# TOWARDS A SYSTEM OF REPRODUCTIVE HEALTH ACCOUNTS

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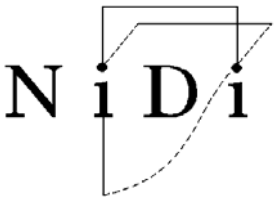


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# TOWARDS A SYSTEM OF REPRODUCTIVE HEALTH ACCOUNTS

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# Executive summary

Financing reproductive health and HIV/AIDS activities is a significant economic and social issue. It involves resource mobilization and the channelling of resources through the health system in a way that results in a better reproductive health status of women and men. The health system involves many actors and a myriad of transactions. The monitoring of the flows of funds, i.e. the tracking of health expenditures, is an essential aspect of an assessment of the effectiveness of health financing schemes and the allocation of scarce resources.

The financial information about who pays, how much and for what, that is generated by resource tracking is most effectively organized in National Health Accounts (NHAs). NHAs are origin-destination tables documenting the flows of financial resources in the health system. The development of a NHA involves the identification of the **actors** (or stakeholders) in the health system, the relevant **activities**, and the financial **transactions** between the actors aimed at carrying out the designated activities. The development also involves decisions about the activities to be included, and the geographical area and time period to be covered. These decisions define the boundary of the NHA. The classification of actors, activities and transactions in meaningful categories that share common characteristics is at the heart of the health accounting methodology. Four types of actors are distinguished:

i. Financing sources (FS): institutions or entities that provide the funds. They consist of donors and domestic sources.
ii. Financing agents (FA): institutions or entities that channel the funds provided by financing sources and use those funds to pay for, or purchase, the activities inside the health account boundary.
iii. Providers (P): entities that receive money in exchange for or in anticipation of producing the activities inside the reproductive health accounts boundary;
iv. Beneficiaries: those receiving or affected by the goods and services consumed within the health account boundary.

A NHA tracks the flow of funds from the sources of funds, through the intermediaries, to the final recipient, i.e. from source to final destination. The account reveals who is funding what and how the funds are channelled through the health system. The resource tracking is an essential aspect of an effective health system and an essential component of health system reform.

The Reproductive Health Account (RHA) developed in this report is a sub-account or satellite account of a NHA. In a RHA actors, activities and transactions are limited to those that are involved in reproductive health and HIV/AIDS. Reproductive health expenditures encompass all expenditures for activities whose primary purpose is to restore, improve or maintain reproductive health. A useful way of viewing activities is in relation to specific objectives such as safe motherhood, teenage pregnancies, mother-to-child transmission of HIV, prolongation of life for people living with AIDS, increased access to health services, increased gender equity in health, etc. Viewing activities in relation to the objectives they serve provides a good basis for the monitoring and evaluation of the activities, and the formulation of a set of indicators to measure the performance of the activities. That way reproductive health accounts represent not only an effective resource tracking instrument, but also a powerful monitoring and evaluation instrument. Monitoring and evaluation view reproductive health programmes as composed of a set of **activities** that use (invest) **inputs** or resources (financial, manpower, technology) and that produce results (**output**) at the programme level intended to lead to changes at the population level (**outcome**).

This report is the first systematic description of RHAs. The guiding principles for producing RHAs are based on the best practice of producing NHAs, represented by the manual *Guide to producing national health accounts* (WHO, 2003). To demonstrate the link between the RHA and the NHA, the paper relies heavily on the WHO manual. In addition, the structure of the report resembles the structure of the manual.

# Acronyms

| | |
|---|---|
| AIDS | Acquired Immuno-Deficiency Syndrome |
| BCG | Tuberculosis vaccine |
| BDHS | Bangladesh DHS (Demographic and Health Survey) |
| DAC | Development Assistance Committee |
| DHS | Demographic and Health Survey |
| DPT | Diphtheria, Pertussis and Tetanus vaccine |
| DT | Diptheria and Tetanus |
| F | Functions |
| FA | Financing Agents |
| FP | Family Planning |
| FS | Financing Sources |
| FWV | Family Welfare Visitor |
| GOI | Government of India |
| GOR | Government of Rajasthan |
| HF | Financing Agents |
| HIV | Human Immunodeficiency Virus |
| HMO | Health Maintenance Organizations |
| HNP | Health, Nutrition and Population |
| HRC | Health-Related Categories |
| ICD | International Classification of Diseases |
| ICHA-FS | International Classification for Health Accounts – classification scheme financing sources |
| ICHA-HC | International Classification for Health Accounts – functional classification of health care |
| ICHA-HF | International Classification for Health Accounts – classification scheme for financing agents |
| ICHA-HP | International Classification for Health Accounts – classification scheme for providers |
| ICPD | International Conference on Population and Development |
| IIHMR | Indian Institute for Health Management Research |
| IPPF | International Planned Parenthood Federation |

| | |
|---|---|
| IUD | Intra-Uterine Device |
| MCH | Mother and Child Health |
| NGO | Non-Governmental Organization |
| NIDI | Netherlands Interdisciplinary Demographic Institute |
| NHA | National Health Account |
| OECD | Organization for Economic Co-operation and Development |
| OPV | Oral Polio Vaccine |
| P | (Health) Providers |
| PAI | Population Action International |
| PHRplus | Partners for Health Reform*plus* |
| RCH | Reproductive and Child Health |
| RF | Resource Flows |
| RFB | Regional Finance Bureaus |
| RHA | Reproductive Health Account |
| RTI | Reproductive Tract Infection |
| SIDALAC | Regional AIDS initiative for Latin America an the Caribbean |
| SNA | System of National Accounts |
| STD | Sexually Transmitted Diseases |
| SWAp | Sector-Wide Approach |
| TT | Tetanus Toxoid |
| UNAIDS | Joint United Nations Programme on HIV/AIDS |
| UNDP | United Nations Development Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNFPA | United Nations Population Fund |
| USAID | US Agency for International Development |
| WHO | World Health Organization |

# 1. Introduction

Poor reproductive health accounts for 36 percent of women's total disease burden (Murray and Lopez, 1996). An estimated 76 million unwanted pregnancies in developing countries per year of which 19 million end in unsafe abortion causing the death of 68,000 women, and worldwide about 40 million adults and children living with HIV/AIDS, about 5 million newly infected persons per year and 3 million AIDS deaths per year confirm the global burden of reproductive health problems (Singh *et al*., 2004; WHO, 2004; UNAIDS, 2004).

The World Health Organization (WHO) defines health as the state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. Reproductive health addresses the reproductive processes, functions and system at all stages of life (http://www.who.int/health_topics/reproductive_health/en/). Reproductive health, therefore, implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this are the rights of men and women to be informed of and to have access to safe, effective, affordable and acceptable methods of fertility regulation of their choice, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant.

In similar vein, the Programme of Action of the International Conference on Population and Development (ICPD), held in Cairo in 1994, defines reproductive health as 'a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its processes and functions.' (ICPD, 1994; Chapter 7). The ICPD vision is 'a world where all individuals would have access to comprehensive reproductive health information and services throughout their life cycle by 2015' (http://www.unfpa.org/monitoring/pdf/n-

issue22.pdf). The reproductive health portion of the ICPD Programme of Action calls for all nations:

1. To ensure that comprehensive and factual information and a full range of reproductive health-care services, including family planning, are accessible, affordable, acceptable and convenient to all users (through the primary health care system by 2015);
2. To enable and support responsible voluntary decisions about childbearing and methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law and to have the information, education and means to do so;
3. To meet changing reproductive health needs over the life cycle and to do so in ways sensitive to the diversity of circumstances of local communities.

The implementation of the ICPD Programme of Action and the enhancement of reproductive health across the globe require a variety of reproductive health. These activities must be financed. With the growing scarcity of resources for basic reproductive health and family planning on the one hand and rapidly expanding needs for HIV/AIDS prevention and treatment on the other, financing reproductive health becomes a significant public health issue. The reluctance of the public sector to be involved more in health care financing and health care delivery, and the long-term consequences of poor reproductive health for mothers further reinforce the importance of this issue.

The optimal allocation of scarce resources requires an effective health system. The reproductive health system may be defined as the combination of actors and activities involved in reproductive health care, whose primary purpose is to promote, restore or maintain reproductive health[2] (WHO, 2003, p. 2). Reproductive health care is then defined as the constellation of information, goods and services that contribute to reproductive health and well-being by preventing and curing reproductive health problems. The health system involves a myriad of transactions between the actors in the system. Finances for health care may come from multiple sources and providers may receive payment from more than one source. The monitoring of the flows of funds through a multitude of channels connecting primary financing sources and ultimate beneficiaries, i.e. the tracking of reproductive health expenditures, is an important aspect of health

[2] The definition is consistent with the definition of health system in the *World Health Report 2000* (p. 5) http://www.who.int/whr2001/2001/archives/2000/en/index.htm.

systems analysis and is essential to assess the effectiveness of allocation of scarce resources.

The information on the flow of funds is used in the assessment of the performance of the health system, the evaluation of specific health care interventions, and the design of more effective reproductive health institutions and programmes. Ultimately, the information is used in the health policy process. Resource tracking addresses several questions of immediate[3] concern to health policy making. They include:

i. How are funds mobilized and managed? How do public sources and private sources compare?
ii. Are funds adequate for covering the expenses of activities that are required to achieve target health levels?
iii. Who provides goods and services and what resources do they use?
iv. Who pays and how much is paid for health care?
v. How are funds distributed among different activities and among different input factors (production factors) in those activities? Input factors consist of manpower, equipment, goods and services, and management.
vi. Who benefits from health care expenditures?

Few studies investigate the expenditures for reproductive health, including family planning. UNFPA/UNAIDS/NIDI engaged in primary data collection on donor assistance for population and AIDS activities at the global level and regional levels (cf. UNFPA, 2002). In the RF 2003 survey round, data collected by the Resource Flows (RF) project are derived from detailed questionnaires

[3] See http://www.cgdev.org/section/initiatives/_active/ghprn/current/rtrwg
The background and purpose of the Working Group illustrate the stakes. "The lack of timely, accurate information about spending on health services and public health programs represents a key constraint for good policymaking and effective use of limited resources in developing countries. Although important advances have been made in improving the data quality and policy-relevance of data on national spending and external flows from public and private donors, the need to further improve data systems is clear. None of the existing tracking systems or efforts provides up-to-date, comprehensive information in a form that addresses central policy questions. Without information about what resources are expected —from whom, and for what purpose— and without better tracking of how those funds have been spent, policy leaders, advocates and analysts are unlikely to be able to effectively raise additional resources and allocate them toward the populations and types of services that are vital to the achievement of the Millennium Development Goals."

mailed to 77 donor countries, multilateral organizations and agencies, development banks, major private foundations and other international NGOs that provide population and AIDS assistance.[4] Information on domestic resource flows by national governments and local NGO's in developing countries and countries-in-transition was obtained from responses to questionnaires sent to UNFPA/UNDP field offices throughout the world. As a result of the external evaluation, in 2003, a decision was taken to split the developing countries/countries in transition into core and non-core countries to help minimise respondent fatigue and logistical burden. Since 2004, a core developing country survey and a non-core developing country survey are executed, alternately every year. The non-core group is further divided and sampled on a rotating basis. The following groups of countries are considered core countries: (1) countries that constitute 80 percent of developing countries and countries in transition's population, (2) countries that constituted 90 percent of reported expenditures for population and AIDS and responded at least once in the past three RF survey rounds, and (3) countries especially affected by the HIV/AIDS epidemic.

Within the framework of the first RF core survey conducted in 2004 (for fiscal year 2003), 66 developing countries and countries in transition were studied.

The data collected by the RF project pertain to expenditures on activities that are included in the ICPD costed population package, which is included in the ICPD Programme of Action (paragraph 13.14). The Cairo goal was to mobilize $17 billion by the year 2000 and $18.5 billion by 2005 for population and AIDS activities: family planning, basic reproductive health services, sexually transmitted diseases (STDs) and HIV/AIDS activities, and research and data collection. According to the Programme of Action, approximately two thirds of the projected resources was expected to come from developing countries and one third from the international donor community.
Recently, a study was conducted by the RF project on the world-wide size and structure of funds for population and AIDS activities, generated by donors and the governments and NGOs in developing countries and countries in transition

[4] In order to address the increasing respondent fatigue and reduce the logistic burden on NIDI, since 2004, questionnaires have only been distributed to key donors. By approaching approximately 50 percent of the former sample it is estimated that 90 percent of the donor assistance in the field of population and AIDS is captured. Within the framework of the current RF 2004 survey, 72 donors have been approached. The sample is updated regularly as new organisations appear or dissolve.

for the years 2003-2005. (Dalen and Reuser, 2005) Focus of this report is the question whether the financial promises made at the ICPD are likely to be fulfilled in the next coming years. According to this study, the total flow of resources is expected to increase from US$14.2 billion in 2003 to US$18.5 billion current US dollars in 2005. This amount comprises resources from both donors and domestic organisations in developing countries/countries in transition, including a significant share of private out-of-pocket expenditures.

The following conclusions can be drawn from the findings:

- The Programme of Action targeted a sharing of costs between donors and developing countries of 1:2. For 2005, donors did indeed provide approximately one third of total generated funds: $5.9 billion in nominal terms. Domestic expenditures would account for $12.7 billion. However, more than half of the funds in developing countries and countries in transition constitute out-of-pocket expenditures by consumers. Given this prominent position and the concern for poverty in the developing world, it would seem of utmost importance to strengthen the involvement of all public and private stakeholders, including profit and non-profit firms, in population and AIDS activities to alleviate the financial burden for consumers.
- On average, donors as a whole are living up to their commitment by giving more than the aimed four percent of ODA to population and AIDS issues. Yet, a large share of a recent increase is attributable to one initiative, namely the United States President's Emergency Plan For AIDS Relief, committing US$2.7 billion to HIV/AIDS in 2005.
- In nominal terms, the ICPD world-wide goal for 2005 is likely to be met.[5] However, a dollar today cannot buy the same basket of goods and services as it did in 1993 — the time when ICPD targets were developed. To allow comparison across time, 2005 figures could be stated in 1993 dollars to correct for inflation. By doing so, the question whether the 2005 ICPD goal will be achieved would have to be answered differently.
- Given the dramatic AIDS pandemic and the skyrocketed health-care costs in general, a financial target considered reasonable in 1993 is no longer sufficient to cover expenses in 2005. Therefore, attention should be given to the question whether the 2005 ICPD target is adequate to meet the

[5] If Development Bank loans are included, it is likely that the ICPD target for 2005 will be surpassed.

increasing needs of developing countries/countries in transition in the fields of family planning, reproductive health, STD/HIV/AIDS and basic research.

- The fact that the world today is very different than at the time of the ICPD is also revealed by the shift from Family Planning and Reproductive Health to AIDS activities. This change will probably be the most dominant trend among the OECD/DAC countries. In 2005 it is expected that 66 percent of their donor funds will be allocated to STD/HIV/AIDS activities. This is in marked contrast to the targeted share mentioned in the ICPD Programme of Action for 2005 of eight percent. The other elements of the ICPD costed population package are crowded out by the drive to fighting AIDS.

Resource tracking is an active field of research. In addition to the RF study, a number of studies examine global funding of reproductive health, in particular donor funding, and investigate the extent to which funding has met the ICPD estimates of resources needed. For a recent overview of actors and activities, see Eisenman and Fossum (2005). The studies include Potts *et al.* (1999), Claeys and Wuyts (2004), McKellar (2005) and Kates (2005). The International Planned Parenthood Federation (IPPF) organizes shadow peer reviews of donor countries, i.e. countries that are members of the Development Assistance Committee (DAC). The reviews are published in DAC Watch. IPPF aims to raise donor government awareness of the need to contribute to sexual and reproductive health programmes. In collaboration with relevant national family planning associations and other NGOs, IPPF initiated an independent evaluation of countries under DAC review. Population Action International (PAI) publishes overviews of donor performance with regard to their financial and political support for international reproductive health and population programs (Conly and de Silva 1998, Ethelston *et al.* 2004). The study, which relies to a large extent on data of the RF project, profiles the donor countries, and grades each of them on their contributions toward the goal of universal access to basic reproductive health care by 2015 — the goal agreed to at the ICPD in 1994. The study also addresses donors' growing focus on HIV/AIDS and the importance of linking HIV/AIDS services to other aspects of sexual and reproductive health care. The multitude of activities call for coordination. In 2004, the Centre for Global Development in Washington established the Global Health Resource Tracking Working Group, involving the major actors in the field. The Working Group drew up a number of recommendations for global health resource tracking (Global Health Resource Tracking Working Group, 2005).

The tracking of donor expenditures on sexual and reproductive health is relatively well developed. Information on domestic expenditures is difficult to obtain and generally requires detailed fieldwork, since accurate monitoring and accountancy systems are often missing. The Institute of Policy Studies in Sri Lanka reviews costs and financing of reproductive health services in Bangladesh, India, Nepal, Pakistan and Sri Lanka (IPS 2004). The study reveals large gaps in the available evidence base and existing information systems.[6] Rannan-Eliya *et al.* (2000) assess the financing of family planning and reproductive health services in Egypt and Sri Lanka.[7] The study identifies important differences in the performance of the reproductive health system in the two countries. The Indian Institute for Health Management Research (IIHMR) in Jaipur, India, and the Futures Group International (FGI) in Washington joined forces to investigate the reproductive and child health financing in Rajasthan, India (IIHMR and FGI, 2000).[8]

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[6] The study shows that the only countries and states for which financing for reproductive health services can be easily quantified are those which have established health accounting systems (Bangladesh, Sri Lanka), or recent health accounting studies of reproductive health expenditures (Rajasthan). In only these territories do databases exist which systematically quantify and classify public expenditures by purpose, and thus enable ready identification of reproductive health service expenditures and costs. Household out-of-pocket expenditures are a substantial source of financing in all countries, but again only in those territories with health accounting systems have the level and composition of household spending been reliably quantified. In all countries, existing household surveys of expenditure and utilization suffer limitations with respect to the detail of their coverage of reproductive health. With respect to the costs of public sector services, similar limitations exist owing to the lack of reliable and representative facility cost studies outside of Bangladesh, Sri Lanka and a few Indian states (IPS 2004).

[7] The study shows that reproductive health expenditures (per capita) in Sri Lanka and Egypt are comparable, with similar contributions of the private and public sectors. Expenditures on reproductive health are 14 percent of all health expenditures in Egypt (1994/95) and 11 percent in Sri Lanka (1997). Public sources (including donor assistance) account for two thirds of reproductive health expenditures (Rannan-Eliya *et al.* 2000, p. 46). Family planning and Mother and Child Health (MCH) services account for the smallest share of reproductive health costs whereas the largest cost components are general obstetric and gynecological care and childbirth services.

[8] In the fiscal year 1998/99, the state of Rajasthan spends 6 percent of the State Domestic Product on health care, the same percentage as India. The Government of India (GOI) and the Government of Rajasthan (GOR) with donor assistance finance about 29 percent of health care services while household spending constitutes 71 percent of the total. Of the 71 percent, households allocate 66 percent to direct payments to private providers and 33.6 percent to payments for services initiated in the public sector. Less than 1 percent of household spending goes to pay official user charges in public facilities. Of

Standing (2002) examines the impact of different financing regimes on the delivery of reproductive health services in low and middle income countries. She investigates the shift in balance between collective and individual responsibility for reproductive health and finds that the shift towards individualization has produced a plethora of new financing arrangements. Rising cost of medical care means decreasing access to services, especially for the poor. The author raises a critical note on expenditures studies. In Africa, the public health sector is increasingly becoming a fiction as poorly paid and supervised health staff becomes personal entrepreneurs. Budget allocations are almost irrelevant when institutions that manage them are weak and lack accountability (Standing 2002, p. 5). She concludes that, "in understanding the relationship between financing and outcomes at the level of service delivery and health gain, unofficial financial flows, such as informal payments and other costs of access to services, are as important as official ones." (Standing 2002, p. 6). Ways to monitor reproductive health spending, that may cover informal payments, are discussed. They include National Health Accounts and Budget Studies.

Tracking the flow of financial resources in reproductive and sexual health and HIV/AIDS is a major undertaking. The results are often questioned because of

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the total state health care expenditure, 21 percent is for reproductive and child health (RCH). These services are a significant part of primary health care. They attend the immediate, basic needs of women of fertile age and of young children and infants by providing services like family planning, delivery assistance, immunizations, abortion, treatment of reproductive tract infections and others. They also support public health measures that aim to halt the spread of sexually transmitted infections including HIV/AIDS. In the study period, the GOI and GOR finances only one fifth of RCH services in the state. On an out-of-pocket basis, households finances four fifths of RCH services. Their direct payments to private providers constitutes nearly half the services financed (49 percent). They also make payments to public providers (31 percent of total RCH spending). It is interesting to note that public institutions receive far more of their financing from households than from governments and donors (31 versus 20 percent). A surprising result of this study was that the treatment of reproductive tract infections (RTIs) accounts for almost half of all RCH expenditures. RTI accounts for 41 percent of RCH expenditures, of which nine percent is spent by the government and 91 percent is spent by households. The high expenditures for RTI are related to the high prevalence of RTI. More than one of three women (37 percent) report an RTI-related symptoms in the past three months (vaginal discharge that is not menstruation, pain or burning while urinating, pain in the abdomen during intercourse, or blood after sex when not menstruating). Only 20 percent of those who report a symptom report seeking medical help, mostly from private providers, although private providers charge three times the cost charged by government providers. Half of the expenditures for RTI treatment are for medicines.

incomplete coverage, problems associated with the definition of activities, measurement problems, and allocation problems. To alleviate these problems, an instrument is required for the collection of data. The instrument consists of a framework and a set of rules that guide the resource tracking exercise. In this paper, a framework and rules are proposed for tracking resources in the field of sexual and reproductive health and HIV/AIDS. The outcome is a reproductive health account.

The paper is organized in six sections. Section 2 introduces the principle of health accounting and briefly situates Reproductive Health Accounts in the larger framework of National Health Accounts and the system of national accounts. Section 3 describes the reproductive health system. It includes the identification and classification of actors and activities in the sphere of reproductive health and the financial transactions among the actors. These transactions represent the health expenditures. Section 4 elaborates the reproductive health account. The accounts are tables displaying various aspects of the health system pertaining to reproductive health. They connect the actors by the financial transactions they generate. Different types of tables are distinguished. In order to quantify the transactions and to fill the tables, data must be collected from various sources and missing data must be estimated. Section 5 discusses data and databases for reproductive health accounts. Since the account includes both observations on expenditures and estimates, the data in the account belong to the class of synthetic data. The section addresses the rapidly expanding statistical literature on the generation of synthetic databases. Section 6 concludes the paper.

# 2. Health accounting

Resource tracking is a necessary part of health system development. The financial information about who pays, how much and for what, that is generated by the resource tracking is most effectively organized in a single National Health Account (NHA) or a system of accounts. A NHA is a set of tables in which are arrayed the various expenditures on health. It involves the identification of the **actors** (or stakeholders) in the health system, the relevant **activities**, and the many financial **transactions** between the actors aimed at carrying out the designated activities. The classification of actors, activities and transactions in meaningful categories that share common characteristics is at the heart of the health accounting methodology.

The Reproductive Health Account (RHA) developed here is a sub-account or satellite account of a NHA (see also Rannan-Eliya *et al*., 2000, and De *et al*., 2004b). In a RHA actors, activities and transactions are limited to those that are involved in reproductive health. The approach of situating the RHA within the context of a NHA places a country's spending on reproductive health within the context of overall health spending. The best practice of producing NHAs, represented by the manual *Guide to producing national health accounts* (WHO, 2003), provides the leading principles for producing reproductive health accounts. To demonstrate the links between the RHA and the NHA, the report relies heavily on the WHO manual. In addition, the structure of the report resembles that of the manual.

A NHA tracks funds from their origin (financing sources) to the entities that manage them (financing agents) to health providers that receive funds and, ultimately, to the end users (beneficiaries). A NHA consists of a set of tables documenting the flows of financial resources in a country's health system (WHO 2003, p. xiv). Health accounts portray the sources of funds for health care goods and services and the consumption of health care goods and services. Health accounting involves the following (WHO, 2003, p. 2):

i. A rigorous **classification** of the actors in the health system and the types and purposes of expenditures;
ii. A complete **accounting** of all spending for health, regardless of origin, destination, or object of the expenditure;
iii. A rigorous approach to **collecting, cataloguing, and estimating** all those transactions or flows of money related to health expenditure; and
iv. The development of a structure intended for ongoing **analysis**.

The first item involves a delineation of the scope of the health system and rigorous definitions (Berman, 1997, p. 16). The items (ii) and (iii) involve the construction of an origin-destination matrix showing the sources of funds and the uses of funds. This 'sources and uses matrix' is at the core of national health accounts. The matrix approach requires that all expenditures estimated by the different sources be allocated to specific uses. That imposes an important discipline on health accounting (Berman, 1997, p. 17). The capability of linking sources and uses of health expenditures is an important aspect of the value of the NHA for documenting and evaluating health care financing policies.

Health accounts cover financial transactions. Activities that do not use financial resources and therefore do not involve a financial transaction are not covered in the health account (WHO, 2003, p. 20). For instance, unpaid labour of caregivers is not counted among health expenditures, although it is a transaction that may be essential in the provision of health care and the improvement of the health status of the population. Thus, health services delivered by family, friends and volunteers, and contraceptives distributed freely, are generally not included in the measurement. Sometimes they are included, however. For example, the inventory of affordable healthcare published by the Health and Welfare Department of the Government of Haryana, India, includes goods and services that are provided free of charge. Under various national health programmes, vaccines (BCG, OPV, DPT, DT, TT and Measles), tablet iron and folic, HIV kits and family planning devices like IUD, oral pills, condoms are made available free of cost to the private doctors in Haryana. They are requested to administer the same to the target beneficiaries free of cost but they may accept reasonable service charges (http://www.haryanahealth.com/performa.html). It should be noted that free goods and services do not exist except in the voluntary sector. The costs of goods and services that are free to the beneficiaries are covered from the government revenues (e.g. taxes). In principle, health accounts could be extended to include transactions other than financial transactions. A major problem is to estimate the value of the transaction (shadow price).

The NHA is related to the System of National Accounts (SNA), but it differs in an important way (WHO, 2003, p. 8). The NHA focuses on the *consumption* of health care goods and services and the financing of the activities involved. The SNA focuses on the *production* of goods and services and the factors of production (input) and the costs involved. For example, the national account may show the production of pharmaceuticals including those that are exported. Health accounts show only the domestic consumption of pharmaceuticals. As early as 1975, Richard Stone, in a publication on social and demographic accounting, asserted that the two perspectives prevail since information is needed on the provision (production) of goods and services and on the distribution of their benefits (consumption) (United Nations, 1975, p. 4). The differences in focus imply that the NHA cannot be viewed (yet) as a satellite account in a system of national accounts. The discussion by Stone (United Nations, 1975, Chapter XIX) of health accounts within the framework of SNA addresses several of the issues that are debated today.

Resource tracking is not an end-goal. It is a means to increase the performance of the health system. The ultimate goal of reproductive health service delivery is the improvement of the *reproductive health status* of women, men and adolescents. Throughout the world, several surveillance systems are in place to monitor the changes in reproductive health status of the population. Among the systems to monitor change, the Demographic and Health Surveys (DHS) are most widely used. During a period of 30 years since 1965, USAID has invested some $340 million on DHS and similar surveys in developing countries (Measure DHS, 2002). A major concerted effort to improve demographic surveillance is the INDEPTH network that has 36 demographic surveillance sites in 19 different countries (http://www.indepth-network.org; accessed 23 December 2004). Ideally, the tracking of reproductive health expenditures and the tracking of reproductive health status change are interconnected. When the two tracking systems are combined, the ultimate question who is paying and how much is being paid for *better* health can be answered. This is a line that is also pursued by the UNFPA/UNAIDS/NIDI RF project.

# 3. The reproductive health system

The reproductive health account describes the flow of funds through the health system. The first requirement for creating health accounts is a thorough description of that health system. This involves the identification and classification of actors, activities and transactions. The WHO manual introduced the OECD International Classification for Health Accounts functional classification of health care (ICHA-HC) as a way to group activities and transactions in the health accounts. In any classification scheme, categories need to be meaningful but mutually exclusive and exhaustive. Mutual exclusivity means that an actor, activity or transaction cannot go into more than one category. Exhaustiveness means that each and every actor, activity or transaction can go into at least one category only. During the construction of the account, many decisions need to be made to assure mutual exclusivity and exhaustiveness. The decisions should be documented.

## 3.1 | The boundary

Following the general guideline by WHO on setting the boundary of national health accounts (WHO, 2003, p. 20), the boundary of the RHA is determined by (i) a set of activities that are related to reproductive health, (ii) space (geography) and (iii) time.

### *3.1.1. The activity boundary*

Reproductive health expenditures encompass all expenditures for activities whose primary purpose is to restore, improve or maintain reproductive health for individuals during a specified period of time. The "primary purpose" is inferred from the type of good or service purchased, or determined from the stated intention of the purchaser. This definition applies regardless of the institution or entity providing or paying for the health activity.

Activities of reproductive health care include:

i. promoting reproductive health and preventing reproductive health related disease;
ii. curing reproductive health related illness and reducing maternal mortality;
iii. nursing care for persons with illness or impairment that are related to reproductive health;
iv. providing and administering reproductive health service and programmes, including those for family planning and HIV/AIDS.

At a minimum, the RHA should cover expenditures incurred on reproductive health services and STD/HIV/AIDS activities listed by the Programme of Action of the ICPD (Paragraph 13.14) (see below). Section 3.3 provides a classification of reproductive health activities, which defines the activities boundary of the RHA.

As noted above, health accounting excludes activities that do not involve financial transactions for goods and health services delivered by family, friends and volunteers. However, it is advisable to expand the RHA to include informal payments, since they often represent an important part of service delivery and may contribute significantly to the health level of the population. The WHO manual notes that decisions to include or exclude activities and transactions are, in a sense, arbitrary. The goal of health accounting is to be consistent in making such decisions, and to document those decisions thoroughly for later reference and comparison.

*3.1.2. The time boundary*

The time boundary of the health account has two elements. First, a particular period must be chosen within which the activities took place. Most often this is a fiscal year or a calendar year. Government entities often report spending on the basis of a fiscal year while private entities report on the basis of a calendar year. The WHO manual includes procedures to adjust the time frame to assure comparability. The second element of the time boundary is the distinction between the activity and the transaction that paid for the activity. Funds may be released in a year that is different from the year in which the activity takes place. In *cash accounting*, expenditures are registered when the actual cash disbursement takes place. In *accrual accounting*, expenditures are attributed to the time period during which the economic value is created (by activity taking place). The manual recommends the accrual method. Funds that are received in

a given year to be used over several years should be recorded that way. For instance, when funds are used in equal parts over three years, one third should appear in each year of the RHA (WHO, 2003, p. 43).

In the resource flows (RF) project by UNFPA/UNAIDS/NIDI, the second element of the time boundary is exemplified in the distinction between *primary funds* for population assistance and *final expenditures* on population activities. Primary funds refer to the financial resources contributed by a primary donor for population activities. Primary funds also include self-generated income of intermediate donors as well as contributions that they receive from donor countries that are not members of OECD/DAC. Primary funds reflect the money originating from donors in a given year. They are recorded in the year of allotment or allocation of funds (cash accounting). Final expenditures reflect the funds provided to a final recipient in a given year. They refer to funds that have been received by developing countries and countries in transition directly from donor governments and international foundations, or through intermediate donors. The final recipients may be domestic governments, national NGOs, or donors' field offices in developing countries and countries in transition. Final expenditures are attributed to the year during which the activities take place (accrual accounting). More detail is provided in Section 3.4.

### *3.1.3. The space boundary*

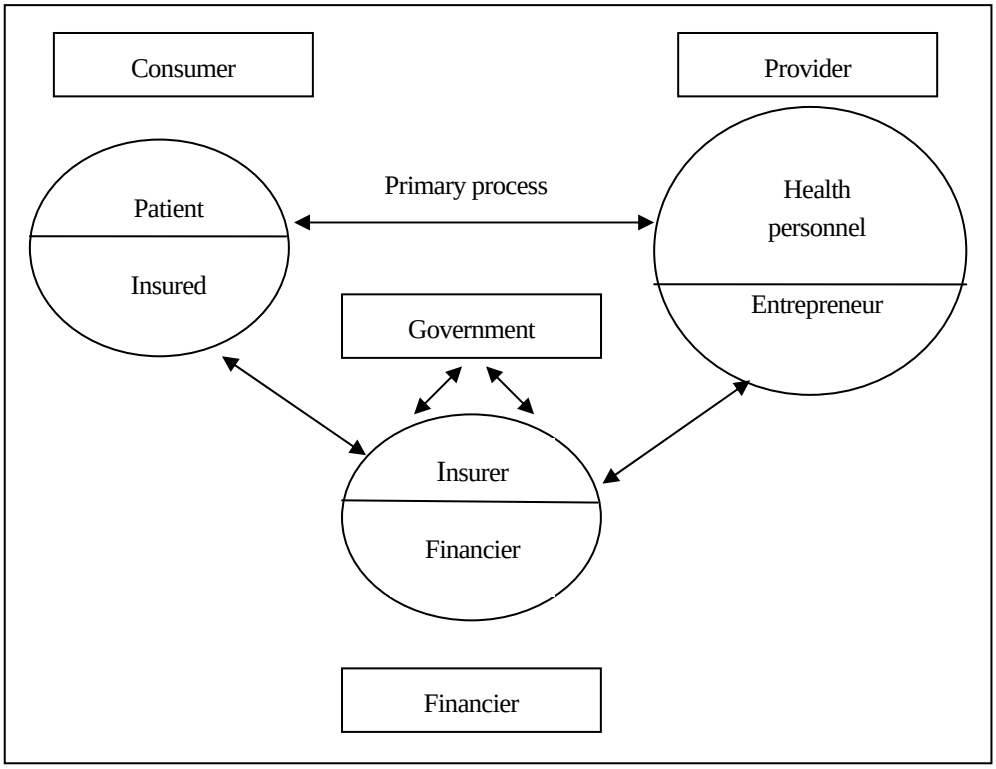
The NHA for a country captures the health expenditures by *usual residents* of that country. The accounts include spending on health care by citizens and residents who are temporarily abroad, as well as spending by external agencies on inputs to health care within that country (WHO, 2003, p. 22). The accounts exclude spending in the country by foreign nationals (which is treated as 'export' of health care). This procedure is particularly significant in countries with a large foreign population, e.g. refugees.

The RF project also encounters problems related to the space boundary. Final expenditures on reproductive health in developing countries include expenditures on activities in developed countries, such as research, that benefit more than one developing country and country in transition.

In health systems analysis, three types of actors are distinguished (Post 1995, pp. 307ff). They are the consumer of health care (the patient), the provider of health care (the physician and other health personnel and health institutions) and the financier of health care (donor or insurer). In addition, government plays a

significant role. *Figure 3.1* shows the actors and the way they are connected. The complexity of the system derives in part from the fact that each actor has at least two faces. For a provider, a consumer of health care is a patient, but for the financier it is an insured individual. The primary process in health care takes place between consumer and health provider. The interaction between the actors results in a series of events. They include the distribution/sales of pharmaceutical products and the delivery of a service, the payment of premium and the reimbursement of health care costs, and the allotment of funds to providers.

*Figure 3.1. The actors in the field of health care*




Source: Post, 1995, p. 308.

WHO (2003) distinguishes four types of actors:

i. Financing sources (FS): institutions or entities that provide the funds used in the system by financing agents. They consist of donors and domestic sources;
ii. Financing agents (FA): institutions or entities that channel the funds provided by financing sources and use those funds to pay for, or purchase, the activities inside the health account boundary;
iii. Providers (P): entities that receive money in exchange for or in anticipation of producing the activities inside the reproductive health account boundary;
iv. Beneficiaries: those receiving or affected by the goods and services consumed within the health account boundary.

Financing agents may pool health resources from different sources or may use their own resources (e.g. self-generated income) to pay directly for health care. They include households that purchase health services using out-of-pocket payments and firms that purchase health services for their employees.

Providers are paid for their goods and services directly by consumers of health care, or by financiers or the government. Different countries have different systems of paying providers. Four types of systems may be distinguished (Borghuis-Lub *et al*. 1994, pp. 45ff). They are:

- *Transaction system*. The provider is paid directly by the consumer for goods and services provided. The price is generally determined by the market.
- *Insurance system*. The insurer is a third party between the beneficiary and the provider of health care. Health care insurance is basically an instrument to share the risk of excessive health expenditures. In the presence of insurance, the out-of-pocket expenditures for health care are independent (to some degree) of the consumption of health care. Beneficiaries do not pay directly for goods and services but they pay a premium to the insurer who pays the goods and services from the premiums collected from all participants in the insurance. The list of goods and services covered by the insurance is governed by a contract between the beneficiary and the insurer. Insurance can be voluntary or compulsory. Insurance can be organized by the government or by the private sector (or a combination). A particular type of insurance is social insurance, which is an insurance established by law. Everyone who meets eligibility criteria established by law is insured. In some

cases, insurers directly engage in providing health care. In this *integrated model*, providers are not independent of insurers.

- *National system*. In the national system, health care is financed entirely or in part from tax revenues. Participation is compulsory and contributions are generally dependent on income. Goods and services are provided free of charge. Providers generally have a fixed budget to cover costs.
- *Capitation fee system*. In this method of payment, the provider of medical services is paid a fixed period fee for each person served or member of the scheme (Capitation means by the head, or per person.) The total payment is according to the number of members in a health benefit plan that the provider contracts to treat. Because the fee is independent of how many services are performed, the doctor has an incentive to keep costs low. It also promotes preventive care. For more information, see e.g. Wouters *et al*. (1998).

### *3.1.4. Financing sources (FS)*

The guiding principle adopted by WHO for classifying financing sources is human behaviour. The WHO manual distinguishes among funds that in economic theory elicit different behaviour. Consumers of health care behave differently in response to a given out-of-pocket charge than they do in response to the same amount charged as a health insurance premium or levied as an income tax, or when the amount is paid by the employer. *Table I.1* in *Annex* I shows the WHO classification scheme for financing sources.

Three broad categories of financing sources (FS) are distinguished: the public sector, the private sector and the international donor community and the multinationals. FS 1.2 includes funds generated by government on trust funds or other assets and FS 2.4 include funds generated by private entities. The FS 3 category is reserved for funds that come from outside the country for use in the current year. They include external funds from bilateral or multilateral donors and funds contributed by institutions and individuals outside the country (e.g. remittances). External sources traditionally have accounted for an estimated 25 percent of global spending on family planning, and they have tended to be most important in the poorest countries (Potts *et al.*, 1999). About three quarters of all family planning expenditures have come from developing country governments and consumers. According to conservative estimates, private consumer spending accounts for about 14 percent of global spending on family planning (Conly *et al*., 1995, Potts *et al*., 1999). The PHR*plus* Project provides NHA-based estimates of out-of-pocket health expenditures in Middle East and African countries, ranging from 15 to 54 percent (PHR*plus* 2002). A compilation of

HIV/AIDS expenditure statistics by UNAIDS (2004) reveals a range of 10-93 percent for the share of households. For the Indian State of Rajasthan, a household contribution to reproductive and child health of 80 percent was found (Sharma *et al*., 2002).

In tracking resource flows for reproductive health (costed-package), the UNFPA/UNAIDS/NIDI Resource Flows project adopts the notion of donor. A donor is a financing source located outside of the country. Three types of donors are distinguished: (1) *primary donors* which are developed countries (OECD/DAC members) and private foundations, (2) *intermediate donors*, which are multinational organizations and agencies (mostly UN organizations), international NGOs and research institutes/universities that channel most of the primary donor's funds for population and AIDS assistance, and (3) *development banks*. An overview of donors included in the 2004 survey round of the RF project is provided in *Annex II*.
In addition, the RF project distinguishes two types of domestic sources (in developing countries and countries-in-transition): (1) *central governments*; and (2) *national NGOs* which operate exclusively in one country.

### *3.1.5. Financing agents (FA)*

Financing agents are the institutions and entities that pay for or purchase health care. They include institutions that pool health resources collected from different sources, as well as entities (such as households and firms) that pay directly for health care from their own resources (WHO, 2003, p. 36). The WHO manual adopts the OECD classification of financing agents (*Table I.2* in Annex I). The classification of expenses in mutually exclusive categories is often problematic because of several cost sharing mechanisms. Health care costs may be covered partly by government or insurance and partly by out-of-pocket payments. Deductibles under health insurance schemes are an example. Goods and services delivered under a social marketing programme represent another situation where costs are shared by the beneficiary and a governmental or non-governmental organization. Cost-sharing is a possibility for maintaining acceptable levels of reproductive health activities when public resources decline, provided market segmentation is used to determine those individuals most in need of subsidized services (Gribble *et al*., 2004). The need for targeted cost recovery schemes is also stressed by Sanderson and Tan (1995, p. 89).

In the WHO classification, three types of insurance schemes are distinguished. They differ a little from the funding schemes presented above. Social security

schemes (HF 1.2) are those in which participation is required by law or regulation. Although social security funds are closely tied to governments, they are separately organized and hold their assets and liabilities separately from the government. Social insurance schemes are collective schemes whose enrolment is restricted to subsets of the population; typically, to be covered one must be an employee (or retiree) of a sponsoring firm or association (e.g. trade union) or a family member of such a person. Other private health insurance (HF 2.2), often called voluntary medical insurance, is potentially available to any member of society.

The adoption of the NHA perspective in the RF project requires that donors and funds be classified following the WHO guidelines. The RF project distinguishes financing sources located outside of the country and sources located within the country. The first category is referred to as *donors*. Donors are further divided into primary donors, intermediate donors and development banks. Primary donors are financing sources. Intermediate donors receive funds from primary sources, which make them financing agents, but they may also generate income to be distributed among providers, which makes them primary sources. Intermediate donors include multilateral organizations and agencies incorporated into the United Nations System, and international NGOs that channel funds for population assistance from primary donors to the recipients. They may also include governments and other domestic sources of funds (e.g. domestic NGOs). Intermediate donors are mostly financing agents, whereas primary donors are financing sources.

The development of health accounts at a disaggregate level, i.e. for population groups, specific diseases, or geographic units within a country, raises additional problems of distinguishing primary financing sources and financing agents. For example, De *et al*. (2004a, p. 27) discuss classification issues raised in the development of subnational health accounts in Ethiopia. In Ethiopia, and many other countries, more than one level of financing source can be identified. In Ethiopia, the Ministry of Finance gives block grants to Regional Finance Bureaus (RFB) and all major decisions on spending are done at the regional level. RFBs give funds to Regional Health bureaus. De *et al*., decided to term the regional/local government as the “Financing source” of funds disbursed by RFBs. If the Central Government is shown as the “source” this would greatly diminish the role of RFBs and not accurately describe how the health system is organized. A similar issue arises in accounting the spending by donors given to a central government to allocate to regional governments. The donor is the

ultimate financing source and the central government is the financing agent. The regional government is a financing agent too. Consequently, in a multilevel system, different financing agents can operate at different levels. By treating donors as the financing source and not the central government, the country's dependence on external assistance is reflected.

### *3.1.6. Health care providers (P)*

Providers are often the end-users of funds. They answer to the question "Where does the money go?". Providers include hospitals, clinics, primary health centres, traditional health care institutions, pharmacies and researchers (Berman, 1997). They also include independent physicians, nurses and other health personnel. Providers may also include organizations that provide IEC services aimed at promoting healthy lifestyles and preventing illnesses. Health care providers include international nongovernmental organizations such as the Red Cross or Red Crescent, Doctors without Borders, Oxfam, Save the Children, Caritas, Mary Stopes International, Family Health International, and so on. They also include for-profit organizations such as private clinics, traditional healers, pharmacies, doctors, and diagnostic centers; and non-profit and community-based organizations such as religious organizations, trade unions, and other NGOs.

Several classification schemes of the health care providers exist. Widely used ordering principles include the following:

*i. Classification based on the location of health care services*
- Intra-mural and extra-mural
- Residential and ambulant

*ii. Classification based on position of provider in health care chain (access)*
- Primary health centres and physicians (Front-line health care)
- Referral institutions (e.g. referral hospital)

*iii. Classification based on target population*
- Mother and child health centres
- Elderly health care

*iv. Classification based on type of intervention or function of care*
- Prevention (including promotion activities)
- Cure
- Revalidation
- Care (e.g. nursing home, palliative care)

*v. Classification based on ownership*
- Government or public sector
- Privately ownded
- Owned by NGOs

*vi. Classification based on type of medicine*
- Allopathic or Western medical medicine
- Traditional medicine, such as Ayurveda or traditional Chinese medicine.

The non-allopathic health system may include hospitals and dispensaries, research and training institutions. For instance, the Government of Kerala grants medical aid to the people through the network of Ayurveda hospitals and dispensaries, grant-in-aid Ayurveda institutions, Sidha-Vaidya, Unani and Naturopathy institutions (see the official web portal of the Government of Kerala: http://www.kerala.gov.in/dept_%20indiansys_medi/indian_ systems_ medicine_dept.htm)

The WHO manual recommends a classification of health care providers that is an extension of the OECD ICHA-HP classification scheme. The scheme is shown in *Table I.3* in Annex I.

By way of example, *table 3.1* lists the providers distinguished by SIDALAC (Regional AIDS initiative for Latin America an the Caribbean) in National HIV/AIDS accounts (SIDALAC, 2001).

A health care provider may provide several reproductive health services and several providers may be involved in a single service. For instance, antenatal care may be provided by midwives, primary or community health centres, district-level health centres, general government hospitals or other government facilities, private clinics, in hospital outpatient departments, or in offices of private physicians.

A useful source on providers of family planning services is the Demographic and Health Survey (DHS). The providers play an important role in the promotion and maintenance of family planning practices, e.g. contraceptive use, in the population. For instance, the Bangladesh DHS (BDHS) 1996-97 classifies the sources of family planning services into five major categories: govern-

*Table 3.1. Providers of HIV/AIDS goods and services (SIDALAC)*

| |
|---|
| ***Personal health*** |
| **Treatment** |
| Hospital |
| Ambulatory care center |
| Physician's office |
| Alternative providers |
| **Ancillary services** |
| Diagnostic centers |
| Other ancillary services |
| **Drugstores** |
| **Other providers of goods** |
| ***Public health*** |
| **STD/HIV/AIDS programs** |
| **Promotion and prevention entities** |
| **Insurance** |
| Social security |
| Private social insurance |
| Private insurance |

ment facilities (including thana health complexes, family welfare centres, clinics, and hospitals), private medical sources (including private clinics, doctors and pharmacies), fieldworkers (which may be either government of non-government) and clinics run by NGOs.[9] Fieldworkers remain the largest source of family planning methods. The DHS also shows that the proportion of users who buy their methods from pharmacies and shops is increasing.[10] This finding indicates that the number of users willing to pay for family planning supplies or services has been rising. Pill users are more likely to pay for their method than users of other methods. Since the relative importance of different providers is influenced by the willingness to pay for family planning and reproductive health services and commodities, changes in the willingness to pay will result in changes in share of providers.

[9] Thirty eight percent of current users of modern contraceptive methods received the most recent product or service from a fieldworker, 35 percent from a public institution, and 21 percent from a private source such as pharmacies, and private doctors and clinics (Mitra *et al*., 1997, p. 65). Some 40,000 village-level fieldworkers visit couples in their homes to provide contraceptive information, supplies and referrals. They include the Family Welfare Visitor (FWV), who is able to give contraceptive injections and insert IUDs. The approach was necessitated by the fact that many women are restricted by custom to their homes or the nearby area (*purdah*).

[10] From 15 percent in the 1993-1994 BDHS to 19 percent in the 1996-1997 BDHS.

The increased willingness to pay for family planning services and commodities and the shift from governmental providers of health care to private providers are important trends in the reproductive health system. That shift is documented by resource tracking and the financial information it provides on who pays, how much and for what. That shift may signal significant underlying changes in the health system. For instance, the study in Rajasthan, India, by the Indian Institute for Health Management Research (IIHMR) and the Futures Group International (IIHMR and FGI, 2000), mentioned above, revealed that many people seek medical help for RTIs from private providers rather than from government providers although private providers charge three times the cost charged by the government sector. The authors explain the observation by the fact that government facilities often fail to provide confidentiality and attention with dignity to the users of such services (*Ibid.* p. 34). Differences in (perceived) quality is also the reason why many individuals, even among the poor, obtain their contraceptives from private sources for a fee, despite the availability of free or highly subsidised supplies. Quality improvements can more than offset the demand-reducing effects of price increases (Matheny, 2004, p. 136-137).

A shift to private providers may also signal a change in reproductive health practice. Padmadas *et al.* (2004) show that 14 percent of deliveries in Kerala, India, are caesarean section deliveries and that caesarean sections occur more in private health institutions than in public institutions.

### *3.1.7. Beneficiaries*

The beneficiaries are individuals. They are patients or individuals in the population at large. Individuals can be classified on the basis of a range of attributes. Demographic attributes include age, sex, race or ethnicity, and place of residence. The socio-economic status and health status of beneficiaries are of particular relevance. Of equal relevance is vulnerability status. Vulnerable groups include women or couples with unmet need, i.e. persons who want to limit or space childbearing but have no access to the means to do so. They are not served by family planning (FP) and reproductive health services providers. Vulnerable groups also include people with a low ability to pay for commodities and health services. The health status and vulnerability status are not constant but vary in time. Of particular relevance is the variation over the life course. People in different stages of life have different needs and early life experiences may have consequence lasting a lifetime. The ICPD Programme of Action stressed the changing reproductive health needs over the life cycle and the Madrid International Plan of Action on Ageing 2002 called for ensuring that

"gender-specific primary prevention and screening programmes are available and affordable to older persons" (Madrid Plan, para 67c) and "provision of adequate information, training and care giving skills, treatment, medical care and social support to older persons living with HIV/AIDS and their caregivers" (Madrid Plan para 80).[11] Elias and Sherris (2003) also address the subject of reproductive health in an ageing population. An ultimate goal of reproductive health expenditures is to assure not only an adequate *health status* of the population, but also to assure a *healthy life* by meeting the reproductive health needs over entire the life course.

The classification of beneficiaries facilitates the assessment of who benefits most from reproductive health care expenditures. *Benefit incidence analysis* investigates the extent to which the financial benefits of public spending on social services accrue to different population groups (e.g. the poor, adolescents, older women and men) (Van de Walle, 1995, Demery, 2000).[12] Benefit-incidence analysis has long been used in the public finance field, to determine the progressivity or regressivity of government expenditures. In recent years, it has been applied with increasing frequency to the health, nutrition and population (HNP) sector — usually to determine the distribution across economic classes of overall governmental HNP spending as well as the distribution of spending on a particular type of HNP program, such as a reproductive health programme.

Benefit incidence analysis is one type of programme or policy evaluation. It focuses on money and on the distributional or equity effects of programmes. It differs from programme incidence analysis which focuses on the volume of services delivered (number of people seen, of operations performed, of children vaccinated). It also differs from cost-effectiveness analysis, used to assess a program's efficiency. Cost-effectiveness analysis focuses on immediate programme **outputs**. Incidence analysis investigates the achievement of ultimate programmatic objectives or **outcomes** (at the population level).
Benefit incidence analysis in Madhya Pradesh, India, for instance, shows that nearly half of the public health subsidies accrue to the top two percent of the population. The bottom quintile accounts for just 6.6 percent of the hospitalization. Analysis also shows that the rich use the private sector more but

[11] The Madrid International Plan of Action on Ageing 2002 is available on http://www.un.org/esa/socdev/ageing/waa/a-conf-197-9b.htm

[12] For an introduction, see the World Bank Poverty Net: http://www.worldbank.org/poverty/health/library/incidence.htm

they also use a much larger share of the public provision as well (Government of Madhya Pradesh, n.d.). Studies in other parts of the world also indicate that government health care benefits are significantly pro-rich (Barnett *et al*., 2001, Mamotlohi Alina Mohanoe, 2004, p. 9, Nandakumar *et al*., 2004, p. 19).

A particular type of public expenditure benefit incidence analysis disaggregates by gender. It aims at the determination of the extent to which men and women, girls and boys, benefit from expenditure on publicly provided services. It is a quantitative tool useful in assessing the distribution of public spending by gender.

Knowles and Behrman (2000) present a list of information needed to calculate benefit incidence for services oriented towards safe motherhood:

i. Service utilization rates among the target population by income group;
ii. The proportion of the target population in the larger population of each income group (e.g., the proportion of married women of reproductive age in the total population of each income group);
iii. The proportion of services obtained from various providers by income group (e.g., the proportion of women in each income group who obtain reproductive health services from commune health centres or from provincial hospitals);
iv. The unit subsidy received by each provider for each type of service.

In the RF project the concept of beneficiary is not used. The RF project uses the concept of *final recipient* instead. Final recipients include (1) developing countries and countries in transition that are the final beneficiaries of the programmes being funded, and (2) national NGOs that receive funds for programmes that they themselves execute (UNFPA, 2002, p. 9). The concept is therefore different from that of beneficiary.

The WHO manual suggests that spending on health problems can be partitioned among disease categories using the International Classification of Diseases (ICD) scheme, the WHO burden of disease classification (based on ICD-10), or other groupings. *Table I.4* in Annex I displays the global burden of disease classification scheme. Being able to link expenditures to specific ICD categories of groups of categories can be a useful approach to tracking resource allocation and a step in the direction of a powerful monitoring and evaluation methodology

(WHO, 2003, p. 45). No international standards exist to guide the health accountant.

Data on reproductive health expenditures by socio-economic status and other characteristics of beneficiaries are often lacking. When expenditure data are lacking, they may be estimated using costing methods that combine information on the use of family planning commodities and reproductive health services and information on unit costs. Use data are generally made available by health surveys such as the Demographic and Health Surveys (DHS).

## 3.2 | The activities (F)

In accordance with the *2000 World Health Report* (WHO, 2000, p. 5), the RHA encompasses all services and goods delivered by providers in the health system to the ultimate beneficiaries, whose primary purpose is to promote, restore or maintain reproductive health. Activities answer to the question "What types of goods and services were actually produced?". A useful way of viewing activities is in relation to specific objectives such as the reduction of unwanted pregnancies, teenage pregnancies, maternal deaths, abortions, and mother-to-child transmission of HIV, prolongation of life for people living with AIDS, increased access to health services, increased gender equity in health, etc.

Reproductive health refers to 'all matters relating to the reproductive system and its functions and processes' (ICPD Programme of Action, para 7.2). This implies that categories of reproductive health functions include all activities that relate to human reproduction, i.e. maternal health, family planning, sexual health, including HIV/AIDS, and general order of the reproductive system. They also refer to activities that indirectly contribute to reproductive health, like training of medical personnel, policy monitoring and advocacy, research, and construction and maintenance of buildings, storage and equipment.

OECD (2000, p. 114) proposed the International Classification for Health Accounts — functional classification of health care (ICHA-HC), which is adopted by WHO (2003). It provides a way to group activities and transactions in health accounts by referring to the functions of health expenditures; hence the abbreviation "F". This *functional approach* includes all expenditures on all health care activities regardless of the provider or the paying entity. In the approach, spending on 'non-health care' or 'health-related' entities, such as

spending by the Ministry of Education on teaching hospitals and infrastructure development or research, is included.

Many classifications of reproductive health activities have been applied by, for instance, Odumosu *et al*. (2002), Bernard and Tsui (1995), Rannan-Eliya *et al*. (2000), Sharma *et al*. (2002). *Annex III* reviews some classifications. The Programme of Action of the ICPD (Paragraph 13.14) distinguishes four categories in the costed-population package (see also *Annex IV*):

a. Family planning services;
b. Basic reproductive health services;
c. Prevention and treatment of STDs and HIV/AIDS;
d. Research, data, policy analysis.

The RF project adjusted the list of activities covered by these categories to meet data requirements of UNFPA and UNAIDS (see *Annex V*). De *et al*., (2004a, 2004b) mapped that list of activities to a NHA classification scheme.

The classification of reproductive health activities proposed here (see *Annex VI*) draws on the various classifications. More in general, it takes into account the following considerations:

- The categories of the classification must be exhaustive and mutually exclusive; i.e. all reproductive health related activities should be covered by the classification, and they should be attributed to one category only;
- The classification should only include activities whose primary purpose is to promote, restore or maintain reproductive health. Other activities that may be associated with reproductive health, but whose primary aim is different —e.g. infant and child health activities— should be excluded;
- Given the importance of distinguishing health expenditure and activities for men and women, the classification should be gender specific. Expenditures by function and resulting RHA matrices should, therefore, be disaggregated by sex.

The classification should be based on OECD's ICHA-HC (see *Annex VII*). This has two major reasons: it facilitates the integration of Reproductive Health Accounts in the larger framework of National Health Accounts; and it allows cross-country comparability. The ICHA-HC provides a functional classification of activities at the two- and three-digit level. It distinguishes personal and

collective health care services (respectively, codes HC.1-HC.5 and HC.6-HC.7). Personal health care services are further subdivided according to *mode of production* (in-patient, day care, out-patient, home care), and to the *basic functions of care* (curative, rehabilitative and long-term nursing).

The distinction between the functions of personal and collective services is not always obvious, especially since the ICHA-HC associates the public-personal dimension with the dimension of preventive-curative/rehabilitative care. In practice this parallel distinction cannot always be maintained and practical solutions should be found for adequately classifying all activities. The proposed functional classification for reproductive health care assigns a relative large weight to the distinction between preventive and curative/rehabilitative care as criterion to categorize activities.

A relevant example of inconsistency in the ICHA classification relates to the HC.6.1 category, which is crucial to Reproductive Health Accounts since it includes maternal health, family planning and counselling. This health area comprises public and personal care components, as well as preventive, curative and rehabilitative elements. The present elaboration of the classification scheme retains functions of largely preventive nature (e.g. pre-natal and post-natal care, family planning service delivery) in this category, whereas curative and rehabilitative functions (e.g. obstetric care, fistula treatment, maternity care) are classified under respective categories HC.1 and HC.2.

The classification of reproductive health activities in Annex VII provides a detailed elaboration and adaptation of the ICHA-HC by OECD. Next to including health-related functions, such as infrastructure development, health personnel training and research, it also includes so-called Addendum or non-health related functions, e.g. legal support to people living with AIDS or reproductive health policy advocacy. For reasons of analysis and flexibility it is advisable to maintain this level of detail, even though for practical purposes information can be presented at a more aggregated level. However, it may not always be possible to collect data on all of the categories, and in practice the number can be limited to those categories that are relevant and feasible.

Countries that implement a Reproductive Health Account may also want to expand or adapt the functional classification to their specific needs, possibilities and circumstances. For instance, it may be relevant to append categories for

services that fall outside the allopathic system —e.g. Ayurvedic or homeopathic alternatives— and cannot be assigned to the present classification.

Viewing activities in relation to the objectives they serve provides a good basis for the monitoring and evaluation of the activities, and the formulation of a set of indicators to measure the performance of the activities. Monitoring and evaluation view reproductive health programmes as composed of a set of **activities** that use (invest) **inputs** or resources (financial, manpower, technology) and that produce results (**output**) at the programme level intended to lead to changes at the population level (**outcome**) (Bertrand and Tsui, 1995, p. 15).

## 3.3 | The expenditures

The flow of funds from source to final use (recipient, beneficiary) usually passes through several channels. Different data collection instruments are required to capture this flow at different points. Donor surveys collect expenditure data from financing sources. Provider surveys collect information from providers of health care on funds received (income) and money spent. They may also include information on services delivered, visitors, etcetera. For the same transactions, provider data may differ from data produced by financing agents or donors. WHO (2003, p. 112) recommends starting the measurement of expenditures with financing agents and to work upstream to financing sources and downstream to providers and activities or functions. A particular difficult issue is to determine in sufficient detail how much is spent on the various reproductive health activities. It is often not possible to determine what funds are allocated to specific activities because the activities are not listed in sufficient detail. That is particularly true in case of a Sector-Wide Approach (SWAp).

The passage of funds through multiple channels of assistance before reaching the final beneficiary takes time. Generally, funds committed or allotted at one point in time are spent some time later. To accommodate these differences, accounting distinguishes between cash accounting and accrual accounting (see Section 3.1.2). As mentioned above, the Resource Flows project distinguishes primary funds and final expenditures. Primary funds provided by a primary donor to an intermediate donor in year A, may be spent by the intermediate donor in year B. Funds allotted in year A but spent in year B would be included under *primary funds* in year A and *final expenditures* in year B. The RF project

also requests primary donors to report future commitments. These figures are used to generate real-time estimates for donor assistance in the area of population and AIDS activities.

WHO makes a distinction between three types of spending (WHO 2003, p. 84):

a. Anticipated spending:
   Anticipated spending are reported future commitments for reproductive health activities. Reported future commitments or budgetary estimates of expenditures may never materialize, or may be subject to overruns or underruns.
b. Executed spending:
   Data on executed spending are more solid than budget estimates. They may be subject to revision, however, when later data become available.
c. Audited spending.

Audited accounts of actual spending are the most reliable. A drawback is the delay in data availability. Data on audited expenditures become available one to two years after the actual expenditures. As a result, provisional estimates or un-audited data are used until the more reliable audited data become available.

# 4. The reproductive health account

Reproductive health accounts are tables displaying various aspects of the health system pertaining to reproductive health. The tables serve two purposes. One is to display estimates of reproductive health expenditures in ways that can be linked to fundamental policy questions and objectives. The basic questions relate to how resources are mobilized (input), managed and distributed (throughput) and used (output). The other purpose is to facilitate the estimation process itself. The RHA combines numbers and other information from different sources. The accounts provide a framework for the indirect estimation of missing information, much in the same way as traditional social, economic and demographic accounts provide a framework for estimation (see e.g. United Nations, 1975).

The tables that constitute the RHA incorporate the classification schemes described in the previous chapter that represent the dimensions of health expenditure. It includes the actors (financing sources, financing agents, providers and beneficiaries) and the activities. Each of the RHA tables displays some facet of health expenditure cross-tabulated by two or several of the dimensions of health expenditure. The WHO (2003) guidelines recommend tables involving two dimensions only. One of the dimensions can be thought of as the "origin" of the funds and the other dimension as the "destination" or "use" of funds. By convention, the origin dimension is shown as columns in the table and the destination dimension is shown as rows. A row is denoted by i and a column by j. The (i,j) cell of the table shows the amount of resources spent by j on i. These are resources that originate in j and are used by i. *Table 4.1* illustrates a typical table.

Note that the convention used in NHA and RHA tables to show the origin as a column and the destination as a row differs from the widely used mathematical convention used in matrix analysis. In it, the origin is shown in the row and the destination in the column. The convention used in NHA and RHA tables

*Table 4.1. Resource flows by origin (source of funds) and destination (use of funds)*

| Destination (Use of funds) | Origin (Source of funds) | | | | |
|---|---|---|---|---|---|
| | Origin 1 | Origin 2 | Origin 3 | . . . | Origin n | Total |
| Use 1 | | | | | | |
| Use 2 | | | | | | |
| Use 3 | | | | | | |
| . | | | | | | |
| . | | | | | | |
| . | | | | (i,j) | | |
| . | | | | | | |
| . | | | | | | |
| Use m | | | | | | |
| Total | | | | | | |

is similar to that used in transition data analysis and multistate demography, where origins are shown as columns and destinations as rows.

WHO (2003, p. 51) considers five of the dimensions to be critical for accurate estimation of total health spending. These are the financing sources, the financing agents, the providers, the beneficiaries and the functions or activities. Sources, agents, providers, beneficiaries and functions are grouped into types. For reasons of consistency with the system of NHA recommended by WHO, activities are denoted by F (functions).

Consequently, the following tables constitute a minimal set:

- Health expenditures by financing source and financing agent (FSxFA);
- Health expenditures by financing agent and provider (FAxP);
- Health expenditures by provider and activity (PxF);
- Health expenditures by financing agent and activity (FAxF);
- Health expenditures for beneficiaries (population) by age and sex of beneficiaries;
- Health expenditures for beneficiaries (population) by socio-economic status of beneficiaries;
- Health expenditures for beneficiaries (population) by health status of beneficiaries;
- Health expenditures for beneficiaries (population) by geographic region.

A final table recommended by WHO falls outside of the categorization scheme. The table shows the cost of resources used to produce goods and services. The tables recommended by WHO are consistent with those included by OECD in the system of health accounts (SHA).

Each of these tables is briefly explained below. The classification schemes presented in the previous section are used at an aggregate level to show how the table is constructed. Tables similar to those shows below are considered in national HIV/AIDS accounts proposed by organizations such as SIDALAC and Abt Associates.

*a. Reproductive health expenditure by type of financing source and financing agent (FSxFA)*

This table highlights resource mobilization patterns in the field of reproductive health. It addresses the question "where does the money come from" by showing the sources of funds received by the financing agents. For instance, households contribute to health spending both through direct expenditures and through contributions to social and private insurance. In several countries private firms pay part of the health care costs of their employees either by providing health services (e.g. hospital and/or health centres), by contributing to the health insurance premium payment, or by allowing employees to visit health workers during working hours.

*b. Reproductive health expenditure by type of financing agent and type of provider (FAxP)*

This table shows how funds are distributed across different types of providers. It answers the question "who finances whom" in the health system. By way of illustration, *Annex VIII* shows a dummy FAxP table. The information can be used for cost-efficiency analysis. The expenditures on specific providers can be linked to measures of service delivery by the providers in order to estimate the average expenditure by service delivered. Measures of service delivery include number of patients treated per unit of time (e.g. vaccinations, prenatal care, counselling, etc.) or length of episodes of protection (e.g. Couple-Years of Protection; Disability Free Life Expectancy).

*c. Reproductive health expenditure by type of provider and by function (activity) (PxF)*

This table shows how funds for the different activities are channelled through the various types of providers. It answers the question "who does what", i.e.

which providers are executing particular activities or providing particular services. The PxF table shows who accounts for a particular activity. It is possible to examine, for instance, the share of spending on prenatal care accounted for by or channelled through government hospitals, private hospitals, and community health centres. The information can be linked to usage and may give useful insight in how the types of institutions differ in output (services delivered) per dollar spent on the institution (or received by the institution). Ideally, the information is also linked, not only to the output of activities, but also to the outcome, i.e. to behavioural changes and changes in health status. Usage data are collected in a Service Availability Survey that is generally part of the Demographic and Health Surveys. For instance in Bangladesh, as part of the 1996-97 DHS, a Service Availability survey was conducted to distinguish communities (sample points) covered by government facilities from those covered by non-governmental organizations and to determine differences in services accessibility and/or availability of health workers (approximated by e.g. distance). This information can be linked to the several initiatives that exist in the world to measure the costs of maternal and reproductive health services in order to improve the cost-effectiveness of service delivery.

*d. Reproductive health expenditure by type of financing agent and by function (activity) (FAxF)*

This table shows who finances the various activities in the field of reproductive health. The FAxF table is used to describe the allocation of resources to the major types of reproductive health activities. What activities are funded by the central government? What activities are funded by the private sector (including out-of-pocket expenses and private insurance schemes) and by foreign NGOs? The table indicates the major sources of reproductive health funding and the allocation of funds to the various reproductive health activities. De *et al.* (2004a, p. 29) show a FAxF table for the analysis of reproductive health expenditures.

*e. Reproductive health expenditure by population characteristics*

These tables show how the expenditures in the health system are distributed among the population. Population groups are defined on the basis of personal attributes such as sex, age, socio-economic status, income, health status, and place of residence. The distributional breakdown is a first step in benefit incidence analysis.

Tabulating health expenditure by health status of the population is one of the more challenging health accounts activities (WHO, 2003, p. 55). It requires reliable health status data from providers and the population that can be linked to health expenditures. Instead of health status, one may distinguish reproductive health problems, and tabulate health funds by funding sources, financing agents or service providers allocated to the various health problems. Examples of these problems include unwanted pregnancy, unsafe abortion, lack of reliable and safe contraceptives, obstetric problems, STD prevention and treatment, HIV/AIDS prevention and treatment. This tabulation differs from the tabulation of expenditures by activity or function. Expenditures on different activities directed towards the alleviation of the same health problem are aggregated.

# 5. Data collection and estimation of missing data

## 5.1 | Data collection

The overall aim of reproductive health accounting is to picture the sources of funds, the allocation of expenditures, and to capture the transactions of flows of resources that occur in the area of reproductive health. A considerable amount of time should be spent on (1) a description of the reproductive health system; and (2) searching for, evaluating, and comparing sources of data to find the most suitable information that describes the flow of funds through the reproductive health system. A data plan lists the steps to be taken and addresses several questions related to the description of the system, the collection of data and the estimation of missing data. Often, data collection can be improved by creating a greater awareness of the importance of complete and correct information for policy formulation. Since data are generally collected from different sources, they must be combined and missing data must be estimated.

Data collection for reproductive health accounting has four goals (WHO 2003, p. 68):

i. using all suitable existing data;
ii. adjusting existing data to bring them closer to suitability;
iii. improving or enriching surveys and administrative records with a potential for suitability;
iv. arranging for collection or generation of 'missing' data.

An important issue in adjusting existing data to bring them closer to suitability is assuring internal consistency when data originate from different sources and definitions, measurements or coverage differ. Many of the data issues that arise in the construction of health accounts are part of an emerging subfield of statistics; namely, the combination of data from different sources.

In the context of NHAs data are separated into two types: survey data and non-survey data. In surveys, data are collected from respondents. They may be individuals, households or institutions. The Demographic and Health Surveys collect information from households and individual household members, and are a major source of data on changes in family planning practices and intentions, and changes in reproductive health status. Household surveys are the major source of information on household spending on health care. Surveys of institutions collect information from institutions such as enterprises, (international) donor organizations, NGOs, health service providers, and health insurance companies and health maintenance organizations (HMOs). Sample frame bias, sampling error and non-sampling error constitute the major pitfalls of surveys. For a description, the reader is referred to WHO (2003, pp. 73ff). Non-survey data come from a wide variety of sources: audits, government budget data, special reports, annual reports of private organizations (commercial and non-profit), insurer's administrative data, business case studies and academic research. Since data sources differ greatly in type and quality, records should be created and maintained that document the type of data used and the quality of the data. For instance, many surveys, among them the Demographic and Health Surveys, associate with each variable or a selection of variables a 'flag variable' that indicates how the value of the variable is obtained (e.g. direct measurement, imputation by type of imputation).

To enhance reproductive health research and health policy analysis, it is useful to distinguish between data that provide information on **actors** in the health system and data that tell something about the transactions and other **events** in the system. Actors can be institutions and persons. PHR*plus* (2004) distinguishes several sources of HIV/AIDS expenditure data, based on actors (*table 5.1*). To gather information on the ultimate use of the expenditures, a targeted population survey may be needed of persons who use health services and/or acquire pharmaceutical commodities. The population targeted may consist of the most vulnerable group, such as women and men with no access to reliable and safe contraception, pregnant women, and persons living with HIV/AIDS. For details, see De *et al.* (2004b, pp. 23ff).

*Table 5.1. Data sources*

| Secondary sources | Primary sources |
|---|---|
| Government records | Employer survey |
| Private insurers records | Private insurer survey |
| Providers data | Facility survey |
| Non-profit governmental organizations | Non-profit governmental organizations survey |
| Donors | Donors |
| | Pharmaceutical company survey |
| | Traditional healers survey |
| | Household data |

## 5.2 | Estimation of missing data

The optimal use of survey data and administrative records in producing RHAs requires that the data coming from different sources are integrated into a single accounting framework. There are two major aspects of this problem. The first relates to the harmonization of categories and definitions used to classify resources and expenditures. The second is the prediction of the entries of all cells in the tables that constitute the RHA, in a way that assures optimal use of the available information and internal consistency.

Surveys are designed to meet different needs and to serve different actors. A consequence is lack of cohesion that leads to differences in concepts and definitions, design, fieldwork and processing practices, and outputs. Harmonization involves standardization to ensure comparability. For instance, harmonization of concepts relates to interview questions and answer categories (input) and to variables derived from the questions (output). Harmonization aims at common classifications, definitions and standards for health expenditures survey questions and improved comparability of statistics. For a discussion of issues related to the harmonization of health statistics, see e.g. Hofmarcher and Riedel (2000).

The proposed strategy to deal with the second issue is to create, for each cell in the table or account, an explicit link between the prediction and the data or information used to predict the cell value. Regression analysis can be used for that purpose. This involves specifying a regression model where the prediction is represented by the dependent variable and the available information by the independent variables. The coefficients of the regression model, which need to be estimated from the data, represent the contribution of each source of information to the predicted value. In other words, the regression coefficients tell

how the predicted cell value is made up by the data made available by the different sources. The regression model is a log-linear model, i.e. the logarithmic transformation of the dependent variable is a linear function of the independent variables. The logarithmic transformation is selected to ensure that the predicted values are all non-negative (the logarithm of a negative value does not exist). The method is described by Willekens (1994, 1999) in the context of the estimation of migration flows by origin and destination by combining data from different sources. For a brief description in the context of the estimation of resource flows for population activities, see NIDI (2003).

The method is an extension of matrix balancing methods that update a table (two-dimension table or matrix but also multidimensional tables) that contains preliminary data to a new table that is as close as possible to the original table but that satisfies some data constraints. The most common data constraints are known marginal totals. Matrix balancing methods have a long history. They were first developed in the 1930s to predict telephone communications traffic from information on outgoing calls and data on incoming calls. In 1940, Deming and Stephan (1940) developed the method (independently) to predict entries of contingency tables. Their method, known in social statistics as iterative proportional fitting (IPF), remains popular today. Around the same time, but in economics, Leontief (1941) developed the first input-output tables in the context of a system of national accounts. The tables exhibit the transactions (flows of goods and services) between sectors of the economy. To predict the values of missing inter-industry transactions from available national accounts, Leontief developed the biproportional technique which is identical to the IPF. The same technique was developed around the same time by Stone (1961) in the context of economic accounts. His method became widespread and known as the RAS method. The biproportional technique has become a key part of input-output tables and has been extended in a number of directions during the past decades. Recently, Lahr and De Mesnard (2004) edited a special issue of *Economic Systems Research*, the journal of the international input-output association, documenting the advances in biproportional techniques and related matrix balancing algorithms.[13]

[13] It may be interesting to note that the reformulation of the biproportional technique as a regression model and the *statistical* approach to the prediction problems attacked by RAS and related techniques, is entirely lacking from the special issue. For instance, the link with the EM algorithm, which today is the main technique of statistical inference when data are incomplete, is entirely lacking.

# 6. Conclusion

The improvement of reproductive health represents a major challenge. A great variety of interventions or activities, often integrated in projects, programmes and policies contribute to that improvement. Financing the activities is another major challenge. The mobilization of adequate resources is only part of that challenge. Funds should be allocated in a way that is most effective to meet reproductive health goals and to achieve or approximate specific objectives. Reproductive health accounts provide an instrument for improving allocation mechanisms and the performance of the health system as far as it relates to reproductive health. RHAs map the flow of funds from the sources of funds, through the intermediaries, to the final recipients (reproductive health services providers or individual beneficiaries). The accounts reveal who is funding what and how the funds are channelled through the health system. This resource tracking is an essential aspect of an effective health system.

The reproductive health system can be described in terms of the actors, the activities in which they are involved, and the financial transactions that pay for the activities. The classification of actors, activities and transactions in meaningful categories that share common characteristics is at the heart of the RHA methodology. The RHA is developed within the context of a general National Health Account (NHA). The approach of situating the RHA within the context of a NHA places a country's spending on reproductive health within the context of overall health spending. The best practice of producing NHAs, represented by the manual *Guide to producing national health accounts* (WHO, 2003), provides the leading principles for producing reproductive health accounts. To demonstrate the links between the RHA and the NHA, the report relies heavily on the WHO manual. In addition, the structure of the report resembles the structure of the manual.

A first requirement for creating health accounts is a thorough description of the health system. Who are the actors? What are the activities? Who receives money from whom or who funds whom? What commodity, service or activity is the

money used for? Since actors and activities are situated in time and space, a first decision in describing the health system in preparation of the health account is to determine what actors and what activities are included in the reproductive health account and what is excluded. Many activities in the field of reproductive health are listed in the ICPD Programme of Action and an updated version that includes new reproductive health concerns is provided in this paper (Section 3.3). Many classifications of reproductive health activities exist and the appropriate classification depends on the setting (country, region) of the RHA and the specific aim of the account, if any.

Health accounts are generally restricted to activities that involve financial transactions. Goods and services provided free of charge to beneficiaries and non-paid activities, such as voluntary work, are excluded from the account linking providers and beneficiaries. The accounts therefore give an incomplete picture of who benefits from the services provided. To determine the total value of goods and services provided, the goods and services that are provided free of charge by the government sector, employers, NGOs and the informal sector, should be included in the RHA. They should be valued at a proper level (e.g. shadow price).

Another problem for which solutions need to be found is the estimation of reproductive health expenditures that are part of a Sector Wide Approach (SWAp). In a SWAp, reproductive health expenditures are part of health expenditures. The share of reproductive health expenditures is difficult to disentangle from the total health expenditures.

The RHA that is being proposed is closely related to the NHA. The approach enables the operationalization of the RHA as a sub-account of the NHA. What is different is the composition of the actors and the list of activities, which is naturally more detailed in the RHA. Different is also the perspective on the individual beneficiaries. In NHAs beneficiaries are classified by socio-demographic characteristics, e.g. socio-economic status, health status, and place of residence. For RHAs it is recommended to emphasize the reproductive life course of individuals and to adopt the stage in the life course as the primary classification variable of beneficiaries. The reason is that the ultimate goal of reproductive health expenditures is to ensure a healthy reproductive life by meeting the individual reproductive health needs over the entire life course. Meeting individual needs implies being gender-sensitive.

The RHA can develop into a significant instrument to improve reproductive health when the tracking of resources is used to identify bottlenecks and weak links in the health system. That way, it may bring reality closer to the ICPD vision: “a world where all individuals would have access to comprehensive reproductive health information and services throughout their life cycle by 2015.”

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# Annex I

WHO classifications

*Table I.1. WHO classification of financing sources*

| Code | Description |
|---|---|
| FS.1 | Public funds |
| FS.1.1 | Territorial government funds |
| FS.1.1.1 | Central government revenue |
| FS.1.1.2 | Regional and municipal government revenue |
| FS.1.2 | Other public funds |
| FS.1.2.1 | Return on assets held by a public entity |
| FS.1.2.2 | Other |
| FS.2 | Private funds |
| FS.2.1 | Employer funds |
| FS.2.2 | Household funds |
| FS.2.3 | Non-profit institutions serving individuals |
| FS.2.4 | Other private funds |
| FS.2.4.1 | Return on assets held by a private entity |
| FS.2.4.2 | Other |
| FS.3 | Rest of the world funds |

Source: WHO, 2003, p. 42.

*Table I.2. OECD classification of financing agents*

| | Description |
|---|---|
| ICHA-HF code | |
| HF.1 | General government |
| HF.1.1 | Territorial government |
| HF.1.1.1 | Central government |
| HF.1.1.2 | State/provincial government |
| HF.1.1.3 | Local/municipal government |
| HF.1.2. | Social security funds |
| HF.2 | Private sector |
| HF.2.1 | Private social insurance |
| HF.2.2 | Other private insurance |
| HF.2.3 | Private households' out-of-pocket payment |
| HF.2.4 | Non-profit institutions serving households (other than social insurance) |
| HF.2.5 | Private firms and corporations (other than health insurance) |
| HF.3 | Rest of the world |

Source: WHO, 2003, p. 36.

*Table I.3. Classification scheme for providers*

| Code | Description |
|---|---|
| HP.1 | Hospitals |
| HP.1.1 | General hospitals |
| HP.1.2 | Mental health and substance abuse hospitals |
| HP.1.3 | Specialty (other than mental health and substance abuse) hospitals |
| *HP.1.4* | *Hospitals of non-allopathic systems of medicine (such as Chinese, Ayurveda, etc.)* |
| HP.2 | Nursing and residential care facilities |
| HP.2.1 | Nursing care facilities |
| HP.2.2 | Residential mental retardation, mental health and substance abuse facilities |
| HP.2.3 | Community care facilities for the elderly |
| HP.2.9 | All other residential care facilities |
| HP.3 | Providers of ambulatory health care |
| HP.3.1 | Offices of physicians |
| HP.3.2 | Offices of dentists |
| HP.3.3 | Offices of other health practitioners |
| HP.3.4 | Outpatient care centres |
| HP.3.4.1 | Family planning centres |
| HP.3.4.2 | Outpatient mental health and substance abuse centres |
| HP.3.4.3 | Free-standing ambulatory surgery centres |
| HP.3.4.4 | Dialysis care centres |
| HP.3.4.5 | All other outpatient multi-specialty and cooperative service centres |
| HP.3.4.9 | All other outpatient community and other integrated care centres |
| HP.3.5 | Medical and diagnostic laboratories |
| HP.3.6 | Providers of home health care services |
| HP.3.9 | Other providers of ambulatory health care |
| HP.3.9.1 | Ambulance services |
| HP.3.9.2 | Blood and organ banks |
| *HP.3.9.3* | *Alternative or traditional practitioners* |
| HP.3.9.9 | All other ambulatory health care services |
| HP.4 | Retail sale and other providers of medical goods |
| HP.4.1 | Dispensing chemists |
| HP.4.2 | Retail sale and other suppliers of optical glasses and other vision products |
| HP.4.3 | Retail sale and other suppliers of hearing aids |
| HP.4.4 | Retail sale and other suppliers of medical appliances (other than optical glasses and hearing aids) |
| HP.4.9 | All other miscellaneous sale and other suppliers of pharmaceuticals and medical goods |
| HP.5 | Provision and administration of public health programmes |

*Table 1.3. (end)*

| Code | Description |
|---|---|
| HP.6 | General health administration and insurance |
| HP.6.1 | Government administration of health |
| HP.6.2 | Social security funds |
| HP.6.3 | Other social insurance |
| HP.6.4 | Other (private) insurance |
| HP.6.9 | All other providers of health administration |
| HP.7 | All other industries (rest of the economy) |
| HP.7.1 | Establishments as providers of occupational health care services |
| HP.7.2 | Private households as providers of home care |
| HP.7.3 | All other industries as secondary producers of health care |
| *HP.8* | *Institutions providing health-related services* |
| *HP.8.1* | *Research institutions* |
| *HP 8.2* | *Education and training institutions* |
| *HP.8.3* | *Other institutions providing health-related services* |
| HP.9 | Rest of the world |
| *HP.nsk* | *Provider not specified by kind* |

Source: WHO, pp. 39-40.

*Table I.4. WHO's global burden of disease classification scheme*

| Code | Description |
|---|---|
| GBD.1 | Communicable diseases, maternal and perinatal conditions and nutritional deficiencies |
| GBD.1.1 | Infectious and parasitic diseases |
| GBD.1.1.1 | Tuberculosis |
| GBD.1.1.2 | Sexually transmitted diseases |
| GBD.1.1.3 | HIV disease |
| GBD.1.1.4 | Diarrhoeal diseases |
| GBD.1.1.5 | Childhood diseases |
| GBD.1.1.6 | Meningitis |
| GBD.1.1.7 | Hepatitis |
| GBD.1.1.8 | Malaria |
| GBD.1.1.9 | Tropical diseases |
| GBD.1.1.10 | Leprosy |
| GBD.1.1.11 | Dengue |
| GBD.1.1.12 | Japanese encephalitis |
| GBD.1.1.13 | Trachoma |
| GBD.1.1.14 | Intestinal nematode infection |
| GBD.1.1.15 | Respiratory infections |
| GBD.1.1.16 | Maternal conditions |
| GBD.1.1.17 | Perinatal conditions |
| GBD.1.1.18 | Nutritional deficiencies |
| GBD.1.1.19 | All other communicable, maternal, perinatal, and nutritional conditions |
| GBD.2 | Noncommunicable conditions |
| GBD.2.1 | Malignant neoplasms |
| GBD.2.2 | Other neoplasms |
| GBD.2.3 | Diabetes mellitus |
| GBD.2.4 | Endocrinal and nutritional disorders |
| GBD.2.5 | Neuropsychiatric disorders |
| GBD.2.6 | Sense organ disorders |
| GBD.2.7 | Cardiovascular diseases |
| GBD.2.8 | Respiratory diseases |
| GBD.2.9 | Digestive diseases |
| GBD.2.10 | Diseases of the genitourinary system |
| GBD.2.11 | Skin diseases |
| GBD.2.12 | Muskuloeskeletal diseases |
| GBD.2.13 | Congenital abnormalities |
| GBD.2.14 | Oral diseases |
| GBD.2.15 | All other noncommunicable conditions |
| GBD.3 | Injuries |
| GBD.3.1 | Unintentional |
| GBD.3.1.1 | Road traffic accidents |
| GBD.3.2 | Intentional |
| GBD.3.2.1 | Self-inflicted |
| GBD.3.2.2 | Homicide and violence |
| GBD.3.2.3 | War |
| GBD.3.3 | All other injury conditions |

Source: WHO, 2003, p. 46.

# Annex II

Donors included in the UNFPA/UNAIDS/NIDI Resource Flows project
(2004 survey round)

| OECD/DAC Countries | |
|---|---|
| Australian Agency for International Development | Australia |
| Canadian International Development Agency | Canada |
| Danish Ministry of Foreign Affairs | Denmark |
| Department for International Development | United Kingdom |
| Direction du Développement et de la Coopération Technique | France |
| Directorate General for International Cooperation | Belgium |
| Europe Aid Coordination Office | European Union |
| Federal Ministry for Economic Cooperation and Development | Germany |
| Federal Ministry of Foreign Affairs | Austria |
| Hellenic Republic, Ministry of Foreign Affairs | Greece |
| Ministère des Affairs Etrangères | Luxembourg |
| Ministry of Foreign Affairs, Department for Development Policy | Finland |
| Ministry of Foreign Affairs of Japan | Japan |
| Ministry of Foreign Affairs, Development Cooperation Division | Ireland |
| Ministry of Foreign Affairs, Directorate General for Development Cooperation | Italy |
| Ministry of Foreign Affairs, Spanish Agency for International Development | Spain |
| Ministry of Foreign Affairs, Institute for Portuguese Cooperation | Portugal |
| Netherlands Ministry of Foreign Affairs, Directorate General for International Cooperation | The Netherlands |
| New Zealand's International AID and Development Agency | New Zealand |
| Norwegian Agency for Development Cooperation | Norway |
| Swedish International Development Cooperation Agency | Sweden |
| Swiss Agency for Development and Cooperation | Switzerland |
| United States Agency for International Development | United States |

| United Nations organizations |
|---|
| Food and Agriculture Organization of the United Nations |
| Global Fund to Fight AIDS, Tuberculosis and Malaria |
| International Labour Organization |
| Joint United Nations Programme on HIV/AIDS |
| United Nations Children's Fund |
| United Nations Department of Economic and Social Affairs |
| United Nations Development Fund for Women |
| United Nations Development Programme |
| United Nations Educational, Scientific and Cultural Organization |
| United Nations High Commissioner for Refugees |
| United Nations Office on Drugs and Crime |
| United Nations Population Fund |
| United Nations Volunteers |
| World Food Programme |
| World Health Organization |

| Banks |
|---|
| World Bank |
| Asian Development Bank |
| African Development Bank |
| Inter-American Development Bank |

| International foundations |
|---|
| Bill and Melinda Gates Foundation |
| Bristol-Myers Squibb Foundation |
| Clinton Foundation |
| Edith Stein Foundation |
| Fogarty International Center |
| Ford Foundation |
| Henry J. Kaiser Family Foundation |
| MacArthur Foundation |
| Population Area |
| OPEC Fund for International Development |
| Packard Foundation |
| Rockefeller Foundation |
| Safe Blood for Africa Foundation |
| Safe Blood for China Foundation |
| Summa Foundation |
| The Coca Cola Africa Foundation |
| The William and Flora Hewlett Foundation |
| United Nations Foundation |
| Wallace Global Fund |
| Welcome Trust |

| International NGOs |
|---|
| Engender Health Inc |
| International HIV/AIDS Alliance |
| International Planned Parenthood Federation (IPPF) |
| International Projects Assistance Services |
| Japanese Organization for International Cooperation in Family Planning (JOICP) |
| JHPIEGO Corporation |
| John Snow, Incorporated |
| Marie Stopes International (MSI) |
| ORC Macro |
| Pathfinder International |
| Population Council |
| Population Services International (PSI) |
| Program for Appropriate Technology in Health |

# Annex III

Selected classifications of reproductive health and AIDS activities

Bernard and Tsui (1995) consider five broad categories that are also related to objectives:

i. Safe pregnancy
   - Maternal and neonatal health
   - Post-abortion care
ii. STD/HIV
iii. Women's nutrition
iv. Breastfeeding
v. Adolescent's reproductive health services

The categories include a range of activities. Viewing activities in relation to the objectives they serve, provides a good basis for the monitoring/evaluation of the activities and the formulation of a set of indicators to measure the performance of the activities.

Rannan-Eliya *et al*. (2000) define the package of reproductive health services as consisting of:

i. Family planning services: All programs, goods and services intended to assist women control their fertility, and all counseling, health education and information in support of the same.
ii. Maternal health services: All special programs designed to provide antenatal and postnatal care to mothers, including provision of dietary supplements for malnourished pregnant and lactating mothers, such as iron and vitamins.
iii. Childbirth services: Services to provide medical care for women delivering and giving birth.
iv. Infant care: All services intended to promote and improve the health and development of infants (defined as children aged less than 1 year), including baby health care, growth monitoring and growth promotion, and provision of dietary supplements such as micronutrients.
v. Other personal reproductive health services for women: All other clinical services for women, which intend to enable women to safely exercise their reproductive health functions, to be operationalized as the equivalent of all obstetric and gynecological services.

For the purpose of their study, Rannan-Eliya *et al*. did not include services intended to treat sexually transmitted diseases. The reason for excluding the services is not substantive in nature, but is related to data limitation.

Other classifications are related more to the expenditures or the use of funds. The organization Abt Associates distinguishes between direct health care (HC) expenditures and indirect expenditures or health-related spending (see e.g. De *et al*. 2004b). The indirect or health-related (HRC) expenditures are for activities that may overlap with other areas of the NHA:

i. Mitigation activities, such as
   - Nutritional support for pregnant women
   - Caring for HIV/AIDS orphans
   - Empowerment and human right issues related to reproductive health and HIV/AIDS (Odumosu et al. 2002, p. 7)
ii. Training and supportive services, such as
   - Education and training of health personal
   - Operational research and development
iii. Capital formation to providers, such as
   - Lab facilities
   - Drug supply and storage systems

The Indian Institute for Health Management Research (IIHMR) and the Policy Project, the Futures Group International (2000) distinguish activities based on the use of funds:

i. Antenatal care
ii. Childbirth
iii. Postnatal care
iv. Family planning
v. Child health care
vi. Abortion services
vii. RTI services

The identification of activities (including activities that involve the provision of goods and services) is critical for the specification of transactions. The development of a classification of activities in the area of reproductive health may benefit from the experience of SIDALAC, PHR*plus* and others in developing HIV/AIDS accounts.

De *et al*. (2004a) distinguish the following services:

i. Family planning services
   - Retail pharmaceutical sales of products such as oral contraceptives, condoms and spermicidals.
   - Outpatient services (counselling, IUD insertions, injectables)
   - Inpatient services (female and male surgical sterilization)

ii. Services that support or promote family planning
   - Information, education, communication (IEC), public awareness, health education campaigns
   - Training, research

iii. Prenatal care and delivery

# Annex IV

Activities included in the ICPD "Costed Population Package"
(Paragraph 13.14 of the Programme of Action of the ICPD)

Basic reproductive health includes the following major components:

a. Family-planning services: contraceptive commodities and service delivery; capacity-building for information, education and communication regarding family planning and population and development issues; national capacity-building through support for training; infrastructure development and upgrading of facilities; policy development and programme evaluation; management information systems; basic service statistics; and focused efforts to ensure good quality care;
b. Basic reproductive health services: information and routine services for prenatal, normal and safe delivery and post-natal care; abortion (as specified in paragraph 8.25 of the ICPD document); information, education and communication about reproductive health, including sexually transmitted diseases, human sexuality and responsible parenthood, and against harmful practices; adequate counselling; diagnosis and treatment for sexually transmitted diseases and other reproductive tract infections, as feasible; prevention of infertility and appropriate treatment, where feasible; and referrals, education and counselling services for sexually transmitted diseases, including HIV/AIDS, and for pregnancy and delivery complications;
c. Sexually transmitted diseases/HIV/AIDS prevention programmes: mass media and in-school education programmes, promotion of voluntary abstinence and responsible sexual behaviour and expanded distribution of condoms;
d. Basic research, data and population and development policy analysis: capacity-building through support for demographic as well as programme-related data collection and analysis.

Source: http://www.unfpa.org/sustainable/popups/icpd-ch13.htm, accessed 31 July 2004.

# Annex V

Categories and examples of population and AIDS activities (RF project)

| Category: | Examples of projects, programmes and activities: |
|---|---|
| **1. Family planning services:**<br>• Contraceptive commodities and service delivery;<br>• Capacity-building for information, education and communication (IEC) regarding family planning and population and development issues;<br>• National capacity-building through support for training;<br>• Infrastructure development and upgrading of facilities;<br>• Policy development and programme evaluation;<br>• Management information systems;<br>• Basic service statistics;<br>• Focused efforts to ensure good quality care. | **Examples of category 1:**<br>• Family planning projects;<br>• Family planning information systems;<br>• Construction/infrastructure of family planning clinics;<br>• Soap series on TV about family planning;<br>• Procurement of contraceptives;<br>• Contraceptive supply;<br>• Family planning training. |
| **Category:** | **Examples of projects, programmes and activities:** |
| **2. Basic reproductive health services given at primary health care level:**<br>• Information and routine services for prenatal care, normal and safe delivery, post-natal care;<br>• Abortion (as specified in paragraph 8.25 of the ICPD document);<br>• Information, education and communication (IEC) about reproductive health, human sexuality and responsible parenthood, and against harmful practices;<br>• Adequate counselling;<br>• Diagnosis and treatment for reproductive tract infections, as feasible;<br>• Prevention of infertility and appropriate treatment, where feasible;<br>• Referrals, education and counselling services for pregnancy and delivery complications. | **Examples of category 2:**<br>• Upgrading maternity wards;<br>• Training of traditional birth attendants;<br>• Refresher course for midwives;<br>• "Safe Motherhood" programmes;<br>• Eradicating female genital mutilation. |

| Category: | Examples of projects, programmes and activities: |
|---|---|
| **3. Sexually transmitted diseases and HIV/AIDS activities:** | **Examples of category 3**: |
| *a) STD activities*<br>• STD prevention and care services;<br>• STD diagnosis and treatment;<br>• Promotion of voluntary abstinence and responsible sexual behaviour. | • Information, education and communication (IEC) about STDs;<br>• STD sentinel and behavioural surveillance. |
| *b) HIV/AIDS prevention*<br>• Voluntary Counselling and Testing (VCT);<br>• Prevention of Mother to Child Transmission of HIV/AIDS (MTCT);<br>• Information, education and communication (IEC) about HIV/AIDS prevention;<br>• Blood safety;<br>• HIV/AIDS prevention strategies — peer outreach for out-of school youth, public sector condom promotion and distribution. | • Policy, advocacy, administration and research, school based AIDS education;<br>• Support to MTCT programmes; post exposure prophylaxis (PEP);<br>• Prevention programmes, including those in the workplace, targeted at vulnerable groups, e.g. youth, women, men having sex with men (MSM), intravenous drug users;<br>• HIV/AIDS prevention-related research. |
| *c) HIV/AIDS treatment/care*<br>• Palliative care for people living with AIDS;<br>• Treatment for opportunistic infections;<br>• Access to essential HIV/AIDS care programmes, including drugs, prophylaxis for opportunistic infections. | • Diagnosis, counselling and referrals to care services;<br>• Multidrug-resistant (MDR) TB and HIV care;<br>• Highly active antiretroviral therapy (HAART), including laboratory services for monitoring treatment. |
| *d) HIV/AIDS social mitigation/support*<br>• Promotion and protection of human rights of HIV-infected people;<br>• Legal support services for people living with HIV/AIDS;<br>• Humanitarian assistance for people affected by HIV/AIDS. | • Support to national strategic plans on HIV/AIDS;<br>• Support to AIDS orphans;<br>• Surveillance of HIV infection and AIDS prevalence;<br>• Psychological support for HIV/AIDS affected people and families;<br>• Support to networks of people living with HIV/AIDS. |

| **Category**: | **Examples of projects, programmes and activities:** |
|---|---|
| **4. Basic research, data and population and development policy analysis:**<br><br>• National capacity-building through support for demographic as well as programme-related data collection and analysis, research, policy development and training;<br>• Support for population data collection, support to academic and other training institutions for population and development research and analysis and to national population planning units, population councils, and population commissions. | **Examples of category 4**:<br><br>• Demographic and health surveys;<br>• Sending staff to overseas training courses;<br>• Setting up a demography department at a university;<br>• Population censuses. |

# Annex VI

Reproductive Health Account functions classification[14]

[14] Prepared by Bart de Bruijn and Ronald Horstman, NIDI.

| **Health care functions**<br>**HC. 1-7 Direct health care functions** | Examples |
|---|---|
| **HC.1 Services of curative care** | |
| *HC.1.1 Inpatient curative care* | |
| HC.1.1.1 RH related inpatient curative care | Including accommodation costs |
| HC.1.1.1.1 Obstetric care | Assistance by trained attendants of vaginal delivery, caesarean section, surgery, anaesthesia, blood transfusion; antibiotics, oxyticic drugs, sedatives for ecclampsia, manual removal of placenta, removal of retained products |
| HC.1.1.1.2 Fistula reconstructive surgery | |
| HC.1.1.1.3 Treatment for reproductive tract infections | Treatment female and male tract infections, e.g. vaginal, pelvic, cervical and urinary tract infections (in-patient) |
| HC.1.1.1.4 Treatment of RH-related cancers | Treatment of uterine, cervical, ovarian, breast, prostate, testicular cancer; radiotherapy |
| HC.1.1.1.5 Health-related abortion | Abortion related to health of the mother (in-patient) |
| HC.1.1.1.6 Psycho-social support to mothers | Support to mothers in case of loss of child |
| HC.1.1.1.7 STI management | STI diagnosis and treatment |
| HC.1.1.1.8 Treatment of infertility | Treatment of infertility and sub-fertility; IVF (in-patient) |
| HC.1.1.1.9 All other inpatient RH-related curative care | |
| HC.1.1.2 HIV/AIDS-related inpatient curative care | |
| HC.1.1.2.1 OI Treatment and monitoring | |
| HC.1.1.2.9 All other inpatient HIV/AIDS-related curative care | |
| *HC.1.3 Outpatient curative care* | |
| HC.1.3.5. RH-related outpatient curative care | |
| HC.1.3.5.1 Treatment for reproductive tract infections | Treatment female and male tract infections, e.g. vaginal, pelvic, cervical and urinary tract infections (out-patient) |
| HC.1.3.5.2 Treatment of RH-related cancers | Treatment of uterine, cervical, ovarian, breast, prostate, testicular cancer; radiotherapy |
| HC.1.3.5.3 Health-related abortion | Abortion related to health of the mother (out-patient) |

| | |
|---|---|
| HC.1.3.5.4 Psycho-social support to mothers | Support to mothers in case of loss of child |
| HC.1.3.5.5 STI management | STI diagnosis and treatment |
| HC.1.3.5.6 Treatment of infertility | Treatment of infertility and sub-fertility (out-patient) |
| HC.1.3.5.9 All other outpatient RH-related curative care | |
| HC.1.3.6. HIV/AIDS-related curative care | |
| HC.1.3.6.1 OI Treatment and monitoring | |
| HC.1.3.6.2 ARV treatment | Highly active antiretrivirol therapy (HAART) |
| HC.1.3.6.3 Psychosocial support | |
| HC.1.3.6.9 All other outpatient HIV/AIDS-related curative care | |
| *HC.1.4 Services of curative home care* | |
| HC.1.4.1 Obstetric services | Birth attendance at home |
| **HC.2 Services of rehabilitative care** | |
| *HC.2.1 Inpatient rehabilitative care* | |
| HC.2.1.1 Inpatient rehabilitative care for RH-related cancer | |
| *HC.2.4 Services of rehabilitative home care* | |
| HC.2.4.1 Rehabilitative home care for RH-related cancer | |
| HC.2.4.2 Post-delivery rehabilitative home care | Maternity care |
| **HC.3 Services of long-term nursing care** | |
| *HC.3.1 Inpatient long-term nursing care* | |
| HC.3.1.1 Palliative care for RH-related cancer patients | |
| HC.3.1.2 Palliative care for PLWHA | |
| *HC.3.3 Long-term nursing care: home care* | |
| HC.3.3.1 Palliative care for RH-related cancer patients | |
| HC.3.3.2 Palliative care for PLWHA | |
| **HC.4 Ancillary services to medical care** | |
| *HC.4.1 Clinical laboratory* | |
| HC.4.1.1 Pregnancy tests | |

| | |
|---|---|
| HC.4.1.2 Diagnosis for RTI | Diagnosis for vaginal, pelvic, cervical and urinary tract infections; PAP smears |
| HC.4.1.3 STI-related lab services | Lab monitoring for STI |
| HC.4.1.4 HIV/AIDS-related lab services | Lab monitoring for HIV, HAART, immunology |
| HC.4.1.9 All other RH-related lab services | |
| *HC.4.2 Diagnostic imaging* | |
| HC.4.2.1 Diagnostic imaging for MTP | Diagnostic imaging for medical termination of pregnancy |
| HC.4.2.2 HIV/AIDS diagnostic imaging | |
| HC.4.2.9 All other RH-related diagnostic imaging | Mammograms, imaging of uterine, cervical, ovarian, breast, prostate, testicular cancers |
| *HC.4.3 Patient transport and emergency rescue* | |
| HC.4.3.1 Transport for emergency obstetric care | |
| HC.4.3.2 Transport for other RH-related inpatient curative care | |
| HC.4.3.3 Transport for RH-related outpatient curative care | |
| HC.4.3.4 Transport for RH-related diagnostic services | |
| *HC.4.9 All other miscellaneous ancillary services* | |
| HC.4.9.1 Attending to inpatients by family members and relatives | Expenses for food and accommodation of patient's attendants |
| HC.4.9.9 Other miscellaneous ancillary services | |
| **HC.5 Medical goods dispensed to outpatients** | |
| *HC.5.1 Pharmaceuticals and other medical nondurables* | |
| HC.5.1.1 Prescribed medicines | |
| HC.5.1.1.1 STI medication | Antibiotics |
| HC.5.1.1.2 RTI medication | Antibiotics |
| HC.5.1.1.3 Prescribed contraceptive commodities | Oral contraceptives |
| HC.5.1.1.4 Other RH-related prescribed medicines | |
| HC.5.1.1.5 ARV Drugs | ARV drugs as prescribed medicines for outpatients |
| HC.5.1.1.6 OI Drugs | Prophylaxis for opportunistic infections |
| HC.5.1.2 Over-the-counter medicines | |
| HC.5.1.3 Other medical nondurables | |

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| HC.5.1.3.1 Safe-delivery kits | |
| HC.5.1.3.2 Condoms | |
| HC.5.1.3.3 Contraceptive commodities other than condoms | Spermacides, IUDs |
| HC.5.1.3.4 Pregnancy tests | Over-the-counter pregnancy tests |
| HC.5.1.3.9 All other medical nondurables | |
| **HC.6 Prevention and public health services** | |
| *HC.6.1 Maternal health; family planning and counselling* | |
| HC.6.1.1 Maternal health | |
| HC.6.1.1.1 Prenatal care | Tetanus toxoid immunization, hookworm treatment, detection and management of complications (e.g. pre-eclampsia), antenatal check-ups, safe motherhood counselling and referral, registration of pregnant women [N.B. diagnosis and management of tract infections is included in HC.1.1.1.3 or HC.1.3.5.1] |
| HC.6.1.1.2 Post-natal care | Post-delivery check-ups and referral |
| HC.6.1.1.3 Women's nutrition | Provision of dietary supplements to during and after pregnancy women (e.g. iron, folic acid and other minerals and vitamins) |
| HC.6.1.2 Family planning service delivery | |
| HC.6.1.2.1 Family planning counselling | Counselling and referral, including genetic counselling |
| HC.6.1.2.2 Permanent methods of family planning | Female and male sterilization |
| HC.6.1.2.3 Temporary methods of family planning | IUD insertions, injectables (NB: oral contraceptives and condoms are included in category HC.5.1.3) |
| HC.6.1.2.4 Abortion | Abortion and post-abortion care (abortion related to health of the mother in HC.1.1.1.5 or HC.1.3.5.3) |
| *HC.6.3 Prevention of communicable diseases* | |
| HC.6.3.1 HIV/AIDS prevention | |
| HC.6.3.1.1 Counselling and testing | Voluntary counselling and testing (VCT) and referral |
| HC.6.3.1.2 Blood safety | Screening of donated blood |
| HC.6.3.1.3 Post exposure prophylaxis | PEP use for exposed health workers or other high-risk groups |
| HC.6.3.1.4 Needle programs | Needle exchange programmes |

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| HC.6.3.1.5 Health workers protection | Disposable bins; protective wear |
| HC.6.3.1.6 Condom distribution programs | Condom promotion and distribution (specifically aiming at HIV/AIDS) |
| HC.6.3.1.6.1 Targeted interventions | Interventions aiming at high-risk groups, e.g. commercial sex workers, truckers, migrant workers, street children |
| HC.6.3.1.6. General programmes | |
| HC.6.3.1.7 Prevention of mother to child transmission of HIV/AIDS | Breast feeding intervention, provision of ART drugs during pregnancy and at time of delivery |
| HC.6.3.1.9 All other HIV/AIDS prevention activities | |
| HC.6.3.2 STI Prevention program | Prevention of infertility and sub-fertility |
| HC.6.3.2.1 Condom distribution programs | Condom promotion and distribution (not specifically aiming at HIV/AIDS) |
| *HC.6.4 Prevention of non-communicable diseases* | |
| HC.6.4.1 Prevention of RH-related cancer | |
| *HC.6.6 IEC/BCC on reproductive health practices* | Including mass media, magazines, posters and targeted programmes (school and peer education); community/group level communication; . Including male involvement programmes |
| HC.6.6.1 IEC&BCC on safe motherhood | |
| HC.6.6.2 IEC&BCC on family planning | Campaigns for natural methods (abstinence, rhythm, breastfeeding) |
| HC.6.6.3 IEC&BCC on infertility | Promotion of voluntary abstinence and responsible sexual behaviour |
| HC.6.6.4 IEC&BCC on sexual health | |
| HC.6.6.5 IEC&BCC on STI prevention | Promotion of voluntary abstinence and responsible sexual behaviour |
| HC.6.6.6 IEC&BCC on HIV/AIDS prevention | |
| HC.6.6.6.1 Targeted interventions | IEC aiming at high-risk groups, e.g. commercial sex workers, truckers, migrant workers, street children (excl. school-based IEC) |
| HC.6.6.6.2 School AIDS education programme | School-based education |
| HC.6.6.6.9 All other IEC/BCC on HIV/AIDS | Workplace prevention programmes; promotion of voluntary abstinence and responsible sexual behaviour |
| HC.6.6.9 IEC/BCC on all other reproductive health practices | IEC&BCC about harmful practices (e.g. female genital mutilation) |

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| **HC.7 Health administration and health insurance** | |
| *HC.7.1 General government administration of health* | |
| HC.7.1.1 General government administration of health (except social security) | Formulation, administration, coordination and monitoring of health policies, plans, programmes and budgets; management information systems, monitoring and evaluation, basic service and health statistics (not compilation), preparation and enforcement of legislation (governmental) |
| HC.7.1.2 Administration, operation and support of social security funds | |
| *HC.7.2 Health administration and health insurance: private* | |
| HC.7.2.1 Health administration and health insurance: social insurance | Administration and operation of private social health insurance |
| HC.7.2.2 Health administration and health insurance: other private | Administration and operation of all other private health and accident insurance, including private for-profit insurance |
| **HC.nsk HC expenditure not specified by kind** | |
| **HC.R..1-5 Health-related functions** | |
| **HC.R.1 Capital formation for health care provider institutions** | Infrastructure development and upgrading of facilities; e.g. clinics, lab facilities, drug supply and storage systems |
| *HC.R.1.1 Infrastructure development and upgrading in the curative and preventive health care provider institutions* | |
| HC.R.1.1.1 Primary health care | |
| HC.R.1.1.2 Secondary health care | |
| HC.R.1.1.3 Tertiary health care | |
| *HC.R.1.2 Infrastructure development and upgrading in the delivery of diagnostic health care services* | |
| *HC.R.1.3 Non-clinical system improvements* | |

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| **HC.R.2 Education and training of health personnel** | Medical education and in-service training for paramedical workers; universities and nursing schools; training on capacity-building for IEC |
| *HC.R.2.1 Health personnel education and training on RH (not related to HIV/AIDS)* | Education and training on RH, including maternal health, family planning, STI; e.g. training TBAs, refresher course midwives |
| *HC.R.2.2 Health personnel education and training on HIV/AIDS* | Training on treatment and protection |
| **HC.R.3 Research and development in health** | Basic and applied research (including data collection), and experimental development; research to improve programme performance |
| *HC.R.3.1 R&D in RH (not related to HIV/AIDS)* | Data collection (DHS, surveillance), (policy) analysis, (operations) research in RH, including maternal health family planning, STI and sexuality |
| *HC.R.3.2 R&D in HIV/AIDS* | Data collection, (policy) analysis, prevention and cure research research (e.g. vaccine and microbicide research) |
| HC.R.3.2.1 HIV sentinel surveillance | |
| HC.R.3.2.2 Autopsies of HIV/AIDS patients | |
| HC.R.3.2.9 All other R&D in HIV/AIDS | |
| **HC.R.nsk HC.R expenditure not specified by kind** | |
| **Addendum functions** | |
| **AD.1 Provision of social services in kind to assist living with disease and impairment** | |
| *AD.1.1 Support to people with RH problems (not related to HIV/AIDS)* | Support to people with infertility, fistula stigma reduction, empowerment |
| *AD.1.2 Support to PLWHA* | Legal support services for / in-kind benefits (e.g. nutritional support) to / empowerment and organization, human rights protection, stigma reduction of PLWHA |

| **AD.2 Policy advocacy** | **Support to national strategic plans** |
|---|---|
| *AD.2.1 Policy advocacy on RH (not related to HIV/AIDS)* | Support to national strategic plans on family planning and RH or to alternative plans |
| *AD.2.2 Policy advocacy on HIV/AIDS* | Support to national strategic plans on HIV/AIDS or to alternative plans |

# Annex VII

International Classification for Health Accounts — Functional Classification of Health Care
(ICHA-HC)

## HC. 1-7 DIRECT HEALTH CARE FUNCTIONS

HC.1 Services of curative care
- HC.1.1 Inpatient curative care
- HC.1.2 Day cases of curative care
- HC.1.3 Outpatient curative care
  - HC.1.3.1 Basic medical and diagnostic services
  - HC.1.3.2 Outpatient dental care
  - HC.1.3.3 All other specialized medical services
  - HC.1.3.4 All other outpatient curative care
- HC.1.4 Services of curative home care

HC.2 Services of rehabilitative care
- HC.2.1 Inpatient rehabilitative care
- HC.2.2 Day cases of rehabilitative care
- HC.2.3 Outpatient rehabilitative care
- HC.2.4 Services of rehabilitative home care

HC.3 Services of long-term nursing care
- HC.3.1 Inpatient long-term nursing care
- HC.3.2 Day cases of long-term nursing care
- HC.3.3 Long-term nursing care: home care

HC.4 Ancillary services to medical care
- HC.4.1 Clinical laboratory
- HC.4.2 Diagnostic imaging
- HC.4.3 Patient transport and emergency rescue
- HC.4.9 All other miscellaneous ancillary services

HC.5 Medical goods dispensed to outpatients
- HC.5.1 Pharmaceuticals and other medical nondurables
  - HC.5.1.1 Prescribed medicines
  - HC.5.1.2 Over-the-counter medicines
  - HC 5.1.3 Other medical nondurables
- HC.5.2 Therapeutic appliances and other medical durables
  - HC.5.2.1 Glasses and other vision products
  - HC.5.2.2 Orthopaedic appliances and other prosthetics
  - HC.5.2.3 Hearing aids

HC.5.2.4 Medico-technical devices, including wheelchairs
HC.5.2.9 All other miscellaneous medical goods

HC.6 Prevention and public health services
HC.6.1 Maternal and child health; family planning and counselling
HC.6.2 School health services
HC.6.3 Prevention of communicable diseases
HC.6.4 Prevention of noncommunicable diseases
HC.6.5 Occupational health care
HC.6.9 All other miscellaneous public health services

HC.7 Health administration and health insurance
HC.7.1 General government administration of health
HC.7.1.1 General government administration of health (except social security)
HC.7.1.2 Administration, operation and support of social security funds
HC.7.2 Health administration and health insurance: private
HC.7.2.1 Health administration and health insurance: social insurance
HC.7.2.2 Health administration and health insurance: other private

HC.nsk HC expenditure not specified by kind

**HC.R.1–5 HEALTH-RELATED FUNCTIONS**

HC.R.1 Capital formation for health care provider institutions

HC.R.2 Education and training of health personnel

HC.R.3 Research and development in health

HC.R.4 Food, hygiene and drinking-water control

HC.R.5 Environmental health

HC.R.nsk HC.R expenditure not specified by kind

Source: WHO, 2003, p.28.

# Annex VIII

Reproductive health expenditure by type of financing agent and type of provider (FAxP)

| Providers | Financing agent | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | HF.1 General government | | | | HF.2 Private sector | | | | | HF.3 Rest of world | |
| | HF.1.1 Territorial government | | | HF.1.2 Social security fund | HF.2.1 Private social insurance | HF.2.2 Other private insurance | HF.2.3 Private households out-of-pocket payment | HF.2.4 Non-profit institutions serving households | HF2.5 Private firms and corporations | | |
| | HF.1.1.1 Central government | HF.1.1.2 State/provincial government | HF.1.1.3 Local/ municipal government | | | | | | | | |
| HP.1 Hospitals | | | | | | | | | | | |
| HP.2 Nursing and residential care facilities | | | | | | | | | | | |
| HP.3 Ambulatory health care | | | | | | | | | | | |
| HP.4 Retail sale | | | | | | | | | | | |
| HP.5 Administration of public health programmes | | | | | | | | | | | |
| HP.8 Health related services | | | | | | | | | | | |
| HP.9 Rest of world | | | | | | | | | | | |
| Total | | | | | | | | | | | |

Source: WHO, 2003, p. 57.