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The Programme of Action adopted at the 1994 international Conference on Population and Development (ICPD) in Cairo outlines specific funding targets to be met to achieve the ICPD population and Development objectives. The declaration of Commitment on HIV/AIDS adopted at the 2001 United Nations General Assembly Special Session (UNGASS) on HIV/AIDS urges the international community to supplement the efforts of developing countries through increased international development assistance, particularly for those countries most affected by HIV/AIDS. The project on 'Financial Resource Flows for Population and AIDS Activities' aims at monitoring expenditures and future commitments for population and AIDS programmes in response to the ICPD and the UNGASS on HIV/AIDS.

The 'Resource Flows' Project is a collaboration between the United Nations Population Fund (UNFPA) and the Netherlands Interdisciplinary Demographic Institute (NIDI).

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The purpose of the UNFPA/NIDI Resource Flows Newsletter is to inform donor and developing country governments, public and private organisations, research institutes, universities and civil society about resource tracking for population and AIDS activities in general and the role of the Resource Flows (RF) project in particular.

Measuring Out-of-Pocket Expenditures for Sexual and Reproductive Health

1. Introduction

In many parts of the world, household expenditures for health, including Sexual and Reproductive health (SRH), amount to more than 50 percent of all health expenditures. Health expenditures that exceed 10 percent of the household income are generally referred to as catastrophic health expenditures. They are found to be an important financial burden for low-income families and an important cause of impoverishment (Doorslaer et al., 2006). Sustainable health financing schemes address not only issues of efficiency but also health equity and protect households with health problems from poverty.

To combat poverty, it is important to know how much households spend on health care, what health services and other costs need to be paid for, and how they are paid for. Household expenditures for health include direct payments at the time health care is received and indirect payments to the health system through taxes, social security contributions and premiums for private health care insurance. Indirect payments are paid in advance whether health care is received or not. They are associated with risk sharing. The amounts households spend on health care at the

time of service delivery depend on how the health system is organized and health care is financed.

The monitoring of financial flows for population and AIDS activities (the main aim of the Resource Flows Project) includes the tracking of financial transactions for SRH. Households are important financing sources and a growing need exists for data on how much households spend on health, either directly or indirectly. This newsletter examines, partly based upon existing literature and partly upon field experiences, ways to collect useful data. We include useful references to the literature. The structure of the newsletter is as follows. Section 2 briefly discusses the concept of out-of-pocket expenditures (OOPE). Section 3 lists a number of sources that may contain information on OOPE for health care. When the information contained in these sources are adequate, complex and expensive OOPE surveys are not required. Section 4 discusses OOPE surveys. Section 5 concludes the paper. The Newsletter is based on the UNFPA/NIDI Resource Flows Project (2008).

2. Out-of-pocket expenditures

A common definition of OOPE is the direct payments at the time when health care services and goods are obtained. This definition is consistent with that proposed by the WHO: "The direct outlays of households, including gratuities



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and payments in-kind, made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or to the enhancement of the health status of individuals or population groups. This includes household payments to public services, non-profit institutions or nongovernmental organizations. It excludes payments made by enterprises which deliver medical and paramedical benefits, mandated by law or not, to their employees” (WHO 2003). Following from the WHO conceptualization of OOPE, out-of-pocket expenditures include direct household expenditures used for the purchasing of health services. This includes co-payments, fee-for-service payments, self-medication, informal payments and all other expenses paid directly (in cash or in-kind) by the households for the health services and goods (Belli, Gotsadze, & Shahriari, 2004). It excludes outlays for insurance premiums and other pre-payment schemes, and reimbursements by third party payers. Some studies do not follow WHO’s narrow definition of OOPE and include indirect costs (e.g. Xu et al., 2003; Guthrie, 2005).

Out-of-pocket expenditures include informal payments. Informal payments for health services are unofficial payments (under-the-table payments) that are added to the official service fees recorded in the administration of health service providers. This could encompass cash payments, exchanging goods and services (barter) or in-kind contributions (e.g. supplies needed for hospital treatment like sheets, drugs, blood) or gifts (Lewis 2002; Vian et al. 2004). By its very nature, unofficial payments are lacking in financial accounts. The tracking of these payments is a major challenge.

Out-of-pocket expenditures are on the rise. That is largely a consequence of the introduction and maintenance of user fees, i.e. direct charges to users for health services. The rationale for user fees is basically two-fold: to recover (part of) the costs of health service delivery, and/or to increase efficiency in health service delivery (Bijlmakers et al., 2006). User fees can take the form of a uniform fee (“flat fee”) or they can be differential fees for various types of services.

3. Data sources on OOPE for health care

A number of data sources may contain information on OOPE for health services. They include surveys, health surveillance systems, financial diaries and costing studies. In some instances, they may be alternatives to specialized out-of-pocket expenditure surveys. In addition to primary data collection, indirect methods for estimating OOPE have been tried (see e.g. Horstman, 2007; Kruk et al., 2007).

A. Surveys

i. Household surveys

A household survey collects information on a range of topics from people living in private households. Use of health facilities and expenditures are usually included, but only broad categories of health functions are distinguished. A useful reference is O’Donnell et al. (2007). A type of household survey is the Living Standard Measurement Study (LSMS). These studies are household surveys aimed at the measurement and understanding of poverty in developing countries. The World Bank maintains a website of LSMS: (<http://www.worldbank.org/LSMS/>).



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Waters (2007) uses the LSMSs from Latin America to measure the share of total household spending that is taken up by spending on healthcare. Falkingham (2004) uses the Tajikistan Living Standard Survey to investigate the level and distribution of out-of-pocket payments for health care in Tajikistan and to examine the extent to which such payments act as barriers to health-care access.

ii. Demographic and Health Surveys (DHS)

The DHS program collects, analyses and disseminates data on population, health (including HIV/AIDS) and nutrition through more than 200 surveys in 75 countries. Data can be downloaded from the website (<http://www.measuredhs.com/>). DHS surveys include data on health needs and service utilisation, but few include information on expenditures (e.g. Morocco 1995 DHS). DHS surveys may be useful sources for costing studies, however.

Household surveys and Demographic and Health Surveys address different issues. An alignment of the two surveys, as suggested by Falkingham and Namazie (2001), offers cost-effective ways of spending for sexual and reproductive health. They suggest that the DHS remains the starting source for measuring health status and that LSMS includes questions on self-reported health status, utilisation of health services and, for women of reproductive age, birth history. LSMS should also include questions on out-of-pocket payments related to health care.

B. Demographic and health surveillance systems (DSS).

Demographic surveillance tracks births, deaths, and migrations in a population over time (Baiden

et al., 2006). Surveillance systems are often set up around specific intervention studies and later converted into standing DSS sites that can form a platform for further studies. There are over 30 DSS sites in Africa, Asia, and the Americas. They are a major source of longitudinal data. At most sites, core demographic data are supplemented with social and economic correlates of population and health dynamics. DSS sites have come together under the banner of the INDEPTH network: (<http://www.indepth-network.org/>). Mugisha et al. (2002a, 2002b) used the Nouma DSS in Burkina Faso as a sample frame to study the impact of OOPE on health care. The Butajira DSS site in Ethiopia is used by the Resource Flows Project to collect information on OOPE for SRH.

C. Financial diaries

Financial Diaries were originally proposed by a team from the Institute for Development Policy and Management at the University of Manchester led by David Hulme. Financial diaries use detailed balance sheets of all income and expenditure and monthly cash flow statements maintained by family and researcher. The objective of financial diaries is to shed more light on how poor households manage their finances over a full year, and in particular, how and why they make use of financial services and devices. The diaries present a picture of the financial lives of the poor by interviewing households over the course of a year and compiling a record of daily income, expenditure and financial exchange. For details, see Rutherford (2001), the website maintained by the Finance and Development Research Programme at the University of Manchester: (<http://www.devinit.org/findev/>) and the website maintained by the Southern Africa Labour and Development Research Unit (SALDRU) of the



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University of Cape Town, South Africa: (<http://www.Financialdiaries.com/>).

Financial diaries have become an important tool in microfinance. Diary data have been collected in India, Bangladesh and South Africa (Cape Town). The Cape Town data are disseminated by SALDRU and can be accessed through the internet: at: (http://blogs.uct.ac.za/blog/saldru/2006/04/26/release_of_the_financial_diaries_data_set). Guthrie (2005) lists strengths and limitations of financial diaries.

Collins and Liebbrandt (2007) use financial diaries to study the financial impact of death at the household level in three urban and rural areas in South Africa. Their diaries track household-level cash flows over one year. The data can be accessed at: (http://www.datafirst.uct.ac.za/data_fdiaries.html). For details on the dataset, including survey instruments, see: (www.financialdiaries.com) and in Collins (2005).

D. Costing studies

Costing studies collect data on expenditures from the provider's perspective.

4. OOPE surveys

OOPE surveys collect data on OOPE in detail by distinguishing between the various health services utilized and by health service providers. The number of surveys of OOPE for SRH is still small. Rannan-Eliya (2005) provides a good introduction to OOPE surveys. Khan (2005) studies the out-of-pocket expenditures for maternity services and related costs such as transportation by persons visiting a large hospital in Dhaka, Bangladesh. All interviewees incurred substantial out-of-pocket expenditures for travel,

hospital admission fees, medicine, tests, food, and tips. As part of the Resource Flows Project (UNFPA/UNAIDS/NIDI study) in the period 2005 - 2007, surveys for OOPE for SRH were organized in the State of Karnataka, India, and in Nepal and Ethiopia. In this section we briefly present the major methodological findings of these studies. For a detailed account, see e.g. Puri et al. (2006).

The general aims of these surveys were to:

- Assess levels of individual and household spending on SRH.
- Assess the equity of SRH expenditures across gender and life-course stages.
- Relate household spending on SRH to the wealth status of households, to the costs of health service provision by the public and private sector, and to general household spending on health.
- Strengthen health resource tracking capacity of counterpart organizations and stimulate south-south co-operation.

For a description of these surveys in some detail, see UNFPA/NIDI Resource Flows Project (2008).

Based on these studies and the practical experience in the field a number of observations can be made. Concerning the expenditures on SRH the following should be noted:

- Although OOP spending levels on general health are known for many countries, to date we are short of information on OOP spending on SRH.
- Available data suggest that a considerable portion of total health expenditure is out-of-pocket spending for SRH services (esp. for developing countries).



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- A detailed mapping of the health system is required to identify and define important components of OOP spending on SRH.
- Policies that address equity and efficiency in the field of SRH require OOP expenditure estimates.
- Identifying expenditure for SRH services is often hampered by a lack of a suitable administrative categorization in health information systems and sometimes overlaps between FP/RH and sexual health categories (e.g. HIV-AIDS), partly determined by the policy context.

The following steps should receive particular attention when executing a study on SRH related OOPE:

a. First step: mapping the health system

Since OOPE for health depend on the idiosyncrasies of the health system in the country or region, a detailed mapping of the system is required, including e.g. financing sources, public and private providers, range and type of health services available and health insurance schemes. In addition to mapping the relevant actors in the health system, the mapping exercise can also be used to identify useful data sources and databases.

In the context of OOPE for HIV/AIDS prevention and treatment, one needs to map which providers are providing what HIV/AIDS related services to whom. For each data source a thorough evaluation of the availability, scope, quality, detail (expenditure by service category, commodity), compatibility, representativeness and reliability should be made. On the basis of this, and in light of available resources, a detailed data collection plan needs to be drawn up. Gaining a thorough understanding of the local health system,

its actors, functions and types of available data is a necessary prerequisite for any OOPE study. For an illustration of mapping the reproductive health system, see Mishra et al. (2000).

b. Functional boundaries

After a detailed mapping has been accomplished one needs to determine what is considered SRH related treatment and care within the given country context.

This does not only pertain to official guidelines from MOH or international classifications, but could also include services/treatment outside mainstream health care services, e.g. use of traditional healers or ayurvedic medicines. For example, the use of condoms could be classified under FP/RH, but could also be seen as a preventive measure against HIV. For clarity in analysis and to make international comparisons possible however, these categories should be clearly distinguished and measured separately. One should be aware that users and providers could have differing views as to what comprises SRH prevention/treatment. Therefore, during a survey boundaries should be clearly defined and cross-checking with respondents as to what they consider spending on SRH prevention and treatment needs attention.

c. Sample frame

Some studies use as a sample frame existing surveillance schemes. In the Karnataka and Nepal studies, in preparation for the survey all households in the enumeration areas were visited to determine eligibility of household members. In Ethiopia, the DSS households were screened for SRH problems in the past 12 months to determine eligibility. In addition hospital data were used to identify persons that meet the eligibility criteria. Since the interview was conducted some months



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after the initial screening, some households or members of households had migrated. That is not a problem if these migrants do not differ from the general population.

d. Time frame

The reference period is generally 12 months. Hence, service utilization and expenditures are recorded for the past year. Lack of memory, recall bias and telescoping are main problems. For instance, persons may report catastrophic expenditures that occurred more than 12 months ago. One should also be aware that the timing of consumption and payment of health services need not be the same. However, longitudinal data with measurement at several time intervals can relate trends in expenditure and disease burden to the various stages of the disease (Bachmann and Booyesen 2003; 2004) The use of the financial diary method could be a way to enhance accuracy, but the method also has its limitations. In order to arrive at useful OOPE data, care should be taken to circumscribe the time boundary clearly and relate this to respondents. In case of memory loss concerning small outlays for health services, it could be considered to record payments over a shorter period and extrapolate this for the whole period, based on average number of visits or purchasing of health services or commodities.

e. Questionnaire design

The instruments should be tailored to elicit information specific to the local situation, actors and funding flows. In order to make (international) comparison possible, categories and classifications (providers, functions etc) should be compatible with international classification guidelines (e.g. Producers Guide WHO, AIDS Accounts guidelines). In order to maximize response the design of the instrument needs to

take into consideration issues of sensitivity, culture, confidentiality and ethics.

The questionnaire(s) should take account of the clinical stage of the disease or impairment since expenditures are likely to vary with the specific stage. It should also include demographic characteristics and socio-economic status of households. The questionnaire should include information on service providers, service provided by type (prevention, treatment) and other costs (e.g. transportation and accommodation). It should distinguish between payments that are eligible for reimbursement from health insurance schemes or employers and those that are not.

f. Tabulation

The tabulation plan should be guided by the system of reproductive health accounts. Such a system of accounts is described by WHO (2007) (see also Willekens, 2005). Households can be financing sources or financing agents. Households that contribute to pre-payment schemes, such as health insurance, are classified as financing sources.

The classification of the beneficiaries is dictated by the intention of the use of the funds. For example, if members of the most at risk populations (MARPs) are reached by services aimed at the general population, the respective expenditure should be accounted for the latter, i.e. general population, and cannot be attributed to any specific MARP. The classification of beneficiary's populations may be combined with demographic characteristics (such as age and sex, educational attainment, urban-rural habitat) when the information is available at country level.



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g. Analysis

It is good practice to formulate an analysis plan before and during the questionnaire design. The analysis plan includes (a) a set of questions that need to be answered but cannot using available data, and (b) a plan of data analysis that includes tabulations and methods of analysis.

A dimension that is not adequately covered in surveys and analyses is duration. The health status and the social participation of persons with SRH problems may vary with the duration of the disease. For AIDS patients, anti-retroviral treatment extends over a lifetime. Unless the treatment is free, the financial consequences are likely to worsen with duration of the disease. Duration analysis calls for longitudinal data. Longitudinal research capacity is still limited, particularly in developing countries (See Durrant and Menken, 2002; Willekens, 2006).

Care should be taken that reported data refer to the same time frame; if possible data could be transformed into annualized data. In addition, given country/regional variations in what constitutes a household, it is necessary to verify whether data refer to individual level expenditure or household level expenditure.

After arriving at OOPE estimations it is important to triangulate and validate the data using other cost and utilization studies, provider surveys, national health accounts or expert opinion.

It should be clear from the analysis and reporting whether OOPE estimates refer to direct health care expenditure related to an illness episode or a specific defined period. In order to be meaningful and make (international) comparison possible, OOPE should be measured and related to specific health care related categories e.g. spending for

counselling, treatment, medicines, hospital admission fees, medical tests, bed charge, travel, tips, informal payments etc.

In estimating annualized OOPE or reporting trends in spending (in US\$), account should be taken of currency exchange fluctuations, which can be erratic.

5. Conclusion

As a result of increased demand for health care, the absence or inadequacy of collective schemes of health finances, and health system reforms, OOPE for health, including sexual and reproductive health, is on the rise in most parts of the world. The financial burden of SRH problems to individuals and households remains largely unknown, however. OOPE surveys are designed to complement household surveys, demographic and health surveys and other data collection efforts to obtain the necessary data. The design and implementation of OOPE surveys involve several issues. They are briefly addressed in this Newsletter. Reference to the literature is added to direct the reader to useful publications. The interest in OOPE surveys is expected to grow because in most cases health system reforms transfer the financial burden of health problems from the collective to the individual.



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