

# WHO (Headquarters) - World Health Organization Headquarters

## 1.4 Health (WHO (Headquarters))

### Methods and country health information systems

WHO is continuing to work to improve methods and country health information systems for measuring population health, health system functioning, inequities in health, core health-related indicators including health-related millennium development goals, as well as key inputs into the health system such as national health expenditures.

#### WHO's Global Health Observatory

WHO is developing a Global Health Observatory (GHO) that aims to enhance access to and analyses of WHO's data and statistics on health situation and trends. The Global Health Observatory is an Organization-wide activity with strong links to the regional and country offices. The goal is to enhance the quality, efficiency and effectiveness of all of WHO's work in the area of health statistics. The main target audiences are the general public, policymakers and public health professionals (in practice, research and education) in Member States and international organizations. The Global Health Observatory disseminates information in three ways:

- a web portal providing one entry-point to WHO's health statistics and analyses, including theme pages and data views;
- a data repository that includes easy links to all major data bases;
- analytical reports on specific and cross-cutting topics.

In 2009, as part of the GHO, WHO issued a global report on women and health bringing together and analysing data on health-issues relevant to women across the life-course and around the world. WHO also produces the annual World Health Statistics publication.

#### Methodological work

WHO methodological work continues to focus on better measurement of fatal and non-fatal health outcomes in a comparable manner and on the development of improved estimation techniques for summary measures of population health and the measurement of inequality.

Specific activities include:

#### Mortality statistics

The WHO Department of Health Statistics and Informatics is continuing to support countries strengthen their routine health information and civil registration systems. WHO has developed a strategic guidance tool to support countries to identify gaps and weaknesses in their vital statistics and find feasible ways of addressing them.

WHO continues to invest greater effort to improve the coverage and timeliness of causes of death statistics by working with countries to:

- Obtain and update civil registration information for Member States with complete civil registration, with a delay of no more than two calendar years;
- Establish and implement mechanisms to obtain, validate and update vital statistics for countries with partial registration data, e.g., where data are limited to cities or to sample registration areas;
- Establish and implement mechanisms to obtain, validate and update data for countries with limited registration capacity, using data from small scale/sample registration and surveillance systems;
- WHO has produced, in collaboration with other international partners, a standard verbal autopsy tool to collect data on cause of death data in household surveys in settings where vital registration is non-existent or incomplete.

#### Improving Measurement of Morbidity and Risk factors

Self reported health data on levels of health, chronic diseases and risk factors are known to be subject to a host of reporting biases. In order to provide comparable measurement of these factors, innovative methods of data collection are proposed for low- and middle-income countries with poor health information:

- Health examination survey: collection of biological and clinical data, behavioural/risk factor data and background characteristics;
- Global risks to health: 2004 update: WHO has updated its analyses of the relative contribution of major risk factors to population ill-health and produced a report detailing the burden of mortality, injuries and disease caused by 24 risk factors globally and in a range of regional groupings.

#### Summary measures of population health

WHO will continue to work with international partners in the updating of information on burden of disease using up-to-date epidemiological data as well as improved estimation techniques:

- Child mortality estimates are updated annually, working in coordination with the Inter-agency Group for Child Mortality Estimation (IGME), which includes UNICEF, United Nations Population Division, the World Bank, WHO. The latest child mortality estimates up to 2010 were published in 2011.
- Neonatal mortality estimates by country are updated and published periodically by WHO. The latest estimates were for the year 2008 were released in 2010. For 2011, a time series from 1990 to 2009 was published for neonatal deaths for all the countries of the Member States. WHO compiled an extensive database and improved modeling methods from previous estimates.
- Maternal mortality estimates will be released in 2012. The most recent update for 1990 to 2008 was released in 2010, developed in close collaboration with an international expert group and used all available country data on maternal mortality, as well as improved methods of estimation. The intensive country consultation carried out as part of the development of these estimates has been instrumental in identifying increased data collection efforts in recent years including the special systems to capture data on maternal deaths. There are however major gaps in the availability and quality of data for many countries where maternal mortality levels are high, and only through statistical modeling is it possible to obtain an understanding of the trend. WHO and partner agencies will continue to strengthen the systems for data collection and analysis as well as the global database for improving the future estimates.

- Life tables estimates are also updated bi-annually for all Member States. They provide consistent indicators across countries, period and ages for life expectancy at birth, child mortality and adult mortality. For child mortality, estimates from IGME is taken into account, furthermore, they provide the estimated total number of deaths which constitute the "envelope" that should not be exceeded when all cause-specific number of deaths are summed.

### **Monitoring health system performance**

In 2010, a handbook of indicators and measurement strategies for monitoring health systems building blocks was published, with a wide range of collaborators, including country experts and donor agencies. Additionally, guidance towards monitoring and evaluation of national health strategies has been developed. This guidance outlines the key elements and characteristics of a platform that requires regular assessment of country progress and performance and uses the results to enhance the implementation and evidence base of the national health strategy. In 2011, a guidance document for countries and partners was produced by WHO and IHP+ on "Monitoring and evaluation of national health strategies: a country led platform for information and accountability".

During 2009-2010, WHO expanded its work to support countries efforts to strengthen accountability for health with a focus on women's and children's health. This includes work with low and lower middle income countries to improve monitoring of results (e.g. data quality assessment, transparency, analysis) and to strengthen death registration systems. . . The WHO Health Statistics and Information Systems department continues to work with the Health Metrics Network (HMN) partnership in strengthening civil registration and vital statistics systems.

### **Health Expenditures - Financial risk protection**

#### **Ongoing methodological work**

WHO will continue to develop indicators measuring financial risk protection and poverty impact of health payments.

#### **Priority objective on methodological work**

Development of methods for countries to monitor these indicators over time.  
New activities to be undertaken in the next two years  
Technical briefs on key indicators and their distribution across socio-economic groups.

### **Health expenditure statistics: national health accounts**

#### **Ongoing methodological work**

WHO is continuing to update the figures on health expenditure of its Member States each year in the World Health Statistics and online ([www.who.int/nha](http://www.who.int/nha)). Estimates are based on nationally reported data publically available or sent to various international bodies, plus data from household surveys. In a joint attempt to produce more comparable health expenditure data, WHO, together with the OECD and Eurostat, is working on a revised and unique version of health accounts methodology to be published in 2011. It will replace WHO, World Bank and USAID 'Producer's Guide to National Health Accounts' for low and middle income countries, as well as OECD 'System for Health Accounts' (SHA).

#### **Priority objective on methodological work over next two years**

- Contribution to revisions of the SHA;
- Consultation of Member States by region to validate proposed revision.

### **Human Resources Development in Health**

#### **Ongoing methodological work**

A key area of work is the collection and dissemination of data and research on health personnel to provide evidence on human resources (HR) for policy formulation and health system scale-up.

#### **Priority objectives on methodological work in 2009**

Publication of a "Handbook on monitoring and evaluation of human resources for health, with special applications in low and middle income countries", and initiate activities to build capacity in its use.

#### **Priority objectives on methodological work over the next two years**

- Consensus on a core set of HR indicators and means to their measurement to monitor and assess HR development strategies.
- Building capacity in use of HR Action Framework among countries and stakeholders to address specific HR issues.
- Contribute to the improvement of standard definitions for health occupations in the new revision to the International Classification of Occupations in collaboration with the International Labour Organization.

#### **New activities to be undertaken in the next two years**

- Support to countries and regions in the development and strengthening of HR Observatories and other cooperative mechanisms for knowledge sharing.
- Coordinate partnerships and catalyze initiatives to strengthen HR information systems at the country and sub-country levels.

### **Global Observatory for eHealth (GOe)**

The Global Observatory for eHealth (GOe) ([www.who.int/goe](http://www.who.int/goe)) provides Member States with strategic information and guidance on the use of information and communication technologies (ICT) for health. The World Health Assembly endorsed the establishment of the GOe in 2005.

- Dedicated to monitoring the impact of ICT on health and to improving the understanding of developments, opportunities and challenges to the implementation of eHealth worldwide.
- First global survey conducted in 2005/6: development of eHealth country profiles, identification of eHealth challenges and presentation of recommendations for action.
- Second global survey conducted in 2009/10: builds upon the first survey and expands its scope to address relevant eHealth areas that have evolved since the first survey.
- Publishing a series of reports on telehealth, atlas of participating country profiles, mobile health, management of patient information and legal and ethical frameworks for eHealth during 2011.

#### 4. Methodology of data collection, processing, dissemination and analysis (WHO (Headquarters))

##### 1.4 Health (WHO (Headquarters))

###### Methods and country health information systems

WHO is continuing to work to improve methods and country health information systems for measuring population health, health system functioning, inequities in health, core health-related indicators including health-related millennium development goals, as well as key inputs into the health system such as national health expenditures.

###### WHO's Global Health Observatory

WHO is developing a Global Health Observatory (GHO) that aims to enhance access to and analyses of WHO's data and statistics on health situation and trends. The Global Health Observatory is an Organization-wide activity with strong links to the regional and country offices. The goal is to enhance the quality, efficiency and effectiveness of all of WHO's work in the area of health statistics. The main target audiences are the general public, policymakers and public health professionals (in practice, research and education) in Member States and international organizations. The Global Health Observatory disseminates information in three ways:

- a web portal providing one entry-point to WHO's health statistics and analyses, including theme pages and data views;
- a data repository that includes easy links to all major data bases;
- analytical reports on specific and cross-cutting topics.

In 2009, as part of the GHO, WHO issued a global report on women and health bringing together and analysing data on health-issues relevant to women across the life-course and around the world. WHO also produces the annual World Health Statistics publication.

###### Methodological work

WHO methodological work continues to focus on better measurement of fatal and non-fatal health outcomes in a comparable manner and on the development of improved estimation techniques for summary measures of population health and the measurement of inequality.

Specific activities include:

###### Mortality statistics

The WHO Department of Health Statistics and Informatics is continuing to support countries strengthen their routine health information and civil registration systems. WHO has developed a strategic guidance tool to support countries to identify gaps and weaknesses in their vital statistics and find feasible ways of addressing them.

WHO continues to invest greater effort to improve the coverage and timeliness of causes of death statistics by working with countries to:

- Obtain and update civil registration information for Member States with complete civil registration, with a delay of no more than two calendar years;
- Establish and implement mechanisms to obtain, validate and update vital statistics for countries with partial registration data, e.g., where data are limited to cities or to sample registration areas;
- Establish and implement mechanisms to obtain, validate and update data for countries with limited registration capacity, using data from small scale/sample registration and surveillance systems;
- WHO has produced, in collaboration with other international partners, a standard verbal autopsy tool to collect data on cause of death data in household surveys in settings where vital registration is non-existent or incomplete.

###### Improving Measurement of Morbidity and Risk factors

Self reported health data on levels of health, chronic diseases and risk factors are known to be subject to a host of reporting biases. In order to provide comparable measurement of these factors, innovative methods of data collection are proposed for low- and middle-income countries with poor health information:

- Health examination survey: collection of biological and clinical data, behavioural/risk factor data and background characteristics;
- Global risks to health: 2004 update: WHO has updated its analyses of the relative contribution of major risk factors to population ill-health and produced a report detailing the burden of mortality, injuries and disease caused by 24 risk factors globally and in a range of regional groupings.

###### Summary measures of population health

WHO will continue to work with international partners in the updating of information on burden of disease using up-to-date epidemiological data as well as improved estimation techniques:

- Child mortality estimates are updated annually, working in coordination with the Inter-agency Group for Child Mortality Estimation (IGME), which includes UNICEF, United Nations Population Division, the World Bank, WHO. The latest child mortality estimates up to 2010 were published in 2011.
- Neonatal mortality estimates by country are updated and published periodically by WHO. The latest estimates were for the year 2008 were released in 2010. For 2011, a time series from 1990 to 2009 was published for neonatal deaths for all the countries of the Member States. WHO compiled an extensive database and improved modeling methods from previous estimates.

- Maternal mortality estimates will be released in 2012. The most recent update for 1990 to 2008 was released in 2010, developed in close collaboration with an international expert group and used all available country data on maternal mortality, as well as improved methods of estimation. The intensive country consultation carried out as part of the development of these estimates has been instrumental in identifying increased data collection efforts in recent years including the special systems to capture data on maternal deaths. There are however major gaps in the availability and quality of data for many countries where maternal mortality levels are high, and only through statistical modeling is it possible to obtain an understanding of the trend. WHO and partner agencies will continue to strengthen the systems for data collection and analysis as well as the global database for improving the future estimates.
- Life tables estimates are also updated bi-annually for all Member States. They provide consistent indicators across countries, period and ages for life expectancy at birth, child mortality and adult mortality. For child mortality, estimates from IGME is taken into account, furthermore, they provide the estimated total number of deaths which constitute the "envelope" that should not be exceeded when all cause-specific number of deaths are summed.

### **Monitoring health system performance**

In 2010, a handbook of indicators and measurement strategies for monitoring health systems building blocks was published, with a wide range of collaborators, including country experts and donor agencies. Additionally, guidance towards monitoring and evaluation of national health strategies has been developed. This guidance outlines the key elements and characteristics of a platform that requires regular assessment of country progress and performance and uses the results to enhance the implementation and evidence base of the national health strategy. In 2011, a guidance document for countries and partners was produced by WHO and IHP+ on "Monitoring and evaluation of national health strategies: a country led platform for information and accountability".

During 2009-2010, WHO expanded its work to support countries efforts to strengthen accountability for health with a focus on women's and children's health. This includes work with low and lower middle income countries to improve monitoring of results (e.g. data quality assessment, transparency, analysis) and to strengthen death registration systems. . . The WHO Health Statistics and Information Systems department continues to work with the Health Metrics Network (HMN) partnership in strengthening civil registration and vital statistics systems.

### **Health Expenditures - Financial risk protection**

#### **Ongoing methodological work**

WHO will continue to develop indicators measuring financial risk protection and poverty impact of health payments.

#### **Priority objective on methodological work**

Development of methods for countries to monitor these indicators over time.

New activities to be undertaken in the next two years

Technical briefs on key indicators and their distribution across socio-economic groups.

### **Health expenditure statistics: national health accounts**

#### **Ongoing methodological work**

WHO is continuing to update the figures on health expenditure of its Member States each year in the World Health Statistics and online ([www.who.int/nha](http://www.who.int/nha)). Estimates are based on nationally reported data publically available or sent to various international bodies, plus data from household surveys. In a joint attempt to produce more comparable health expenditure data, WHO, together with the OECD and Eurostat, is working on a revised and unique version of health accounts methodology to be published in 2011. It will replace WHO, World Bank and USAID 'Producer's Guide to National Health Accounts' for low and middle income countries, as well as OECD 'System for Health Accounts' (SHA).

#### **Priority objective on methodological work over next two years**

- Contribution to revisions of the SHA;
- Consultation of Member States by region to validate proposed revision.

### **Human Resources Development in Health**

#### **Ongoing methodological work**

A key area of work is the collection and dissemination of data and research on health personnel to provide evidence on human resources (HR) for policy formulation and health system scale-up.

#### **Priority objectives on methodological work in 2009**

Publication of a "Handbook on monitoring and evaluation of human resources for health, with special applications in low and middle income countries", and initiate activities to build capacity in its use.

#### **Priority objectives on methodological work over the next two years**

- Consensus on a core set of HR indicators and means to their measurement to monitor and assess HR development strategies.
- Building capacity in use of HR Action Framework among countries and stakeholders to address specific HR issues.
- Contribute to the improvement of standard definitions for health occupations in the new revision to the International Classification of Occupations in collaboration with the International Labour Organization.

## **New activities to be undertaken in the next two years**

- Support to countries and regions in the development and strengthening of HR Observatories and other cooperative mechanisms for knowledge sharing.
- Coordinate partnerships and catalyze initiatives to strengthen HR information systems at the country and sub-country levels.

## **Global Observatory for eHealth (GOe)**

The Global Observatory for eHealth (GOe) ([www.who.int/goe](http://www.who.int/goe)) provides Member States with strategic information and guidance on the use of information and communication technologies (ICT) for health. The World Health Assembly endorsed the establishment of the GOe in 2005.

- Dedicated to monitoring the impact of ICT on health and to improving the understanding of developments, opportunities and challenges to the implementation of eHealth worldwide.
- First global survey conducted in 2005/6: development of eHealth country profiles, identification of eHealth challenges and presentation of recommendations for action.
- Second global survey conducted in 2009/10: builds upon the first survey and expands its scope to address relevant eHealth areas that have evolved since the first survey.
- Publishing a series of reports on telehealth, atlas of participating country profiles, mobile health, management of patient information and legal and ethical frameworks for eHealth during 2011.

---

## **4. Methodology of data collection, processing, dissemination and analysis (WHO (Headquarters))**

### **4.2 Classifications (WHO (Headquarters))**

#### **WHO Family of International Classifications (WHO-FIC)**

- WHO Family of International Classifications (WHO-FIC): WHO, in collaboration with national and international partners, has developed an integrated suite of health and health-related classifications. International Classification of Diseases (ICD) and International Classification of Functioning, Disability and Health (ICF) are the two main reference classifications. WHO will enhance use of ICD in most high mortality countries and carry out revisions, updates and development of e-health applications.
- Health and mortality classifications: specific updates and tools to enhance dissemination and use, as electronic training, planning the revision strategy.
- Contribute to the improvement of the International Classification of Occupations for health related occupations in collaboration with the International Labour Organization.
- Consult process of classification of Traditional Medicine.
- Conduct the process for the International Classification of Patient Safety.
- Produce a strategy towards an International Classification of Health Interventions.
- Revision of the ICD-10 has begun with massive international collaboration in order to produce a revision over the next few years that will be informed by the best evidence.

---

### **4.3 Data sources (WHO Headquarters)**

#### **4.2 Classifications (WHO (Headquarters))**

#### **WHO Family of International Classifications (WHO-FIC)**

- WHO Family of International Classifications (WHO-FIC): WHO, in collaboration with national and international partners, has developed an integrated suite of health and health-related classifications. International Classification of Diseases (ICD) and International Classification of Functioning, Disability and Health (ICF) are the two main reference classifications. WHO will enhance use of ICD in most high mortality countries and carry out revisions, updates and development of e-health applications.
- Health and mortality classifications: specific updates and tools to enhance dissemination and use, as electronic training, planning the revision strategy.
- Contribute to the improvement of the International Classification of Occupations for health related occupations in collaboration with the International Labour Organization.
- Consult process of classification of Traditional Medicine.
- Conduct the process for the International Classification of Patient Safety.
- Produce a strategy towards an International Classification of Health Interventions.
- Revision of the ICD-10 has begun with massive international collaboration in order to produce a revision over the next few years that will be informed by the best evidence.

#### **4.3 Data sources (WHO Headquarters)**

##### **4.3.3 Household surveys (WHO (Headquarters))**

#### **WHO Study on Global Ageing and Adult Health (SAGE)**

- WHO has completed the first round of data collection from SAGE.
- Data sets from these studies are now available upon request. A public release data set with all metadata was made available by mid 2011.
- The pilot testing has been completed in the three European SAGE-like surveys. The main field work was completed in 2011.

#### **Other survey related activities**

- WHO will work closely with the International Household Survey Network (IHSN) and international experts to develop a standard set of modules for use in health interview surveys for priority health outcomes. A meeting has been held to start the process with the module on health expenditures but resource constraints may considerably delay this project.
- A set of health examination surveys in the Gulf Cooperation Council countries, building on the World Health Survey, have been completed in five countries. The last survey will be completed in 2011.

#### **4.3.5 Other administrative and non-survey sources (WHO (Headquarters))**

#### **Data sources for population health measures**

### **WHO Study on Global Ageing and Adult Health (SAGE)**

- WHO has launched a study of health and health-related outcomes and their determinants in older adults in six countries in nationally representative samples. The study has been designed as a longitudinal cohort study and includes health examinations and biomarkers.
- Data sets from these studies will be made available in the public domain in 2009.
- The study will be extended to three additional countries in 2009. Possible extension to additional countries will be explored in the future.

### **Other survey related activities**

- WHO will work closely with the International Household Survey Network (IHSN) and international experts to develop a standard set of modules for use in health interview surveys for priority health outcomes. The first set of these modules is expected to be finalised in 2009.
- A set of health examination surveys are being undertaken in the Gulf Cooperation Council countries building on the World Health Survey. Three of the surveys have been completed and the rest are to be completed in 2009. These surveys will also develop new measurement strategies.

### **Non-survey sources for health statistics**

- Vital registration with causes of the death and other information: development and application of sample vital registration systems, validation studies for verbal autopsy, link with ICD.
  - Sentinel clinics: work with countries to establish sentinel sites with small lab, investment in information and communication technology, and staff for health information; develop tools and protocols.
- 
- 
-