

Foreword	XIII
Preface	XIV
Acknowledgements	XVII
Chapter 1. Introduction to national health accounts and this <i>Guide</i>	1
National health accounts in the context of health systems and health system performance measurement	2
National health accounts as an input to stewardship for improving health system performance	3
Analytical dimensions of health expenditure	4
Classification schemes for health expenditure	5
The International Classification for Health Accounts	5
Similarities and differences between health accounting and national income accounting	7
The process of implementing national health accounts and the organization of this <i>Guide</i>	9
Thoughts before embarking	9
Chapter 2. Getting organized: gathering the resources to prepare national health accounts, and sketching the health system	11
Instituting the health accounts project	12
The cost of a health accounts project	12
Timeline for setting up health accounts	12
Housing the health accounts project	12
Resources required for the health accounts project	13
Developing a preliminary sketch of the nation's health system	14
Chapter 3. Defining and categorizing health expenditure	19
Setting the boundary of the national health accounts	20
The space and time boundaries of national health accounts	22
Classifying health expenditures by their function	23
Establishing aggregate measures of national health expenditure	24
Summary	25
Postscript: Classification schemes for prevention and public health services	25
Sri Lanka	25
Malaysia	26
Essential public health functions	27
Chapter 4. Classifying entities in the health care system	35
Classifying financing agents	36
Classifying health care providers	38
Classifying financing sources	42
Classification schemes for the beneficiary population	43
Classifying populations by demographic characteristics	44
Classifying populations by socioeconomic characteristics	44
Classifying populations by health status or disease state	45
Classifying the resources used to produce health care goods and services	47
Concluding thoughts on classification schemes	48

Chapter 5.	National health accounts tables	49
	The structure of national health accounts tables	50
	Health expenditure by type of financing agent and type of provider	52
	Health expenditure by type of provider and by function	52
	Health expenditure by type of financing agent and by function	53
	Health expenditure by type of financing source and financing agent	53
	Costs of resources used to produce health goods and services	53
	Tables showing the distribution of health spending among the population	54
	Health expenditure by age and sex of the population	54
	Health expenditure by socioeconomic status of the population	55
	Health expenditure by health status of the population	55
	Health expenditure by geographical region	55
	Time as a dimension of the health accounts tables	56
	Developing a set of tables for the national health accounts.....	56
Chapter 6.	Data and the national health accounts	67
	Creating a data plan	68
	An overview of data sources	71
	What data are needed?.....	71
	Assessing the quality of a data source	72
	Quality of survey data	73
	Quality of non-survey data	74
	Choosing among competing data sources	75
	Concluding thoughts on the choice and use of data	76
Chapter 7.	A guide to non-survey sources of data for national health accounts	81
	Data on government entities	82
	Actual or estimate?	84
	Comprehensiveness of data collection	84
	Subnational authorities	85
	Data on social security, social insurance, and voluntary medical insurance	85
	Social security	85
	Private insurance companies: social insurance and voluntary medical insurance.....	86
	Data on firms and employers.....	88
	Household data.....	89
	Data on providers	90
	Government sector providers.....	91
	Private sector providers	91
	Data on local and international non-governmental organizations and other external organizations	93
	Government expenditure accounts	94
	Government records on external assistance	94
	Routine surveys of external financing assistance	94
	Special surveys	95
	The Development Cooperation Analysis System	95
	The Creditor Reporting System	95
	Summary.....	96

Chapter 8.	Developing and using surveys in health accounts	97
	Census data..	98
	Random-sample surveys	99
	Rationale for survey.....	100
	Sampling design and sampling error	100
	Non-sampling error	101
	Sample frame	103
	Detail and specificity of questions	104
	Mode of administration.....	104
	Feasibility of cross-checks	105
	Access to survey instruments and data sets	105
	Regularity of survey.....	105
	“Piggy-backing” on existing surveys	106
	Improving the quality of data survey	106
	Rapid assessment and other small scale, low cost survey techniques	107
	Concluding thoughts on surveys...	109
Chapter 9.	Organizing the estimation process: developing a route map and establishing a list of financing agents	111
	Sequencing the estimation steps	112
	Organizing the health accounts effort	113
	Securing team mates.....	113
	Building a steering committee	113
	Developing a work plan	113
	Mapping out the health care system	114
	Creating a data plan	115
	Sketching in potential financing agents.....	115
	Classifying financing agents	118
	Government-owned “businesses”	118
	Private physicians practising in government facilities	118
	Social security versus private social insurance	119
	Social health insurance versus other health insurance	119
	Government health insurance plans that cover only government employees	119
	Including ministries with closed health systems	120
	Nongovernmental organizations versus extrabudgetary entities.....	120
	Starting on the health accounts path in Appia.....	120
	Origin of the Appian health accounts project	121
	First steps..	121
	Sketching the Appian health system	123
	Creating a data plan for the Appia national health accounts.....	124
	Filling in the tables	124
Chapter 10.	Making a first approximation of financing agent funds.....	139
	Questions related to estimating spending totals for financing agents	141
	Working with more than one estimate of spending.....	141
	When no figure is available for the spending of a known financing agent	142
	Indirect expenditures for support and maintenance	142

	Non-contributory pensions and other staff benefits	142
	Insurance benefits or insurance premiums	143
	Government (or some other entity) supplements or subsidies of private social or voluntary insurance premiums.....	143
	When there is only a benefit figure (or only a premium figure) for insurance.....	143
	Accounting for spending by external organizations	144
	Loans made to or repaid by a financing agent.....	144
	Using T-Accounts in health accounting	146
	Estimating financing agent amounts in Appia	147
Chapter 11.	Estimating the financing sources by financing agents table.....	155
	Evaluating each financing agents financing sources.....	156
	Summing financing sources and checking for reasonableness	156
	Matters related to financing sources	158
	Earmarked taxes, such as social security	158
	Financing that comes from health-specific lotteries	158
	Treatment of special taxes	159
	Funds transferred from the central government to regional governments	159
	Calculating the financing sources by financing agents table in Appia	159
Chapter 12.	Estimating the financing agents by providers table	169
	Disaggregating each financing agent.....	170
	Breaking down spending into provider types.....	170
	Accumulating provider revenue across financing agents	172
	Estimating provider revenues.....	172
	Estimating the value of market provider activity	172
	Estimating the value of non-market provider activity	173
	Valuing capital created and consumed	175
	Household production of health care	175
	Treatment of loans and subsidies to providers	175
	Reconciling differences between estimates based on financing agents and on providers	177
	Identifying gaps and missing cells	178
	Reconciling estimates	178
	Estimating the financing agents by providers table for Appia.....	178
	Disaggregating financing agent payments.....	178
	Estimating spending by provider type	184
	Reconciling the entries	186
Chapter 13.	Developing the tables for financing agents by functions and providers by functions.....	195
	Starting with which table?.....	196
	Disaggregating financing agent payments into functional classes	197
	Where data exist	197
	Where data are not available.....	199
	Estimating the providers by function table.....	200
	Single function providers	200

	Multi function providers	200
	Reconciling the results	201
	Classifying activities into functions.....	202
	Categorizing services ancillary to medical care.....	202
	Categorizing medical goods dispensed to outpatients	202
	Creating the financing agents by functions and providers by functions tables in Appia	203
Chapter 14.	Distributing health expenditure among the population.....	213
	Subnational accounts and geopolitical distributions.....	214
	Defining subnational units.....	215
	Estimation procedures	216
	A case study: Mexico.....	217
	Distributing health spending among population groups	218
	Scope of expenditures to be considered	219
	Defining the population dimension	219
	Estimation procedures	220
	Creating an expenditure distribution table.....	221
	Analysing the equity of health care funding	223
	A case study: distributing spending among income quintiles in Appia	224
	A case study: distributing health expenditure by age and sex in the Netherlands	230
	Classifying expenditures by health status or intervention	232
	Classification aspects.....	232
	Estimation procedures	233
	A case study: expenditure by health status in Spain.....	235
	A case study: expenditure on pharmaceuticals in Egypt.....	237
	Concluding thoughts on distributions of health spending	239
Chapter 15.	Concluding thoughts	243
	Challenges encountered worldwide.....	244
	Resources available to health accountants	246
	What does it mean to be a health accountant?.....	246
	A permanent commitment to transparency	248
	An ability to employ judgement in a non-partisan and professional way	248
	A recurrent and open interaction with all stakeholders	249
	A commitment to continuous improvement	249
	Patience and resolution to overcome all hurdles.	250
	The challenge	250
References		251
Annex A	Resources available for health accountants	253
Annex B	Definitions of categories in the International Classifications for Health Accounts and in other useful classification schemes	259
Annex C	National accounts, input/output tables, and satellite accounts.....	265
Annex D	Data techniques often used in health accounting	269
	Appendix: Converting annual data to quarters	278

Glossary	291
Notes	306
List of illustrations	
Table 1.1 Sri Lanka national health accounts, sources to providers matrix, 1997 (OECD SHA format)	10
Table 2.1 Profile of health subsystems in Lebanon	16
Table 3.1 Examples of activities that might be included in or excluded from national health expenditure	21
Table 3.2 International Classification for Health Accounts scheme for health care functions (ICHA-HC)	28
Table 3.3 Sri Lanka national health accounts (SLNHA): definitions for the functional classification of preventive and public health services expenditures	29
Table 3.4 Malaysia national health accounts (MNHA): classification of prevention and public health services as core functions of medical care	26
Table 3.5 Classification based on essential public health functions (EPHF)	32
Table 4.1 OECD International Classification for Health Accounts classification scheme for financing agents (ICHA-HF)	36
Table 4.2 Classification scheme for financing agents based on the OECD International Classification for Health Accounts classification scheme for financing agents (ICHA-HF)	38
Table 4.3 Classification scheme for providers based on the OECD International Classification for Health Accounts classification scheme for providers (ICHA-HP)	39
Table 4.4 Example of possible subcategorization of the general hospitals (HP.1.1) category	41
Table 4.5 Proposed classification scheme for financing sources (FS)	42
Table 4.6 Example of an age/sex classification scheme	44
Table 4.7 WHO's global burden of disease (GBD) classification scheme	46
Table 4.8 A resource cost (RC) or economic classification	47
Table 5.1 Structure of a typical table in the set of tables comprising the national health accounts	51
Table 5.2 National health expenditure by type of financing agent and type of provider (FAXP)	57
Table 5.3 National health expenditure by type of provider and by function (PxF)	58
Table 5.4 National health expenditure by type of financing agent and by function (FAXF)	59
Table 5.5 National health expenditure by type of financing source and type of financing agent (FSxFA)	60
Table 5.6 Personal health expenditure by type of financing agent and by age and sex of the population	61
Table 5.7 National health expenditure by type of financing agent and by per capita household expenditure quintile	62
Table 5.8 National health expenditure by type of financing agent and by disease group	63
Table 5.9 National health expenditure by type of financing agent and by region	64
Table 5.10 Functional classification of government health expenditures, Nepal, 1999–2000	65
Table 6.1 Strengths and weaknesses of data sources, by origin of data	77
Table 6.2 Strengths and weaknesses of data sources, by reason for data collection	79

Table 6.3	Strengths and weaknesses of data sources, by level of detail (granularity) of data.....	80
Table 9.1	List of potential financing agents and their ICHA codes.....	117
Table 9.2	A schematic description of the Appian health system	125
Table 9.3	Appia national health accounts project: tentative data plan.....	127
Table 11.1	Financing sources by financing agents (FSxFA) table (working outline).....	157
Table 12.1	Financing agents by providers (FAXP) table (working outline)	170
Table 13.1	Example of a reconciliation table	201
Table 14.1	Spending in the Brazilian universal health system on selected outpatient procedures in reproductive health care, 1995–1997 (currency of 1997).....	233
Table 14.2	Egypt: pharmaceutical sales, financial years 1986–1996	237
Table 14.3	Egypt: estimation of public sector drug purchases in financial year 1995.....	239
Table C.1	Example of a simplified input/output table	267
Table D.1	Interpolation example 1.....	271
Table D.2	Interpolation example 2.....	272
Table D.3	Interpolation example 3.....	274
Table D.4	Examples of linear and log-linear interpolations.....	274
Table D.5	Example of converting fiscal year totals to calendar year totals	276
Table D.6	Example of adjusting between fiscal year and calendar year inflation	277
Box 1.1	Experience in implementing the system of health accounts worldwide	6
Box 6.1	Improving survey response for national health accounts in Rwanda.....	70
Box 7.1	Use of provider and function keys to code government spending in Sri Lanka.....	83
Box 7.2	Estimating spending for prescription drugs in Bolivia.....	92
Box 8.1	Aspects to be evaluated when considering a survey for use in building health accounts.....	99
Box 8.2	Adjusting household survey results to eliminate bias in Argentina	103
Box 9.1	Initial contacts for information.....	115
Box 10.1	The importance of documentation	140
Box 10.2	Treatment of pension benefits to health workers in the health accounts of Hong Kong Special Administrative Region, China	143
Box 10.3	Handling loans in health accounts	144
Box 10.4	Example of an exhibit table showing changes in debt related to the health system	146
Box 10.5	The T-account	147
Box 11.1	How much is “a significant amount” of difference?	157
Box 12.1	Building provider estimates from household and other data sources in Rwanda	171
Box 12.2	Using income and expenditure reports to prepare health accounts estimates	173
Box 12.3	Handling provider subsidies in the health accounts	176
Box 13.1	Notional allowances	201
Box 14.1	Flow of HIV/AIDS monies in Rwanda	234
Figure 9.1	Route map for estimating national health accounts.....	129
Figure 9.2	Project plan for Appia: workplan for producing national health accounts	122
Figure 14.1	Total and per capita health care costs by age and sex for hospital and long-term care in the Netherlands, 1994.....	231
Figure 14.2	Distribution of expenditure on inpatient care in Spain	236
Figure D.1	Example showing how interpolated and extrapolated estimates are derived from observed measures	270

Exhibit 9.1	Appia: national health accounts 2002 – Health insurance questionnaire	130
Exhibit 9.2	Appia: national health accounts 2002 – Employer survey	132
Exhibit 9.3	Appia: national health accounts 2002 – Government survey of external aid contributions to health.....	135
Exhibit 9.4	Appia: national health accounts 2002 – Nongovernmental organization questionnaire	136
Exhibit 9.5	Appia: national health accounts 2002 – Special tabulation of household survey	137
Exhibit 9.6	Appia: national health accounts 2002 – Preliminary list of possible financing agents and their codes	137
Exhibit 10.1	Appia: Ministry of Health consolidated health spending T-account (HF.1.1.1.1)	148
Exhibit 10.2	Appia: Ministry of Education and Ministry of Defence consolidated health spending T-accounts (HF.1.1.1.2, HF.1.1.1.3)	148
Exhibit 10.3	Appia: regional government health spending (HF.1.1.2).....	149
Exhibit 10.4	Appia: National Insurance Agency consolidated income and expenditure (HF.1.2)	149
Exhibit 10.5	Appia: national electricity utility (AZap) health spending (HF.2.1.1)	150
Exhibit 10.6	Appia: Government Employees Health Fund (HF.2.1.1)	150
Exhibit 10.7	Appia: Ministry of Health spending on health care by type of expenditure (budget code 7.xx.xx)	153
Exhibit 10.8	Appia: private employers/firms worksheet (HF.2.5.2)	151
Exhibit 10.9	Appia: households worksheet (HF.2.3).....	151
Exhibit 10.10	Appia: external organizations worksheet (HF.3)	152
Exhibit 10.11	Appia national health accounts: provisional list of financing agents and amounts spent	152
Exhibit 11.1	Appia: Ministry of Health consolidated health spending T-account (HF.1.1.1.1) (revised)	160
Exhibit 11.2	Appia: financing sources by financing agents (FSxFA) table (in progress, 1)	160
Exhibit 11.3	Appia: regional government health spending (HF.1.1.2) (revised, 1).....	161
Exhibit 11.4	Appia: financing sources by financing agents (FSxFA) table (in progress, 2)	161
Exhibit 11.5	Appia: financing sources by financing agents (FSxFA) table (in progress, 3)	164
Exhibit 11.6	Appia: financing sources by financing agents (FSxFA) table (in progress, 4)	165
Exhibit 11.7	Appia: financing sources by financing agents (FSxFA) table (in progress, 5)	166
Exhibit 11.8	Appia: regional government health spending (HF.1.1.2) (revised, 2).....	163
Exhibit 11.9	Appia: financing sources by financing agents (FSxFA) table (preliminary)	167
Exhibit 12.1	Appia: allocation of Ministry of Health budget to HP classes in the Appia national health accounts	179
Exhibit 12.2	Appia: National Insurance Agency consolidated statement of expenditure.....	180
Exhibit 12.3	Appia: financing agents by providers (FAxP) table (in progress, 1)	180
Exhibit 12.4	Appia: households worksheet (HF.2.3) (revised, 1)	181
Exhibit 12.5	Appia: private insurance worksheet.....	182
Exhibit 12.6	Appia: health spending by the nationally owned electricity utility, AZap (HF.2.1.1)	183
Exhibit 12.7	Appia: households worksheet (HF.2.3) (revised, 2)	183
Exhibit 12.8	Appia: financing agents by providers (FAxP) trial table	190
Exhibit 12.9	Appia: Ministry of Health hospitals, consolidated income and expenditure	184
Exhibit 12.10	Appia: regional hospitals, consolidated income and expenditure (HP.1.1.1.3).....	185
Exhibit 12.11	Appia: private hospitals, consolidated income and expenditure (HP.1.1.2)	185
Exhibit 12.12	Appia: financing agents by providers (FAxP) table (in progress, 2)	191

Exhibit 12.13	Appia: outpatients worksheet	186
Exhibit 12.14	Appia: private physicians worksheet	188
Exhibit 12.15	Appia: traditional healers worksheet	188
Exhibit 12.16	Appia: financing agents by providers (FAXP) table (preliminary)	192
Exhibit 12.17	Appia: financing sources by financing agents (FSxFA) updated table	193
Exhibit 13.1	Appia: crosswalk of Ministry of Finance budget codes to ICHA-HC codes	203
Exhibit 13.2	Appia: Ministry of Health hospitals worksheet	204
Exhibit 13.3	Appia: regional government hospitals worksheet	206
Exhibit 13.4	Appia: private general hospitals worksheet	206
Exhibit 13.5	Appia: polyclinics worksheet	207
Exhibit 13.6	Appia: combined table of financing agents by providers and functions	208
Exhibit 13.7	Appia: estimated providers by functions (PxP) table	210
Exhibit 13.8	Appia: estimated financing agents by functions (FAXF) table	211
Exhibit 14.1	Appia: special tabulation of household survey	225
Exhibit 14.2	Appia: worksheet for determining household as financing agent expenditure distribution, 2002	226
Exhibit 14.3	Appia: worksheet for expenditure distribution by employers as financing agents, 2002	227
Exhibit 14.4	Appia: Ministry of Health white paper on the effects of privatization on use of hospital services, 1996–1998	227
Exhibit 14.5	Appia: worksheet for expenditure distribution for hospital inpatients, 2002	240
Exhibit 14.6	Appia: administration worksheet	228
Exhibit 14.7	Appia: current expenditure on health, by financing agent and by household expenditure quintile	242