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# **Report of the World Health Organization on health statistics**

#### Note by the Secretary-General

In accordance with Economic and Social Council decision 2014/219, the Secretary-General has the honour to transmit the report of the activities of the World Health Organization in the field of health statistics. Monitoring the health situation and trends in countries is a core function of the World Health Organization, which is specified in its Constitution. Its work programme is developed on the basis of close interaction with Member States and often associated with a specific resolution adopted by the World Health Assembly.

The report submitted to the Statistical Commission at its 2013 session (E/CN.3/2013/12) provided an overview of the work done by the World Health Organization in three main areas of work: monitoring levels and trends in health, developing and promoting standards and tools for health information, and strengthening country monitoring and measurement. The present report provides a brief discussion of activities in these three areas carried out in 2014 and also focuses on progress in three current priority subject areas: civil registration and vital statistics systems, monitoring health under the post-2015 development agenda, and the revision of the International Classification of Diseases.

The Statistical Commission is invited to take note of this report.



\* E/CN.3/2015/1.



# **Report of the World Health Organization on health statistics**

## I. General update on health statistical work

1. The World Health Organization (WHO) published global, regional and country health estimates as well as data reported by Member States on a set of core health indicators in its annual report entitled *World Health Statistics* at the time of the sixty-seventh session of the World Health Assembly, held in 2014. The six WHO regional offices published statistical updates to inform the annual meetings of the regional commissions. In addition, specific WHO programmes and collaborating organizations published updated estimates of trends in key indicators as part of global reports, including those on tuberculosis, malaria, drowning, suicide and non-communicable diseases.

2. New estimates were produced for child mortality (as part of the work of the United Nations Inter-Agency Group on Mortality Estimation, causes of death in childhood (in collaboration with the Child Health Epidemiology Reference Group) and specific conditions such as tuberculosis and malaria. Health expenditure statistics were produced for all Member States and published in *World Health Statistics* and on the web.

3. WHO released comprehensive estimates of trends in deaths by cause for the years 2000 and 2012, including systematic and internally consistent estimates for mortality and burden of disease. This work draws on the work of WHO programmes, the United Nations Population Division, academic institutions such as the Institute for Health Metrics and Evaluation, and other inter-agency and expert collaborators.

4. The WHO Global Health Observatory aims at improving access to health data, statistics and analyses. The Observatory is an organization-wide resource with strong links to countries and regional offices. The content of the material it provides has been updated and expanded, and now includes over 1,000 health indicators and for download from the Observatory over 70 data sets, website (www.who.int/gho/en). Regional offices have updated and expanded the volume of health statistical information, and have often added country-specific qualitative information on health systems and disease programmes for use in interpreting health statistics.

5. All WHO health estimates are subject to an international clearance process designed to maximize the consistency and quality of statistics. WHO is using a set of criteria for its official statistics in line with the Fundamental Principles of Official Statistics. These include public access to data inputs and results at the country level, publicly accessible peer-reviewed replicable methods, an expert group mechanism, a consistency check for mortality data, and country consultation prior to publication. The last-mentioned involves a process of interaction of from two to three months duration, in which all input data, methods and results are shared with the Member State (through the web), for the purpose of enabling ministry of health and statistical inputs and discussion. In addition, training workshops have been organized in some regions.

6. Health facility data and statistics are critical elements of country health information systems and permit the generation of critical statistics for multiple indicators such as the coverage of interventions and the prevalence of diseases.

WHO has expanded its work on standards and tools for health facility information systems, including analysis and use of health facility data for regular country health reviews, standardization of the content of web-based reporting systems, systematic data quality assessment tools, and health facility surveys. The health facility survey, referred to as the Service Availability and Readiness Assessment (SARA), now includes key indicators and questions related to all main health programmes, and has been implemented in more than a dozen countries to inform monitoring and review of health services, often in the context of global health initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria and the GAVI Alliance.

7. The WHO Study on Global AGEing and Adult Health is a longitudinal initiative involving nationally representative cohorts of persons age 50 years or over in China, Ghana, India, Mexico, Russian Federation and South Africa and smaller comparison samples of younger adults (18-49 years of age) in each participating country. The aim is to study health and health-related outcomes and their determinants with a sample size of over 40,000 respondents. In 2014, five of the six countries implemented a second wave of the survey, which is financially supported by the National Institute on Aging, National Institutes of Health of the United States of America and local institutions. In addition, two local sites in sub-Saharan Africa have implemented the second wave of a study to follow up on older people living with HIV. Cognitive testing of a model disability survey has been carried out in multiple languages. A pilot field test of the model disability survey has been completed in Cambodia and additional field tests will be implemented in 2015 in several member States.

### II. Civil registration and vital statistics systems

8. The health sector is a contributor to and user of the output of civil registration and vital statistics (CRVS) systems. While reliable continuous vital statistics, especially on mortality by age, sex and cause of death, are the foundation of public health, they are still lacking in many countries. However, in the last few years, the health sector has become more active globally in support of countries. In part through the catalytic support pursuant to the recommendation of the Commission on Information and Accountability for Women's and Children's Health, more than 25 countries have conducted comprehensive assessments and developed a strategic plan, and another dozen countries are in the process of doing so. These country processes were supported by WHO in the context of the leadership of the regional commissions and involved global partners such as the Statistics Division of the Department of Economic and Social Affairs of the United Nations and the United Nations Children's Fund UNICEF).

9. Globally, progress has been made in several areas. First, WHO facilitated and supported the establishment of a United Nations inter-agency group on civil registration and vital statistics systems, known as the Global Civil Registration and Vital Statistics Group, whose secretariat is in the Statistics Division. Second, WHO held a consultation to develop principles for ensuring that relevant health investments are made in such a way as to contribute to system-wide development of civil registration and vital statistics. This encompasses innovations in tracking maternal, newborn and child health, recording and reporting deaths with cause of death in health facilities and communities, and improving vital statistics. Third, WHO worked with the World Bank on the development of the Global Civil

Registration and Vital Statistics Scaling Up Investment Plan, entailing identification of priorities for improvement.<sup>1</sup>

10. In addition, WHO reviewed and strengthened its guidance and the tools available for mortality statistics in the overall context of country-led strengthening of civil registration and vital statistics systems. The relevant document<sup>2</sup> focuses on priority activities for strengthening mortality and cause-of-death statistics for countries at different stages of civil registration and vital statistics system development. Strengthening mortality statistics should be a critical part of national strategies and investment plans.

11. Finally, a standard instrument was released for verbal autopsy, that is, the ascertainment of the probable cause of death through an interview with the relatives of the deceased. Verbal autopsy is needed to collect such information in cases where a medical certification of death cannot be produced. This is usually the case for home deaths in many low- and middle-income countries. The new release, which is considerably shorter than the 2007 standard instrument, was developed in collaboration with many stakeholders. Brazil, India and Indonesia are now testing and using the new instrument. Ascertainment of the cause of death from the results of the verbal autopsy questionnaire can be effected by physicians or through automated methods.

12. The aim of WHO is to continue its work in this area, focusing on technical and strategic support to the civil registration and vital statistics system, strengthening work of the regional commissions, linking investments in women's and children's health to civil registration systems, improving mortality and cause-of-death information, and enhancing country capacity to generate vital statistics using multiple data sources.

### **III.** Classifications

13. WHO is undertaking the revision of the International Classification of Diseases (ICD) through a systematic process, and is currently targeting a submission date in 2017 and the first international release for use in 2018.

14. The International Classification of Diseases is the foundation for health statistics, in particular mortality and morbidity statistics. In recent decades, it has also been used in the areas of diagnostics, and patient safety and quality, and for administrative purposes. All 194 WHO Member States have committed to reporting their statistics to WHO using the International Classification, which provides a common language for comparable statistics. In line with the requests of Member States , the eleventh revision of the Classification (ICD-11) is slated to incorporate the scientific advances in the health sciences that have been achieved since 1990. In addition, the aim is to link ICD-11 with computerized health information systems

<sup>&</sup>lt;sup>1</sup> See http://www.worldbank.org/en/topic/health/publication/global-civil-regsitration-vitalstatistics-scaling-up-investment.

<sup>&</sup>lt;sup>2</sup> WHO, "Improving mortality statistics through civil registration and vital statistics systems: guidance for country strategies and partner support", outcome of a technical meeting held in Geneva on 4 and 5 November 2014 (Geneva, 2014). Available from http://www.who.int/ healthinfo/civil\_registration/CRVS\_MortalityStats\_Guidance\_Nov2014.pdf?ua=1.

(including direct use of standard terminologies and other health informatics applications) so as to make the revision "electronic health application ready".

15. A Beta version of ICD-11 was released in May 2012 with a view to soliciting comments and additional proposals, and conducting field-testing before the revision is finalized. The ICD Beta version is presented in a structured wiki-like platform format, which is moderated. Proposals are systematically peer-reviewed. This approach enables the process to be open to many stakeholders. The result is expected to be the most comprehensive, scientific and user-friendly version of the classification. (see www.who.int/classifications/icd11).

16. The revision process allows the integration of diseases that have been reported as a result of the discovery of new genes and pathogens. Further, it is being fully digitalized, so that users can zoom into and out of the classification structure as if it were a digital map. In this way, consistent versions of ICD can be used for diverse applications such as for basic mortality reporting through verbal autopsy and simple primary care statistics, reporting of mortality events and clinical morbidity based, e.g., on hospital statistics, and specialization and research in such clinical fields as oncology, neurology and rare diseases, as well as in genomics.

17. The most important development in 2014 was the generation of an ICD-11 version which keeps the continuity code set (linearization) with respect to ICD-10. This code set, which is called "Joint Linearization for Mortality and Morbidity Statistics" (JLMMS) and should constitute volume 1 of ICD-11, has about 15,000 standard codes and includes a "transcoding table" and a "crosswalk" matching the ICD-10 to the ICD-11 codes. The content, accuracy and utility of these equivalence tables are under review. The emerging issues (involving about 600 codes) will be discussed at a meeting in early 2015, after which a version for field-testing will be made available for countries during the Beta Phase.

18. The improvements in ICD-11 include some 4,000 more detailed codes proposed by topic experts; an easier coding scheme (known as post-coordination) to prevent code explosion; direct linkage to standard terminologies such as SNOMED CT; definitions that will better identify the content of the code so as to improve use and translation; multilingual development in the official languages of the United Nations (and others, as volunteered); formal scientific peer review; and formal protocols for conducting field tests on key issues, including reliability and utility.

19. At present, known activities associated with the Beta version of ICD-11 include:

(a) Completion of Joint Linearization for Mortality and Morbidity Statistics and stability analysis thereof (i.e., ICD-10 concordance with ICD-10, with less than 2,201 items out of 15,710 codes remaining);

- (b) Creation of a more user-friendly index and computerized coding tool;
- (c) Finalization of morbidity coding rules;
- (d) Common usage with SNOMEDCT and other standard terminologies;

(e) Finalization of short and intermediate primary-care linearizations (code sets).

20. In addition, WHO has commissioned an external review of the overall revision process by a group of independent consultants. The consultants are contracted to

conduct an overall evaluation of the process of revision of ICD-11, analyse the relevance and effectiveness of the planned features in meeting the needs of the key stakeholders in WHO Member States (e.g., utilization in mortality statistics and clinical care). The evaluation report is expected in March 2015.

## IV. Health in the post-2015 development agenda

21. WHO has been working actively on multiple fronts to contribute to the development of the health component in the post-2015 development agenda. On 24 May 2014, the World Health Assembly at its sixty-seventh adopted resolution WHA67.14 to reaffirm the importance of health in the post-2015 development agenda. In that resolution, the Assembly urged Member States to affirm their continued commitment to achieving agreed health targets and goals and the need to accelerate the achievement of the health-related Millennium Development Goals; and also urged Member States to incorporate into the post-2015 development agenda the need for action regarding the new global challenge posed by non-communicable diseases and the continued challenge of global health security. In this regard, universal health coverage is recognized as a core principle under the post-2015 health agenda.

22. During the past several years, the WHO secretariat has worked with international partners and Member States to set new targets for health for 2030, several of which have been endorsed by governing bodies. The targets can be divided into four groups:

(a) Improve reproductive, maternal and child health and reduce the burden of communicable diseases (i.e., achieve and exceed the Millennium Development Goals): e.g., reduce the tuberculosis incidence rate by 80 per cent and the number of deaths from the disease by 90 per cent;

(b) Reduce the burden of non-communicable diseases, injuries and mental illness (reduce mortality from cardiovascular diseases, cancer, diabetes and chronic respiratory disease by one third (among persons 30-70 years of age));

(c) Achieve universal health coverage including financial risk protection: ensure that no one is pushed into poverty or further impoverished owing to out-ofpocket health payments;

(d) Address the social and environmental determinants of health.

This set of targets ties in very well with the health goal and sub-goals proposed by the Open Working Group on Sustainable Development Goals to the General Assembly.

23. In 2014, a new framework for monitoring universal health coverage was published by WHO and the World Bank after extensive consultation with partners and the general public, and 15 country case studies led by national researchers. The global universal health coverage monitoring framework recommends the use of a set of tracer indicators of coverage of essential interventions and financial risk protection against out-of-pocket expenses, disaggregated by socioeconomic status, place of residence and sex, where possible and relevant. A country core set of indicators and targets should be based on country demographic and epidemiological profile, health systems, level of socioeconomic development and people's needs and

expectations, and should, as a minimum, include the small set of globally recommended tracer indicators. Monitoring universal health coverage should become fully embedded in the regular overall health progress and performance reviews that exist in most countries.

24. Global health partners, academics, and others are working towards a comprehensive road map for health measurement and accountability in the post-2015 era, building upon the lesson learned from the Millennium Development Goals. The process of developing the road map has already included a multiplicity of technical meetings on, for instance, standardization of survey modules in household health surveys, high-level health outcome indicators (such as premature mortality and healthy life expectancy), sub-goal-specific indicators (such as maternal mortality), accountability for women's and children's health, and mortality statistics.

25. In addition, leaders of 19 global health organizations agreed upon a reference list of 100 core health indicators in an effort to reduce the reporting burden for countries, to enhance the quality of information and to better align the investments in strengthening country health information systems. The effect of the list has been to galvanize actions to further rationalize data collection in household surveys and health facility information systems. A comprehensive and common road map for measurement of health and accountability for health results in the post-2015 era will be established in early 2015.