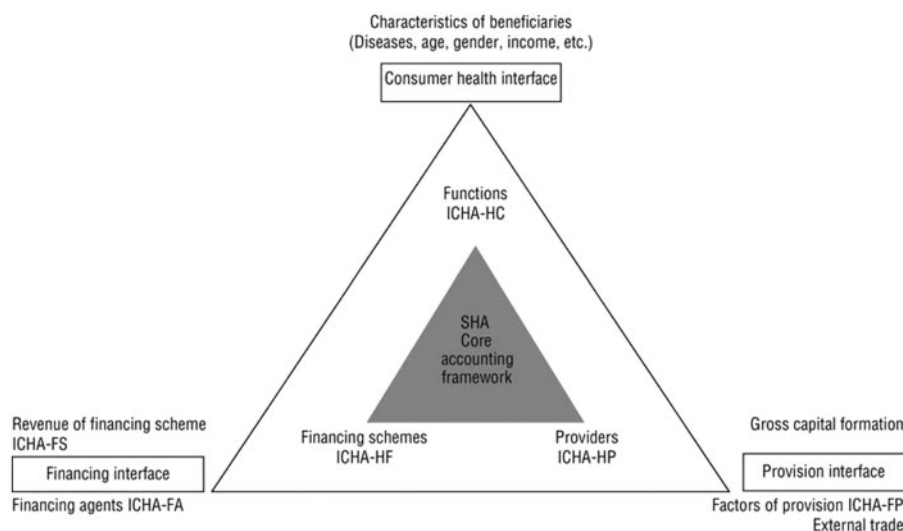


Figure 1. The core and extended accounting framework for SHA2011. (Source: OECD *et al.* 2011: 55).

Table 1. Key achievements institutionalizing NHA in Fiji

Criteria for measuring NHA Institutionalization ^a	Outputs of NHA activities	Indications of institutionalization	External collaborations
Produce NHA data using SHA methodology	Three sets of biennial NHA data covering 2007–12	2007–10 rounds used SHA 2000 methodology 2011–12 round used SHA 2011 methodology ^b	2009–10 ADB-WHO NHA Pilot project In-country WHO technical support Brief visits by external technical consultant Stata short course 2011–12 round—no external support
Consistent production of NHA data	Annual data available in biennial NHA reports	2009–14: Routine production of NHA data Timely, comprehensive reports Production costs constant with improved data collection and analysis 2014: Recoding 2007–10 data from SHA 2000 to SHA 2011 methodology to align data for long term trends	2007–10 rounds—In-country WHO technical support 2011–12 round—no external support
Adequate financial, human and institutional capacity	<i>FMoH 2009—ongoing</i> 2009 NHA pilot started 2010 CHIPSR contracted 2011 Policy unit formed 2012 Health financing unit formed with full-time NHA staff <i>FBoS^c 2012—ongoing</i> Private sector data standardized in household survey schedule	2010–14 NHA costs in FMoH budget 2010—ongoing Health financing unit FMoH Corporate Plan and work schedules include NHA production as performance indicator Policy unit—Responsible for routine NHA production Health financing unit located inside policy unit, full-time NHA staff	2012 Nossal Institute ^d funded 4 month in-country placement at CHIPSR to assist NHA capacity building
Consistent use of NHA data	<i>FMoH 2010—ongoing</i> NHA data used for policy analysis, including: 2010 NHA prompted FMoH review of pharmaceutical costs 2013 Pharmaceuticals review report 2014 Government Health Expenditure 2007–12 reported using SHA2011 2014 Policy briefs on non-communicable diseases and pharmaceutical costs <i>CHIPSR 2010—ongoing^e</i> Collaborative reports 2011 Health in Transition Report 2012 Hospital costing study 2012 Public-Private services 2013 Social health insurance 2013 Catastrophic OOP payments 2014 Health in Transition Report—revised edition 2014 Overseas referral costing	2010—ongoing FMoH Annual Report and Corporate Plan include NHA data 2011–15 FMoH Strategic Plan NHA based indicator 2014 Revised NHA based performance indicators proposed for FMoH Strategic Plan 2016–20	<i>2010—ongoing</i> Regular reports to global agencies. WHO World Health Report OECD Health at a Glance Asia Pacific Ed. <i>Externally supported studies:</i> WHO 2011 Fiji Islands Health System Review: Health System in Transition (HiT) report 2014 Fiji Living HiT Update 2014 WHO policy briefs—pharmaceutical costs; non-communicable diseases 2014 Public Health expenditure report 2007–12 2014 FMoH Policy briefs on funding NCD burden; costing pharmaceuticals Nossal Institute for Global Health 2012 Using NHA to track donor assistance ^f 2013 Strengthening the use of NHA for policy analysis ^g UNSW 2014 SHIFT study ^h using NHA data for calculating equity in health financing

Sources: ^aMaeda *et al.* 2012, 294. ^bThe revised *A System of Health Accounts* (OECD 2011) reorganized the classifications and modified the accounting structure. To integrate the data sets, countries need to recode earlier data from SHA2000 to SHA2011 classifications. ^cFiji Bureau of Statistics; ^dNossal Institute for Global Health, Melbourne University, Australia; ^eCHIPSR publications. http://www.fsm.ac.fj/index.php?option=com_content&view=article&id=310&Itemid=293; ^fNegin *et al.* 2012; ^gPrice 2013a; ^hSustainable Health Financing in Fiji and Timor-Leste Study, University of New South Wales, Sydney, Australia. <https://research.unsw.edu.au/projects/sustainable-health-financing-fiji-and-timor-leste-shift-study>.

analysis, cabinet briefings and supplying data to international agencies. The FMoH and external agencies have commissioned a variety of reports that apply NHA data to local policy issues e.g. the viability of social health insurance (Rannan-Eliya *et al.* 2013), two Health

Systems in Transition (HiT) reports (WHO 2011, 2014b), public-private mix of services (Irava *et al.* 2012a), a hospital costing study (Irava and Prasad 2012), a major review of the pharmaceuticals sector (FMoH-WHO 2013a) and monitoring donor assistance (Negin

et al. 2012). These reports demonstrate strong demand for NHA based evidence at the executive level, particularly from the Minister and Permanent Secretary who commissioned them.

Strategies for institutionalizing NHA: key milestones in Fiji

Drawing on the experience of Fiji over the past 5 years, it is possible to identify four key strategies that have facilitated the utilization of NHA data by key stakeholders.

(1) Recognizing the importance of indicators in maintaining NHA production

Historically, FMOH measured health sector performance by monitoring health outcomes, neglecting health sector financing in their planning documents. The FMOH *Strategic Health Plan 2011–15* (FMOH 2011a), drafted before the NHA data was available, includes over 140 indicators but only one indicator measures health financing; for health expenditure to reach 5% of Gross Domestic Product (FMOH 2011a, p. 21)⁵.

Institutional support for NHA was more evident in the 2010 *Annual Corporate Plan* (FMOH 2010b) that included three pivotal health financing indicators—produce NHA data for 2007–08, establish a health care financing unit, and develop health financing strategies in collaboration with stakeholders to achieve the 5% of GDP target.⁶ These indicators represented a fundamental shift in the analytical approach within the FMOH from clinically based performance assessment towards system wide policy analysis and planning. Importantly, regular production of NHA has been included in subsequent corporate plans (FMOH 2010–14).

The importance of having NHA production as a key performance indicator in the corporate plan was demonstrated in the lead up to 2012 NHA round. At this time, executive support was still evident: in the foreword to the *2014 Annual Corporate Plan*, the Minister ranked NHA production as the third most important output in a list of seven policy priorities for that year (FMOH 2014a, p. 3). However, the original NHA representative from FMOH (an author to this paper), intimately involved in the first two rounds of NHA production had moved on to another job. New NHA committee members were not familiar with either the SHA methodology or the resources necessary to produce a set of accounts. NHA were a time-consuming add-on to their existing workload and production might have faltered, except for the explicit NHA related performance indicators that compelled the team to engage and support another round. Embedding NHA based indicators in departmental plans and specific work schedules protects and promotes NHA, irrespective of fluctuations in support within the ministry.

(2) Ensuring NHA-based indicators are policy-relevant

Indicators serve several functions. Linking data to policy objectives simplifies complex data into an easier format to help staff understand and use data with confidence, without specialized training. Standardized indicators avoid miscalculations, misuse or mistaken interpretations of the raw data. Used regularly, new concepts become familiar and shared among policymakers, strengthening health planning and management and building demand for more detailed analysis. Regular use demonstrates to policymakers that NHA provide important data and merit continued resources, encouraging a more sophisticated understanding of the factors affecting health sector performance and the policy levers available to health planners to implement and evaluate reforms. Generating more demand for the

data helps identify information gaps on particular policy issues, stimulating more investment in policy-relevant research and analysis.

Early in the production of the 2011–12 accounts, a 1-day NHA workshop was held for members of the NHA committee. As only two members of the committee had experience from previous rounds, the workshop began with a brief history of NHA in the global context, explained SHA 2011 methodology, distinguished between publically available NHA data compared to detailed data available to the FMOH, and discussed how NHA indicators can be used for routine tracking and reporting of health financing data. Several scenarios were presented using NHA data, such as advising the Minister for a media debate on health financing issues and investigating a fall in admissions to private hospitals and its effect on funding public services.

The workshop was designed to demonstrate the utility of NHA data in the regular workings of the FMOH and to build ownership of both the production, translation and dissemination of the data. Specifically, it was decided the NHA report's primary function was to relay data to a public audience rather than be a forum for policy discussion. Simply providing the data allowed stakeholders to interpret, translate and utilize the data to suit their policy priorities and interests. It was also agreed the NHA data in previous reports was difficult to interpret for many readers, meaning the data was underutilized. The proposed solution was to develop a set of indicators relevant to policymakers in a three-pronged approach. Firstly, to inform public debate, identify a set of indicators for the NHA report to be continued in subsequent reports, possibly with trend lines extending back to 2007. Secondly, develop NHA based indicators to inform policy debate in individual programme areas within FMOH and include these in policy briefs, as appropriate to the audience. And thirdly, expand the set of NHA based performance indicators for subsequent FMOH strategic plans, particularly related to health system strengthening but also primary, preventive and clinical care.

Initiatives one and two have been implemented. The 2011–12 NHA report includes a list of 30 key indicators (FMOH 2013, p.13; Appendix 2) aligned to international conventions for reporting NHA and FMOH long-term strategic goals and annual performance indicators. They provide a comprehensive set of data for an interested outsider to 'read' the Fiji health system at a glance including: the proportion of health revenue from government, private sector and external assistance; household out-of-pocket expenditure; health expenditure for different types of care from different providers; investments in human resources and capital formation. Longitudinal data for most of the indicators are included in a recent report on trends in health financing in Fiji, 2007–2012 (FMOH 2014a). Policy briefs prepared by the FMOH policy unit (responsible for NHA production) tackle funding for non-communicable diseases (FMOH 2014b), the most urgent health financing challenge for Fiji and the Pacific region, and pharmaceutical costs (FMOH 2014c). Each brief uses NHA data extensively to support their analysis and are available on the FMOH website, using NHA data to stimulate and inform policy in a 'user friendly' format. The third initiative, involving the calculation of health finance based performance indicators for the next five-year strategic plan, is pending executive approval.

(3) Guide for using NHA data in policy analysis

A full set of SHA health accounts includes approximately 500 classifications in ten categories. Unfortunately, the SHA manual (SHA 2011) does not include a template for linking NHA categories to specific policy issues. In Fiji, the task was undertaken by an

Table 2. Fiji NHA Report 2011–12: Health financing indicators policy guide (Excerpt for Financing Schemes only)

NHA Report Indicators	Policy relevance	Related data sources
Financing schemes <ul style="list-style-type: none"> • Govt financing % CHE • Voluntary health insurance % CHE • OOP expenditure % CHE 	<ul style="list-style-type: none"> • Trends in expenditure 2007–12: Government, voluntary insurance and OOP expenditure ↑↓ • Govt commitment to universal health coverage, poverty alleviation • Factors driving demand for private and public health services • Burden of health costs on households through OOP • Levels of financial pooling through insurance cover 	<ul style="list-style-type: none"> • Govt Health Expenditure 2007–2012 reported using SHA 2011 (FMoH 2014) • Household Income & Expenditure Survey: OOP expenditure on health (conducted by FBoS) • Social health insurance report (Rannan-Eliya 2013) • Fiji National Provident Fund annual reports (FNFP website); health insurance company reports • Changes to private sector services and charges, e.g. review of pharmaceutical pricing (FMoH 2013a, 2014b) • Related NHA indicators, especially General (aggregate) Expenditures, Revenue Sources, Financing Agents, Health Functions and Health Providers

Source: Adapted from Price 2013.

CHE, Current health expenditure; FBoS, Fiji Bureau of Statistics; OOP, Out of pocket.

Table 3. Matching NHA classifications to performance indicators for non-communicable diseases (NCDs)

Strategic goal program area	Strategic plan NCD performance indicators (summarized)	NHA classification matched to policy area ^a
Non-communicable diseases	<ul style="list-style-type: none"> • Strengthen primary health care • Support community and village health workers • Increase rehabilitation services and aged care facilities • Prevention—reduce smoking, obesity; improve nutrition • Diabetes—reduce prevalence, admissions, complications • Implement integrated diabetes management • Average length of stay for foot sepsis amputation <15 days • Screening—diabetes, cancer, and cardio-vascular disease • Reduce alcohol related accidents and incidents • Dental—improve hygiene, water fluoridation • Laboratory/radiology services—improve turnaround to receive results faster • Prostheses available 	<p><i>Health functions</i></p> <p>HC.2 Rehabilitative care</p> <p>HC.2.1–HC.2.4 Rehab—Inpatient/outpatient</p> <p>HC.3 Long term care</p> <p>HC.3.1–3.4 Long-term care for inpatient/outpatient</p> <p>HC.4 Ancillary services</p> <p>HC.4.1 Laboratory services</p> <p>HC.4.2 Imaging services</p> <p>HC.5.2 Therapeutic appliances, medical goods</p> <p>HC.5.2.3 Orthopaedic appliances, prosthetics</p> <p>HC.6 Preventive expenditure</p> <p>HC.6.1 Information, education, counselling</p> <p>HC.6.3 Early disease detection programmes</p> <p>HC.6.4 Healthy condition monitoring programmes</p> <p>HC.RI.3.4 Prevention of non-communicable diseases</p> <p>HC.RI.3.5 Occupational health care</p> <p>HCR.1 Long-term care (social)</p> <p>HCR.1.2 Long-term social care, cash benefits</p> <p><i>Health providers</i></p> <p>HP.1.3 Specialized hospitals (other than mental health)</p> <p>HP.2 Residential long-term care facilities</p> <p>HP.3.4.4 Dialysis care centres</p> <p>HP.4.2 Medical and diagnostic laboratories</p> <p>HP.4.9.1 Prosthesis Unit</p> <p>HP.6 Providers of preventive care</p> <p>HP.8.1 Households as providers of home health care</p> <p><i>Global Burden of Disease classifications</i></p> <p>GBD.2.1 Malignant neoplasms</p> <p>GBD.2.2 Other neoplasms</p> <p>GBD.2.3 Diabetes mellitus</p> <p>GBD.2.7 Cardiovascular diseases</p>

Source: Adapted from Price 2013.

^aSome classifications relate directly to the performance indicator, e.g. NCD prevention campaigns. Broader classifications, such as ‘rehabilitative care’ may need to be disaggregated to identify the NCD component for that classification.

externally funded researcher embedded at CHIPSR (an author on this paper) as part of an NHA capacity building project.⁷ The guide (Price 2013b) was designed to assist FMOH staff to understand and utilize NHA data. It contains two sections. The first section suggests how data captured in the NHA report indicators could be used for FMOH public documents such as media releases, pamphlets or reporting to other government departments or external partners. This style of basic guide could be included in NHA reports to assist readers (see Table 2).

The second section assigns SHA 2011 classifications to policy issues prioritised in the “Strategic Health Plan 2011–2015” (FMOH 2011a) and is intended for internal FMOH research, analysis and report writing; these analyses may require access to a more detailed set of data than is in the NHA report. Table 3 links specific NHA classifications to the policy objectives for NCDs identified in the FMOH *Strategic Plan 2011–15* (FMOH 2011a).

Both sections of the guide enable policymakers to understand what information is available and request the data from the NHA officer. Once the research is complete, programme managers can develop appropriate NHA based indicators to match their objectives for monitoring and evaluating programmes and referencing in policy documents.

(4) Sharing NHA data for collaborative research

Another low cost strategy for translating NHA data into useable policy into useable policy content involves participation in collaborative research projects (see Table 2). The WHO has commissioned reports with the FMOH and other stakeholders that utilize NHA data extensively. For example, two ‘Health Systems in Transition’ reports include chapters on health financing in Fiji (WHO 2011; WHO 2014b) and the *Fiji Pharmaceutical Country Profile* (FMOH 2013a) includes detailed analysis of pharmaceutical expenditure based on NHA data. The FMOH, CHIPSR and WHO also collaborated on a costing study of selected health facilities, filling a gap in the data identified while compiling the NHA (Irava and Prasad 2012, p. 8).

CHIPSR has also collaborated with external teams building specialized analytical skills for using NHA data. To assess the feasibility of social health insurance for Fiji (Rannan-Eliya *et al.* 2013), CHIPSR worked with two investigators from the Institute for Health Policy in Sri Lanka. Currently, CHIPSR and the FMOH are collaborating with a multi-country team based at the University of New South Wales conducting financing and benefit incidence analyses of health financing equity in Fiji and Timor-Leste, using NHA as a key data source for tracking progress towards universal health coverage (SHIFT 2014).

In all these instances, the local implementing partner has an active role in managing and translating NHA data to inform policy debate within FMOH, generating demand for analysis using NHA data and building local capacity for future research.

Conclusion

The Fiji experience demonstrates that limited resources do not preclude institutionalizing NHA in LMICs. Low cost tools are available for countries looking to integrate their NHA data into policy analysis: promoting health financing indicators in monitoring and evaluation documents, developing user guides for matching NHA classifications to prioritized policy areas, and encouraging research collaborations that utilize NHA data to inform policy and build specialized skills in-country. This paper supports international

efforts to institutionalize NHA in LMICs, including building capacity through all stages of the NHA cycle: production, dissemination, translation of data and generating local demand. Unlocking the evidence stored in NHA data to inform policy decision-making will ensure NHA production remains cost-effective, relevant and integral to health planning in all countries.

Notes

¹ For the purpose of this article, ‘SHA’ refers to the specific methodology, *A System of Health Accounts* (OECD 2000, revised 2011). ‘NHA’ refers to the data set produced using the SHA methodology and more broadly, the four dimensions of a full round of accounts.

² SHA2011 distinguishes financing schemes (government schemes, insurance, household out-of-pocket payment, etc.) and financing agents (institutional units, like insurance companies, operating the financing schemes). For example, a social insurance scheme can be managed by both a government agency and a private insurance company in the same country.

³ The ICHA are intended to be comprehensive (including all health and related activities), consistent (all countries use the same methodology), comparable (inter-country data can be compared) and compatible [complementing the System of National Accounts (European Commission *et al.* 2009)] (OECD *et al.* 2011, 320–321).

⁴ This reference is intended as indicative of NHA activity in non-OECD countries and not an exhaustive list.

⁵ The remaining indicators are either health outcome targets or clinically based programme deliverables monitoring three strategic policy areas: primary and preventive services; clinical care and rehabilitative services; and health system strengthening at all levels of the ministry.

⁶ Other health system strengthening initiatives included establishing a Health Policy Commission and developing a health information systems strategic plan and related policies (FMOH 2010a, 8).

⁷ The Nossal Institute for Global Health, University of Melbourne, Australia has worked closely with the Fiji Ministry of Health and CHIPSR on various health systems strengthening projects.

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Appendix 1. System of Health Accounts 2011—core and extended accounting framework

Core accounting framework

Classification	Definition	Policy applications
Financing schemes	Expenditure according to key health financing categories <ul style="list-style-type: none"> Government schemes, social health insurance, compulsory and voluntary private insurance, non-profit institutions and external schemes (pp. 159–160, 163) 	Revenue raising Revenue collection Financial pooling Regulation Equity/progressivity Risk protection Ability to pay purchasing schemes Structural allocations
Providers	Expenditure according to type of providers of health care goods and services <ul style="list-style-type: none"> Hospitals and long term care, outpatient facilities, ancillary services, retailers and providers of medical goods, preventive care, administration and financing, home based health care providers (p. 124) 	Service provision Utilization rates Funding by levels of care Organisational structure Regulation Purchasing schemes Access to services Access to medicines Prevention versus curative
Health functions	Expenditure according to type of health purpose <ul style="list-style-type: none"> Curative, rehabilitative and long-term health care, ancillary services, medical goods, preventive care, governance and financing administration, pharmaceuticals, traditional, complementary and alternative medicines, prevention and public health services, long term social care (pp. 83–84) 	Beneficiaries Burden of disease Out-of-pocket expenses Current level of demand Satisfying health needs Unmet health needs Epidemiological transition Future levels of demand

Extended accounting framework

Classification	Definition	Policy applications
Revenues of financing schemes	How revenues are raised to pay for health care <ul style="list-style-type: none"> Taxes, direct payment for service, insurance premiums, foreign transfers, 'From whom' revenues are collected Government, households, employers, donors (foreign financial transfers) (p197) 	Revenue raising Revenue collection Regulation Governance—transparency, accountability Equity/progressivity Budgeting processes Ability to pay Structural allocations
Financing agents	Can collect, manage and distribute funds <ul style="list-style-type: none"> Ministry of Health, commercial insurance companies, compulsory health insurance schemes, international organizations, household spending on health. 	Financial pooling Risk protection Governance—transparency, accountability Private–public mix Regulation Service coverage
Beneficiary characteristics	Direct consumption based on type of disease and demographics <ul style="list-style-type: none"> Characteristics of those who receive health care using the International Classification of Disease system and further disaggregated by age, gender, socioeconomic status, and location. Ch 10 	Burden of disease At risk/vulnerable groups Equity/progressivity Current level of demand Access to services Unmet health needs Epidemiological transitions Future levels of demand
Capital formation	Net expenditure on items used for more than one year <ul style="list-style-type: none"> Gross fixed capital formation (infrastructure, machinery, equipment, intellectual property e.g. computer software) Changes in inventories (e.g. long-term storage) Non-produced non-financial assets (e.g. land) (pp248, 266) 	Production capacity Supply chain management Logistical planning Estimating capital Intensity Information systems Access to services

(continued)

Appendix 1. (Continued)

Core accounting framework

Classification	Definition	Policy applications
Factors of production	Inputs needed to produce health care Expenditure on labour (wages), buildings, equipment, utilities (water, electricity), out-sourced services (pp 212–213)	Staffing levels Training Wages and conditions Purchasing/contracting Investments in technology Expanding services mix

Adapted from OECD et al. (2011).

Appendix 2: Fiji NHA Report 2011–2012—Key indicators^a

	2011	2012	
General	Population	854 290	858 038
	Gross Domestic Product (GDP) (FJ\$m)	5633.4	6064.8
	Total Government Expenditure (TGE) (FJ\$m)	1898.30	2266.20
	Current Health Expenditure (CHE) (FJ\$m)	234.5	256.8
	CHE plus capital spending (FJ\$m)	249.5	271.5
	CHE per capita (FJ\$)	274.46	299.25
Revenues of schemes	Government Current Health Expenditure (GCHE) (FJ\$m)	142.7	154.4
	Private health expenditure	80.6	87.2
	Development partner	11.1	15.2
	GCHE as a % CHE	60.9%	60.1%
	Private expenditure as % of CHE	34.4%	33.9%
	Development partner funds as % CHE	4.7%	5.9%
	CHE as a % of GDP	4.2%	4.2%
	GCHE as a % TGE	7.5%	6.8%
	GCHE as % GDP	2.5%	2.5%
	GCHE per capita (FJ\$)	167.07	179.93
	Private health expenditure as % of GDP	1.4%	1.4%
	Development partner funds as a % GDP	0.2%	0.3%
Financing schemes	Government financing schemes as a % of CHE	60.9%	60.1%
	Voluntary health insurance schemes as a % of CHE	5.5%	5.6%
	Out of pocket (OOP) expenditure as a % of CHE	27.4%	26.8%
Health functions	Curative spending as a % of CHE	40.3%	39.7%
	Inpatient care as a % of CHE	19.5%	18.5%
	Outpatient care as a % of CHE	20.7%	21.2%
	Preventive care as a % of CHE	11.4%	13.9%
Health providers	Hospital spending as a % of CHE	49.4%	45.6%
	Ambulatory health care as a % of CHE	13.0%	14.3%
	Medical goods as a % of CHE	18.0%	17.2%
Factors of production	Expenditure on government human resources as % CHE	35.1%	36.1%
	Expenditure on government human resources as % GCHE	57.6%	60.1%
Capital formation	Capital expenditure as a % CHE plus capital spending	6.1%	5.4%
	Government capital expenditure as a % GHE	7.2%	5.7%

FMoH 2013, p. 13.

^aThis table of indicators has been reproduced as they appear in the Fiji NHA report (FMoH 2013: 13) and is not intended as an exhaustive or ideal list. For example, it has been argued the indicators for 'Revenues of Schemes' are more accurately 'Financing Schemes'. A possible indicator for 'Revenues of financing schemes' is the percentage of domestic revenues and revenues of foreign origin in financing government financing schemes.