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HEALTH STATISTICS

Note by WHO

This WHO Report on Health Statistics provides the committee with a detailed follow-up action taken in response to the 2004 Statistical Commission report of the Friends of the Chair (E/CN.3/2004/33). In particular the committee will be informed on how the recommendations have been implemented in relation to the following items:

1. The Health Metrics Network in relation with a) the undertaking of "a strategic review of international programs on the production of health statistics" (E/CN.3/2004/33; item C.4.e.i) and b) the support to building capacity at country level, item C.4.h
2. The coordination of international programs on the production of health statistics, referring to Report (E/CN.3/2004/33), item C.4.e(ii)
3. The harmonization of definitions, classifications and methodologies, item C.4.e(iii)
4. The collaboration at the regional level between WHO and other agencies involved in health statistics, item C.4.g
5. The alternative methods of estimating the prevalence of HIV/AIDS, item C.4.i

## **1. Health Metrics Network**

The process of consensus-building around the Health Metrics Network (HMN) has continued and the first meeting of the HMN Board took place in June 2004, hosted by Carole Bellamy at UNICEF, New York. The HMN Board membership reflects the strong focus of the collaboration on bringing together the health and statistics constituencies at global, regional and country levels in order to strengthen the ability of countries to generate, analyze, disseminate and use sound health statistics. Board members include developing country representatives of ministries of health, national statistics offices and regional research centers. Representatives of the multilateral system are UNICEF, the World Bank, the United Nations Department of Economic and Social Affairs and WHO. Representation of bilateral donors, foundations and public-private partnerships comprises USAID, the DFID, DANIDA, the Bill and Melinda Gates Foundation, the European Commission, the Global Fund Against AIDS, TB and Malaria and UNAIDS. Other Board members are the OECD Development Assistance Committee/Paris21 and CDC Atlanta. The Board made recommendations for HMN focus and strategies that are currently being incorporated into the funding proposal to the Gates Foundation. A formal launch of the Network will take place during the third quarter 2004.

HMN has a single overarching strategic goal – to increase the availability and use of timely and accurate health information at sub-national, national and global levels by catalyzing the joint funding and development of core country health information systems. In pursuit of this goal, HMN will work with technical partners to develop a consensus technical framework to frame and guide country and donor inputs to the health information system.

Pending the finalization of the funding proposal, technical work identified as critical during the HMN development phase, and also raised during the meeting of the High level Forum on the Health-related MDGs, has been carried forward by WHO and other partners.

## **2. Coordination of international programs on the production of health statistics**

Several technical reference groups are tasked to coordinate the production of core health statistics, each one in a specific technical area:

- The Child Health Epidemiology Reference Group (CHERG) looks at the epidemiology of child morbidity and mortality. The group includes representatives from WHO, UNICEF, the CDC and from universities and academics.
- The Malaria Monitoring and Evaluation Reference Group (Malaria-MERG) focuses on the development of indicators and data collection methods for the coverage of malaria specific interventions, malaria prevalence (and proximate indicators), and malaria mortality (and proximate indicators). The Malaria-MERG includes experts from WHO, UNICEF, the CDC and various universities.
- The WHO and UNICEF Joint Monitoring Program for Water Supply and Sanitation (JMP) keeps a data base containing not only water supply and sanitation coverage estimates but also all the data from household surveys (MICS, DHS, Censuses, etc) which were considered for these estimates.
- The HIV/AIDS Monitoring and Evaluation Reference Group (HIV/AIDS-MERG) focuses on HIV/AIDS prevalence estimates as well as other indicators for the monitoring and evaluation of HIV/AIDS program and the progress made to achieve international targets such as the "3\*5" initiative. It includes the participation of WHO, UNAIDS, UNICEF.
- The Peer Review Group for the Maternal Mortality Estimates looks at harmonizing methods to generate maternal mortality estimates. The group is composed by WHO, UNICEF, UNFPA and members from the academics.
- The UNAIDS Epidemiology Reference Group on HIV/AIDS that provides and advises on estimates, projections and modeling related to HIV/AIDS and includes UNAIDS, WHO, UNICEF, UNDESA and academics.

## **3. The harmonization of definitions, classifications and methodologies**

### *3.1 Harmonization of household surveys*

In developing countries, sample household surveys are often the most effective way of obtaining health-related data. Over the last 20 years, both the number and scope of household surveys have expanded to take in aspects of mortality and health status, health-related behaviors, and use of health services. Such surveys have yielded important information to support global and country health strategies and have been accompanied by support to building national capacities to collect and process data. At the same time, heavy reliance on household surveys has sometimes been to the detriment of other aspects of health information systems which have remained relatively neglected. Moreover, because many surveys are supported by external partners and donors, they are not necessarily implemented at times most appropriate for country decision-making. Availability of funding and donor interest tend to be the driving

force rather than country need. Different donors tend to support different instruments with the result that there is overlap and duplication between surveys.

The *Action Plan for Improving Development Statistics* presented at the Second International Roundtable on Managing for Development Results held in Marrakech in February 2004<sup>1</sup> made a number of recommendations on how to better coordinate and strengthen statistical systems. One of these recommendations is the establishment of an international household survey network (IHSN). Similar sentiments emerged from fora such as the meetings of the Coordinating Committee on Statistical Activities, the Millennium Development Goals (MDG) Indicators Expert Group, and the work of several PARIS21 task teams and from the development phase of the Health Metrics Network (see above).

In response, WHO is collaborating with the World Bank and others to investigate options for enhancing coordination among the many partners involved in household surveys. The World Bank Development Economics Data Group (DECDG) hosted a first workshop in Washington, DC, in June 2004. A second meeting, involving Europe-based agencies and relevant regional development banks will be hosted by WHO in September 2004. Immediate outcomes from this process will include a shared data dissemination and presentation Microdata and Toolkit, and discussions with PARIS21 to develop guidelines to integrate survey programs in national statistical strategies (NSDS).

### 3.2 Tracking the health-related MDGs

The health-related MDGs consist of a few health status indicators (mortality, morbidity and nutritional status) and a selected number of health program coverage indicators (immunization coverage, maternity care, condom use). Many of these indicators are difficult to monitor on a short-term basis because measurement techniques are subject to wide margins of uncertainty and because the indicators are slow to change and poorly responsive to programmatic inputs. At the meeting of the High Level Forum in January 2004, participants called for the identification of a limited set of indicators that can be used for regular (biannual) monitoring of progress, for performance-based disbursement of funds, and for informing non-health constituencies such as Ministers of Finance about progress.

In response to this challenge, WHO organized a one day meeting of agency, donor and academic experts in June 2004. Meeting participants agreed to explore different options for responding to this call, including exploration of:

- the extent to which health service or health program indicators can be used as predictors of levels and trends in health status indicators.
- a limited set of health system performance indicators that could be used alongside the health outcomes indicators to monitor system-wide progress towards the health-related goals.
- a possible health commodity index that associates well with levels of health status and health trends.
- the strength of association between available data on health expenditures and trends in the MDGs.
- ways to obtain better disaggregation of proxy indicators.
- a menu of good practice intermediate indicators to help countries identify the best set of indicators to monitor their own programs of which a small sub-set could then be highlighted and promoted as key indicators for international monitoring.

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<sup>1</sup> *The Marrakech Action Plan for Statistics. Better Data for Better Results. An Action Plan for Improving Development Statistics.* Presented at the Second International Roundtable on Managing for Development Results, Marrakech, Morocco, February 4-5, 2004 (see <http://unstats.un.org/unsd/statcom/doc04/marrakech.pdf>).

The outcome of this work will be reported to the next meeting of the High level Forum in Abuja, in December 2004.

### 3.3 Tools development for public health decision-making

#### **a) Service availability data at district level**

A key goal of health programs is to make essential health services equally accessible to all individuals and communities. Access has a range of dimensions, but the very first step is availability. Monitoring the availability of services is of particular importance in the early stages of program development or in the context of scaling up programs. Whereas several health measurement tools provide information on access, coverage and quality of services (household surveys, clinic-based statistics and facility surveys) only limited use has been made of an easy and powerful method to obtain data on health services availability – a survey of districts with service availability mapping (SAM). A simple survey of districts to map services and resource availability can provide strategic information on the necessary link between scale up and strengthening of health systems.

The objective of SAM is to provide timely information on the availability and coverage of specific public and private health interventions and resources in a given district and country. The tool is simple to administer through district health management teams and also comprises a validation tool applied within health facilities. The information collected from the districts is linked to a global positioning system (GPS) or geographical information system (GIS) database containing the geographic coordinates of each health facility. This allows the production of maps demonstrating the distribution of specific interventions at the district level. The long-term objective of this tool is to enable district and national planners to use service availability mapping as a key tool for public health decision-making.

#### **b) Development of a Core Health Indicator Data-base**

The demand for timely, reliable and consistent information on key health indicators continues to rise—as witnessed by the broad agreement on such global initiatives as the Millennium Development Goals.

In this respect, WHO collects and summarizes a wide range of quantitative data from a variety of health domains. These data are used internally by WHO for policy setting and are widely disseminated in formal publications as well as through more informal mechanisms, both electronically and in print. As an international organization, information published by WHO is frequently used for benchmarking, for advocacy of particular policies, for monitoring achievements towards internationally accepted goals and targets and to guide technical strategies and responses. The bulk of the health indicator work is done by vertical programs in WHO.

The most effective way for WHO to fulfill its data management role is to develop an information clearinghouse that compiles, disseminates and maximizes access to sound country-level health indicators. Three components have been identified to develop a "one stop" shop for core health indicators:

- The selection of an organization wide core set of health indicators of about 40 core indicators which include the MDG and include regional offices and headquarters
- A standardized format for data management and documentation which includes fairly extensive metadata for the core health indicators: this includes empirical data, data source with description, quality of data or data collection effort, methods of estimation and the ultimate estimate. Both country reported data and best estimate according to WHO established methods are presented.
- A database maintained by WHO and its application to disseminate core health indicators using a variety of customized table, graphs and maps.

### **c) Harmonization of under 5 mortality and causes of death**

It is essential for the UN to disseminate identical estimates on child mortality in order to enhance proper use of these figures in policy planning or in program monitoring and evaluation. Hence, there is an urgent need to develop a system through which the UN speaks with a single voice and produce estimates that agree. Four UN agencies (WHO, UNICEF, UN Population Division, and World Bank) organized a meeting on child mortality (infant and under 5 mortality rates) in May 2004. The primary objective of the meeting was to obtain an agreement on estimates and procedures for determining child mortality estimation and to set up a system to manage this over the year to come so there can be one common set of estimates.

Meeting participants agreed on the following actions and to further explore the joint activities to improve the estimation process on a regular basis:

- Creating common database (see above)
- Discussion on the issues of the currently used methods and ways for improvement
- More focus on country capacity building/training to improve data availability and quality.

WHO is the primary organization to provide estimates on cause-specific mortality. A major problem has been the lack of accurate cause-specific mortality data from developing countries, especially those with higher levels of mortality. These data gaps need to be addressed both by stepping up efforts to work with countries and initiatives to obtain more recent mortality data and by collaborating with partners to promote better tools (e.g. for verbal autopsy) and investment in data collection and analysis. There is also a need for better harmonization of cause-specific mortality estimates within WHO and with other UN organizations and academic institutions.

In 2001, WHO established a technical advisory group to help improve the estimates of cause-specific mortality in childhood (see CHERG above), which has succeeded in furthering the work on estimates of cause-specific mortality and has been very active and productive over the last few years. Given an increasing demand for country specific estimates of cause-specific mortality in childhood, both for health planning and evaluation purposes, WHO in close collaboration with other UN agencies and academic institutions, will continue to support such activities with more emphasis on the development of the best possible cause of death distribution at global, regional, sub-regional and country levels and design a process and method to update such estimates over time.

### **d) Measurement of burden of disease and health states**

WHO is continuing to develop tools to facilitate country-level analysis of burden of disease and the attributable burden of risk factors using standard methods and definitions. These tools are currently being finalized and tested in collaboration with a number of research groups.

In the area of health states, an individual's health state need to be conceptualized as an individual's capacity to function in a given set of domains linked to the conceptual framework of the International Classification of Functioning, Disability and Health (ICF). Determinants of health status, risk factors, and interventions are important and should be measured in health interview or examination surveys but need to be separated from the measurement of health states. Comparability of data that allow the estimation of levels of individual and population health require a conceptual clarity with regard to what is being measured, a common parsimonious set of domains/attributes; comparable survey instruments that have linguistic and conceptual equivalence; explicit strategies at the design and analytical phase to ensure comparability across population groups; and demonstrated reliability and validity.

The choice of domains for measurement of health states should be dictated by the feasibility of their inclusion in health interview surveys (e.g. brevity, clarity, psychometrics); their being conceptually "important" and independent; their ability to capture most variance in overall health levels or valuations; and there being a clear set of levels within each domain.

There was a broad consensus on broad domains of "functioning" which should be included - physical, mental, and sensory. The broad set of domains considered were: physical – mobility, dexterity or self care; cognition – memory and concentration; sensory – seeing, hearing; other important domains – pain/discomfort, vitality/fatigue, psychological functioning, including affect/anxiety, interpersonal relationships, and social functioning.

A Working Group was set up that will work toward the development of a new common instrument, building on the work already done by national and international organizations with regard to health surveys, and will coordinate with existing groups such as the Eurostat Group on HIS and the Washington Group. A Steering Group of Canada, the USA, WHO, Eurostat, and ECE will oversee this exercise.

### **e) WHO Family of International Classifications**

The World Health Organization's two reference classification in health, namely the **ICD** (International Statistical Classification of Diseases and Related Health Problems) and the **ICF** (International Classification of Functioning, Disability and Health) are members of the UN Family of Economic and Social Classifications.

Given the mandate by the World Health Assembly in 1990 (*WHA 43.24*) WHO has established an updating process to incorporate new scientific knowledge (e.g. SARS and new emerging diseases) and also systematically planned for a revision of the ICD by 2010 or thereafter in order to enable a wider implementation of the classification.

The most important difficulty in the implementation of the ICD exists in countries that lack a systematic mechanism for the vital registration of causes of death. These countries are nearly 80 in number out of the 192 Member States of WHO and they cannot provide mortality statistics using the ICD as required by the WHO Regulations. This situation poses an "information paradox" because the greatest burden of mortality and disability exists in these countries. We have the least information on health where we have the greatest problems. To address this issue WHO has developed a short mortality list and various tools to assist countries to apply the ICD in the collection of mortality statistics with reliable and efficient methods.

The ICF which was adopted as the international standard for health and disability statistics in 2001 has now been translated into 30 languages and the development of various tools to facilitate its implementation is under way. Most importantly, the UN Washington City Group on Disability Statistics has taken the ICF as a basis for its efforts to develop census and survey questions. At regional level WHO is collaborating with UNESCAP and UNESCWA in projects to improve disability statistics in regional countries using the ICF framework. Similarly, the UNECE meeting on health status also based its approach on the ICF. Today, it is more important than ever to establish the link between health and disability statistics in order to achieve a better use of our limited resources for compilation of health and disability statistics.

## 4. Collaboration with UN regional commissions

### ESCWA

WHO's regional office for the Eastern Mediterranean (EMRO) attended the Expert Group Meeting on Data and Indicators to Monitor progress Toward the Millennium Development Goals in the ESCWA region in February 2004. An important outcome of the meeting was an agreement that Arab states should establish mechanisms to ensure consistency in data at national levels and should regularly report new and updated data to ESCWA, UNSD, WHO and other competent agencies to ensure consistency in data at regional and global levels. The meeting also agreed that central statistics offices and ministries of health should adhere to WHO standards for the collection of health-related data and WHO calculation methods for health-related indicators, especially in the preparation of MDG data and indicators. To facilitate this, WHO committed to provide needed guidance on data collection and analysis.

### FASDEV

WHO attended the Forum for African Statistical Development (FASDEV) hosted by the Economic Commission for Africa in May 2004 and presented a summary of the development phase of the Health Metrics Network, focusing particularly on the potential for collaboration and mutual reinforcement of efforts to strengthen statistical capacity in the area of health statistics.

### UNECE

The Joint UNECE/WHO/Eurostat Meeting on the Measurement of Health Status was held in Geneva from 24 to 26 May 2004. The meeting focused on the development of common instruments to measure health states in its multiple dimensions. WHO's conceptual framework to measure health was agreed upon (see above for technical details).

## 5. The alternative methods of estimating the prevalence of HIV/AIDS (TIES)

UNAIDS and WHO work together closely in developing country, regional and global level estimates of HIV. A joint UNAIDS /WHO working group meets weekly. Regional estimates are updated annually, country level estimates bi-annually. The working group is advised by the UNAIDS Epidemiology Reference Group which includes leading modelers, demographers and epidemiologists in HIV/AIDS, the UN Population Division, CDC and WHO.

An estimation model has been developed for countries, with different methods for generalized and concentrated/low level epidemics. Recent publications describe the model and the issues related to the use of the model and to the use of population-based surveys in surveillance systems.<sup>2</sup> During the last two years more than 120 countries were trained in the use of estimation and projection software. Guidelines for the use of population-based surveys in surveillance systems are in an advanced stage of preparation. Active technical assistance is given to countries that have conducted a population based survey to reconcile surveys and surveillance.

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<sup>2</sup> Ward H, Walker N, Ghys PD. Methods and tools for HIV/AIDS projections and estimates. Sexually Transmitted Infections 2004, 80, supplement 1. Walker N, Grassly NC, Garnett GP, Stanecki KA, Ghys PD. Estimating the global burden of HIV/AIDS: what do we really know about the HIV pandemic? Lancet. 2004 Jun 26;363(9427):2180-5. Boermt JT, Ghys P, Walker N. HIV estimates from national population-based surveys: A new gold standard for surveillance systems? Lancet.2003, 362: 1929-31.