WORLD HEALTH STATISTICS 2016

MONITORING HEALTH FOR THE SDGs

SUSTAINABLE DEVELOPMENT GOALS

World Health Organization

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EXECUTIVE SUMMARY

The 17 Sustainable Development Goals (SDGs) of the 2030 Agenda integrate all three dimensions of sustainable development (economic, social and environmental) recognizing that eradicating poverty and inequality, creating inclusive economic growth and preserving the planet are inextricably linked. Health is centrally positioned within the 2030 Agenda, with one comprehensive goal (SDG 3) and its 13 targets covering all major health priorities, and links to targets in many of the other goals.

The 2030 Agenda has major implications for health monitoring. Monitoring will need to reflect the fact that the SDGs are relevant for all countries. In order to accommodate a much broader range of health and health-related issues, country, regional and global monitoring systems will have to adapt. This will mean, at the very least, undertaking health data collection, analysis and communication in an integrated manner. The SDG focus on leaving no one behind means that much greater attention will have to be given to disaggregated data. Health monitoring will have to look beyond the health sector and consider economic, social and environmental indicators, as well as intersectoral actions. The 2030 Agenda also puts strong emphasis on country follow-up and review processes as the basis for accountability. Strengthening country health information systems should therefore be a priority.

This report brings together the most recent data on the proposed health and selected health-related SDG indicators – to assess the current situation and describe crucial data gaps. In the current absence of official goal-level indicators, summary measures of health such as (healthy) life expectancy are used to provide a general assessment of the situation. As universal health coverage (UHC) is a central concern, statistics are presented on a service-coverage index and on measures of financial protection using the WHO/World Bank UHC monitoring framework. In relation to equity, special attention is given to describing the statistical situation disaggregated by key demographic, geographic and socioeconomic characteristics. Because the 2030 Agenda emphasizes the interlinked nature of all the various goals, this report also includes indicators of selected health determinants and risk factors in relation to other SDG targets. More work is required to fully integrate monitoring the health dimension in other goals.

Available data show that in spite of the major progress during the Millennium Development Goal (MDG) era, major challenges remain in terms of reducing maternal and child mortality, improving nutrition, and achieving further progress in the battle against infectious diseases such as HIV/AIDS, tuberculosis, malaria, neglected tropical diseases and hepatitis. The situation analysis also provides evidence of the importance of addressing noncommunicable diseases and their risk factors such as tobacco use, mental health problems, road traffic injuries, and environmental health issues. Data on water and sanitation and air quality show that much more needs to be done to reduce risks to health. Weak health systems are a major obstacle in many countries, resulting in major deficiencies in UHC for even the most basic health services and inadequate preparedness for health emergencies.

This report shows that for most SDG health and health-related targets it is possible to provide an overview of the global situation and trends using a limited number of indicators. It, however, also shows that there are major data gaps for many indicators. For instance, several health and health-related indicators require regular, quality data on mortality by age, sex and cause of death, which are still lacking in most countries. The demand for comparable disaggregated statistics is particularly challenging for almost all indicators. These deficiencies will require major investments in strengthening country health information and statistical systems.

ABBREVIATIONS

ABR	adolescent birth rate
AFR	WHO African Region
AIDS	acquired immunodeficiency syndrome
AMR	WHO Region of the Americas
ART	antiretroviral therapy
CRD	chronic respiratory disease
CRVS	civil registration and vital statistics
CVD	cardiovascular disease
DHS	Demographic and Health Survey
EML	essential medicines list
EMR	WHO Eastern Mediterranean Region
EPPM	ending preventable maternal mortality
EUR	WHO European Region
FCTC	Framework Convention on Tobacco Control
GDP	gross domestic product
GHO	Global Health Observatory
GSHRH	Global strategy on human resources for health
HAT	human African trypanosomiasis
HBV	hepatitis B virus
HCV	hepatitis C virus
HepBOT	HBV vaccine birth dose administered in a timely way
HIV	human immunodeficiency virus
HLE	healthy life expectancy
HLPF	High-Level Political Forum
HRH	human resources for health
IAEG-SDGs	Interagency and Expert Group on SDG Indicators
ICD	International Classification of Diseases
IGME	Inter-agency Group for Child Mortality Estimation (United Nations)
IHR	International Health Regulations
ITN	insecticide-treated net
LMIC	low- and middle-income countries
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
MMEIG	Maternal Mortality Estimation Inter-agency Group (United Nations)
MMR	maternal mortality ratio
NCD	noncommunicable disease
NHA	national health account
NHWA	national health workforce accounts
NTD	neglected tropical disease
ODA	official development assistance

OECD	Organisation for Economic Co-operation and Development
OOP	out-of-pocket
PM	particulate matter
PPP	purchasing power parity
R&D	research and development
SDG	Sustainable Development Goal
SEAR	WHO South-East Asia Region
STH	soil-transmitted helminthiases
TB	tuberculosis
THE	total health expenditure
UHC	universal health coverage
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDESA	United Nations Department of Economic and Social Affairs
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNODS	United Nations Office on Drugs and Crime
WASH	water, sanitation and hygiene
WHA	World Health Assembly
WPR	WHO Western Pacific Region
YLD	years of healthy life lost due to disability

INTRODUCTION

The World Health Statistics series is WHO's annual compilation of health statistics for its 194 Member States. *World Health Statistics 2016* focuses on the proposed health and health-related Sustainable Development Goals (SDGs) and associated targets. It represents an initial effort to bring together available data on SDG health and health-related indicators. In the current absence of official goal-level indicators, summary measures of health such as (healthy) life expectancy are used to provide a general assessment of the situation.

The series is produced by the WHO Department of Information, Evidence and Research, of the Health Systems and Innovation Cluster, in collaboration with all relevant technical departments of WHO. As in previous years, *World Health Statistics 2016* has been compiled primarily using publications and databases produced and maintained by WHO or United Nations groups of which WHO is a member, such as the UN Inter-agency Group for Child Mortality Estimation (IGME). A number of statistics have been derived from data produced and maintained by other international organizations, such as the United Nations Department of Economic and Social Affairs (UNDESA) and its Population Division.

Unless otherwise stated, all estimates have been cleared following consultation with Member States and are published here as official WHO figures. Where necessary the estimates provided have been derived from multiple sources, depending on each indicator and on the availability and quality of data. In many countries, statistical and health information systems are weak and the underlying empirical data may not be available or may be of poor quality. Every effort has been made to ensure the best use of country-reported data – adjusted where necessary to deal with missing values, to correct for known biases, and to maximize the comparability of the statistics across countries and over time. In addition, statistical modelling and other techniques have been used to fill data gaps. However, these best estimates have been derived using standard categories and methods to enhance their cross-national comparability. As a result, they should not be regarded as the nationally endorsed statistics of Member States which may have been derived using alternative methodologies.

Because of the weakness of the underlying empirical data in many countries, a number of the indicators presented here are associated with significant uncertainty. It is WHO policy to ensure statistical transparency and to make available to users the methods of estimation and the margins of uncertainty for relevant indicators. However, to ensure readability while covering such a comprehensive range of health topics, printed versions of the World Health Statistics series do not include the margins of uncertainty which are instead made available through online WHO databases such as the Global Health Observatory (GHO).[1]

While every effort has been made to maximize the comparability of the statistics across countries and over time, users are advised that country data may differ in terms of the definitions, data-collection methods, population coverage and estimation methods used. More information on indicator metadata is available through the Global Health Observatory.

1 The Global Health Observatory (GHO) is WHO's portal providing access to data and analyses for monitoring the global health situation. See: http://www.who.int/gho/en/, accessed 16 April 2016.

1 THE 2030 AGENDA – A NEW IMPETUS FOR HEALTH MONITORING

In September 2015, the United Nations General Assembly adopted the new development agenda: *Transforming our world: the 2030 agenda for sustainable development.*[1] Comprising 17 Sustainable Development Goals (SDGs), the 2030 Agenda integrates all three dimensions of sustainable development (economic, social and environmental) around the themes of people, planet, prosperity, peace and partnership. The SDGs recognize that eradicating poverty and inequality, creating inclusive economic growth and preserving the planet are inextricably linked, not only to each other, but also to population health.

Intended to realize the vision of a world that is rights based, equitable and inclusive, the 2030 Agenda is to be implemented in a manner consistent with the existing obligations of states under international law. Many governments, institutions and organizations have already started to translate the new agenda into their development plans, strategies and visions.[2] Encouraging stakeholders to work together to promote sustained, inclusive economic growth, social development and environmental protection, the 2030 Agenda is designed to benefit all. Universal in scope, the agenda will require a comprehensive, integrated approach to sustainable development, as well as collective action at all levels. "Leaving no one behind" will be an overarching theme, and addressing inequalities and discrimination a defining feature.

Health is centrally positioned within the 2030 Agenda, with one comprehensive goal – SDG 3: Ensure healthy lives and promote well-being for all at all ages – and explicit links to many of the other goals. The 2030 Agenda thus has major implications for the health sector, and its realization will entail the development of coherent, integrated approaches, and an emphasis on equity and multisectoral action. Each of these broad objectives will require debate and the generation of new approaches at global, regional and country levels.[3]

SDG 3 includes 13 targets covering all major health priorities, including four targets on the unfinished and expanded Millennium Development Goal (MDG) agenda, four targets to address noncommunicable diseases (NCDs), mental health, injuries and environmental issues, and four "means-of-implementation" targets. The target for universal health

1 The future we want. Resolution adopted by the General Assembly on 27 July 2012. A/RES/66/288. United Nations General Assembly, Sixty-sixth session, agenda item 19 (http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288, accessed 9 April 2016).

2 Mainstreaming the 2030 agenda for sustainable development. Reference guide to UN Country Teams. February 2016. New York (NY): United Nations Development Group; 2015 (https://undg.org/wp-content/uploads/2015/10/UNDG-Mainstreaming-the-2030-Agenda-Reference-Guide-Final-1-February-2016.pdf, accessed 9 April 2016).

3 Preparing the Region of the Americas to achieve the Sustainable Development Goal on health. Washington (DC): Pan American Health Organization; 2015 (http://iris.paho.org/xmlui/bitstream/handle/123456789/10016/9789275118634_eng.pdf?sequence=1&isAllowed=y, accessed 9 April 2016).

coverage (UHC) underpins, and is key to, the achievement of all the other targets and the development of strong resilient health systems. Achieving the UHC target will require an integrated approach to the provision of health services that minimizes fragmentation and the competing agendas that characterized the MDG period. Comprehensive in scope, the health targets build upon a wide array of recent World Health Assembly (WHA) and Regional Committee resolutions, WHO and other global plans of action and current country health strategies.[1]

Tracking progress was vital in maintaining momentum towards the MDGs and in identifying areas that required greater efforts. It will be no less important in the context of the SDGs. The 2030 Agenda places considerable emphasis on the systematic follow-up and review of SDG-related implementation at country, regional and global levels. Health-related monitoring will occur in the context of overall assessment of progress towards the SDGs, and will need to be comprehensive, comprising the monitoring of: (a) overall progress towards SDG 3; (b) the UHC target; (c) other health targets; and (d) health-related targets in other goals – all of which will be undertaken with a strong emphasis on equity.

In March 2016, the United Nations Statistical Commission discussed the proposed global indicator framework of its Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs).[2] IAEG-SDGs members represent 28 national statistical offices, with United Nations agencies acting as observers and the United Nations Statistical Division as the secretariat. The United Nations Statistical Commission agreed "as a practical starting point" with the global indicator framework proposed by the IAEG-SDGs "subject to further technical refinement".[3]

The indicator framework will be presented for adoption to the High-Level Political Forum (HLPF) for Sustainable Development, under the auspices of the United Nations Economic and Social Council in mid-2016.[2] The indicator framework comprises 230 indicators, including several dozen requiring further development. The framework is focused on indicators for the 169 SDG targets, and does not include goal-level or thematic indicators that cut across goals to assess the overall achievements of the 2030 Agenda.

A complex and intensive reporting, follow-up and review process is planned, and will include an annual SDG Progress Report by the United Nations Secretary-General with support from the United Nations system. The report will serve to inform the HLPF, which will also receive a Global Sustainable Development Report from the United Nations Department of Economic and Social Affairs. Follow-up and review will possibly focus on a small number of themes each year with the intention of covering all SDGs over a period of 4 years. Every 4 years, starting in 2019 and under the auspices of the United Nations General Assembly, the HLPF will review overall progress and provide high-level political guidance on the SDG agenda and its implementation.[4] Review mechanisms will also be established at regional and national level, and are likely to be more active and relevant than was the case for the MDGs.

This *World Health Statistics* report represents an initial effort to bring together available data on the SDG health and health-related indicators to provide an assessment of the situation in 2016 and to take stock of data gaps. Data are presented on the proposed indicators for health targets in goal 3 and selected health-related targets in other SDG targets, revealing the crucial linkages between health and the other SDGs. The two-page summaries in Annex A provide more detailed information on the epidemiological situation, set out what is needed to achieve the 2030 targets, and indicate what is currently known about the key aspects of equity and the extent of data gaps for each target.

In addition, this report presents summary measures of health such as life expectancy to assess the situation and trends which can be used to monitor health goal-level progress. UHC is one of the health targets. As stated above, because it underpins the achievement of all other health targets under SDG 3, a separate section presents statistics on a UHC service-coverage index and on measures of financial protection using the WHO/World Bank UHC monitoring framework.[5] Finally, as equity is central to the realization of the SDGs, special attention is given to describing the statistical situation disaggregated by key demographic, geographic and socioeconomic characteristics.

The report does not address issues related to monitoring the global partnership that will be crucial in advancing the 2030 Agenda. Future monitoring will have to include the extent to which a revitalized global partnership is delivering the means of implementation. SDG 17 is specifically devoted to strengthening the means of implementation and a set of indicators has been drawn up to monitor progress in achieving that end. This also includes monitoring the extent to which data are disaggregated by relevant inequality dimensions and the extent to which countries are making progress in implementing a regular census and succeed in achieving high levels of birth and death registration.

1 Health in 2015: from MDGs to SDGs. Geneva: World Health Organization; 2015 (http://www.who.int/gho/publications/mdgs-sdgs/en/, accessed 9 April 2016).

2 Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. E/CN.3/2016/2/Rev.1. 19 February 2016. Presented to the Forty-seventh session of the United Nations Statistical Commission, 8–11 March 2016 (http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-IAEG-SDGs-Rev1-E.pdf, accessed 18 April 2016).

3 Report of the Commission on its 47th session. Draft decisions. 11 March 2016. New York (NY): United Nations Statistical Commission; 2016 (http://sd.iisd.org/events/47th-session-of-un-statistical-commission/, accessed 9 April 2016).

4 Critical milestones towards coherent, efficient and inclusive follow-up and review at the global level. Report of the Secretary-General. A/70/684. 15 January 2016. New York (NY): United Nations; 2016 (http://www.un.org/ga/search/view_doc.asp?symbol=A%20/70/684&Lang=E, accessed 9 April 2016).

5 Tracking universal health coverage: first global monitoring report. Geneva and Washington (DC): World Health Organization and World Bank; 2015. (http://www.who.int/healthinfo/ universal_health_coverage/report/2015/en/, accessed 9 April 2016).

2 IMPLICATIONS OF THE SDGs FOR HEALTH MONITORING – A CHALLENGE AND AN OPPORTUNITY FOR ALL COUNTRIES

Tracking progress towards the health-related MDGs led to substantial developments in monitoring capacity. Notable advances included the focus on a small set of indicators and targets, and the increased investment in health data for priority health programmes. At the same time, major efforts were directed at compiling statistics on progress at regional and global levels. It can be argued that without the galvanizing influence of the MDGs on promoting measurement and the development of monitoring systems the world would not be in a position to track progress with the degree of confidence that is now possible. The MDG monitoring effort also brought key issues to the fore, encouraging political leaders in several countries to make public commitments to achieving specific targets in areas such as maternal and child mortality. Such commitments not only put pressure on governments to deliver, but also provide a way for civil society, parliaments and the media to hold health providers to account.

The 2030 Agenda differs from the MDGs in several ways, with important implications for global, regional and country health monitoring. Key differences include the broader scope of the 2030 Agenda in terms of the health targets set, as well as the emphasis placed on equity, the links between health and other sectors, and the centrality of country monitoring and review. This section discusses the main differences and their implications for monitoring.

2.1 Scope – an agenda for all countries

The SDGs are not solely focused on developing countries. Thus, while some targets and indicators may be more relevant for developing countries, SDG monitoring should, in principle, cover all. At present, there are multiple regular global mechanisms for health monitoring and reporting, but most are focused on specific health topics (such as annual reports on tuberculosis or malaria) or on a limited numbers of countries (for example, regional WHO reports or the *Health at a Glance* series of the Organisation for Economic Co-operation and Development – OECD).[1] The WHO *World Health Statistics* series, supported by the web portal Global Health Observatory (GHO), is currently the only regular United Nations mechanism that presents comparable data on a large range of health topics from all countries.[2] Because many countries still do not have adequate health information systems data availability and quality varies greatly between countries. For example, only 70 countries currently provide WHO with regular data on mortality by age, sex and cause of death which are required for more than a dozen SDG indicators. There are also important data

1 *Health at a Glance* provides the latest comparable data and trends on different aspects of the performance of health systems in OECD countries. See: http://www.oecd.org/health/health-systems/health-at-a-glance-19991312.htm, accessed 22 April 2016.

2 The Global Health Observatory (GHO) is WHO's portal providing access to data and analyses for monitoring the global health situation. See: http://www.who.int/gho/en/, accessed 16 April 2016.

gaps for indicators other than mortality. This is a challenge for all countries, including high-income countries, and is a particular concern with regard to disaggregated data.

2.2 Contents – all major health areas are included

The SDGs cover a much broader set of topics than the MDGs, notably with regard to health. The SDG 3 targets cover virtually all major health topics, including reproductive, maternal, newborn and child health, infectious diseases, NCDs, mental health, road traffic injuries, UHC, environmental health consequences and health systems strengthening. In addition, many other SDGs include health-related targets and indicators such as targets for nutrition, water, sanitation, air quality and violence, as well as for the key determinants of health such as education and poverty.

In order to accommodate a much broader range of health and health-related issues, country, regional and global monitoring systems will have to adapt. This will mean, at the very least, undertaking data collection in an integrated manner, and avoiding the fragmentation and duplication of investment and effort that often characterized MDG-related efforts. At the same time, data analyses will need to assimilate multiple areas of health and provide clearly articulated syntheses for diverse audiences. Progress and performance review processes will provide an opportunity to take a more holistic approach to the interpretation of results on a wide range of targets and indicators, and to translate comprehensive analysis into effective action.

Finally, closer collaboration between health and other sectors will be required to ensure that health monitoring takes into account data on determinants and risk factors for health, and that other sectors give due attention to health statistics. Health stakeholders will need to work closely with the statistical community to enhance the quality of health monitoring, ensure strong inputs from other sectors and align with the overall SDG monitoring processes.

2.3 Equity – the need for disaggregated data

Much of the focus on the MDGs was based on aggregate global, regional and national achievements. Going forward, and in order to reflect the SDGs' emphasis on equitable development, there is a need for much greater disaggregation of data, including statistics disaggregated by sex, age, income/wealth, education, race, ethnicity, migratory status, disability and geographic location, or by other characteristics, in order to identify and track disadvantaged populations within countries. SDG Target 17.18 specifically calls for countries to increase the availability of data disaggregated by all relevant inequality dimensions.

Data disaggregation presents a major challenge for many countries and for global and regional monitoring. Household surveys are the primary source of disaggregated health data on demographic and socioeconomic characteristics and can be used to identify disadvantaged populations. However, they often lack the sample sizes required to allow for the computation of reliable subnational statistics beyond the provincial or regional level, or to measure health indicators in smaller disadvantaged or difficult-to-survey populations such as migrants, mobile populations and minorities. Data from health facilities and administrative sources can be used to fill the local information gap, but the quality of such data still requires considerable improvement in many countries. In several situations special data collection efforts are required.

2.4 Multisectoral data – health-related risk factors and determinants

Because the SDGs address the full range of economic, environmental and social factors that underpin sustainable development, monitoring progress towards them requires a high degree of integrated analysis. Health-related targets in the SDGs must be included in health monitoring, including risk factors for health that are the primary domain of other sectors (for example, water and sanitation, air quality and nutrition). Determinants of health that have a major indirect influence on health, such as income/wealth, education, gender, peace and security, should also be considered. Because the health sector often does not have primary responsibility for tracking these determinants, effective monitoring will depend upon more integrated and collaborative approaches. In addition, monitoring should aim to track multisectoral action. While this may be measured through quantitative process indicators outside of the global SDG indicator framework, qualitative information is often required to obtain a clear picture of what is really happening.

2.5 Country monitoring – data gaps and capacity

The 2030 Agenda puts considerable emphasis on country follow-up and review processes as the basis for accountability. With so many global SDG indicators such follow-up and review will inevitably be challenging for many countries, especially those facing major data gaps. Strengthening country health information systems should therefore be a priority. In future, the overall data picture may improve as a result of innovative approaches based on information and communication technology and the trend towards "open data" – that is, the release of data by government agencies, businesses, non-profit organizations, researchers and other private entities that can be easily accessed and used by all. Open data is not only facilitating

broader scrutiny, but also allowing for the use of different kinds of data.

National statistical offices will lead the country SDG monitoring processes. Enhanced collaboration between health and other sectors with statistical offices will be vitally important in constructing a coherent narrative regarding national health status and trends. According to the proposals of the United Nations Statistical Commission, the global indicators will be the core of all other sets of indicators, based upon internationally agreed standards of collection, analysis and reporting.[1] In addition, WHO Member States will develop indicators (and targets for the indicators) at regional, national and subnational levels, according to national priorities and requirements, and standardized in accordance with international guidelines.

The need for global reporting has often led to the overburdening of countries with reporting requirements related to programme-specific monitoring and grant mechanisms. It is therefore essential that reporting be focused on informing national review processes. The SDG agenda offers an opportunity to rationalize global reporting requirements. In health, the global reference list of 100 health indicators provides an example of an initial multi-agency effort to reduce the reporting burden on countries and improve the quality of what is reported.[2] Such initiatives should be accompanied by further harmonization and alignment of international reporting requirements, and by efforts to maximize the use of country mechanisms. For the health targets, many existing reporting systems can be used to monitor individual targets.

Closer collaboration between health and statistical constituencies in countries (and globally) is essential. Health investments can play a vital role in supporting the strengthening of country statistical capacity, while statistical offices can do much to support the health sector, notably in the area of high-quality data collection and analysis. Public health and academic institutions also have a role to play, working in collaboration with ministries of health and other stakeholders. Recent global initiatives in this area include the establishment of a Health Data Collaborative in which global health actors have joined forces with the aim of providing more effective and efficient support to countries in strengthening country health statistical capacity to monitor progress towards the SDGs.[3]

2.6 Regional and global monitoring – mechanisms and estimates

While global monitoring will continue to be vital to the overall SDG monitoring effort, the 2030 Agenda envisages a greater role for regional monitoring and reporting mechanisms. Most discussions on regional monitoring processes for the SDGs are still ongoing. Globally, the United Nations Secretary-General has been mandated to produce an annual progress report on the SDGs to support follow-up and review at the HLPF. The report is to be based on data produced by national statistical systems and information collected at the regional level. It is expected that the global reporting of progress on the 2030 Agenda will be based on global and regional aggregates of data on indicators as compiled by international agencies based on their respective existing mandates and/or expertise.[4] United Nations agencies will continue to play a critical role in the validation of data and statistics produced by countries.

Global and regional reviews cannot be conducted without comparable data for the indicators. Most health indicators are well developed with good metadata and proven methods of data collection, analysis and use. In particular, the indicators inherited from the MDG era, and other indicators used to measure progress within governing bodies in the United Nations system, are well developed. Others are more difficult to quantify because of the scarcity of underlying data.

Given the large data gaps, and the lack of timely data for many indicators, it is often necessary to use statistical models to obtain a picture of the global and regional situation, including comparable statistics for use by countries. These estimates differ from country-reported data which are often not adjusted or do not refer to the same year(s). Further efforts should be made to reconcile data provided at the global level with the data published by national statistical authorities and, where possible, to resolve or carefully explain any discrepancies.[4] Improving the situation with regard to estimates will require major investments to support interaction between United Nations agencies and countries, with a focus on capacity strengthening in developing countries. It is important to bear in mind that better data and standardized analyses are the best way to minimize discrepancies between reported statistics and estimates.

1 Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. E/CN.3/2016/2/Rev.1. 19 February 2016. Presented to the Forty-seventh session of the United Nations Statistical Commission, 8–11 March 2016 (http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-IAEG-SDGs-Rev1-E.pdf, accessed 18 April 2016).

2 2015 Global reference list of 100 core health indicators. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/173589/1/WHO_HIS_HSI_2015.3_eng.pdf?ua=1, accessed 9 April 2016).

3 The Health Data Collaborative is an informal, inclusive partnership of international agencies, governments, philanthropies, donors and academics. (See: http://www.healthdatacollaborative.org/, accessed 9 May 2016.)

4 Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. E/CN.3/2016/2/Rev.1. 19 February 2016. Presented to the Forty-seventh session of the United Nations Statistical Commission, 8–11 March 2016 (http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-IAEG-SDGs-Rev1-E.pdf, accessed 18 April 2016).

2.7 Review – using data for improved implementation

Countries will develop their own review processes which should be based on objective assessments that include quality statistics as well as complementary qualitative information that captures the complexity of the agenda and may offer insights into why progress is or is not being made. SDG progress assessments are likely to be comprehensive and complex, and thus have the potential to become very unwieldy. One of the biggest challenges faced will be keeping the focus on the "big picture" of the SDGs, rather than the details related to individual targets. The health sector can contribute to the overall SDG review process by formalizing its own review of progress and performance in health and health-related areas, and feeding a synthesis of such assessments into overall reviews.

One of the many benefits derived from augmented monitoring during the MDG era was greater scrutiny by civil society and others of national government performance. It is likely therefore that the SDGs, in addition to being the subject of country-level monitoring of specific health targets, will be used to initiate and/or drive debate regarding a country's position on health, or on factors that impact health. Regional and global reviews can also be used to enhance learning and improve implementation. For example, regional mechanisms such as WHO Regional Committee meetings could conduct voluntary peer reviews of country progress, much along the lines of the proposed functioning of the HLPF.

Furthermore, regional mechanisms could provide syntheses to be used in a global review at the WHA. In turn, the WHA could conduct regular evidence-based reviews of global progress, taking into account regional syntheses and discussing the implementation and financing implications. The WHA could also play a role in providing inputs into the overall global follow-up and review process for the SDGs.

3 MONITORING THE HEALTH GOAL – INDICATORS OF OVERALL PROGRESS

Thus far, the SDG indicator and monitoring framework developed by the United Nations Statistical Commission has focused on finding indicators for the 169 targets. Monitoring of the 17 goals themselves and cross-cutting themes has not yet been discussed, but will certainly be required to help produce easily legible summaries of situations and trends at national, regional and global levels. Framed in very general terms, the overall health SDG is: "Ensure healthy lives and promote well-being for all at all ages". WHO has considered several overarching indicators that might serve to monitor this goal, including: "life expectancy"; "healthy life expectancy"; and "number of deaths before age 70".[1] As such indicators are not only affected by progress towards the targets under the health SDG but also by advances made towards the health-related targets in other goals, they truly reflect the multisectoral nature of health. This section presents the current situation with regard to these indicators, including data gaps.

3.1 Life expectancy – major gains but still large differences

Life expectancy is a summary measure of mortality rates at all ages, and all health and health-related programmes contribute to it. Despite large gaps in the coverage of global mortality data systems, mortality is more amenable to accurate measurement than disease or disability.

Globally, life expectancy has been improving at a rate of more than 3 years per decade since 1950, with the exception of the 1990s.[2] During that period, progress on life expectancy stalled in Africa because of the rising HIV epidemic; and in Europe because of increased mortality in many ex-Soviet countries following the collapse of the Soviet Union. Life expectancy increases accelerated in most regions from 2000 onwards, and overall there was a global increase of 5.0 years in life expectancy between 2000 and 2015, with an even larger increase of 9.4 years observed in the WHO African Region (Fig. 3.1).

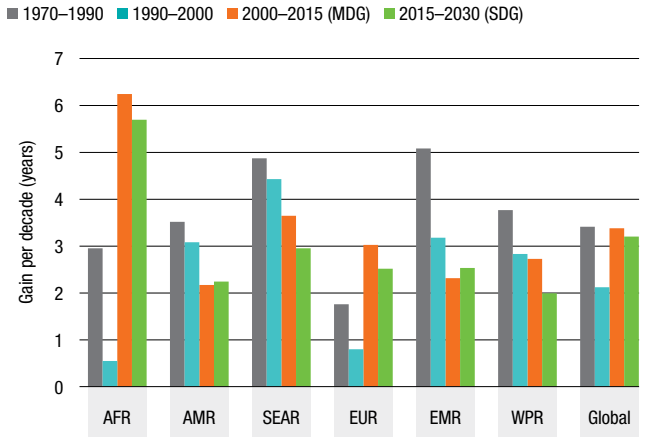
The global average increase in life expectancy at birth since 2000 exceeds the overall average rate of life expectancy increase achieved by the best-performing countries over the past century.[3] The world as a whole is catching up with those countries and improvements in outcomes for all major causes of deaths have contributed to these huge gains.

1 For reports of WHO technical meetings, see: http://www.who.int/healthinfo/sage/meeting_reports/en/ (accessed 9 April 2016).

2 World Population Prospects, the 2015 revision (WPP2015). New York (NY): United Nations DESA, Population Division; and WHO annual life tables for 1985–2015 based on the WPP2015, on the data held in the WHO Mortality Database and on HIV mortality estimates prepared by UNAIDS.

3 Oeppen J, Vaupel JW. Demography. Broken limits to life expectancy. Science 2002;296(5570):1029–31.

Figure 3.1
Regional and global gains in average life expectancy per decade, 1970–2015



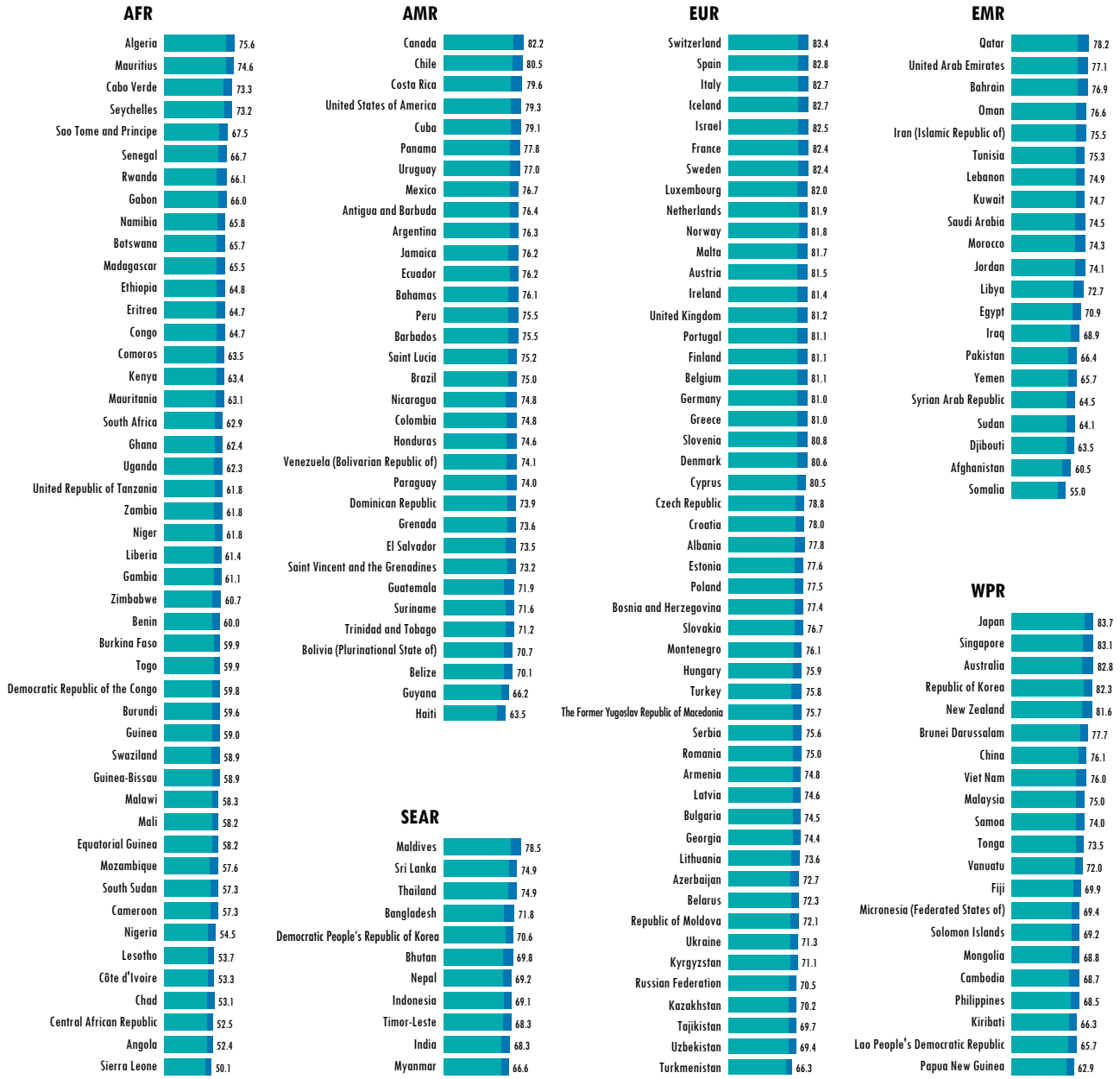
The gap between African life expectancy and European life expectancy has narrowed by 4.9 years since the year 2000.

Life expectancy at age 60 has also been increasing globally – from 18.7 years in 2000 to 20.4 years in 2015. Regional increases ranged from 0.7 years in the WHO Eastern Mediterranean Region to 2.5 years in the WHO European Region.

Several cause-specific mortality targets are proposed for the post-2015 agenda, with many focusing on reducing or ending "preventable" deaths.[1] According to provisional estimates, achievement of the major SDG child, maternal,

1 For instance, SDG Target 3.1 (maternal mortality), Target 3.2 (neonatal and child mortality), Target 3.4 NCD mortality (due to four leading causes of death) and Target 3.6 (road traffic injuries).

Figure 3.2
Life expectancy at birth and healthy life expectancy at birth (years),[a] both sexes, 2015



a Values shown refer to life expectancy at birth. Light blue bars represent provisional estimates of healthy life expectancy at birth. Dark blue bars represent lost health expectancy, defined as the difference between life expectancy and healthy life expectancy.

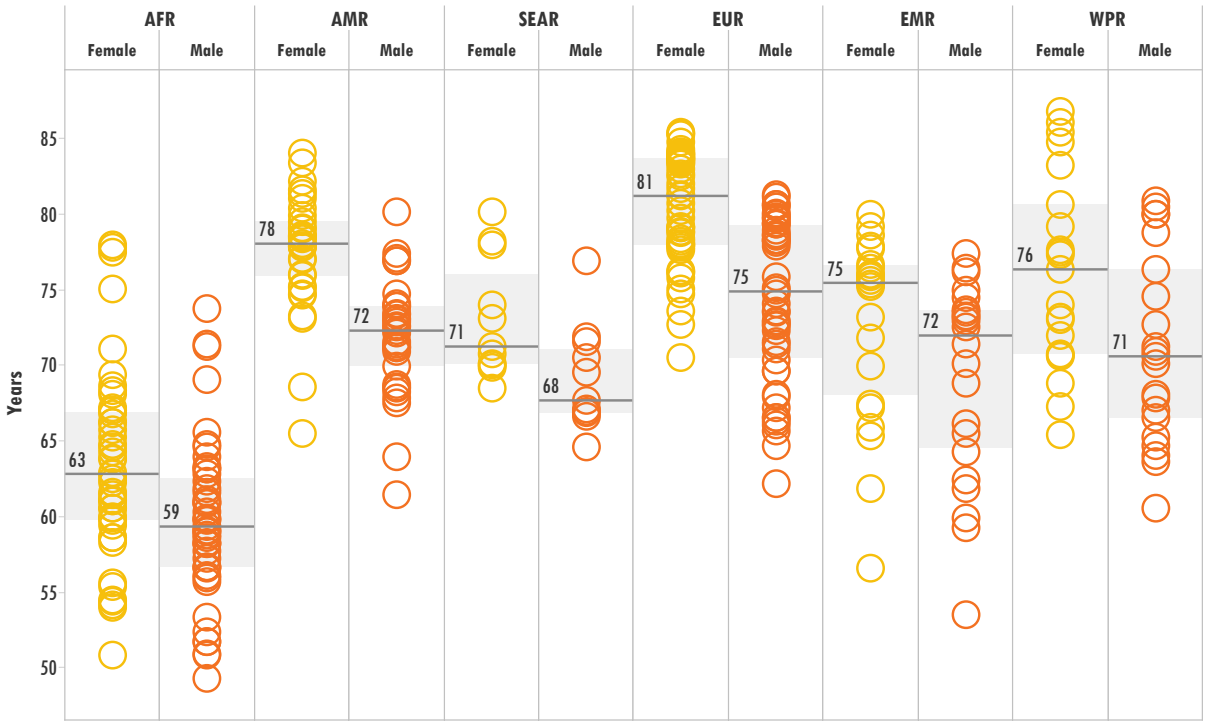
infectious diseases and NCD targets would result in an increase in global average life expectancy of around 4 years by 2030. The gap between high- and low-income countries would narrow from around 17.5 years in 2015 to around 13 to 14 years in 2030.[1]

Global life expectancy in 2015 was 71.4 years. Life expectancy estimates by country for 2015 (both sexes combined) are shown in Fig. 3.2. Twenty-nine countries have an average life expectancy of 80 years or higher. Life expectancy exceeds 82 years in 12 countries: Switzerland, Spain, Italy, Iceland, Israel, France and Sweden in the WHO European Region; Japan, Singapore, Australia, and the Republic of Korea in the WHO Western Pacific Region; and Canada in the WHO Region of the Americas. At the lower end of the range there are still 22 countries with life expectancies below 60 years – all of them in sub-Saharan Africa.

On average, women live longer than men in every country of the world and in every WHO region (Fig. 3.3). Overall, female life expectancy is 73.8 years and male life expectancy is 69.1 years. Globally, female life expectancy at birth passed male life expectancy at birth in the 1970s and the difference reached 4.6 years in 2015. Among high-income OECD countries, the male-female gap peaked at 6.9 years in the 1990s and has been declining since to reach 5.2 years in 2015. Countries with the highest and lowest life expectancy

1 An overarching health indicator for the post-2015 development agenda. Brief summary of some proposed candidate indicators. Background paper for expert consultation, 11–12 December 2014. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/indicators/hsi_indicators_SDG_TechnicalMeeting_December2015_BackgroundPaper.pdf?ua=1, accessed 9 April 2016).

Figure 3.3
Life expectancy by sex, by WHO region, 2015[a]



a Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

by sex are shown in Table 3.1. In developed countries, Scandinavian countries have among the lowest male-female life expectancy gaps (Iceland 3.0 years; Sweden 3.4 years) with some former Soviet countries having among the highest (Russian Federation 11.6 years; Ukraine 9.8 years).

Table 3.1
Countries with the highest and lowest life expectancy at birth (in years), by sex, 2015

Male		Female	
Country	**Years**	**Country**	**Years**
Highest		**Highest**	
Switzerland	81.3	Japan	86.8
Iceland	81.2	Singapore	86.1
Australia	80.9	Spain	85.5
Sweden	80.7	Republic of Korea	85.5
Israel	80.6	France	85.4
Japan	80.5	Switzerland	85.3
Italy	80.5	Australia	84.8
Canada	80.2	Italy	84.8
Spain	80.1	Israel	84.3
Singapore	80.0	Iceland	84.1
Lowest		**Lowest**	
Lesotho	51.7	Chad	54.5
Chad	51.7	Côte d'Ivoire	54.4
Central African Republic	50.9	Central African Republic	54.1
Angola	50.9	Angola	54.0
Sierra Leone	49.3	Sierra Leone	50.8

3.2 Healthy life expectancy – gaining healthy life years

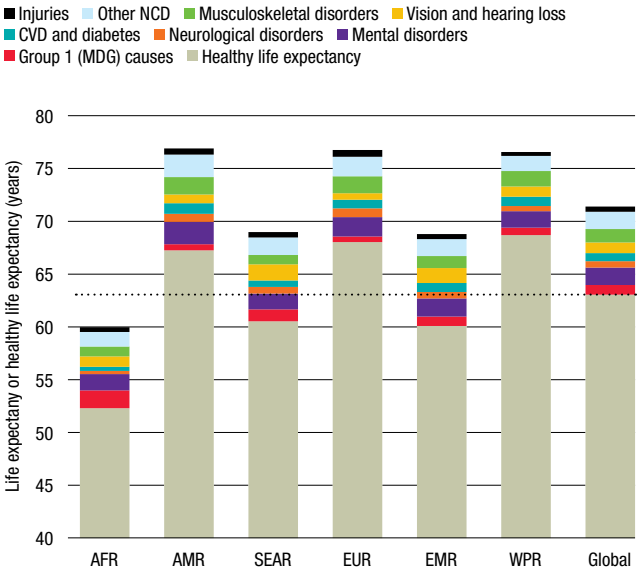
Healthy life expectancy (HLE) provides an indication of overall health for a population, representing the average equivalent number of years of full health that a newborn could expect to live if they were to pass through life subject to the age-specific death rates and average age-specific levels of health states for a given period.[1]

If it could be measured reliably, HLE would be an ideal indicator that captures both mortality and years of life lived in less than good health – that is, in the case of a disability, "years lost due to disability" (YLD). There is increasing interest in the accurate measurement of health, disability and well-being, particularly given the context of ageing populations and the growing prominence of chronic diseases as causes of disability and premature mortality.

WHO has reported on HLE for Member States in recent years based on Global Burden of Disease analyses.[2,3] Estimates have now been updated for the year 2015 using the WHO life tables for year 2015 and updated YLD estimates drawing on WHO statistical inputs and the Global Burden of Disease 2013 analyses using the same methods as previously applied.[4,5] Globally, HLE in 2015 is estimated at 63.1 years for both sexes combined. In general, HLE varies between countries in line with life expectancy (see Fig. 3.2) but is on average 11.7% shorter than life expectancy (ranging from 9.3% to 14.7% between countries).

Regional and global average life expectancies and HLE at birth for 2015 are shown in Fig. 3.4. The total height of the bar represents life expectancy at birth and the bottom part of the bar represents HLE at birth. The gap between life expectancy and HLE are the equivalent healthy years lost through morbidity and disability. The contributions of each of the major causes of this loss of healthy years are also shown. The main contributors are musculoskeletal disorders (with back and neck pain being a major contributor), mental and substance-use disorders (particularly depression and anxiety disorders), neurological disorders, vision and hearing loss, and cardiovascular diseases and diabetes. The prevalence of most of these conditions rises with age, and, for most conditions, the age-standardized rates are not declining. As life expectancy increases, the proportion of the life span spent with these conditions increases – HLE thus increases more slowly than life expectancy.

Figure 3.4
Regional and global life expectancy and healthy life expectancy at birth, with cause decomposition of lost health expectancy,[a] 2015



a Lost health expectancy is calculated as life expectancy minus healthy life expectancy. Horizontal dotted line indicates global health life expectancy.

1 An overarching health indicator for the post-2015 development agenda. Brief summary of some proposed candidate indicators. Background paper for expert consultation, 11–12 December 2014. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/indicators/hsi_indicators_SDG_TechnicalMeeting_December2015_BackgroundPaper.pdf?ua=1, accessed 9 April 2016).

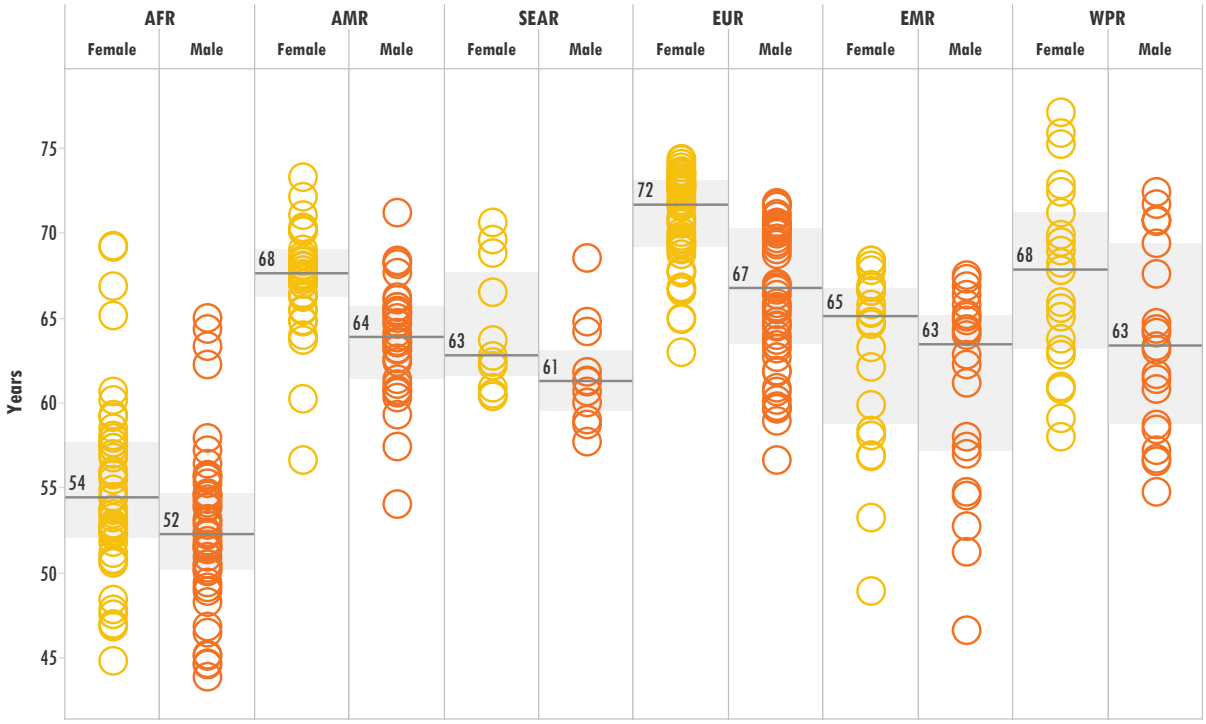
2 World Health Statistics [2005–2015]. Geneva: World Health Organization (series available at: http://www.who.int/gho/publications/world_health_statistics/en/, accessed 9 April 2016).

3 WHO methods for life expectancy and healthy life expectancy. Global Health Estimates Technical Paper WHO/HIS/HSI/GHE/2014.5. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/statistics/LT_method.pdf?ua=1&ua=1, accessed 9 April 2016).

4 WHO methods and data sources for global burden of disease estimates 2000–2011. Global Health Estimates Technical Paper WHO/HIS/HSI/GHE/2013.4. Geneva: World Health Organization; 2013 (http://www.who.int/healthinfo/statistics/GlobalDALYmethods_2000_2011.pdf?ua=1, accessed 4 March 2016).

5 Global Burden of Disease Study 2013 Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015;386(9995):743–800.

Figure 3.5
Healthy life expectancy at birth, by sex and WHO region[a]



a Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Globally, male and female HLEs are 61.5 and 64.6 years respectively with substantial differences between male and female HLE in all WHO regions (Fig. 3.5). The largest difference is observed in the WHO European Region where women can expect 5 more healthy life years than men. The smallest difference is found in the WHO South-East Asia Region, where women have only one extra year of healthy life.

In terms of SDG monitoring purposes, determining the usefulness of HLE estimates is complex. The YLD-based approach to calculating HLE relies on extensive modelling of disease and injury sequelae prevalence and distribution, and on aggregating these to population levels in order to calculate the healthy proportion of years lived at each age. Because the approach relies heavily on statistical modelling and the use of predictive variables to produce estimates of disease incidence and prevalence, it is less suitable for detecting short-term changes and monitoring progress, especially at the country level. Additionally, the YLD-based component is dominated by causes such as musculoskeletal conditions, depression and neurological conditions for which country-specific data are sparse and infrequent. Such data are also often based on self-reporting, and there are significant comparability problems across countries. There are also substantial data gaps on severity distributions within populations. In addition, there was only limited variation (<2 years) across the WHO regions in lost health expectancy at birth in 2015, with considerable statistical uncertainty associated with the estimates, especially at country level.

Other methods for measuring population health status, such as monitoring of the European Union target of gaining 2 healthy life years by 2020, also present challenges in terms of the availability of data on population-level functional status that are comparable over time and across populations, and that are collected through regular surveys.[1,2] To date there is no generally accepted standard survey instrument and methodology that allows for the comparable measurement of health-state distributions in populations.[3,4,5]

1 Europe 2020 – for a healthier EU [website]. Brussels: European Commission (http://ec.europa.eu/health/europe_2020_en.htm, accessed 16 September 2015).

2 Advanced research on European health expectancies [website]. EurOhex (http://www.eurohex.eu/, accessed 16 September 2015). Includes the Joint Action: European Health & Life Expectancy Information System (JA:EHLEIS).

3 Romieu I, Robine JM. World atlas of health expectancy calculations. In: Mathers CD, McCallum J, Robine JM, editors. Advances in health expectancies. Canberra: Australian Institute of Health and Welfare; 1994.

4 King G, Murray CJL, Salomon JA, Tandon A. Enhancing the validity and cross-cultural comparability of measurement in survey research. American Political Science Review. 2003;97(4):567–83.

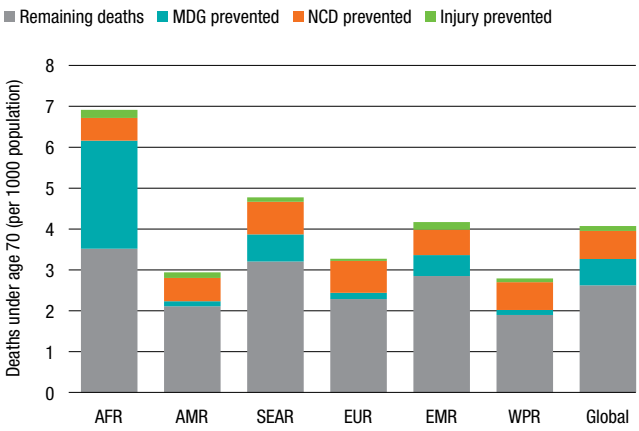
5 An overarching health indicator for the post-2015 development agenda. Brief summary of some proposed candidate indicators. Background paper for expert consultation, 11–12 December 2014. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/indicators/hsi_indicators_SDG_TechnicalMeeting_December2015_BackgroundPaper.pdf?ua=1, accessed 9 April 2016).

3.3 Premature mortality – focusing on deaths among those under 70 years of age

Also warranting consideration is a proposal for a measure of premature mortality with a target of reducing the number of deaths before age 70 by 40% by 2030 globally and in every country.[1] Numbers of deaths before age 70 is a more readily measurable indicator than life expectancy, and can decrease more rapidly than life expectancy can increase as it is more sensitive to interventions. Countries at different stages of development could, depending on their epidemiological priorities, achieve this kind of gain by bringing down mortality due to HIV, malaria, tuberculosis or child mortality, or to NCD deaths between ages 30 and 70. Concerted action to reduce NCD deaths before age 70 would also reduce NCD death rates for people age 70 and over.

The impact of attaining the SDG health-related targets on numbers of deaths under age 70 can be approximated by applying the SDG target impact on mortality rates to provisional estimates of deaths in 2015 by cause, age and sex.[2] There were an estimated 30 million deaths under age 70 in 2015, and if the SDG mortality targets had been achieved in 2015,[3] this would have been reduced to 19 million deaths. This represents a 36% reduction (almost 11 million averted premature deaths) – close to the proposed 40% target. Of these averted deaths, 5 million would have been due to infectious diseases, malnutrition, and child and maternal mortality (the MDG causes), with a further 5 million and 0.9 million due to NCDs and injuries respectively. Fig. 3.6 shows the regional and global rates of premature deaths (under 70 years of age) per 1000 population in 2015, together with estimates of the deaths that would have been averted by achievement of the SDG mortality targets in 2015. It is worth noting that the achievement of SDG mortality targets dramatically narrows regional variations in the premature death rate.

Figure 3.6
Regional and global premature deaths and deaths that would have been averted by achievement of SDG mortality targets, 2015



1 Norheim OF, Jha P, Admasu K, Godal T, Hum RJ, Kruk ME et al. Avoiding 40% of the premature deaths in each country, 2010–30: review of national mortality trends to help quantify the UN Sustainable Development Goal for health. Lancet. 2015;385(9964):239–52 (http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2814%2961591-9/fulltext, accessed 9 April 2016).

2 Provisional estimates based on all-cause mortality from WHO life tables for 2015; WHO estimates for MDG causes, cancers, child causes of death, road injury, homicide, disasters and conflict; death-registration data reported to WHO; and analyses from the Global Burden of Disease 2013 study.

3 Targets for maternal mortality ratio, neonatal and under-five mortality rates; 90% reduction in HIV, TB, malaria and NTD death rates, one third reduction in hepatitis, cancer, diabetes, cardiovascular disease and chronic respiratory disease; 50% reduction in road injury deaths; 50% reduction in diarrhoea deaths (through achievement of WASH target); and one third reductions (arbitrary interpretation of the SDG target of substantial reduction) in deaths due to homicide, conflict and disasters. These estimated mortality reductions are conservative and do not include the mortality impacts of suicide, pollution and drug and alcohol targets (beyond their contribution to the NCD mortality target).

3.4 Data gaps – most deaths not registered

As noted, many countries still lack adequate death-registration capacity. An estimated 53% of deaths go unregistered worldwide, and progress in improving death registration in developing countries has been slow. Nevertheless, a number of countries have made considerable progress in recent years, with notable examples including Brazil, China, the Islamic Republic of Iran, South Africa and Turkey. There are also indications of a new momentum to improve civil registration and vital statistics (CRVS) systems, backed by significant political interest in Asia and Africa and supported by global and regional agencies. One of the two indicators for SDG Target 17.19: "By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries" is the proportion of countries that have: (a) conducted at least one population and housing census in the last 10 years; and (b) have achieved 100% birth registration and 80% death registration.

For countries with inadequate death-registration capacity, mortality data from the population census and household surveys are used to obtain mortality estimates. A substantial amount of survey information is available for mortality for children aged under 5 years, usually based on the collection of birth histories,[4] while adult mortality levels can be estimated from census and survey data on deaths in households, orphanhood and sibling survival histories. However, there are considerable problems in assessing the reporting completeness and biases of such data, and the availability of consistent data sources over time is an issue for many countries. Information on older child and older age mortality is also less often available from survey sources. Model life tables and other statistical models are used to fill data gaps (Table 3.2).

4 Levels & Trends in Child Mortality: Report 2015. UNICEF, WHO, the World Bank, United Nations Population Division. New York: UNICEF on behalf of the UN Inter-agency Group for Child Mortality Estimation; 2015 (http://www.childmortality.org/files_v20/download/IGME%20report%202015%20child%20mortality%20final.pdf, accessed 9 April 2016).

Table 3.2
Data availability for all-cause mortality

Available recent data (since 2005)	Number of WHO Member States[a]	Percentage of global deaths in 2015[b]	Methods
Complete death-registration data[c]	59	28	Observed death rates
Incomplete death-registration data	38	25	Adjusted death rates
Other population-representative data on age-specific mortality[d]	18 (3)	25	Estimated death rates and model life table systems
Data on child (under 5 years) and adult (15–59 years) mortality only[d]	30 (18)	12	Estimated death rates and model life table systems
Data on child mortality only[d]	37 (22)	10	Model life table systems
No recent data	1	<1	Projected from data for years before 2005

a Only includes 183 Member States with population above 90 000 in 2015.

b Percentage of global deaths that occur in the countries included in each category – not the percentage registered or included in datasets.

c Completeness of 90% or greater for de facto resident population; as assessed by WHO and the United Nations Population Division, 2016.

d Numbers in parenthesis show the number of high HIV prevalence countries for which multistate epidemiological modelling for HIV mortality was also carried out.

4 UNIVERSAL HEALTH COVERAGE – AT THE CENTRE OF THE HEALTH GOAL

The main text of the SDG declaration endorsed by heads of government in February 2015 puts UHC at the centre of the overall health goal, and makes progress towards the UHC target a prerequisite for the achievement of all the others.[1] Under SDG 3, UHC is also assigned the specific Target 3.8: "Achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all". The goal of UHC (all people and communities receiving the needed quality services, including health protection, promotion, prevention, treatment, rehabilitation and palliation without financial hardship) is relevant to all countries and offers an unprecedented opportunity to increase coherence in health-related actions and initiatives.

Accountability – defined as a cyclical process of monitoring, review and remedial action[2] – will be critically important in ensuring progress towards UHC. WHO and the World Bank have developed a UHC monitoring framework based on a series of country case studies and technical reviews, and on consultations and discussions with country representatives, technical experts and global health and development partners.[3] The framework focuses on the two core components of UHC: coverage of the population with quality, essential health services; and coverage of the population with financial protection, the key to which is reducing dependence on payment for health services out-of-pocket (OOP) at the time of use. The proposed indicators are a "coverage index" of essential services, disaggregated by key stratifiers where possible, and a measure of the lack of financial protection against the costs of health services. These two indicators need to be interpreted together to assess the state of UHC, both nationally and globally.

4.1 UHC coverage index of essential health services – a new summary measure

The proposed SDG indicator for services is a UHC coverage index of essential health services. While recognizing that countries may have different health priorities, and will develop their own indicators accordingly, it is possible to

1 Transforming our world: the 2030 Agenda for Sustainable Development. Resolution adopted by the General Assembly on 25 September 2015. A/RES/70/1. United Nations General Assembly, Seventieth session, agenda items 15 and 116; paragraph 26 (http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E, accessed 10 April 2016).

2 As per the framework of the Commission on Information and Accountability for Women's and Children's Health (http://www.who.int/woman_child_accountability/about/coia/en/index5.html, accessed 10 April 2016).

3 World Health Organization and World Bank Group. Monitoring progress towards universal health coverage at country and global levels. Framework measures and targets. Geneva: World Health Organization and International Bank for Reconstruction and Development/World Bank; 2014 (http://apps.who.int/iris/bitstream/10665/112824/1/WHO_HIS_HIA_14.1_eng.pdf?ua=1, accessed 10 April 2016).

identify a set of tracer indicators that can be combined into an index suitable for the purposes of regional and global UHC monitoring. The set of tracer indicators for service coverage was selected following extensive review and discussion of potential indicators.[1] These are grouped into four main categories, each with four indicators (Table 4.1): (1) reproductive, maternal, newborn and child health; (2) infectious diseases; (3) NCDs; and (4) service capacity and access, and health security. Statistics for the tracer indicators are then combined into a UHC service coverage index.[2]

The resulting 16 tracer indicators spread across the four categories are then used to track health service coverage. All indicators are defined so that they range between 0% and 100%, with 100% implying full coverage. Data for these indicators come from a mix of household surveys and administrative data. Ten of the 16 tracer indicators of health service coverage are supported by recent, comparable estimates of national coverage. For another four (pregnancy care, care seeking for suspected pneumonia in children, hospital inpatient admission rates and health worker density) well-maintained databases of country data points from either survey or administrative data are available, with comprehensive estimates for pregnancy care expected within the next year. For the remaining two indicators (cervical cancer screening and access to essential medicines) there are currently no comprehensive databases or comparable estimates available. As a result, these two indicators are, for now, left out of the calculation of the index in this report.

To provide a summary measure of coverage of essential health services, an index of national service coverage is computed for each country by averaging service-coverage values across the 16 tracer indicators. This is performed in two steps: first, computing the average coverage in each of the four categories; and second, computing the average of these four category-level scores. Geometric means are used to increase sensitivity to very low coverage levels for any indicator, and to reduce the impact of re-scaling indicators on the rankings implied by the index. These computations are simple and straightforward.

However, a small but necessary series of adjustments are made for a few indicators. To obtain greater spread in values across countries, the NCD indicators for hypertension, diabetes and tobacco are re-scaled based on minimum values observed across countries. Hospital inpatient admission rates and health-worker density values are capped at a threshold, as overuse and oversupply can be an issue in high-income countries. These two indicators are capped at 100% once rates reach minimum values observed in OECD countries. Additionally, as comparable antiretroviral therapy (ART) coverage estimates are currently not available for high-income countries, this input is set at the average value of 44% for these countries; country-level estimates of ART coverage for high-income countries are expected in 2017.

The distribution of countries by coverage index in quintiles is presented in Fig. 4.1. The UHC index values based on national coverage levels show substantial differences across WHO regions. The WHO European Region, WHO Region of the Americas and WHO Western Pacific Region all have more than 30% of their countries in the upper quintile of UHC index values globally, whereas the WHO Eastern Mediterranean Region and WHO African Region have no countries in the upper quintile. The WHO African Region accounts for 30 of the 37 countries in the lowest quintile.

Table 4.1
Tracer indicators for UHC service coverage, with data availability

Indicator	Data sources	Number of countries with national data since 2010	Number of countries with comparable estimates	Measurability of key dimensions of inequality[a,b]
Reproductive, maternal, newborn and child health				
Family planning coverage	Surveys	98	184	W,E,R,(A)
Antenatal and delivery care	Surveys	121	194	W,E,R,(A)
Full child immunization	Surveys, Admin	193	194	W,E,R,S
Health-seeking behaviour for child pneumonia	Surveys	72	None	W,E,R,S
Infectious diseases				
Tuberculosis effective treatment	Admin	190	190	(R)
HIV antiretroviral treatment	Admin, Surveys, Surveillance	118	118	(R)
ITN coverage for malaria prevention	Surveys, Admin	40[c]	40[c]	W,E,R,S
Improved water source and adequate sanitation	Surveys	156	192	W,R
Noncommunicable diseases				
Prevalence of raised blood pressure	Surveys	86	192	(E),(R),S,A
Prevalence of raised blood glucose	Surveys	76	192	(E),(R),S,A
Cervical cancer screening	Surveys	<30	None	—
Tobacco (non-use)	Surveys	146	123	(W),(E),(R),S,(A)
Service capacity and access				
Basic hospital access	Facility data	105	None	(R)
Health-worker density	Administrative data	166	None	(R)
Access to essential medicines	Facility surveys	<30	None	(R)
Health security: IHR compliance	Country reported	191	None	—

a W = household wealth quintile; E = educational attainment; R = place of residence (typically urban vs. rural); S = sex; and A = age. Letters in parentheses indicate that data sources exist to estimate coverage by the indicated dimension but that more analytical work is needed to prepare disaggregated estimates.

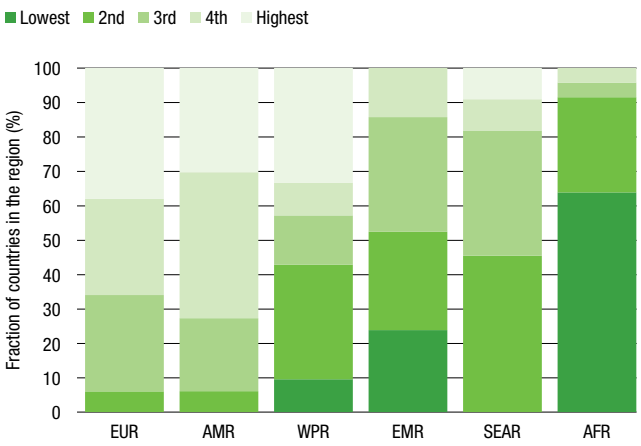
b Information to estimate coverage across key inequality dimensions typically comes from population-based surveys. Standardized population-based surveys are typically only conducted in developing countries, and therefore there is currently a lack consistent data sources to characterize equity for service coverage in many high-income countries.

c Only pertains to countries with highly endemic malaria.

1 Boerma T, AbouZahr C, Evans D, Evans T. Monitoring intervention coverage in the context of universal health coverage. PLoS Med. 2014;11:e1001728. Also see: http://www.who.int/healthinfo/universal_health_coverage/en/, accessed 25 April 2016.

2 Hogan D, Hosseinpoor AR, Boerma T. Developing an index for the coverage of essential health services. Technical Note. Geneva: World Health Organization; 2016 (http:// www.who.int/healthinfo/universal_health_coverage/en/).

Figure 4.1
UHC service coverage index quintiles, by WHO region



The dashboard (Fig. 4.2) shows the coverage levels for each of the indicators used in the computation of the index in this report. The range of country values varies by indicator and between regions. Such a dashboard will also be useful when presented for a single country with the UHC coverage index.

4.2 Inequalities in coverage – towards an integrated assessment

Ensuring that all people who need health services receive them is a UHC imperative, which makes tracking inequalities in health-service coverage a central UHC monitoring goal. Ideally, the UHC index described above would be computed for both the national population and for disadvantaged groups, and then combined to reflect the degree of inequity in service-coverage indicators across key inequality dimensions such as socioeconomic status.

This approach is currently not feasible for many countries due to data limitations. For most indicators, disaggregated data are only partially available or present comparability issues. The most extensive standardized disaggregated data are available for indicators in the first category (reproductive, maternal, newborn and child health). This is especially the case for developing countries. These data are used to compute a relative inequality score based on the ratio of the mean coverage among the poorest populations[1] to the national average. A value of 100 means no difference at all; and the smaller this value, the greater the gap between the poorest and the national average. A summary of these scores is presented in Fig. 4.3 for countries that have conducted an international household health survey (Demographic and Health Survey – DHS or Multiple Indicator Cluster Survey – MICS) since 2005. It is apparent that large differences exist in the relative inequality score of reproductive, maternal, newborn and child health intervention coverage across countries, with many countries having relative differences of less than 10% in coverage between the poor and the national average, while several countries have relative differences of more than 40%.

4.3 Financial protection – measuring the impact of out-of-pocket payments

With regard to tracking levels of financial protection, the global WHO and World Bank monitoring framework proposes the use of two indicators: the incidence of disproportionate spending on health which is labelled "catastrophic"; and the incidence of poverty resulting from health expenditures paid directly by households which is labelled "impoverishing".[2] This section presents data on these two indicators for a selected number of countries. Updated estimates by the World Bank and WHO of both catastrophic and impoverishing health spending for all countries will be published in 2016. This report also presents data from all countries on the related macro-level indicator of OOP payments on health.

At the health system level, the fraction of total health expenditure (THE) that comes from OOP health expenditures is a measure of the extent to which households contribute towards financing the provision of all health services in a country. The lower this fraction, the greater the likelihood that households are protected from financial hardship when accessing health services. Estimates of OOP health expenditure as a share of THE are generated annually by WHO using national health accounts (NHAs) and other sources.[3]

Figure 4.4 presents the OOP health expenditure as fraction of THE.[4] Health financing systems in low-income and lower middle-income countries rely heavily on OOP payments implying that households are the major contributors to the health financing system (42.3% and 40.6% in 2013, respectively). Such countries face particular challenges as they have inadequate service delivery systems and additionally struggle to raise domestic revenues to pay for such services. In contrast, OOP health expenditure as a fraction of THE in high-income countries is much lower, at 21.2%. At regional level, this fraction is highest in the WHO South-East Asia Region and WHO Eastern Mediterranean Region (40.8% and 39.5%, respectively).

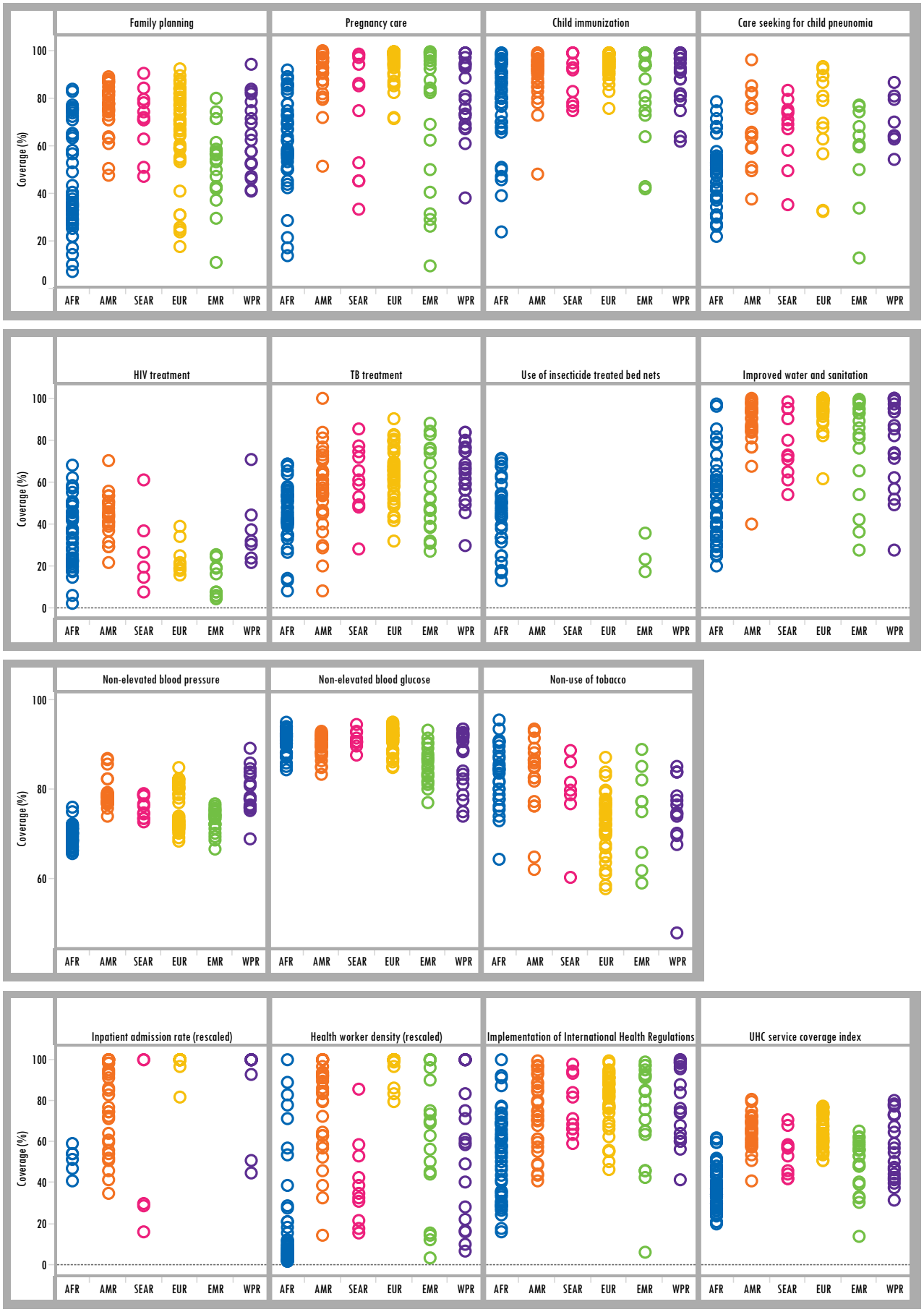
1 Computed as the average of twice the coverage among the poorest quintile and that among the second poorest quintile ((2*Q1+Q2)/3).

2 In the context of the SDG indicator framework a very different indicator has initially been proposed: coverage by health insurance or a public health system. Because health insurance means very different things in different countries, no global data are currently compiled and the indicator is not presented in this report.

3 Not all countries maintain or update NHAs. In such cases, data are obtained through technical contacts in the country or from publicly available documents and reports. Missing values are estimated using various accounting techniques depending upon the data available for each country.

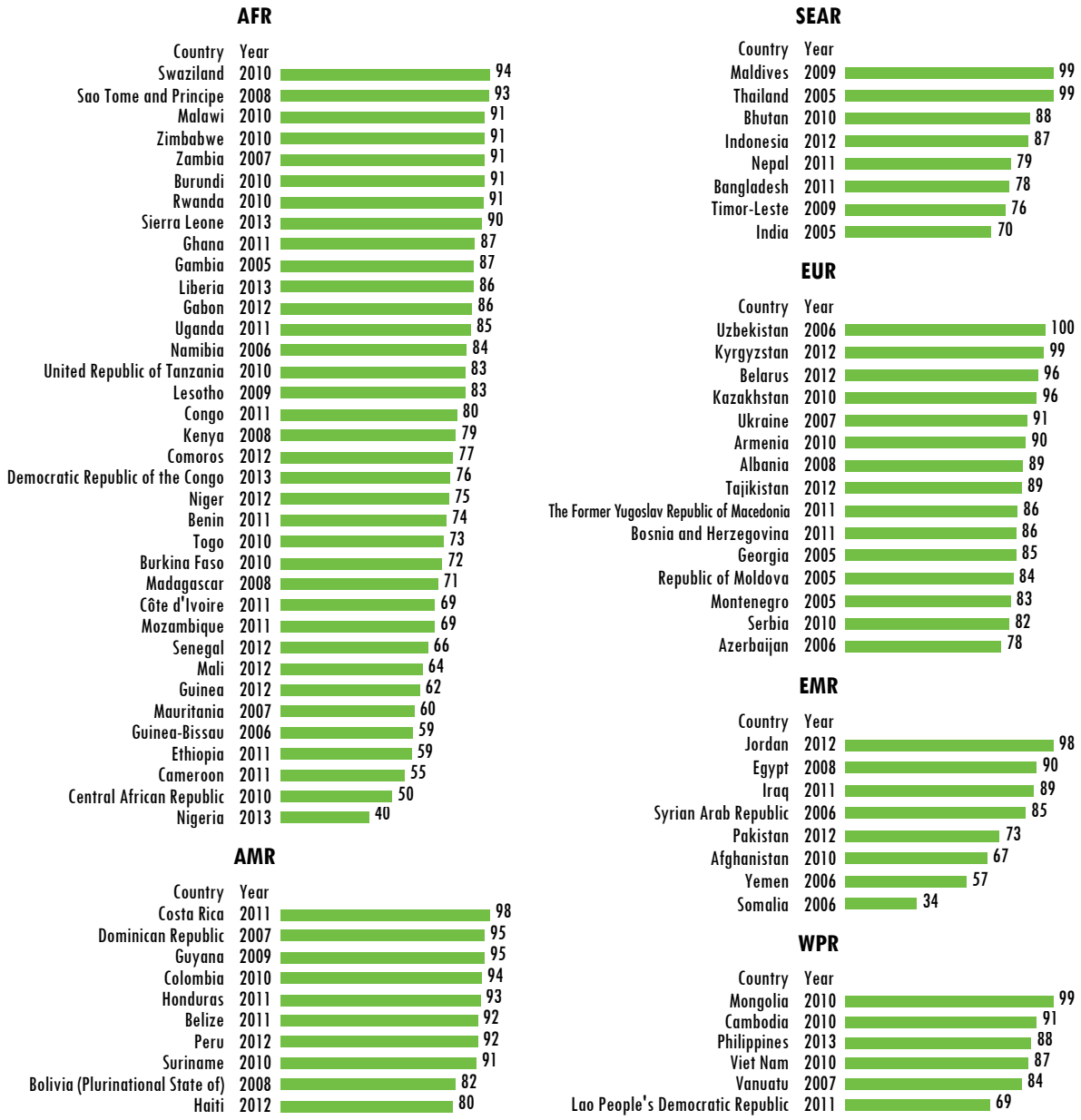
4 To avoid bias towards countries at either end of the population scale, and to avoid bias towards countries which represent a large share of global health spending, regional and income-group aggregates are estimated using unweighted averages and excluding countries with a population of less than 150 000.

Figure 4.2
Dashboard of indicators for the UHC coverage index, WHO, 2015[a]



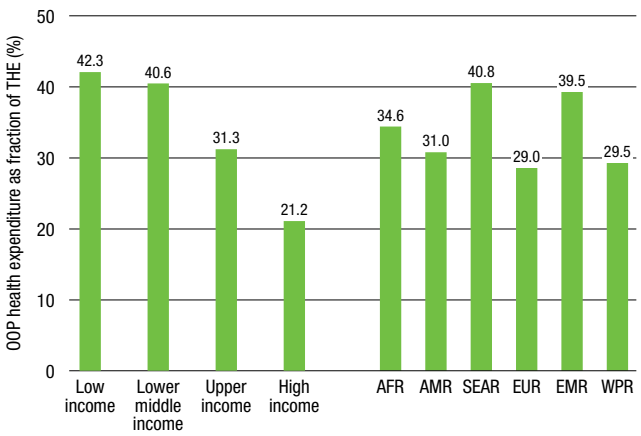
a Each circle represents a country value.

Figure 4.3
Relative inequality score for reproductive, maternal, newborn and child health intervention coverage in 83 countries, 2005–2013[a]



a Based on the results of DHS and MICS.

Figure 4.4
Out-of-pocket health expenditure as fraction of total health expenditure, by country income group[a] and WHO region, 2013



a Based on the World Bank analytical income classification of economies.

Whether such OOP payments cause financial hardship or not requires comparing household levels of OOP health expenditure in relation to total household expenses. OOP payments are judged to be catastrophic when they exceed a given proportion (25%) of the total household budget or of the capacity to pay (40%).[1] They are labelled impoverishing when OOP payments push a household's other spending below a minimum socially recognized living standard such as that identified by a poverty line. The poverty line should be defined according to national standards and also against an international poverty line, consistent with SDG targets 1.1.1 and 1.2.1. The global framework recommends that countries, as a minimum, track the proportion of the

1 Capacity to pay is defined as household's expenditure net of subsistence spending (for example on food).

population with large household expenditures on health as a share of their budget (for example, >25%).

Estimates for catastrophic and impoverishing health expenditures come from a sample of 36 countries which have conducted a nationally representative survey between 2002 and 2012[1] following established methods in the literature.[2,3] Figure 4.5 shows the national rates of catastrophic and impoverishing health expenditure across these countries using comparable data.[4] The median percentage of people experiencing catastrophic health spending defined as OOPs exceeding 25% of household total consumption across these countries was 1.8%. The median incidence of impoverishing health expenditures was 1.0% using different poverty lines for countries at different levels of economic development.[5]

1 Sample composed of countries for which nationally representative, publicly available and comparable survey data with information on total consumption and OOP payments on health are available.

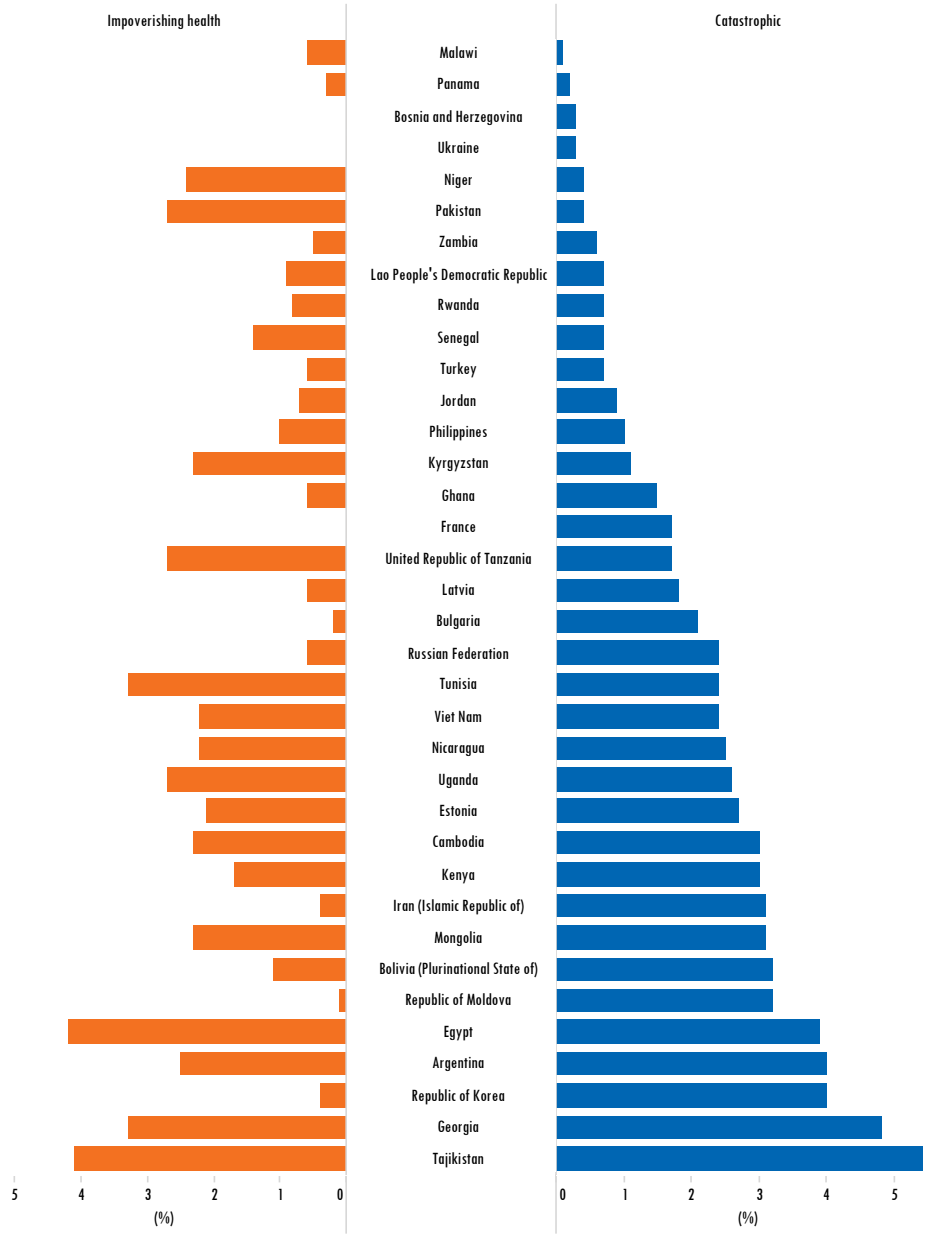
2 Distribution of health payments and catastrophic expenditures: methodology. Discussion Paper. Geneva: World Health Organization; 2004 (http://www.who.int/health_financing/documents/cov-dp_05_2_health_payments/en/, accessed 10 April 2016).

3 Wagstaff A, van Doorslaer E. Catastrophe and impoverishment in paying for health care: with applications to Vietnam 1993–98. Health Econ. 2003;12(11):921–34 (https://www.researchgate.net/publication/9023646_Catastrophe_and_Impoverishment_in_Paying_for_Health_Care_With_Applications_to_Vietnam_1993-98, accessed 10 April 2016).

4 WHO and the World Bank. Tracking universal health coverage: First global monitoring report. Geneva: World Health Organization; 2015 (http://www.who.int/healthinfo/universal_health_coverage/report/2015/en/, accessed 9 April 2016).

5 Tracking universal health coverage: first global monitoring report. Geneva and Washington (DC): World Health Organization and World Bank; 2015. (http://www.who.int/healthinfo/ universal_health_coverage/report/2015/en/, accessed 9 April 2016).

Figure 4.5
Incidence of catastrophic[a] and impoverishing[b] health expenditure among 36 countries with comparable data, 2002–2012



a Defined as 25% of total expenditure.

b Regional poverty lines: US$ 1.25 for low-income countries, US$ 2 for lower middle-income countries, US$ 4 for upper middle-income countries, and US$ 5 for high-income countries.

4.4 Data gaps – regular UHC monitoring is possible

Data availability for the tracer indicators that make up the service coverage index, including the dimension for disaggregation, is summarized in Table 4.1. In the coming years, measurement in several areas will need to improve in order to boost global and country capacity to track UHC progress. Most indicators for the essential services coverage index are estimated consistently across most countries, but there are still data gaps for key indicators such as cervical cancer screening and access to essential medicines. Where coverage data are available, there is rarely sufficient information to monitor levels of effective coverage. Such a measure, of the degree to which evidence-based health services achieve desirable outcomes, is a key component of quality health care and a core UHC concern.

Data scarcity is also an issue with regard to coverage equity. For example, comparable estimates of service coverage across key inequality dimensions are dominated by reproductive, maternal, newborn and child health indicators in countries that have conducted DHS or MICS surveys. Perhaps surprisingly, the lack of standardized surveys across high-income countries is a particular problem, hampering the ability to monitor equity in coverage in such countries.

It could be argued that the current UHC index is most relevant for low- and middle-income countries (LMIC), as the selected indicators tend to have coverage rates near or at 100% in most high-income countries. This is not only a consequence of the MDG-related investments in comparable methods to monitor indicators related to reproductive, maternal, newborn and child health, and to infectious diseases, but also a result of a lack of comparable data for interventions with greater relevance for more advanced health systems.

With regard to financial risk protection data, there are also a number of data challenges. Indicators of exposure to financial hardship, such as catastrophic and impoverishing health spending, rely on data from household surveys. Although there were over 500 surveys during the period 1985–2014 in 88 countries, representative of about 90% of world population, too few countries have recent data (for example, only 58 countries have data from 2010 or later). An increasing number of surveys include a module that facilitates computation of the micro-level indicators which are direct measures of financial burden due to the cost of health care. Similarly, as more countries conduct regular NHAs, the data needed for the annual estimation of indirect measures of financial protection (that is, OOP health expenditure as a percentage of THE) are going to improve.

Finally, country UHC monitoring needs to be integrated into broader health systems performance assessment if it is to realize its full potential as actionable intelligence. Monitoring service coverage and financial protection – which should always go hand-in-hand – does not in itself reveal which policy levers can be used to improve results. For this reason, the monitoring of UHC indicators needs to be embedded within health systems performance assessment frameworks that link changes in coverage to potential drivers of progress caused by changes in inputs, structures and processes. These will include: (a) structural elements related to investments in health; (b) process elements such as health system reforms (such as changes in provider payment mechanisms) designed to improve service quality or health service utilization; and (c) determinants of health. While understanding a country's health system reforms are important in determining the causes of change in health-service coverage measures, it is also essential to assess changes in non-health-system social determinants of health (such as educational attainment and poverty rates) as such changes also greatly influence service coverage and health outcomes.

5 EQUITY – LEAVE NO ONE BEHIND

Equity is at the heart of the SDGs, which are founded on the concept of "leaving no one behind". SDG 3 calls for healthy lives for all at all ages, positioning equity as a core cross-cutting theme, while SDG 10 calls for the reduction of inequality within and between countries. Equity is also a key consideration with regard to UHC, which as noted earlier is both central to the health goal and founded on the principle of equal access to health services without risk of financial hardship.

A movement towards equity in health depends, at least in part, on strong health information systems that collect, analyse and report disaggregated data covering all health areas. This is recognized in SDG Target 17.18, which calls for efforts to build capacity to enable data disaggregation by a number of stratifying factors, including income, sex, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts. The proposed indicator for tracking progress towards this target is the proportion of sustainable development indicators with full disaggregation produced at the national level, where this is relevant to the target.

Disaggregated data enable policy-makers to identify vulnerable populations in the context of reforms towards UHC and to direct resources accordingly. This has relevance for all of the health-related SDG targets, which require equity-oriented approaches that support accelerated progress among the disadvantaged to reduce health inequalities. While important at the global and regional level – where they can be used to measure progress towards the goal of reaching all, and to provide countries with comparative data on their relative position in terms of health inequalities – equity data are most relevant within countries as they not only support targeted policy initiatives but can be used by civil society and other stakeholders to hold governments to account.

Health inequalities within countries are associated with a variety of factors, several of which are encountered uniformly across all countries. Examples include sex, age, economic status, education and place of residence. Other factors may be more specific to a regional or country situation, such as migrant status, race, ethnicity, caste, religion or other characteristic that can differentiate minority subgroups.[1]

1 Handbook on health inequality monitoring: with a special focus on low- and middle-income countries. Geneva: World Health Organization; 2013 (http://apps.who.int/iris/bitstream/10665/85345/1/9789241548632_eng.pdf, accessed 10 April 2016).

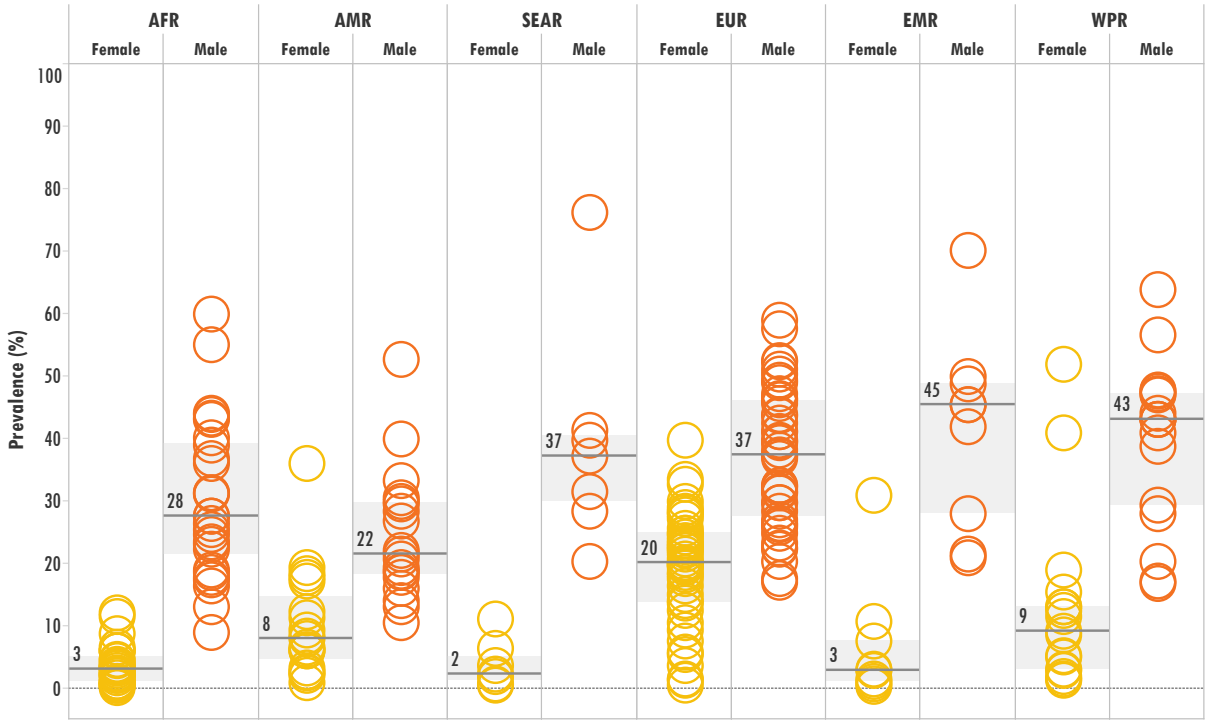
5.1 Sex – major differences between men and women for many indicators

The sex of an individual has a range of biological, behavioural, social and economic consequences for health. Sex-disaggregated statistics are needed for many of the health and health-related SDG indicators. Major differences between males and females may exist in mortality and causes of death, morbidity, coverage of interventions, risk factors and determinants. For example, in section 3, Fig. 3.3 and Fig. 3.5 present differences in life expectancy and HLE showing that on average women live longer than men. In most cases, the gaps between males and females differ between regions and between countries. Sex differences also vary by indicator, and are often linked to gender norms, roles and relations. For example, tobacco smoking is generally much more prevalent among men aged 15 years and older than women. However, there is also considerable variation between regions in this respect, with male-female gaps being smaller in the WHO American Region and WHO European Region (Fig. 5.1a). In relation to HIV incidence, African women have a considerably higher incidence than men (Fig. 5.1b). For deaths due to road traffic injuries, rates are much higher among males than females in all regions (Fig. 5.1c).

The health-related SDGs also include a number of targets and indicators that are focused on gender issues. Examples are SDG targets 5.2 and 5.3 which in *The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030* are combined into "Eliminate all harmful practices and all discrimination and violence against women and girls".[1] This is monitored by SDG indicator 5.2.1: "Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by

1 The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030. Every Women Every Child; 2015 (http://globalstrategy.everywomaneverychild.org/pdf/EWEC_globalstrategyreport_200915_FINAL_WEB.pdf, accessed 11 April 2016).

Figure 5.1a
Prevalence of tobacco smoking among adults >15 years of age, by sex and by WHO region, 2015[a]

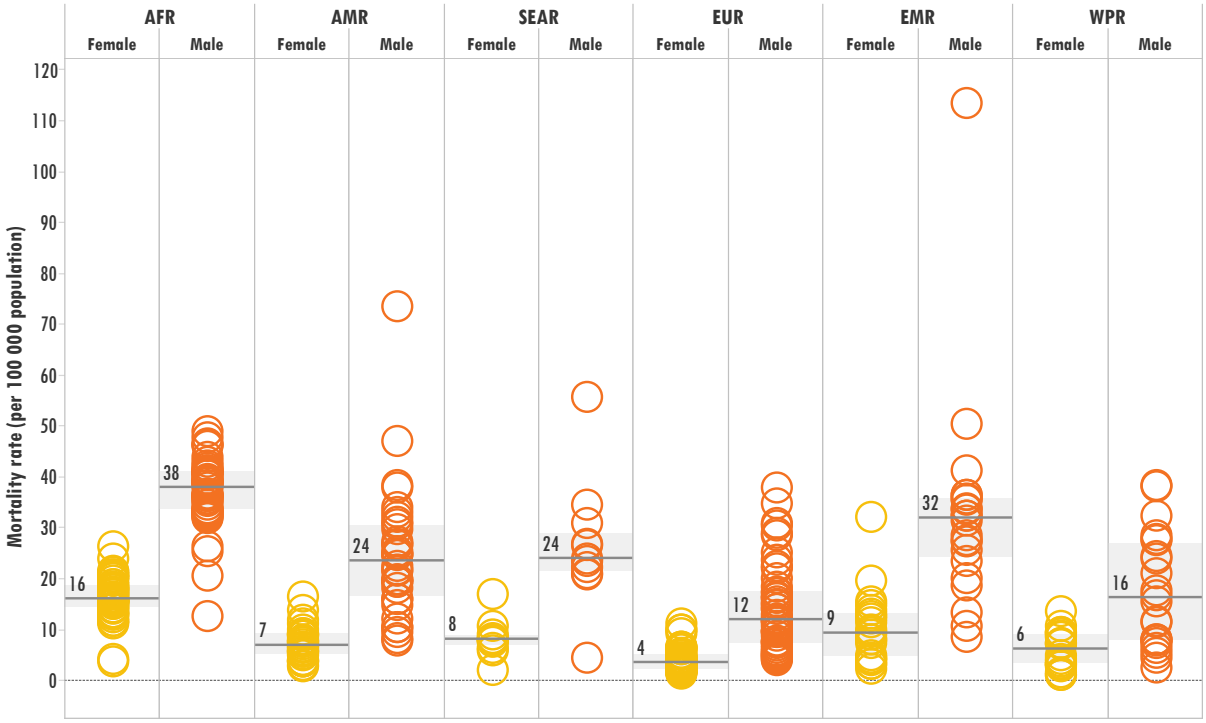


a Based on household surveys in 123 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Figure 5.1b
Percentage of adult population aged 15–49 years newly infected with HIV in Africa, by sex, 2014[a]

a Based on UNAIDS/WHO estimates. Each circle represents a country value; numbers and vertical lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Figure 5.1c
Mortality rate due to road traffic injuries, by sex and WHO region, 2013[a]



a Based on WHO provisional estimates. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

a current or former intimate partner, in the last 12 months, by form of violence and by age group". In addition, several SDG indicators aim to capture the increased health risks specifically associated with reproduction for women that may result in a significant burden of mortality and disability. Examples are the indicators for the health targets on maternal mortality, and on access to sexual and reproductive health-care services.

5.2 Age – data should cover the full life course

SDG 3 aims for health and well-being for all at all ages. It is thus vital to monitor health developments using age-disaggregated data. In some areas, such monitoring is already improving. For example, newborn care became a health priority when evidence emerged that rates of child mortality during the neonatal period were declining much more slowly than those during subsequent periods. Adolescent health is also receiving more attention because of alarming data regarding risk factors such as tobacco use, harmful use of alcohol, HIV incidence and obesity prevalence. Older people do not figure prominently in the 2030 Agenda for Sustainable Development, but their numbers are rapidly increasing and evidence is emerging that much more can be done to promote their well-being.[1] Improving the monitoring of health indicators of older populations should thus be prioritized.

5.3 Socioeconomic inequalities – major disadvantages for the poorest and the least educated

Socioeconomic inequalities exist in all countries and have important impacts on health. Data from high-income countries show that in almost all countries, higher death rates and poorer self-assessments of health are observed in groups of lower socioeconomic status compared with those who are better off.[2,3] In half of the 66 national surveys conducted in LMIC, stunting prevalence in children aged less than 5 years was at least 15% higher in the children of mothers with no education compared with those children whose mothers had attended secondary school or higher.[4]

Socioeconomic inequalities also have implications for health behaviours. For example, smoking among men is reported to decrease across education subgroups moving from least-educated to most-educated across the

1 WHO report on ageing and health. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf, accessed 10 April 2016).

2 Mackenbach JP, Stirbu I, Roskam AR, Schaap MM, Menvielle G, Leinsalu M et al. Socioeconomic inequalities in health in 22 European countries. N Engl J Med. 2008;358:2468–81.

3 Zack MM. Health-related quality of life – United States, 2006 and 2010. MMWR Suppl. 2013;62(3):105–11 (http://www.cdc.gov/mmwr/preview/mmwrhtml/su6203a18.htm, accessed 10 April 2016).

4 WHO and International Center for Equity in Health/Pelotas. State of inequality. Reproductive, maternal, newborn and child health. Geneva: World Health Organization; 2015. (http://apps.who.int/iris/bitstream/10665/164590/1/9789241564908_eng.pdf, accessed 10 April 2016.)

globe.[1,2,3] In LMIC, coverage of reproductive and maternal health interventions is lower among socioeconomically disadvantaged subgroups. For example, the proportion of births attended by skilled health personnel differed by up to 80% between the richest and poorest subgroups in 83 study countries, and the use of modern contraception was at least twice as high among women with secondary schooling or higher than among women with no education in almost half of 71 study countries.[4]

5.4 Place of residence – focus on geographical differences within countries

The world is rapidly urbanizing and this has profound implications for population health. Between 2000 and 2014 more than 1 billion people were added to urban areas and by 2015 more than half of the world's population was living in cities. The proportion of the world's population living in urban areas is projected to increase from 54% in 2015 to 60% in 2030.[5] Almost all projected urban growth will occur in developing countries.

Within cities, poor social and living conditions, such as those encountered in ghettoes and slums, lead to greater health problems among the poorest compared with better-off city dwellers. The poorest run higher risks of diseases and injuries, and have less access to health services. To unmask the full extent of urban health inequities, it is important to disaggregate health and health-determinant data within cities.[6]

Health systems tend to be weaker in rural and remote areas. Rural populations also carry a disproportionate burden of disease and death, and are generally the most disadvantaged within LMIC. For example, a recent study of 73 countries found that children living in urban areas (including those living in slums) have better health outcomes than children living in rural areas.[7] Under-five mortality rates are higher in rural areas than in urban areas in most countries (median values of 54 LMIC: 84 deaths per 1000 live births in rural areas versus 61 deaths per 1000 live births in urban areas) with the magnitude of this difference varying by country (Fig. 5.2).[4] Another study found that rural children were more likely to be stunted than urban children, and that overall improvements in child nutrition usually did not decrease the rural/urban disparities.[8]

There are also major differences in intervention coverage rates. For example, need for family planning satisfied and births attended by skilled health personnel, as well as access to improved water and sanitation, are all lower in rural areas than in urban areas (Fig. 5.3).[9]

Addressing regional or district inequalities is critically important for effective health planning and resource allocation. From a monitoring perspective, regions and districts can also be used as a proxy for populations that share similar conditions or characteristics, such as high exposure to vector-borne diseases, environmental conditions and ethnicity. Thus, monitoring health inequalities between regions can generate important evidence and support for the targeting of health programmes and policies, especially when disparities are substantial.

5.5 Migrants and minorities – requiring special efforts

In almost every country in the world, minorities and indigenous peoples are among the poorest and most vulnerable of groups, suffer greater ill health and receive poorer quality health care than other segments of the population.[10] More often than not, this ill health and poorer health care are the result of poverty and discrimination. The SDGs, with their broad commitment to leaving no one behind, offer hope that development efforts will be focused on minority groups in the coming years, with SDG 10 – which aims to: "Reduce inequality within and among countries" – making specific reference to indigenous peoples, pastoralists and other marginalized groups. Tracking progress in this area will depend upon ensuring the collection of standardized and comparable data, disaggregated by context-specific inequality dimensions.

1 Tackling health inequalities in Europe: an integrated approach. EUROTHINE. 2007.

2 Garrett BE, Dube SR, Winder C, Caraballo RS. Cigarette Smoking – United States, 2006–2008 and 2009–2010. MMWR Suppl. 2013;62(3):81–4 (http://www.cdc.gov/mmwr/preview/mmwrhtml/su6203a14.htm, accessed 10 April 2016).

3 Hosseinpoor AR, Bergen N, Kunst A, Harper S, Guthold R, Rekve D et al. Socioeconomic inequalities in risk factors for non communicable diseases in low-income and middle-income countries: results from the World Health Survey. BMC Public Health. 2012;12:912 (http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-912, accessed 10 April 2016).

4 WHO and International Center for Equity in Health/Pelotas. State of inequality. Reproductive, maternal, newborn and child health. Geneva: World Health Organization; 2015. (http://apps.who.int/iris/bitstream/10665/164590/1/9789241564908_eng.pdf, accessed 10 April 2016.)

5 World Urbanization Prospects. The 2014 Revision. Highlights. New York (NY): United Nations, Department of Economic and Social Affairs; 2014 (ST/ESA/SER.A/352) (http://esa.un.org/unpd/wup/Publications/Files/WUP2014-Highlights.pdf, accessed 10 April 2016).

6 WHO and United Nations Human Settlements Programme (UN-HABITAT). Hidden cities. Unmasking and overcoming health inequities in urban settings. Geneva: World Health Organization; 2010 (http://www.who.int/kobe_centre/publications/hiddencities_media/who_un_habitat_hidden_cities_web.pdf?ua=1, accessed 10 April 2016).

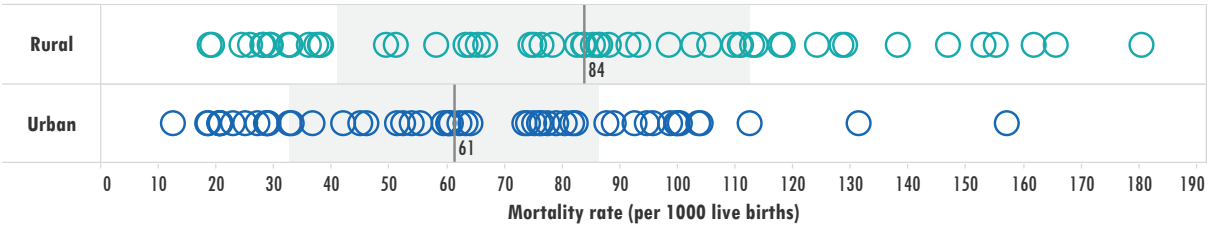
7 Fink G, Günther I, Hill K. Slum residence and child health in developing countries. Demography. 2014;51:1175–97 (https://www.popcenter.umd.edu/resources/scholar-dev/working-groups/jc_papers/meeting_01, accessed 10 April 2016).

8 Paciorek CJ, Stevens GA, Finucane MM, Ezzati M on behalf of the Nutrition Impact Model Study Group (Child Growth). Children's height and weight in rural and urban populations in low-income and middle-income countries: a systematic analysis of population-representative data. Lancet Global Health. 2013;1(5):e300–9 (http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(13)70109-8/abstract, accessed 10 April 2016).

9 WHO and International Center for Equity in Health/Pelotas. State of inequality. Reproductive, maternal, newborn and child health. Geneva: World Health Organization; 2015; (http://apps.who.int/iris/bitstream/10665/164590/1/9789241564908_eng.pdf, accessed 10 April 2016) and UNICEF and WHO. Progress on sanitation and drinking water – 2015 update and MDG assessment. 2015 (http://apps.who.int/iris/bitstream/10665/177752/1/9789241509145_eng.pdf?ua=1, accessed 10 April 2016).

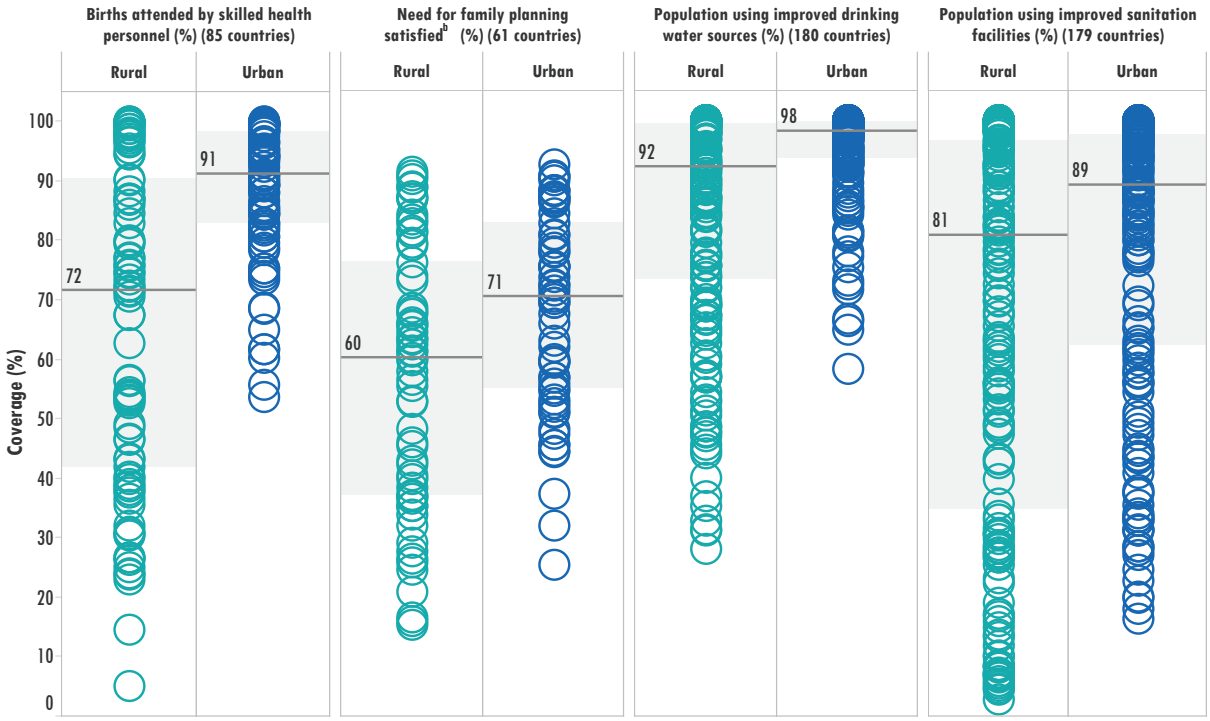
10 Minority Rights Group International (2013). State of the world's minorities and indigenous peoples 2013.

Figure 5.2
Under-five mortality rate in LMIC, by rural/urban residence, 2005–2013[a]



a Based on the results of DHS in 54 countries. Each circle represents a country value; numbers and vertical lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Figure 5.3
Selected intervention indicators, by place of residence[a]



a Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

b Need for family planning satisfied with either modern or traditional methods among married or in-union women of reproductive age.

The situation faced by migrants is another major concern. It is estimated that around 244 million people are living outside their countries of origin,[1] having left their homes for a variety of reasons, including conflict; natural disasters or environmental degradation; political persecution; poverty; discrimination; and lack of access to basic services – and in search of new opportunities, particularly in terms of work or education. Within this group, refugees and asylum seekers (defined as those who did not make a voluntary choice to leave their country of origin and cannot safely return home) require particular attention. The recent increase in the displacement of populations around the world is unprecedented. Over the past 4 years, countries in the Middle East have become host to more than 4.2 million new refugees. About 2.5 million refugees have arrived in Turkey since 2012, and more than 700 000 new migrants and refugees have arrived in Europe since June 2015.[2] Many of these people have higher risks of health problems and lack access to health services and financial protection for health.

The topic of migration is included in the SDGs, which have a number of goals and targets related to migration issues, including SDG Target 10.7 on planned and well-managed migration policies.[3] As with minorities, the effective monitoring of migrant health will be crucial to making progress, and was identified as one of four priority areas for action at the Global Consultation on Migrant Health held in Madrid in March 2010, at which stakeholders

1 Trends in international migrant stock: the 2015 revision [online database]. United Nations, Department of Economic and Social Affairs. (http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml, accessed 1 April 2016).

2 Promoting the health of migrants. Sixty-ninth World Health Assembly. Provisional agenda item 14.7 (A69/27). 8 April 2016 (http://apps.who.int/gb/ebwha/pdf_files/EB138/B138_26-en.pdf, accessed 8 May 2016).

3 2030 Agenda for Sustainable Development. International Organization for Migration (https://unobserver.iom.int/2030-agenda-sustainable-development, accessed 10 April 2016).

called for health information systems to be strengthened to ensure the standardization and comparability of data on migrant health, and for the appropriate disaggregation and assembling of migrant health information.[1]

5.6 Data gaps – disaggregation is a crucial data challenge

The emphasis on disaggregated data called for in the SDGs will be a major challenge for countries and at the global level. Household surveys are the best instrument for obtaining data by socioeconomic and demographic characteristics. They are less suitable for obtaining local data and for use in populations that are small or more difficult to include in household survey samples (as this requires very large survey sample sizes). Nevertheless, surveys will remain the mainstay of disaggregated data collection for many indicators. A good example is the extent to which DHS and later MICS have provided standardized disaggregated data for reproductive, maternal and child health indicators.

For many indicators, however, overall data availability remains poor. Investments are thus needed in regular household surveys and electronic facility reporting systems (either in aggregated format or individual level data). Whenever possible, data collection should include small-area markers (such as postal codes) or individual identifiers (such as personal identification numbers) that permit cross-linkages between different data sources. Countries should move towards implementing standardized electronic record-keeping systems, while ensuring that personal data are protected and used appropriately. In addition, inequality, by its very nature, is a complex concept and can be calculated using different measurements. Countries should therefore also focus on developing the technical expertise needed to conduct health inequality analyses.

Disaggregation also implies a major challenge for the users of data. For example, the volume of data will increase and become more difficult to interpret. For this reason, it is essential that the needs and technical expertise of the target audience are taken into account when communicating health inequality analysis results. Presentation of such results should include, for example, interactive data visualizations, which can facilitate the interpretation of large or complex datasets.[2]

1 International Organization for Migration, the World Health Organization and the United Nations Office of the High Commissioner for Human Rights. International migration, health and human rights. Geneva: International Organization for Migration; 2013 (http://www.ohchr.org/Documents/Issues/Migration/WHO_IOM_UNOHCHRPublication.pdf, accessed 10 April 2016).

2 Hosseinpoor AR, Bergen N, Schlotheuber A. Promoting health equity: WHO health inequality monitoring at global and national levels. Global Health Action. 2015;(8):29034 (http://www.globalhealthaction.net/index.php/gha/article/view/29034, accessed 10 April 2016).

6 SDG HEALTH AND HEALTH-RELATED TARGETS

Even though the indicators for the health and health-related SDG targets are still at the proposal stage, it is possible to provide an overview of the current situation broken down by country, region and globally. This not only provides initial information on the challenges ahead but also allows for assessment of the data gaps that exist for the proposed indicators.

6.1 Health targets – 13 targets and 26 proposed indicators

The health goal (SDG 3) comprises 13 targets, including four listed as "means-of-implementation" targets. Each target has one or two proposed indicators, with the exception of SDG Target 3.3: "By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable disease" which has five indicators; and SDG Target 3.9: "By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination" which has three. With a total of 26 indicators, the health goal has the largest number of proposed indicators of all the 17 SDGs.

SDG 3 targets cover a great deal of ground. Almost all of them can be linked to strategies and global action plans that have been adopted by the WHA in recent years, or are under development. Given that there are 13 health targets covering most national health concerns and the majority of international programmes, any approach to national health development that focuses on individual programmes in isolation will be counterproductive, and risk causing even greater fragmentation and competition than has been seen in the past. More crucially, it will fail to address the many cross-cutting issues that do not fit neatly into programme areas. The emphasis on UHC as a cross-cutting goal for the health sector should contribute to overcoming these challenges.[1]

The need for cross-cutting approaches to the health challenges faced should also inform the monitoring of individual targets; which needs to be done in a way that keeps the broader issues in focus. This includes very broad elements such as UHC and health systems, as well as the links to risk factors and determinants that are often considered external to the health sector. The SDGs provision of a framework for more-integrated action is of considerable importance in this regard.

Robust, reliable monitoring of progress and performance is of fundamental importance to all major programmes. The

1 Health in 2015: from MDGs to SDGs. Geneva: World Health Organization; 2015 (http://www.who.int/gho/publications/mdgs-sdgs/en/, accessed 10 April 2016).

sets of indicators proposed for the SDG targets provide critical information, but more information is often needed to understand why progress is or is not being made. In particular, more data are often needed on direct programme performance using coverage indicators and related quality-of-care measures.

6.2 Health-related targets in other goals – many targets linked to health

The SDGs are founded on the principle that they are "integrated and indivisible" – progress in one area is dependent upon progress in many others. Translating this idea into practical action is going to be one of the key challenges for the new agenda. With regard to health, deliberate action will be required to influence governance in many policy arenas to achieve health-sector goals. The health of people is not solely a health-sector responsibility; it is also impacted by issues such as transport, agriculture, housing, trade and foreign policy. To address the multisectoral nature of health determinants, the health sector should promote "Health in All Policies" – an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies and avoids harmful health impacts in order to improve population health and health equity, and address the social determinants of health.[1,2] Well over a dozen targets in other goals can be considered to be health related and should be given special attention in strategies, policies and plans to achieve the health goal, and in monitoring progress. Examples include targets related to nutrition, environmental risk factors and violence.

The SDGs provide a new and exciting opportunity to strengthen governance for health – the underlying assumption of which is that deliberate action is needed to influence governance in other policy arenas to promote and protect health. Areas of particular relevance include trade and intellectual property, sustainable energy, income inequality, migration, food security, and sustainable consumption and production. While much of the attention on governance for health has focused on global issues, the SDG declaration underlines the importance of governance for health at national and regional levels. While the integrated nature of the SDG agenda presents opportunities for new approaches to old problems, it also presents challenges. For example, it will require revisiting and reshaping the architecture for global health, particularly in relation to health security and the development of global public goods.

1 The Helsinki Statement on Health in All Policies. The 8th Global Conference on Health Promotion, Helsinki, 10–14 June 2013 (http://www.who.int/healthpromotion/conferences/8gchp/8gchp_helsinki_statement.pdf, accessed 10 April 2016).

2 Outcome of the World Conference on Social Determinants of Health. Resolution WHA65.8. In: Sixty-fifth World Health Assembly, Geneva, 21–26 May 2012. Resolutions and decisions, annexes. Geneva: World Health Organization; 2012:15–17 (WHA65/2012/REC/1; http://apps.who.int/gb/ebwha/pdf_files/WHA65-REC1/A65_REC1-en.pdf, accessed 10 April 2016).

6.3 Situation in 2016 – a sketch based on global data

This section provides a brief overview of the situation in key areas, drawing on the health and health-related indicators presented in Fig. 6.1. Countries in this "dashboard" are grouped by WHO region, with each country represented by a circle. The areas of focus are: (a) reproductive, maternal, newborn and child health; (b) infectious diseases; (c) NCDs and mental health; (d) injuries and violence; and (e) health systems. As the dashboard clearly shows, there are marked differences both between and within regions, as well as variations in the pattern for each indicator.

A more-extensive analysis is presented for the main indicators in the form of a series of two-page summaries (Annex A). These summaries cover the current situation, a brief discussion of what is needed to achieve the 2030 target, the equity dimension and the data gaps. Annex B then provides the latest country-level estimates for the indicators. Further information is available from the full database and SDG sections of the Global Health Observatory.[3]

Reproductive, maternal, newborn and child health

Multiple targets in SDG 3 and other goals refer to reproductive, maternal, newborn and child health. These include targets for mortality, service coverage, risk factors and health determinants (Table 6.1). *The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030* is fully aligned with the SDG targets, and is organized around

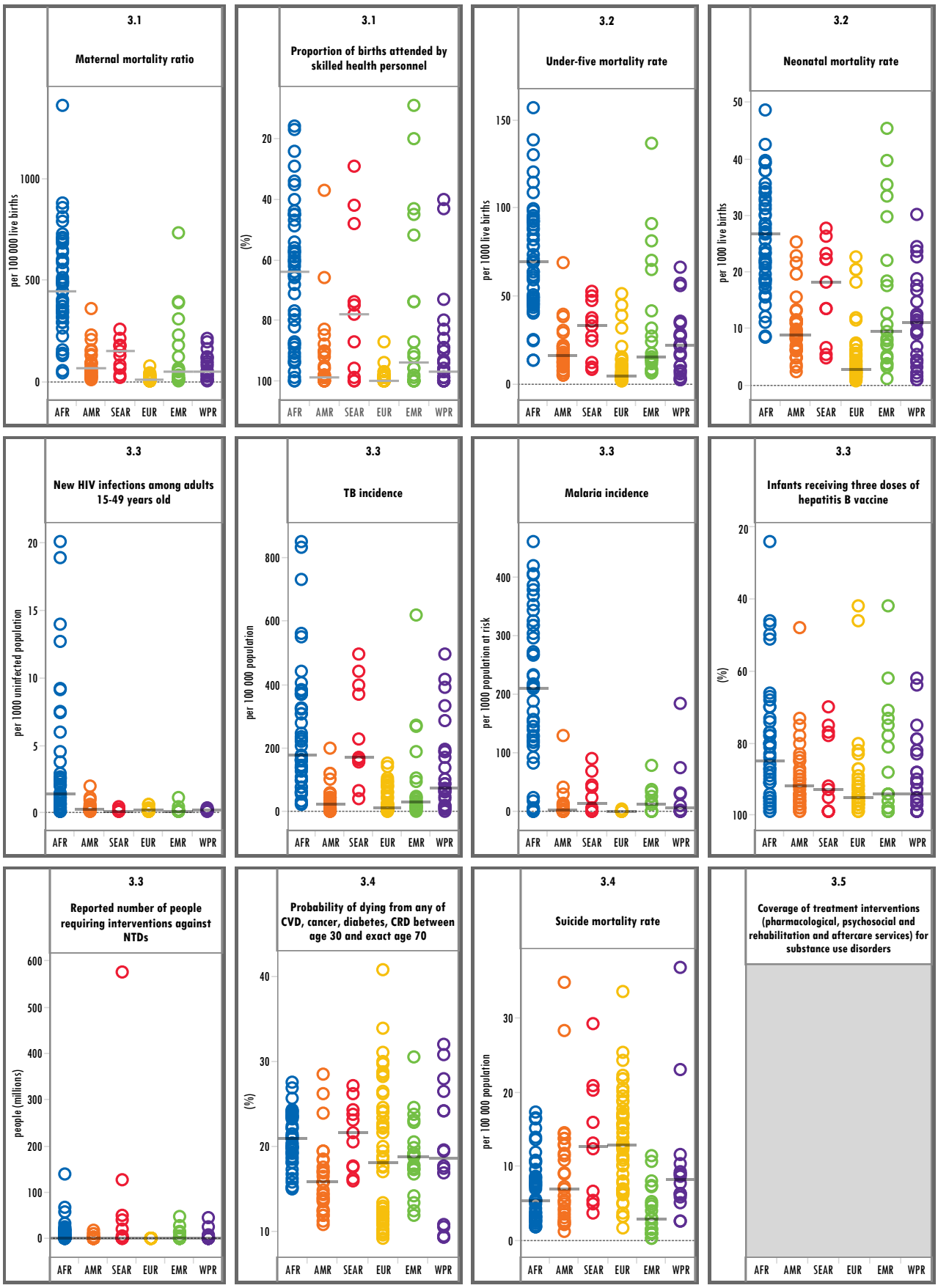
Table 6.1
Selected SDG targets and proposed indicators linked to reproductive, maternal, newborn and child health, by type of indicator

Type of indicator	SDG target	Proposed indicator
Impact	3.1	Maternal mortality
	3.2	Under-five mortality
	3.2	Neonatal mortality
	3.7	Adolescent birth rate
	3.9	Mortality due to unsafe water, sanitation and hygiene; Mortality due to air pollution (household and ambient)
Coverage	3.1	Births attended by skilled health personnel
	3.7	Family planning coverage
	3.8	UHC: RMNCH[a] tracers (family planning, antenatal and delivery care, full immunization coverage, health-seeking behaviour for suspected child pneumonia)
	37 (22)	Model life table systems
Risk factors/ determinants	2.2	Child stunting, child wasting, child overweight
	6.1	Access to safely managed drinking-water source
	6.2	Access to safely managed sanitation
	7.1	Clean household energy
	11.6	Ambient air pollution
	Other	Part of targets in goals on poverty, education, gender etc.

a RMNCH = reproductive, maternal, newborn and child health.

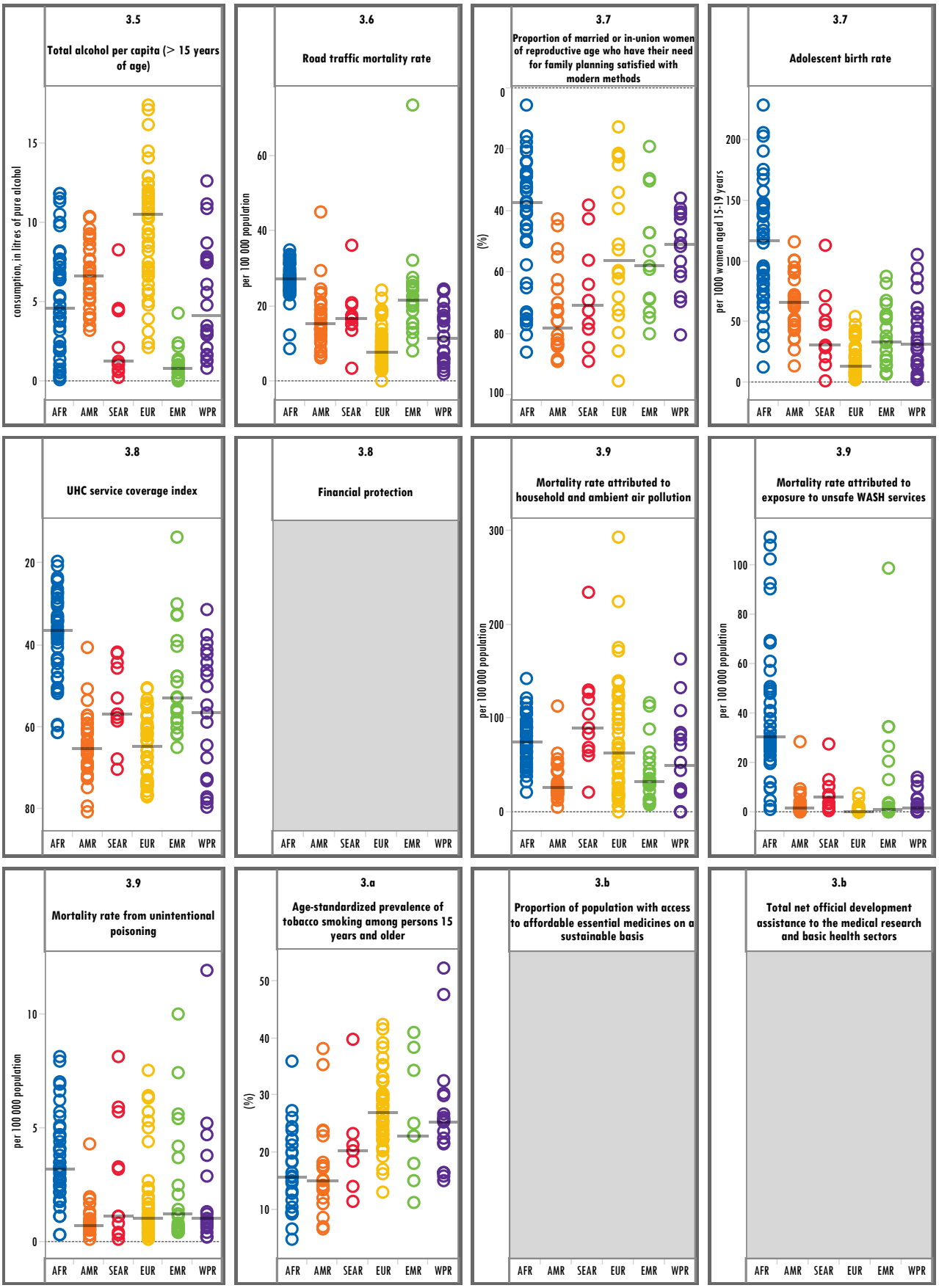
3 The Global Health Observatory (GHO) is WHO's portal providing access to data and analyses for monitoring the global health situation. See: http://www.who.int/gho/en/, accessed 16 April 2016.

Figure 6.1
Dashboard of SDG health and health-related indicators, by proposed indicator and WHO region[a]

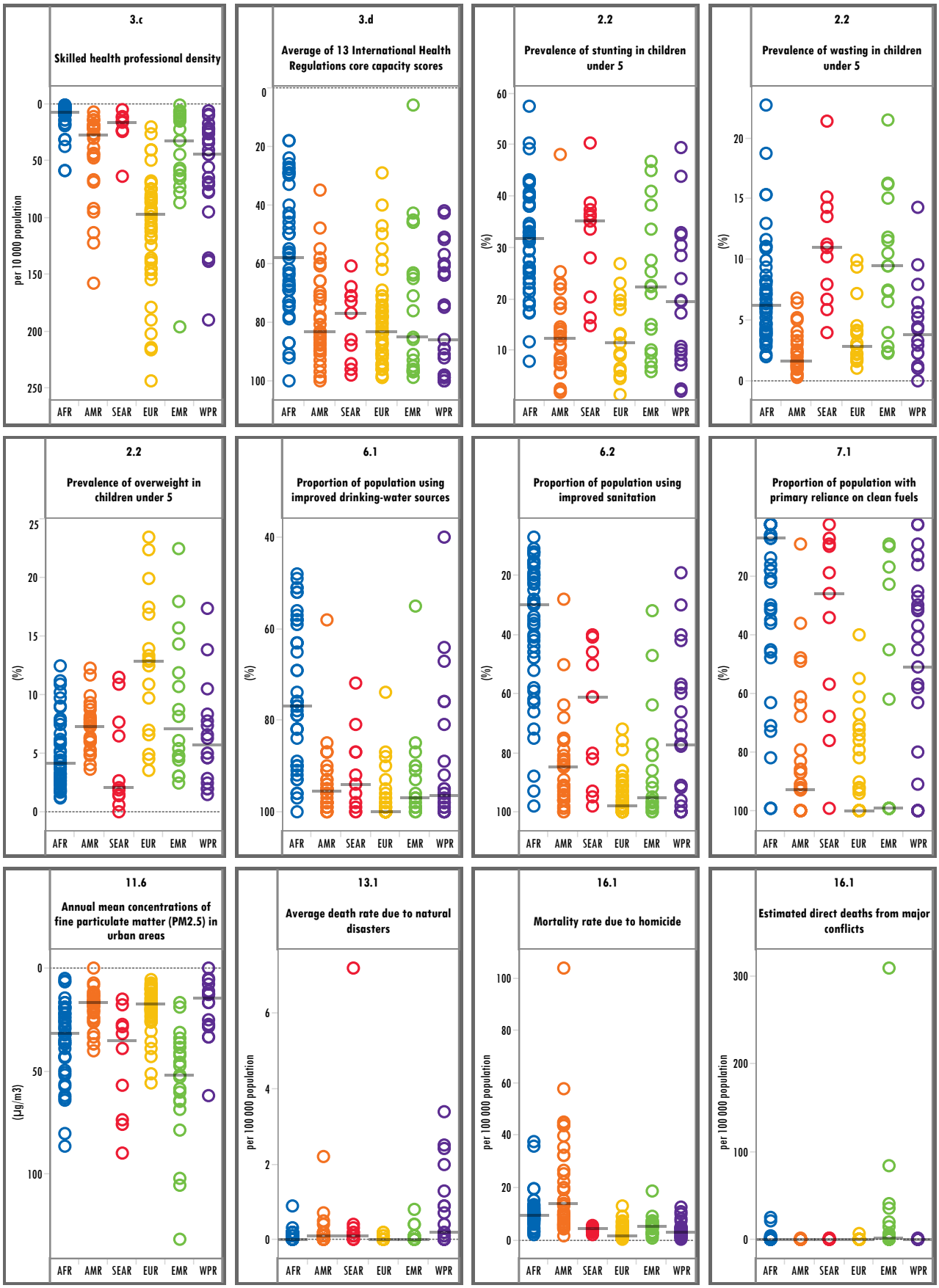


a Each circle represents a country value; horizontal lines indicate the median value for each group. See Annex B for more details on each indicator.

Figure 6.1
Dashboard of SDG health and health-related indicators, by proposed indicator and WHO region continued[a]



a Each circle represents a country value; horizontal lines indicate the median value for each group. See Annex B for more details on each indicator.


3.c
Skilled health professional density
per 10 000 population
3.d
Average of 13 International Health Regulations core capacity scores
2.2
Prevalence of stunting in children under 5
(%)
2.2
Prevalence of wasting in children under 5
(%)
2.2
Prevalence of overweight in children under 5
(%)
6.1
Proportion of population using improved drinking-water sources
(%)
6.2
Proportion of population using improved sanitation
(%)
7.1
Proportion of population with primary reliance on clean fuels
(%)
11.6
Annual mean concentrations of fine particulate matter (PM2.5) in urban areas
(µg/m3)
13.1
Average death rate due to natural disasters
per 100 000 population
16.1
Mortality rate due to homicide
per 100 000 population
16.1
Estimated direct deaths from major conflicts
per 100 000 population
AFR
AMR
SEAR
EUR
EMR
WPR

the broad themes of "Survive – Thrive – Transform".[1] It is an example of how a range of health and health-related goals and targets must be addressed to improve health and well-being of women, children and adolescents. The monitoring framework for this global includes proposed SDG indicators and further expands the set of indicators to provide more specificity.

The indicators for SDG targets 3.1 and 3.2 include the MDG indicators of maternal and under-five mortality. In 2015, the maternal mortality ratio (MMR) – the number of maternal deaths per 100 000 live births – was estimated at 216 globally. Almost all of these deaths occurred in low-resource settings and could have been prevented. The global MMR declined by 44% during the MDG era, representing an average annual reduction of 2.3% between 1990 and 2015.[2] In order to achieve the SDG target of 70 per 100 000 live births by 2030, the global annual rate of reduction will need to be at least 7.3%. Attaining that rate requires a marked acceleration in progress in this area. SDG Target 3.1 also includes skilled attendance at birth. Globally, coverage of skilled attendance at birth was estimated to have reached 73% in 2013.[3] However, more than 40% of births in the WHO African Region and WHO South-East Asia Region were not attended by skilled health personnel, and within countries large access disparities associated with differences in socioeconomic status persist.

An estimated 5.9 million children under 5 years died in 2015, with a global under-five mortality rate of 42.5 per 1000 live births. Child mortality is highest in sub-Saharan Africa, where 1 child in 12 dies before their fifth birthday, followed by South-East Asia where 1 in 19 dies before reaching 5 years. The annual rate of reduction in under-five mortality was 3.9% between 2000 and 2015.[4] Currently, 79 countries have under-five mortality rates above the SDG target of 25 under-five deaths per 1000 live births, and 24 countries have rates that are three times higher than that. However, if the momentum established during the MDG era can be maintained, the world will meet the 2030 target. To reflect the importance of neonatal mortality as part of overall child mortality, a specific target of 12 neonatal deaths per 1000 live births in 2030 was included in the SDG. Between 2000 and 2015, there was a 3.1% decline in such deaths, and this rate of improvement would need to be maintained in order to achieve the child mortality target.

SDG Target 3.7 on universal access to sexual and reproductive health-care services is to be monitored by two proposed indicators: the adolescent birth rate; and coverage of modern family planning services. Both of these were also part of MDG global monitoring. The global adolescent birth rate is estimated at 44 per 1000 women aged 15–19, but is five times higher in low-income countries than in high-income countries.[5] In addition, within LMIC, the adolescent birth rate was four times higher among the poorest quintile than among the richest quintile. Much of early childbearing is related to early marriage (SDG Target 5.3). Globally, more than 700 million women alive in 2014 had been married before their 18th birthday, with about 250 million of these entering into marriage or union before age 15.[6] Other targets and indicators related to sexual and reproductive health are included in SDG 5 (gender), such as female genital mutilation/cutting, reproductive health decision-making and sexual or other types of violence by intimate partners or others.

With regard to modern family planning services, globally in 2015, 76% of women of reproductive age who were married or in a union had their need for family planning with a modern method satisfied. As with other indicators, there was considerable regional variation, with, for example, 9 out of 10 married or in-union women of reproductive age in the WHO Western Pacific Region having their family planning needs met, compared with less than half of those in the WHO African Region.[7]

Reproductive, maternal, newborn and child health is one of the four categories of the UHC coverage index (see section 4, Table 4.1). This category includes four coverage indicators: family planning; antenatal care (four visits or more) with skilled attendance at birth; full child immunization coverage; and health-seeking behaviour for suspected child pneumonia. Major coverage gaps for all four of these indicators persist in many countries, especially among disadvantaged populations.

The indicators for SDG Target 2.2 on ending all forms of malnutrition are focused on stunting, wasting and overweight among children under 5 years of age. Globally in 2015, almost one in four children under 5 years of age (23%, or 156 million children) were affected by stunting, with the highest prevalence observed in the WHO African Region (38%), followed by the WHO South-East Asia Region (33%). Children are at greater risk of stunting if they are born in rural areas, poor households or to mothers denied

1 The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030. Every Women Every Child; 2015 (http://globalstrategy.everywomaneverychild.org/pdf/EWEC_globalstrategyreport_200915_FINAL_WEB.pdf, accessed 11 April 2016).

2 WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Trends in maternal mortality: 1990 to 2015. Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization; 2015 (http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/, accessed 25 March 2016).

3 Tracking universal health coverage: first global monitoring report. Geneva and Washington (DC): World Health Organization and World Bank; 2015. (http://www.who.int/healthinfo/ universal_health_coverage/report/2015/en/, accessed 9 April 2016).

4 Levels & Trends in Child Mortality. Report 2015. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation. New York (NY), Geneva and Washington (DC): United Nations Children's Fund, World Health Organization, World Bank and United Nations; 2015 (http://www.unicef.org/publications/files/Child_Mortality_Report_2015_Web_9_Sept_15.pdf, accessed 26 March 2016).

5 World Population Prospects: The 2015 Revision. DVD Edition. New York (NY): United Nations, Department of Economic and Social Affairs, Population Division; 2015 (http://esa.un.org/unpd/wpp/Download/Standard/Fertility/, accessed 13 April 2016).

6 Ending child marriage. Progress and prospects. New York (NY): United Nations Children's Fund; 2014 (http://www.unicef.org/media/files/Child_Marriage_Report_7_17_LR..pdf, accessed 10 April 2016).

7 Model-based Estimates and Projections of Family Planning Indicators 2015. New York (NY): United Nations, Department of Economic and Social Affairs, Population Division; 2015 (http://www.un.org/en/development/desa/population/theme/family-planning/cp_model.shtml , accessed 21 April 2016). Special tabulations were prepared for estimates by WHO region.

basic education. Wasting affected 50 million children under 5 years of age (around 7%) globally in 2015. The highest prevalence of wasting was observed in the WHO South-East Asia Region (13.5%, or 24 million children). Regarding overweight, prevalence increased globally and in most regions between 2000 and 2015, to 6% or 42 million children under 5 years of age in 2015, with the highest prevalence observed in the WHO European Region.

Several environmental targets and indicators are also relevant to reproductive, maternal, newborn and child health, including water and sanitation, and air pollution (discussed below). Diarrhoea is among the leading causes of deaths in children under 5 years of age, and household air pollution is estimated to cause half of all pneumonia deaths among the same group.

Infectious diseases

The main target relating to infectious diseases is SDG Target 3.3, which refers to ending the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases, and combating hepatitis, water-borne diseases and other communicable diseases. Several other SDG targets address aspects of infectious disease control, including the UHC target (3.8); reduction of mortality due to environmental factors (3.9); and strengthening of country capacity for early warning, risk reduction and management of national and global health risks (3.d). The targets on improving water and sanitation under SDG 6 are also relevant, as are the targets under SDG 1 (poverty), SDG 4 (education), SDG 11 (cities), SDG 13 (climate change) and others (Table 6.2).

Table 6.2
Selected SDG targets and proposed indicators linked to infectious diseases, by type of indicator

Type of indicator	SDG target	Proposed indicator
Impact	3.3	HIV incidence
	3.3	Tuberculosis incidence
	3.3	Malaria incidence
	3.3	Hepatitis B incidence
	3.3	People requiring interventions against neglected tropical diseases
	3.9	Mortality due to unsafe water, sanitation and hygiene; mortality due to air pollution (household and ambient)
Coverage/ system	3.8	UHC: infectious diseases tracer (ART coverage, tuberculosis treatment, use of insecticide-treated nets, access to safely managed drinking-water source and sanitation)
	3.d	International Health Regulations (IHR) capacity and health emergency preparedness
Risk factors/ determinants	6.1	Access to safely managed drinking-water source
	6.2	Access to safely managed sanitation
	7.1	Clean household energy
	Other	Part of targets in goals on poverty, education, cities, climate change etc.

The incidence rates for HIV, tuberculosis (TB), malaria and hepatitis are SDG indicators:

- In 2014, the global HIV incidence rate among adults aged 15–49 years was 0.5 per 1000 uninfected population, with 2 million people becoming infected. HIV incidence was highest in the WHO African Region at 2.6 per 1000 uninfected population in 2014, as compared with other WHO regions where incidence among adults aged 15–49 years ranged from 0.1 to 0.4 per 1000 uninfected.[1]

- In 2014, there were 9.6 million new TB cases (133 per 100 000 population) and 1.5 million TB deaths, including 0.4 million deaths among HIV-positive people. In 2014, the largest number of new TB cases occurred in the WHO South-East Asia Region and WHO Western Pacific Region, accounting for 58% of new cases globally. However, Africa carried the most severe burden, with 281 cases per 100 000 population.[2]

- In 2015, the malaria incidence rate was 91 per 1000 persons at risk, with an estimated 214 million cases and 438 000 deaths (more than two thirds of which occurred in children under 5 years of age). Sub-Saharan Africa has the highest burden, with an incidence rate of 246 per 1000 persons at risk, accounting for roughly 90% of all cases and deaths globally.[3]

- For viral hepatitis no estimates of incidence are available yet. Global coverage of hepatitis B vaccination was 82% in 2014.[4]

Progress towards the target of ending the epidemic of neglected tropical diseases (NTDs) is monitored through the SDG indicator: "People requiring interventions against NTDs". In 2014, at least 1.7 billion people in 185 countries required mass or individual treatment and care for NTDs.

The risk of acquiring infectious diseases varies greatly depending on socioeconomic determinants such as poverty and housing conditions, sex (for example, in the case of HIV infection in women, and tuberculosis in men) and environmental conditions which are influenced by different factors, including climate and climate change. Mortality caused by exposure to unsafe water, sanitation and hygiene (WASH) services is an indicator under SDG Target 3.9. In 2012, an estimated 871 000 deaths (mostly from infectious diseases) were caused by the contamination of drinking-

1 How AIDS changed everything. MDG 6: 15 years, 15 lessons of hope from the AIDS response. Geneva: UNAIDS; 2015 (http://www.unaids.org/en/resources/documents/2015/MDG6_15years-15lessonsfromtheAIDSresponse, accessed 10 April 2016) and UNAIDS/WHO estimates; 2015.

2 Global tuberculosis report 2015. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/191102/1/9789241565059_eng.pdf?ua=1, accessed 11 April 2016).

3 World Malaria Report 2015. Geneva: World Health Organization; 2015 (http://www.who.int/malaria/publications/world-malaria-report-2015/report/en/, accessed 10 April 2016).

4 WHO/UNICEF coverage estimates 2014 revision. July 2015 (see: http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html).

water, bodies of water (such as rivers and reservoirs) and soil, and by inadequate hand-washing facilities and practices resulting from inadequate or inappropriate services. Almost half (45%) of these deaths occurred in the WHO African Region; where 13% of the global population lived.[1,2]

SDG 6 on water and sanitation provides the targets and indicators for monitoring progress towards universal and equitable access to safe and affordable drinking-water, and to adequate and equitable sanitation and hygiene. In 2015, 91% of the world's population used an improved drinking-water source and 68% used an improved sanitation facility.[3] The SDG targets and indicators are more ambitious, and focus on the use of a safely managed drinking-water service, defined as an improved water source which is located on premises, available when needed and free from faecal (and priority chemical) contamination. The SDGs also target safely managed sanitation coverage, which includes access to a hand-washing facility with water and soap. Preliminary estimates for safely managed water coverage are low and suggest that such coverage will be much lower than that for improved drinking-water sources.[4]

SDG Target 3.d: "Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks" concerns more than infectious diseases. The indicator of this target is the International Health Regulations (IHR) capacity and health emergency preparedness index. The IHR require countries to report certain disease outbreaks and other public health events (such as those related to chemical and radio nuclear hazards) to WHO. Despite progress in the implementation of IHR core capacities in recent years, the situation in 2015 is still far from satisfactory.

Noncommunicable diseases and mental health

As shown in Table 6.3, SDG 3 includes targets for the reduction of NCD-related mortality and promotion of mental health (3.4); for reducing substance abuse, including the harmful use of alcohol (3.5); for the reduction of deaths and illnesses from air pollution (3.9); and for tobacco control (3.a).

In 2012, NCDs were responsible for around 38 million deaths per year, accounting for 68% of all deaths worldwide. Of deaths under the age of 70 years, commonly referred to as premature deaths, an estimated 52% were due to NCDs. Over three quarters of those premature deaths were caused by cardiovascular diseases, cancer, diabetes and chronic respiratory disease. Globally, premature mortality from these four main NCDs declined by 15% between 2000 and 2012.[5] This rate of decline is insufficient to meet the 2030 target of a one third reduction.

Table 6.3
Selected SDG targets and proposed indicators linked to noncommunicable diseases and mental health, by type of indicator

Type of indicator	SDG target	Proposed indicator
Impact	3.4	NCD mortality
	3.4	Suicide mortality
	3.9	Mortality due to air pollution (household and ambient)
Coverage/ risk factors	3.8	UHC: NCDs tracers (hypertension treatment coverage; diabetes treatment coverage; cervical cancer screening; tobacco use)
	3.a	Tobacco use
	3.5	Substance abuse (harmful use of alcohol)
Risk factors/ determinants	7.1	Clean household energy
	11.6	Ambient air pollution
	Other	Part of targets in goals on poverty, education, cities, etc.

Mental disorders occur in all regions and cultures of the world with the most prevalent being depression and anxiety, which are estimated to affect nearly one in 10 people on the planet (676 million). At its worst, depression can lead to suicide. In 2012, there were over 800 000 estimated suicide deaths worldwide, with 86% of these occurring in people under the age of 70. Globally, among young adults aged 15–29 years suicide accounts for 8.5% of all deaths and is the second leading cause of death in this group after road traffic injuries.[5]

Substance use and substance-use disorders cause a significant public health burden, including through the harmful use of alcohol. Worldwide alcohol consumption in 2015 was projected to be 6.3 litres of pure alcohol per person aged 15 or older.[6] In 2010, 38% of the world's population aged 15 or older had drunk alcohol in the past 12 months, with 16% of them engaged in heavy episodic drinking.[7] There is considerable global variation in alcohol use.

SDG 3.a addresses the implementation of the WHO Framework Convention on Tobacco Control (FCTC); with tobacco use selected as the indicator of progress. Tobacco use is a leading risk factor for NCDs. In 2015, over 1.1 billion people used tobacco, with far more males (945 million) than females (180 million) smoking. Even though the prevalence of smoking is declining worldwide and in many countries, it appears to be increasing in the WHO Eastern Mediterranean Region and the WHO African Region.[8]

1 Preventing disease through healthy environments. A global assessment of the burden of disease from environmental risks. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196_eng.pdf?ua=1, accessed 3 April 2016).

2 Preventing diarrhoea through better water, sanitation and hygiene. Exposures and impacts in low- and middle-income countries. Geneva: World Health Organization, 2015 (http://apps.who.int/iris/bitstream/10665/150112/1/9789241564823_eng.pdf?ua=1&ua=1, accessed 19 April 2016).

3 Progress on sanitation and drinking water – 2015 update and MDG assessment. New York (NY) and Geneva: UNICEF and World Health Organization; 2015 (http://www.who.int/water_sanitation_health/monitoring/jmp-2015-update/en/, accessed 5 April 2016).

4 Hutton, G, Varughese M. The costs of meeting the 2030 Sustainable Development Goals targets on drinking water, sanitation and hygiene. Washington (DC): World Bank; 2016.

5 Global Health Estimates 2013: deaths by cause, age and sex; estimates for 2000–2012. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/global_burden_disease/en/).

6 Global Health Observatory [website]. Geneva: World Health Organization. (http://www.who.int/gho/en/)

7 Global status report on alcohol and health 2014. Geneva: World Health Organization; 2014 (http://www.who.int/substance_abuse/publications/global_alcohol_report/en/, accessed 29 March 2016).

8 WHO global report on trends in tobacco smoking 2000–2025 (http://www.who.int/tobacco/publications/surveillance/reportontrendstobaccosmoking/en/index4.html).

Air pollution is a major risk factor for NCDs, causing cardiovascular disease, stroke, chronic obstructive pulmonary disease and lung cancer, as well as increasing the risks for acute respiratory infections. In 2012, ambient (or outdoor) air pollution (for example, from traffic, industrial sources, waste burning or residential fuel combustion) caused 3 million deaths. SDG Target 11.6 focuses on urban environmental risks and includes an indicator on the annual mean levels of fine particulate matter (such as $PM_{2.5}$ and PM_{10}) in cities. In 2014, up to 90% of the population in cities were exposed to fine particulate matter in concentrations exceeding WHO Air Quality Guidelines, with exposure rates varying considerably by region.[1]

In addition, household air pollution caused by cooking with unclean fuels or using inefficient technologies caused an estimated 4.3 million deaths from NCDs and childhood pneumonia.[2] In 2014, some 3.1 billion people relied primarily on polluting fuels (that is, solid fuels and kerosene) for cooking.[3] The smoke or household air pollution arising from this inefficient energy use in the home for cooking, heating and lighting is laced with health-damaging pollutants. SDG Target 7.1 addresses access to affordable, reliable and modern energy services, and is to be monitored with an indicator on the reliance on clean fuels and technologies at the household level.

Injuries and violence

Injuries and violence are included in multiple SDG targets. Road traffic injuries and unintentional injuries are included in the health goal (SDG 3) with targets related to violence and disasters part of other goals (Table 6.4).

According to the latest WHO estimates around 1.25 million people died from road traffic injuries in 2013, and another 20–50 million people sustained non-fatal injuries as a result of road traffic collisions or crashes.[4] Halving the number of global deaths and injuries from road traffic accidents by 2020 (SDG Target 3.6) is an ambitious goal given the dramatic increase in vehicle numbers (up by 90% between 2000 and 2013). However, the past decade has shown that the increase in numbers of deaths due to road traffic injuries has been much smaller than the increase in number of registered vehicles, suggesting that interventions to improve global road safety have had some impact on mortality.

Worldwide in 2012, an estimated 193 000 deaths were caused by unintentional poisonings, which is a proposed indicator for SDG Target 3.9. The highest mortality rates from unintentional poisonings occur in children under 5 years of age and adults over 55 years. The mortality rate is also 50% higher in men than in women.[5]

Table 6.4
Selected SDG targets and proposed indicators linked to injuries and violence, by type of indicator

Type of indicator	SDG target	Proposed indicator
Impact	3.6	Deaths due to road traffic injuries
	3.9	Mortality due to unintentional poisoning
	1.5, 11.5, 13.1	Deaths due to disasters
	16.1	Homicide
	16.1	Conflict-related deaths
Coverage/ risk factors/ determinants	5.2	Women and girls subjected to physical, sexual or physiological violence
	16.1	Population subjected to physical, sexual or physiological violence
	Other	Part of targets in goals on peaceful and inclusive societies, cities, poverty, education, etc.

SDG Target 13.1: "Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries",[6] is linked to the SDG Target 3.d to: "Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks". The proposed indicator for SDG Target 13.1 is the number of deaths, missing and persons affected by disaster per 100 000 people.[7] Globally, 331 natural disasters were registered in 2015, causing 22 662 deaths and affecting 90.2 million people. Both the number of reported disasters and total number of people affected have been declining over the last 15 years, with 2014 witnessing the lowest number of deaths due to natural disasters. However, the long-term mortality trend is dominated by major events, such as the Asia tsunami in 2004; the Myanmar cyclone in 2008; and the Haiti earthquake in 2010.[8]

SDG Target 16.1 aims to: "Significantly reduce all forms of violence and related death rates everywhere". The first indicator proposed for this target is: "Number of victims of intentional homicide per 100 000 population, by age group and sex". It is estimated that homicide and collective violence account for around 10% of global injury-related deaths. In 2012, there were an estimated 475 000 murders. There are very large differences between different regions of the world in this respect, with the highest rates occurring in the WHO Region of the Americas. Four fifths of homicide

1 Air pollution: a global assessment of exposure and burden of disease. Geneva: World Health Organization; 2016. Forthcoming.

2 Global Health Observatory [website]. Geneva: World Health Organization (http://www.who.int/gho/en/).

3 Burning opportunity: clean household energy for health, sustainable development, and wellbeing of women and children. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204717/1/9789241565233_eng.pdf, accessed 3 April 2016).

4 Global status report on road safety 2015. Geneva: World Health Organization; 2015 (http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/, accessed 3 April 2016).

5 Global Health Estimates 2013: deaths by cause, age and sex; estimates for 2000–2012. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/global_burden_disease/en/).

6 The same indicator is also proposed for the following two SDG targets relating to disasters: (a) SDG Target 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters; and (b) SDG Target 11.5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

7 This indicator may be revised to reflect the future revision of indicators for monitoring in the context of the Sendai Framework.

8 The International Disaster Database [online database]. Brussels: Centre for Research on the Epidemiology of Disasters – CRED (http://www.emdat.be/database, accessed 11 February 2016).

victims are men, and 65% of victims are males aged 15–49 years. Among women, intimate partner homicide accounts for almost 38% of all murders, as compared with 6% of all murders of men. Between 2000 and 2012, there was a marked decline in homicide rates, with an estimated 17% fall globally (from 8.0 to 6.7 per 100 000 population).[1]

A second proposed indicator for SDG Target 16.1 is conflict-related deaths per 100 000 population. In 2015, it is provisionally estimated that 152 000 people (uncertainty range: 89 500–234 600) were killed in wars and conflicts, corresponding to about 0.3% of global deaths.[2] These estimates do not include deaths due to the indirect effects of war and conflict on the spread of diseases, poor nutrition and collapse of health services. Between around 1990 and 2011, there was a decline in the number and intensity of wars and conflicts.[3] Although WHO estimates of global direct conflict deaths (injury deaths) vary substantially by year, there was a statistically significant average decline during the period 1990–2010 of 2% per year, if the Rwandan genocide of 1994 is excluded.

Health systems

Health systems strengthening is a core focus of the SDGs. This is reflected by the fact that UHC is central to the overall health goal as set out in the SDG declaration, and is assigned a specific target (3.8) under the SDG health goal. With its focus on coverage of quality essential health-care services with financial protection for all, UHC underpins the achievement of the other health targets, and takes into account the interconnectedness of health with risk factors and determinants of health that are part of many other SDG targets (Table 6.5). More details on the UHC indicators are provided in section 4.

In order to move towards the UHC goal, country health systems need to be strengthened as well as adapted to meet the shifting health priorities associated with demographic and epidemiological transitions, rapidly developing technologies and changing public expectations. Several health targets (notably 3.b, 3.c and 3.d) address health system issues, mostly focusing on strengthening health systems in least-developed and developing countries.

Access to affordable medicines and vaccines on a sustainable basis is an indicator for SDG Target 3.b, which focuses on support for research and development,

Table 6.5
Selected SDG targets and proposed indicators linked to health systems, by type of indicator

Type of indicator	SDG target	Proposed indicator
Coverage/ financial protection	3.8	UHC index: tracer indicators on service access (hospital access, health workforce density by specific cadres, access to medicines and vaccines, IHR capacities)
	3.8	UHC: financial protection (catastrophic and impoverishing out-of-pocket health spending)
System	3.b	Access to medicines and vaccines
	3.b	Research and development on health issues that primarily affect developing countries, including official development assistance (ODA)
	3.c	Health workforce density and distribution
	3.d	IHR capacity and health emergency preparedness
	17.18	Data disaggregation
	17.19	Coverage of birth and death registration; completion of regular population census

and on the affordability of medicines and vaccines for communicable diseases and NCDs that primarily affect developing countries. Despite improvements in recent decades, the availability of essential medicines at public health facilities is often poor. Even when available, medical products are not necessarily affordable to patients. Studies have shown that in some LMIC where patients have to pay for medicines in the public sector, the prices of some generic medicines are on average 2.9 times higher than international reference prices, and 4.6 times in private facilities.[4]

A second proposed indicator under SDG Target 3.b aims to capture the level of research and development investments. By combining the indicators under targets 3.b and 9.5 (research and development in general), it is possible to evaluate the amount and proportion of public, private and not-for-profit research and development investments directed towards health problems that primarily affect developing countries. In 2014, such funding reached US$ 3.4 billion, and was directed at medical product development.[5] This constitutes approximately 0.004% of the global gross domestic product (GDP) in 2014.[6] Furthermore, less than 2% of all clinical trials addressed such issues in 2012 and only 1% of 336 newly approved chemical entities between 2000 and 2011 were primarily intended for tackling developing country health problems.[7,8] The lack of research capacity in many developing countries is also an important factor.

1 Global status report on violence prevention 2014. Geneva, New York and Vienna: World Health Organization, United Nations Development Programme and United Nations Office on Drugs and Crime; 2014 (http://www.who.int/violence_injury_prevention/violence/status_report/2014/en/, accessed 6 April 2016).

2 Global Health Estimates: deaths by cause, age and sex, with provisional update to 2015 using methods and data sources found at: http://www.who.int/entity/healthinfo/global_burden_disease/GlobalCOD_method_2000_2012.pdf?ua=1 , accessed 22 February 2016).

3 Human security report 2013. The decline in global violence: evidence, explanation, and contestation. Vancouver: Human Security Press; 2014 (http://www.hsrgroup.org/docs/Publications/HSR2013/HSRP_Report_2013_140226_Web.pdf, accessed 10 April 2016).

4 Millennium Development Goal 8: taking stock of the global partnership for development. MDG Gap Task Force Report 2015. New York (NY): United Nations; 2015 (http://www.un.org/en/development/desa/policy/mdg_gap/mdg_gap2015/2015GAP_FULLREPORT_EN.pdf, accessed 23 April 2015).

5 Moran M, Chapman N, Abela-Oversteegen L et al. Neglected disease research and development: the ebola effect. Policy Cures. 2015.

6 The World Bank. Data, GDP ranking (http://data.worldbank.org/data-catalog/GDP-ranking-table, accessed 22 February 2016).

7 Røttingen J-A, Regmi S, Eide M et al. Mapping available health R&D data: what's there, what's missing and what role for a Global Observatory. Lancet. 2013;382:1286–307.

8 Pedrique B, Strub-Wourgaft N, Some C et al. The drug and vaccine landscape for neglected diseases (2000-11): a systematic assessment. Lancet Global Health. 2013;1:e371–9.

SDG Target 3.c: "Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least-developed countries and small island developing States" has one proposed indicator for workforce density and distribution. Major shortages of physicians and nurses/midwives are a matter for concern in most countries in the WHO African Region, WHO South-East Asia Region and WHO Eastern Mediterranean Region, where densities per 1000 population are only a fraction of what they are elsewhere in the world.[1] It has been estimated that there was a deficit of approximately 17.4 million health workers in 2013 – of which almost 2.6 million were physicians and over 9 million were nurses and midwives. Regionally, the largest deficit of health workers was in South-East Asia (6.9 million) followed by Africa (4.2 million).

Statistics on health financing show that total health expenditure per capita is still low in many developing countries. Most developing countries spent less than 8% of their gross domestic product (GDP) on health, and many less than 5%. In 2013, per capita total health expenditure at average exchange rate was less than US$ 50 in 27 countries and less than US$ 100 in 46 countries. Positive trends are discernible, however. Per capita government health expenditure globally increased by about 40% in real terms between 2000 and 2013, with major increases in all regions. This may simply reflect economic growth, but in several countries is also the result of an increased prioritization for health in government budget allocations. On average, across countries, global OOP health spending is down slightly (from 35% of THE in 2000–2004 to 31% in 2010–2013), which suggests an improvement in financial protection. However, average levels in low-income countries remain high (42%).

SDG Target 3.d: "Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks" has obvious implications for health system strengthening. All national and global health risks require full implementation of the IHR; the core capacities of which are basic health system functions that focus on issues related to health security, and require: (a) strong health systems with good information and surveillance infrastructures; (b) an adequate health workforce; and (c) effective service delivery, including access to medicines and vaccines. As noted above, despite progress in the implementation of IHR core capacities in recent years, the situation in 2015 remains far from satisfactory.

1 Global strategy on human resources for health: Workforce 2030. Draft December 2015 (http://www.who.int/hrh/resources/WHO_GSHRH_DRAFT_05Jan16.pdf?ua=1, accessed 11 April 2016).

6.4 Data gaps – need for strong country health information systems

The SDG agenda presents a major monitoring challenge for all countries. The global set of indicators is large and includes many indicators with considerable measurement issues. Countries will also have to add indicators to ensure that the most relevant aspects of the goals and targets are adequately monitored. Finally, addressing the emphasis on disaggregation of all indicators, where relevant, will be a major challenge for all data collection, analysis and communication efforts.

The monitoring of the health and health-related targets is fairly robust, relative to many other targets. This is partly due to the investments made in monitoring the health MDGs, and partly due to the general emphasis placed on the importance of data and evidence in the health sector. However, there are still major data gaps for most health indicators that need to be addressed in order to improve the ability to track global progress.

Table 6.6 presents a summary of country data availability for a selection of the proposed indicators. More detail is provided in Annex A, which contains short sections on data gaps for each indicator. It is important to distinguish between the availability of global estimates and the strength of the underlying data. Country data availability was assessed based on the underlying data available to WHO or other international agencies producing estimates for global monitoring. The table also presents an assessment of the availability of disaggregated data for global monitoring purposes. An indicator is classified as having "good" data availability/disaggregation if more than 75% of countries where the indicator is relevant have recent data for the indicator (2010 or later); "fair" if 40–74% had recent data; and "poor" if less than 40% of countries had recent data. This does not take into account data quality. For example, cause-of-death information generated by CRVS systems is considered more reliable for NCDs and road traffic injuries than for suicide and unintentional poisoning. Some indicators may have different definitions in different countries, making them less comparable.

Comparable estimates are now produced for every country on a regular basis for most indicators, driven by advances in statistical modelling and a demand for up-to-date comparable statistics at the global level. These global estimates have considerable uncertainty which is greater if data availability is poor. Uncertainty is also greater if more steps are involved in the estimation process. For example, mortality due to air pollution involves not only establishing mortality rates due to specific causes of death (such as respiratory conditions), but also requires data on the proportion of deaths attributable to this risk factor.

Table 6.6
Summary of the availability and degree of disaggregation of country data on proposed health and selected health-related SDG indicators[a]

Indicator topic		Country data availability	Disaggregation	Comparable estimates	Source estimates
3.1.1	Maternal mortality	Fair	Poor	Annual	UN MMEIG
3.1.2	Skilled birth attendance	Good	Fair	In preparation	UNICEF, WHO
3.2.1	Under-five mortality rate	Good	Fair	Annual	UN IGME
3.2.2	Neonatal mortality rate	Good	Fair	Annual	UN IGME
3.3.1	HIV incidence	Fair	Fair	Annual	UNAIDS, WHO
3.3.2	Tuberculosis incidence	Fair	Poor	Annual	WHO
3.3.3	Malaria incidence	Fair	Fair	Annual	WHO
3.3.4	Hepatitis B incidence	Poor	Poor	In preparation	WHO
3.3.5	People requiring interventions against NTDs	Good	Poor	Annual	WHO
3.4.1	Mortality due to NCDs	Fair	Poor	Every 2–3 years	WHO
3.4.2	Suicide mortality rate	Fair	Poor	Every 2–3 years	WHO
3.5.1	Treatment substance use disorders	Poor	Poor	Not available	UNODC, WHO
3.5.2	Harmful use of alcohol	Good	Fair	Annual	WHO
3.6.1	Road traffic injury deaths	Good	Poor	Every 2–3 years	WHO
3.7.1	Family planning	Fair	Fair	Annual	UN Population Division
3.7.2	Adolescent birth rate	Good	Fair	Annual	UN Population Division
3.8.1	Coverage index UHC	Fair	Poor	In preparation	WHO, World Bank
3.8.2	Financial protection	Poor	Poor	In preparation	WHO, World Bank
3.9.1	Mortality due to air pollution	Fair	Poor	Every 2–3 years	WHO
3.9.2	Mortality due to WASH	Fair	Poor	Every 2–3 years	WHO
3.9.3	Mortality due unintentional poisoning	Fair	Poor	Every 2–3 years	WHO
3.a.1	Tobacco use	Good	Fair	Every 2–3 years	WHO
3.b.1	Access to medicines and vaccines	Poor	Poor	Not available	WHO
3.b.2	ODA for medical research	Good	Not applicable	In preparation	OECD, WHO
3.c.1	Health workers	Fair	Poor	Not available	WHO
3.d.1	IHR capacity and emergency preparedness	Good	Not applicable	Not applicable	WHO
2.2.1	Stunting among children	Good	Good	Annual	UNICEF, WHO, World Bank
2.2.2	Wasting and overweight among children	Fair	Fair	Annual	UNICEF, WHO, World Bank
6.1.1	Drinking-water services	Good	Good	Every 2–3 years	UNICEF, WHO
6.2.1	Sanitation services	Good	Good	Every 2–3 years	UNICEF, WHO
7.1.1	Clean household energy	Good	Good	Every 2–3 years	WHO
11.6.1	Air pollution	Good	Good	Annual	WHO
13.1.1	Mortality due to disasters	Good	Poor	Every 2–3 years	UNISDR, WHO
16.1.1	Homicide	Fair	Poor	Every 2–3 years	UNODC, WHO
16.1.2	Mortality due to conflicts	Fair	Poor	Every 2–3 years	OCHCR, WHO

a Country data availability and disaggregation were assessed based on the data available to WHO or other international agencies producing estimates for global monitoring. An indicator is classified as having "good" data availability/disaggregation if data were available for more than 75% of countries where the indicator is relevant (2010 or later); "fair" if data were available for 40–74% of countries; and "poor" if data were available for less than 40% of countries.

It is clear that investments in data generation, analysis, communication and use are needed for almost all indicators. This includes investing in CRVS systems, regular standardized household surveys on health, well-functioning routine health facility reporting systems with regular health-facility surveys, and comprehensive administrative data sources such as NHAs and health workforce accounts. Innovative approaches, using advances in information and communication technology, can also greatly facilitate progress. Priorities for such investment were agreed upon by the participants of the Global Summit on Measurement and Accountability for Health, Washington, DC, June 2015, and by global health agency leaders. Box 6.1 shows the corresponding five-point call to action with a set of targets for better data systems in support of health-related SDG monitoring. The workplan of the Health Data Collaborative, based on this call to action, was launched in March 2016.

Box 6.1
Five-point call to action on strengthening country health information systems, with targets[1]

1. **Increase the level and efficiency of investments to strengthen country health information system in line with international standards and commitments:**

   - By 2030, countries are investing adequately in health information and statistical systems;
   - By 2020, government and development partner investments are fully aligned with a single country platform for information and accountability.

2. **Strengthen country capacity to collect, compile, share, disaggregate, analyse, disseminate, and use data at all levels of the health system:**

   - By 2020, countries have annual transparent reviews of health progress and system performance, based on high-quality data and analyses led by country institutions;
   - By 2025, countries have high quality, comprehensive, disaggregated data to review progress against national plans and report on progress against health-related SDGs;
   - By 2020, countries have health information flows that include regular feedback and local use of data locally to improve services and programmes.

3. **Ensure that countries have well-functioning sources for generating population health data in line with international standards:**

   - By 2025, countries have in place a regular, comprehensive programme of health surveys tailored to country needs, and have completed the 2020 round of census, in line with international standards;
   - By 2030, all births are registered by civil registration as soon as possible; 80% of deaths are reported, registered, medically certified, and disaggregated by age and sex; causes of death are reported using the International Classification of Diseases (ICD) by all hospitals, with verbal post-mortem ascertaining causes of death in communities.

4. **Maximize effective use of the data revolution, based on open standards, to improve health facility and community information systems empowering decision-makers at all levels with real-time access to information:**

   - By 2020, countries are compliant with IHR national core functions for surveillance and response and have effective, real-time systems in place, including the capacity to analyse and link data using interoperable, interconnected electronic reporting systems within the country;
   - By 2025, countries have in place electronic systems for real-time reporting of health statistics from at least 80% of facilities and communities, including data quality assurance;
   - By 2030, countries have regular maternal and perinatal death surveillance and response mechanisms at the national, subnational, and facility levels;
   - By 2030, at least 90% of countries have complete, up-to-date system of health and workforce accounts using international standards.

5. **Promote country and global governance with citizen and community participation for accountability through inclusive, transparent reviews of progress and performance at facility, subnational, national, regional and global levels, linked to the health-related SDGs:**

- By 2016, a global coordination and accountability mechanism produces regular reports and reviews the progress of the health measurement roadmap and action plan;
- By 2017, countries have established mechanisms to make health data available to users through electronic dissemination and easy access to a central data repository;
- By 2020, civil society organizations in countries are actively and meaningfully participating in country reviews of progress and performance at all levels.

1 Health measurement and accountability post 2015: Five-point call to action (http://www.healthdatacollaborative.org/fileadmin/uploads/hdc/Documents/5-point-call-to-action.pdf, accessed 10 April 2016).

ANNEX A

SUMMARIES OF THE SDG HEALTH AND HEALTH-RELATED TARGETS

Explanatory notes

This annex presents a series of two-page summaries of health and selected health-related SDG indicators. These summaries outline the current situation, briefly set out what is needed to achieve the 2030 target, highlight the equity dimension and identify the key data gaps.

The statistics shown below represent official WHO statistics based on the evidence available in early 2016. They have been compiled primarily using publications and databases produced and maintained by WHO or United Nations groups of which WHO is a member. A number of statistics have been derived from data produced and maintained by other international organizations.

Wherever possible, estimates have been computed using standardized categories and methods in order to enhance cross-national comparability. This approach may result in some cases in differences between the estimates presented here and the official national statistics prepared and endorsed by individual WHO Member States. It is important to stress that these estimates are also subject to considerable uncertainty, especially for countries with weak statistical and health information systems where the quality of underlying empirical data is limited.

The tables shown on the right-hand side of most sections provide the latest available set of country values. For indicators with a reference period expressed as a range, country values refer to the latest available year in the range unless otherwise noted. Within each WHO region, countries are sorted in ascending order for mortality, incidence and risk-factor indicators, and in descending order for coverage and capacity indicators. Countries for which data are not available or applicable are sorted alphabetically at the bottom of each region, unless otherwise noted.

Country income grouping is based on the World Bank analytical income classification of economies[1] corresponding to the year of the data.

More details on the indicators and estimates presented here are available at the WHO Global Health Observatory.[2]

1 For more information, see: Country classification. Washington (DC): World Bank (https://datahelpdesk.worldbank.org/knowledgebase/topics/19280-country-classification, accessed 16 April 2016).

2 The Global Health Observatory (GHO) is WHO's portal providing access to data and analyses for monitoring the global health situation. See: http://www.who.int/gho/en/, accessed 16 April 2016.

MATERNAL MORTALITY

SDG Target 3.1
By 2030, reduce the global maternal mortality ratio to less than 70 per 100 000 live births

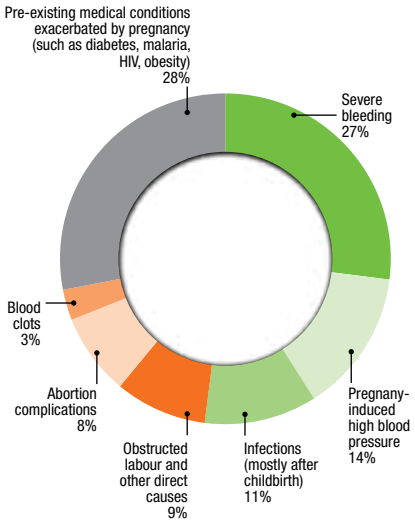
Indicator 3.1.1: Maternal mortality ratio

SITUATION

In 2015, the maternal mortality ratio (MMR) – defined as the number of maternal deaths per 100 000 live births – was estimated at 216 globally.[1] This translates into approximately 830 women dying every single day due to the complications of pregnancy and childbirth. Almost all of these deaths occurred in low-resource settings, and most could have been prevented. The WHO African Region bore the highest burden with almost two thirds of global maternal deaths occurring in the region (Fig. A.1.2). The probability of a 15 year-old girl in the region eventually dying from a maternal cause was as high as 1 in 37 – compared to 1 in 3400 in the WHO European Region.

The primary causes of maternal deaths are haemorrhage (mostly bleeding after childbirth), hypertension during pregnancy (pre-eclampsia and eclampsia), sepsis or infections, and indirect causes mostly due to interaction between pre-existing medical conditions and pregnancy (Fig. A.1.1).[2]

Figure A.1.1.
Global estimates for causes of maternal mortality 2003–2009



Most maternal deaths are preventable as the health-care solutions for preventing or managing the complications of pregnancy and childbirth are well known. All women need access to good-quality antenatal, childbirth and postpartum care. It is also crucially important to ensure access to contraception in order to prevent unintended pregnancies. Factors that prevent women from receiving adequate health care during pregnancy and childbirth include limited availability and poor quality of health services, a lack of information on available services, certain cultural beliefs and attitudes, and poverty.

ACHIEVING THE 2030 TARGET

During the course of the MDG era the global MMR declined by 44% – equating to an average annual reduction of 2.3% between 1990 and 2015. Accelerated progress is now needed as achieving the SDG Target 3.1 will require a global annual rate of reduction of at least 7.3%. Countries with an MMR of less than 432 deaths per 100 000 live births in 2015 will need to achieve an annual continuous rate of reduction of 7.5%. For the 30 countries with MMRs greater than 432 deaths per 100 000 live births in 2015, even higher annual continuous rates of reduction are needed to reduce the MMR to less than 140 deaths per 100 000 live births in 2030.[3]

The SDG target on maternal mortality forms an integral part of The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030.[4] The required acceleration in reducing maternal mortality will not be possible without clinical and non-clinical interventions, as well as political and policy action. Although each country will be different, the Strategies toward ending preventable maternal mortality (EPMM)[5] initiative suggests adaptive and highly effective interventions to improve women's health before, during and after pregnancy. Key EPMM strategic objectives are:

- to address inequities in access to and quality of sexual, reproductive, maternal and newborn health information and services;
- to ensure UHC for comprehensive sexual, reproductive, maternal and newborn health care;
- to address all causes of maternal mortality, reproductive and maternal morbidities, and related disabilities;
- to strengthen health systems to respond to the needs and priorities of women and girls; and
- to ensure accountability to improve quality of care and equity.

EQUITY

Maternal mortality is a health indicator that shows very wide variations between rich and poor, and between urban and rural areas – both between countries and within them. Poor women in remote areas are the least likely to receive adequate health care.

DATA GAPS

Maternal mortality is a relatively rare event and therefore difficult to measure. Civil registration systems in most developing countries – where most maternal deaths occur – are weak and cannot therefore provide an accurate assessment of maternal mortality. Even estimates derived from complete civil registration systems, such as those in developed countries, may not be accurate, for example due to the misclassification of maternal deaths.

Furthermore, although the 2015 MMR estimates made by the United Nations Maternal Mortality Estimation Inter-Agency Group were based on data available for 171 countries, no data had been provided since 2010 from 55 of these countries, or since 2005 in the case of nine others.[3]

REFERENCES

1. Unless otherwise noted, all statistics in the text, table and figures are taken from: WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Trends in maternal mortality: 1990 to 2015. Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization; 2015 (http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/, accessed 25 March 2016).
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4. The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030. Every Women Every Child; 2015 (http://globalstrategy.everywomaneverychild.org/pdf/EWEC_globalstrategyreport_200915_FINAL_WEB.pdf, accessed 11 April 2016).
5. Strategies toward ending preventable maternal mortality (EPMM). Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/153544/1/9789241508483_eng.pdf?ua=1, accessed 11 April 2016).

Figure A.1.2.
Maternal deaths, by WHO region, 2015

Table A.1.1.
Maternal mortality ratio (per 100 000 live births), 2015[a]

AFR

Cabo Verde	42
Mauritius	53
Botswana	129
South Africa	138
Algeria	140
Sao Tome and Principe	156
Zambia	224
Namibia	265
Rwanda	290
Gabon	291
Senegal	315
Ghana	319
Comoros	335
Equatorial Guinea	342
Uganda	343
Ethiopia	353
Madagascar	353
Togo	368
Burkina Faso	371
Swaziland	389
United Republic of Tanzania	398
Benin	405
Congo	442
Zimbabwe	443
Angola	477
Lesotho	487
Mozambique	489
Eritrea	501
Kenya	510
Guinea-Bissau	549
Niger	553
Mali	587
Cameroon	596
Mauritania	602
Malawi	634
Côte d'Ivoire	645
Guinea	679
Democratic Republic of the Congo	693
Gambia	706
Burundi	712
Liberia	725
South Sudan	789
Nigeria	814
Chad	856
Central African Republic	882
Sierra Leone	1360

AMR

Canada	7
United States of America	14
Uruguay	15
Chile	22
Costa Rica	25
Barbados	27
Grenada	27
Belize	28
Mexico	38
Cuba	39
Brazil	44
Saint Vincent and the Grenadines	45
Saint Lucia	48
Argentina	52
El Salvador	54
Trinidad and Tobago	63
Colombia	64
Ecuador	64
Peru	68
Bahamas	80
Guatemala	88
Jamaica	89
Dominican Republic	92
Panama	94
Venezuela (Bolivarian Republic of)	95
Honduras	129
Paraguay	132
Nicaragua	150
Suriname	155
Bolivia (Plurinational State of)	206
Guyana	229
Haiti	359

SEAR

Thailand	20
Sri Lanka	30
Maldives	68
Democratic People's Republic of Korea	82
Indonesia	126
Bhutan	148
India	174
Bangladesh	176
Myanmar	178
Timor-Leste	215
Nepal	258

EUR

Finland	3
Greece	3
Iceland	3
Poland	3
Austria	4
Belarus	4
Czech Republic	4
Italy	4
Sweden	4
Israel	5
Norway	5
Spain	5
Switzerland	5
Denmark	6
Germany	6
Slovakia	6
Belgium	7
Cyprus	7
Montenegro	7
Netherlands	7
Croatia	8
France	8
Ireland	8
The Former Yugoslav Republic of Macedonia	8
Estonia	9
Malta	9
Slovenia	9
United Kingdom	9
Lithuania	10
Luxembourg	10
Portugal	10
Bosnia and Herzegovina	11
Bulgaria	11
Kazakhstan	12
Turkey	16
Hungary	17
Serbia	17
Latvia	18
Republic of Moldova	23
Ukraine	24
Armenia	25
Azerbaijan	25
Russian Federation	25
Albania	29
Romania	31
Tajikistan	32
Georgia	36
Uzbekistan	36
Turkmenistan	42
Kyrgyzstan	76

EMR

Kuwait	4
United Arab Emirates	6
Libya	9
Saudi Arabia	12
Qatar	13
Bahrain	15
Lebanon	15
Oman	17
Iran (Islamic Republic of)	25
Egypt	33
Iraq	50
Jordan	58
Tunisia	62
Syrian Arab Republic	68
Morocco	121
Pakistan	178
Djibouti	229
Sudan	311
Yemen	385
Afghanistan	396
Somalia	732

WPR

Japan	5
Australia	6
Singapore	10
New Zealand	11
Republic of Korea	11
Brunei Darussalam	23
China	27
Fiji	30
Malaysia	40
Mongolia	44
Samoa	51
Viet Nam	54
Vanuatu	78
Kiribati	90
Micronesia (Federated States of)	100
Philippines	114
Solomon Islands	114
Tonga	124
Cambodia	161
Lao People's Democratic Republic	197
Papua New Guinea	215

[a] WHO Member States with a population of less than 100 000 in 2015 were not included in the analysis.

BIRTHS ATTENDED BY SKILLED HEALTH PERSONNEL

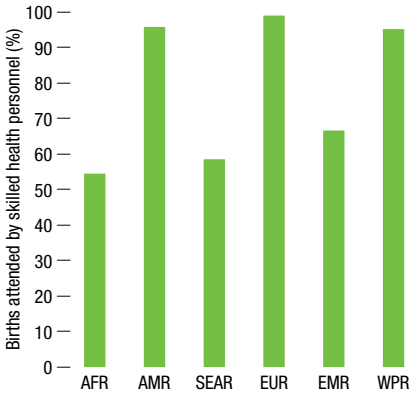
SDG Target 3.1
By 2030, reduce the global maternal mortality ratio to less than 70 per 100 000 live births

Indicator 3.1.2: Proportion of births attended by skilled health personnel

SITUATION

The global coverage of skilled attendance at birth was estimated to have reached 73% in 2013. However, despite steady improvement globally and within regions, millions of births were not assisted by a midwife, a doctor or a trained nurse. More than 40% of births in the WHO African Region and WHO South-East Asia Region were not attended by skilled health personnel (Fig. A.2.1).[1]

Figure A.2.1.
Births attended by skilled health personnel, by WHO region, 2013[1]



Along with adequate antenatal and postpartum care, high-quality childbirth care by a skilled health provider is paramount in preventing maternal and newborn deaths. Timely management and treatment of complications during childbirth can make the difference between life and death for both mother and baby.

ACHIEVING THE 2030 TARGET

This indicator is a measure of the ability of a health system to provide adequate care during birth – a period of greatest risk of mortality and morbidity for both mother and newborn. It is therefore a key indicator for monitoring progress toward the achievement of the SDG target of reducing maternal mortality.

As outlined in The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030[2] good quality of care at childbirth produces a triple return on investment, saving mothers and newborns and preventing stillbirths. The provision of effective care for all women and babies at the time of birth in facilities could prevent an estimated 113 000 maternal deaths, 531 000 stillbirths and 1.3 million neonatal deaths annually by 2020 at an estimated running cost of US$ 4.5 billion per year (US$ 0.9 per person).

Various factors prevent pregnant women from receiving or seeking care during pregnancy and childbirth, including limited availability and poor quality of health services, a lack of information on available services, certain cultural beliefs and attitudes, and poverty. Such barriers must be identified and addressed at all levels of the health system. For example, from the supply side, attracting, training, deploying, motivating, managing and retaining skilled, committed and caring health workers are fundamental health system challenges faced by many countries. Addressing these challenges requires, among other things, strong political will, long-term planning and sustainable financing.

EQUITY

In many countries, the delivery care women receive is strongly associated with their income, whether they live in an urban or rural area, and their level of education. As shown in Fig. A.2.2, disparities across these economic, urban/rural and education gradients are particularly pronounced in low-income countries, where only among the most advantaged groups does median coverage reach more than 80%. Among the most disadvantaged groups the corresponding median coverage is below 50%.[3]

DATA GAPS

In high-income countries, virtually all births are attended by skilled health personnel. For most LMIC, the main data source is household surveys, which are typically conducted every 5 years. Since 2010, 103 countries have generated data from at least one household survey, while some other countries using health-facility data to estimate coverage on an annual basis.

Standardizing the definition of a "skilled" health attendant is difficult because of differences in the training of health personnel in different countries. Although efforts have been made to standardize the definitions of doctors, nurses, midwives and auxiliary midwives used in most household surveys, it is likely that the ability of many skilled attendants to provide appropriate care in an emergency depends upon the environment in which they work.

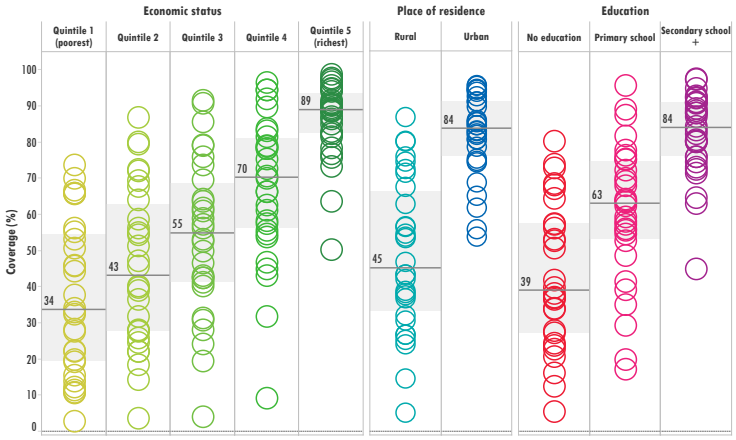
REFERENCES

1 WHO, World Bank. Tracking Universal Health Coverage: First global monitoring report. Geneva: World Health Organization; 2015 (http://www.who.int/healthinfo/universal_health_coverage/report/2015/en/, accessed 25 March 2016).

2 The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030. Every Women Every Child; 2015 (http://globalstrategy.everywomaneverychild.org/pdf/EWEC_globalstrategyreport_200915_FINAL_WEB.pdf, accessed 11 April 2016).

3 WHO and International Center for Equity in Health/Pelotas. State of inequality. Reproductive, maternal, newborn and child health. Geneva: World Health Organization; 2015. (http://apps.who.int/iris/bitstream/10665/164590/1/9789241564908_eng.pdf, accessed 10 April 2016.).

Figure A.2.2.
Births attended by skilled health personnel in low-income countries, by multiple dimensions of inequality, 2005–2013[a]



[a] Based on the results of DHS and MICS in 30 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Table A.2.1.
Proportion of births attended by skilled health personnel (%), 2006–2014[a]

AFR

Botswana	100
Mauritius[b]	100
Seychelles[b]	99
Algeria	97
Congo	94
South Africa	94
Sao Tome and Principe[b]	93
Cabo Verde	92
Rwanda[b]	91
Gabon[b]	89
Namibia	88
Swaziland[b]	88
Malawi[b]	87
Comoros	82
Democratic Republic of the Congo	80
Zimbabwe	80
Lesotho	78
Benin[b]	77
Ghana	71
Equatorial Guinea[b]	68
Burkina Faso	66
Cameroon[b]	65
Mauritania	65
Zambia	64
Kenya	62
Liberia[b]	61
Burundi	60
Sierra Leone	60
Senegal	59
Uganda	58
Gambia	57
Mali	57
Côte d'Ivoire	56
Mozambique[b]	54
United Republic of Tanzania	49
Angola	47
Guinea[b]	45
Guinea-Bissau[b]	45
Togo	45
Madagascar	44
Central African Republic	40
Nigeria	35
Eritrea	34
Niger	29
Chad	24
South Sudan	17
Ethiopia	16

AMR

Antigua and Barbuda[b]	100
Argentina	100
Chile	100
Dominica[b]	100
Saint Kitts and Nevis[b]	100
Trinidad and Tobago[b]	100
Venezuela (Bolivarian Republic of)	100
Barbados	99
Brazil[b]	99
Colombia	99
Costa Rica	99
Cuba	99
Grenada[b]	99
Jamaica	99
Mexico	99
Saint Lucia	99
Saint Vincent and the Grenadines[b]	99
United States of America	99
Bahamas[b]	98
Canada[b]	98
Dominican Republic[b]	98
El Salvador[b]	98
Uruguay	98
Ecuador	96
Paraguay[b]	96
Belize	95
Guyana[b]	92
Panama	91
Peru	90
Suriname	90
Nicaragua[b]	88
Bolivia (Plurinational State of)	85
Honduras	83
Guatemala	66
Haiti	37

SEAR

Democratic People's Republic of Korea	100
Thailand	100
Sri Lanka	99
Maldives	96
Indonesia	87
Myanmar[b]	78
Bhutan	75
India[b]	74
Nepal[b]	48
Bangladesh[b]	42
Timor-Leste[b]	29

EUR

Armenia	100
Belarus	100
Bosnia and Herzegovina	100
Croatia	100
Cyprus[b]	100
Czech Republic[b]	100
Finland[b]	100
Georgia	100
Ireland[b]	100
Italy[b]	100
Kazakhstan	100
Lithuania[b]	100
Luxembourg[b]	100
Malta[b]	100
Poland[b]	100
Russian Federation[b]	100
Slovakia[b]	100
Slovenia[b]	100
The Former Yugoslav Republic of Macedonia	100
Turkmenistan	100
Uzbekistan	100
Albania	99
Austria[b]	99
Estonia[b]	99
Germany[b]	99
Hungary[b]	99
Montenegro	99
Norway	99
Portugal	99
Republic of Moldova	99
Romania[b]	99
Ukraine	99
Denmark[b]	98
France[b]	98
Kyrgyzstan	98
Latvia[b]	98
Serbia	98
Azerbaijan[b]	97
Turkey[b]	97
Bulgaria	94
Tajikistan	87
Andorra	
Belgium	
Greece	
Iceland	
Israel	
Monaco	
Netherlands	
San Marino	
Spain	
Sweden	
Switzerland	
United Kingdom	

EMR

Bahrain[b]	100
Jordan	100
Kuwait[b]	100
Libya	100
Qatar	100
United Arab Emirates[b]	100
Oman	99
Saudi Arabia[b]	98
Iran (Islamic Republic of)	96
Syrian Arab Republic[b]	96
Egypt	92
Iraq	91
Djibouti[b]	87
Morocco	74
Tunisia	74
Pakistan[b]	52
Afghanistan	45
Yemen	43
Sudan	20
Somalia	9
Lebanon	

WPR

Brunei Darussalam[b]	100
China	100
Cook Islands[b]	100
Japan[b]	100
Micronesia (Federated States of)[b]	100
Niue[b]	100
Palau	100
Republic of Korea[b]	100
Singapore[b]	100
Australia[b]	99
Fiji	99
Malaysia[b]	99
Mongolia[b]	99
Nauru[b]	97
New Zealand[b]	97
Tonga	96
Viet Nam	94
Tuvalu	93
Marshall Islands	90
Cambodia[b]	89
Vanuatu	89
Solomon Islands	86
Samoa[b]	83
Kiribati	80
Philippines	73
Papua New Guinea[b]	43
Lao People's Democratic Republic	40

[a] WHO global database on maternal health indicators, 2016 update [online database]. Geneva: World Health Organization (http://www.who.int/gho/maternal_health/en/). Data shown are the latest available for 2006–2014. Data from 2006–2009 are shown in pale green.

[b] Non-standard definition. For more details see the WHO Global Health Observatory at: http://www.who.int/gho/en/.

CHILD MORTALITY

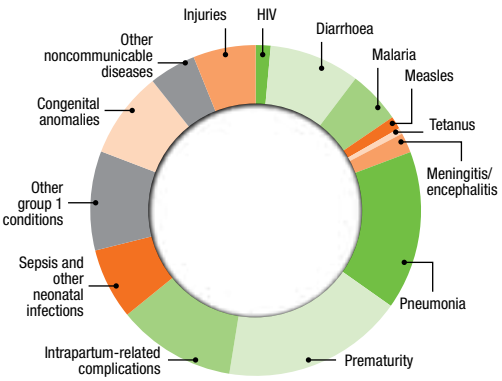
SDG Target 3.2
By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-five mortality to at least as low as 25 per 1000 live births

Indicator 3.2.1: Under-five mortality rate
Indicator 3.2.2: Neonatal mortality rate

SITUATION

An estimated 5.9 million children under 5 years of age died in 2015, with a global under-five mortality rate of 42.5 per 1000 live births.[1] Of those deaths, 45% were newborns, with a neonatal mortality rate of 19 per 1000 live births. Levels of child mortality are highest in sub-Saharan Africa, where 1 child in 12 dies before their fifth birthday, followed by South Asia where 1 in 19 dies before age five. As shown in Fig. A.3.1, the major causes of neonatal mortality in 2015 were prematurity, birth-related complications (birth asphyxia) and neonatal sepsis, while leading causes of child death in the post-neonatal period were pneumonia, diarrhoea, injuries and malaria.

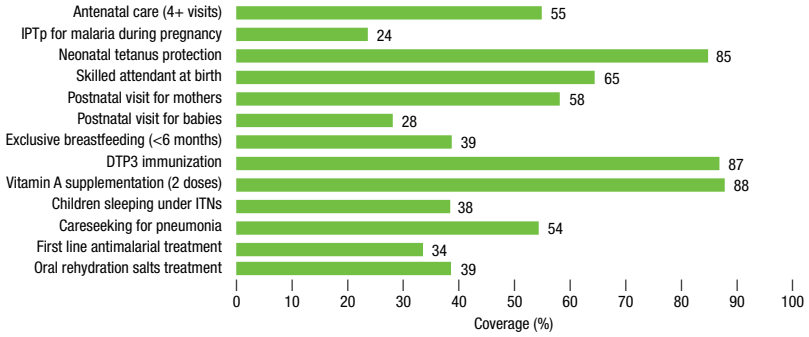
Figure A.3.1.
Major causes of under-five mortality, 2015[2]



ACHIEVING THE 2030 TARGET

The annual rate of reduction in under-five mortality was 3.9% between 2000 and 2015. If this momentum can be maintained, the global under-five mortality rate could be less than 25 under-five deaths per 1000 live births by 2030. However, substantially more rapid progress is needed to meet the SDG targets for under-five mortality and neonatal mortality in many countries. Currently, 79 and 83 countries do not meet the 2030 SDG targets for under-five and neonatal mortality respectively, and 24 and nine respectively have rates that are three times higher. In the WHO African Region, the under-five mortality rate must be reduced by 70% in order to reduce under-five mortality to less than 25 deaths per 1000 live births, followed by the WHO Eastern Mediterranean Region (50% reduction required) and the WHO South-East Asia Region (40% reduction required).

Figure A.3.2.
Coverage of selected child health interventions in LMIC[3]



The Global Strategy for Women's, Children's and Adolescents' Health, 2016–2030 emphasizes the importance of ensuring health and well-being for all at all ages. An important focus of this strategy is the scaling up of priority intervention areas and of specific high-impact interventions to address major gaps in the continuum of care (Fig. A.3.2). Reducing newborn mortality will require better prevention and management of preterm births, inpatient supportive care of ill and small newborn babies, the management of severe infections and the promotion of kangaroo mother care. For the post-neonatal period, greater efforts are needed to scale up the coverage of new vaccines, and to improve treatment coverage for pneumonia and diarrhoea. The prevention and treatment of noncommunicable diseases (NCDs) and injuries also requires attention, with more than one in four deaths in children aged 1–59 months now caused by non-infectious conditions.

EQUITY

Children are at greater risk of dying before age five if they are born in poor households (Fig. A.3.3),[4] rural areas, or to mothers denied basic education. Poorer regions within countries typically have an under-five mortality rate 1.5–2.5 times higher than richer regions.

DATA GAPS

Only 59% of infants younger than 12 months have their births registered, with around 33% registered in South Asia and sub-Saharan Africa. National estimates of child mortality rates are derived from data collected through CRVS systems or during household surveys. Many neonatal deaths occur in the first day of life and differences in the definition of a live birth can complicate between-country comparability. While data availability is reasonably good for estimating national child mortality rates, disaggregating according to key equity stratifiers is challenging. Socioeconomic disaggregation is typically not possible from CRVS data, while sample-size limitations in household surveys make the reliable estimation of neonatal mortality by wealth quintiles challenging.

REFERENCES

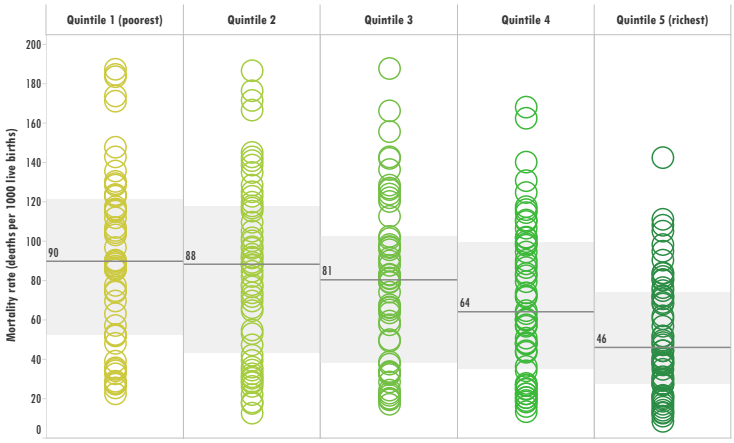
1 Unless otherwise noted, all statistics in text, table and figures are taken from: Levels & Trends in Child Mortality. Report 2015. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation. New York (NY), Geneva and Washington (DC): United Nations Children's Fund, World Health Organization, World Bank and United Nations; 2015 (http://www.unicef.org/publications/files/Child_Mortality_Report_2015_Web_9_Sept_15.pdf, accessed 26 March 2016).

2 WHO-MCEE child causes of death. Estimates for 2000–2015 [website]. Geneva: World Health Organization (http://www.who.int/healthinfo/global_burden_disease/estimates_child_cod_2015/en/, accessed 26 March 2016).

3 Countdown to 2015 [website]: http://www.countdown2015mnch.org/, accessed 26 March 2016. Fig. A.3.2 shows median national coverage of 75 countries, based on most recent survey (2009 or later).

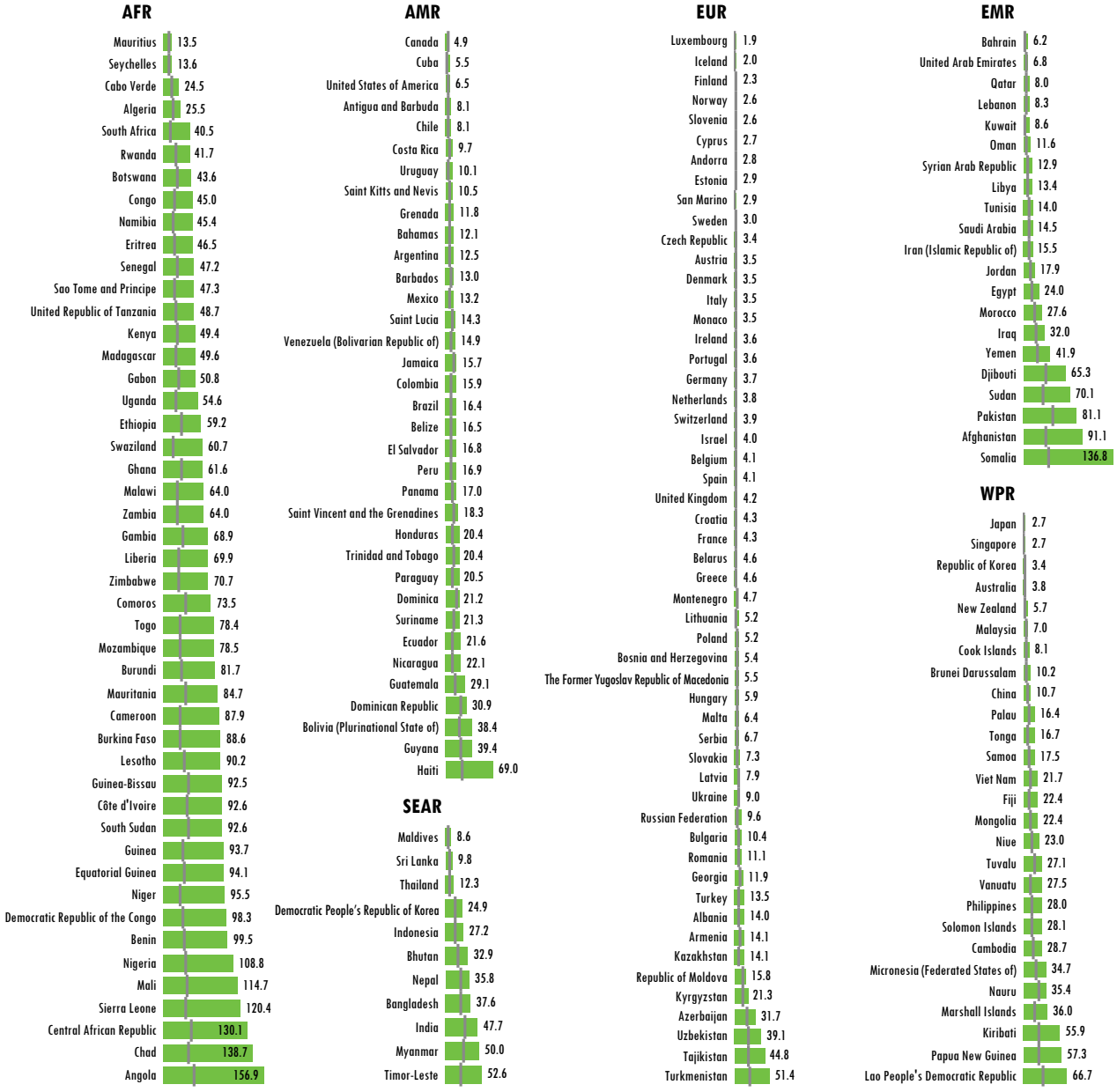
4 WHO and International Center for Equity in Health/Pelotas. State of inequality. Reproductive, maternal, newborn and child health. Geneva: World Health Organization; 2015. (http://apps.who.int/iris/bitstream/10665/164590/1/9789241564908_eng.pdf, accessed 10 April 2016.)

Figure A.3.3.
Under-five mortality rate in LMIC, by wealth quintile, 2005–2013[a]



[a] Based on the results of DHS in 54 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Table A.3.1.
Under-five mortality and neonatal mortality rates (per 1000 live births), 2015[a]



[a] Under-five mortality rates are shown as bars and in numbers. Neonatal mortality rates are shown as vertical grey lines.

HIV

SDG Target 3.3
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

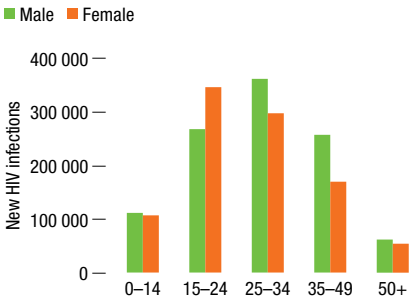
Indicator 3.3.1: Number of new HIV infections per 1000 uninfected population, by sex, age and key populations

SITUATION

In 2014, the global HIV incidence rate among adults aged 15–49 years was 0.5 per 1000 uninfected population, with 2 million people becoming infected that year.[1,2] HIV incidence is highest in the WHO African Region (2.6 per 1000 uninfected population in 2014) compared to other WHO regions where incidence among adults aged 15–49 years ranges from 0.1 to 0.4 per 1000 uninfected population.[2] Incidence rates are much higher in key populations. For example, in 2014 the incidence rate was 17 per 1000 among people who inject drugs, 8 per 1000 among men who have sex with men and 5 per 1000 among female sex workers (Fig. A.4.3).

Forty percent of those living with HIV are receiving antiretroviral therapy, with 1.2 million dying from HIV-related causes in 2014. A little over half of the 37 million people living with HIV are aware that they are HIV positive.

Figure A.4.1.
Global new HIV infections by age and sex, 2014[2]



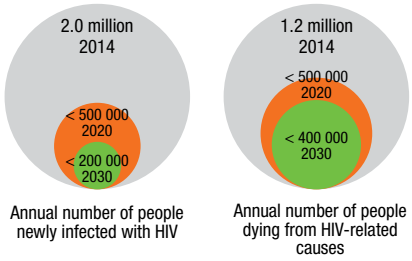
ACHIEVING THE 2030 TARGET

The "90-90-90" targets call for 90% of people with HIV being aware of their infection, 90% of people aware they have HIV initiating antiretroviral treatment and 90% of those receiving antiretroviral treatment having undetectable levels of HIV in their blood by 2020.[3] Milestone targets also include a 75% reduction in new HIV infections between 2010 and 2020, and reducing annual HIV-related deaths to less than 500 000 by 2020 (Fig.A.4.2). Informed by global goals and targets, countries should, as soon as practicable, adopt and implement policies such as the WHO "Treat All" policy,[4] and develop ambitious national goals and targets for 2020 and beyond. This will require taking into consideration the country context, including the nature and dynamics of country HIV epidemics, populations affected, the structure and capacity of health-care and community systems, and the resources that can be mobilized.

The main areas of strategic focus in the SDG era include populations that have been left behind by the HIV response, intensified efforts in settings of greatest HIV transmission and burden, better use of data to support programme decision-making, a transition to sustainable programmes with domestic funding of essential HIV services and the integration of the HIV response into health systems.

In addition to the wider initiation of antiretroviral therapy, key interventions to interrupt HIV transmission include testing and counselling for HIV and other sexually transmitted infections, condom use, communication and behavioural interventions, voluntary medical male circumcision, pre- and post-exposure prophylaxis, harm reduction among drug users, universal screening of blood donations and the elimination of mother-to-child transmission.

Figure A.4.2.
Progress required to reach key 2020 and 2030 targets[5]

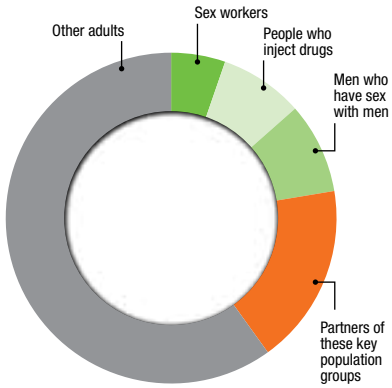


Obstacles to higher treatment coverage occur at each stage of the cascade of services. More effort is needed to increase outreach and testing (almost half of HIV-positive people are unaware of their status), to routinely link people testing HIV positive to treatment, to simplify treatment protocols, and to improve patient monitoring. Taken together, such efforts would increase the number of those starting treatment, reduce loss to follow up and improve treatment adherence. Given the variability in infection rates among different populations, services also need to be focused effectively according to population group, geography, age and gender.

EQUITY

Many highly affected populations have been left behind by the HIV response (Fig. A.4.3), including adolescent girls, sex workers, men who have sex with men, people who inject drugs, transgender people and prisoners. Men who have sex with men are 19 times more likely to be HIV positive than the general population; 13% of people who inject drugs are infected; and adolescent girls in sub-Saharan Africa are almost twice as likely as adolescent boys to be living with HIV. The provision of antiretroviral therapy is relatively equitable across income groups in high-burden countries in sub-Saharan Africa.

Figure A.4.3.
Global new HIV infections among key populations, 2014[6]



DATA GAPS

Currently, national HIV incidence is rarely measured directly. In generalized epidemics, HIV incidence and mortality are estimated from mathematical models fitted to prevalence data routinely collected from antenatal care clinics – and from less frequent nationally representative seroprevalence surveys that occur every 3–5 years. The number of people receiving antiretroviral therapy is obtained from administrative data. In countries with concentrated epidemics, routine surveillance data are less available making monitoring more difficult and requiring alternative modelling strategies. Generating point estimates for prevalence disaggregated across socioeconomic stratifiers is possible based upon national survey results, but modelling assumptions are currently needed to derive approximate estimates of incidence and mortality by age and sex.

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1. Unless otherwise noted, all statistics in the text are taken from: How AIDS changed everything. MDG 6: 15 years, 15 lessons of hope from the AIDS response. Geneva: UNAIDS; 2015 (http://www.unaids.org/en/resources/documents/2015/MDG6_15years-15lessonsfromtheAIDSresponse, accessed 10 April 2016).
2. UNAIDS/WHO estimates; 2015.
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6. Updated analysis from: How AIDS Changed Everything. Geneva: Joint United Nations Programme on HIV/AIDS; 2015 (http://www.unaids.org/sites/default/files/media_asset/MDG6Report_en.pdf).

Figure A.4.4.
HIV prevalence among adults 15–49 years old, 2014[2]

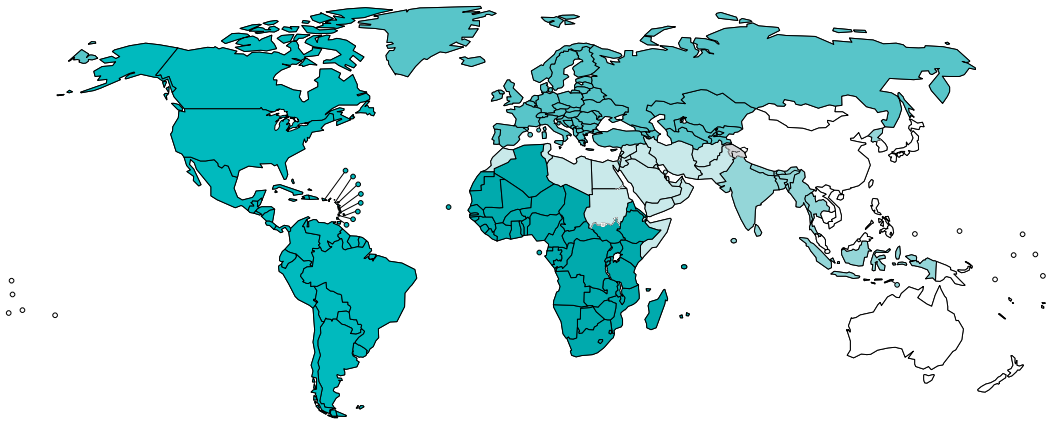


Table A.4.1.
New HIV infections among adults 15–49 years old (per 1000 uninfected population), 2014[2]

AFR	
Algeria	<0.1
Niger	<0.1
Senegal	<0.1
Burundi	0.1
Sao Tome and Principe	0.1
Eritrea	0.2
Madagascar	0.2
Mauritania	0.4
Mauritius	0.4
Burkina Faso	0.5
Benin	0.6
Democratic Republic of the Congo	0.6
Liberia	0.6
Ghana	0.7
Sierra Leone	0.7
Cabo Verde	0.9
Togo	1.0
Gambia	1.1
Guinea	1.1
Rwanda	1.1
Mali	1.3
Congo	1.4
Gabon	1.4
Chad	1.5
Nigeria	2.0
Angola	2.1
Côte d'Ivoire	2.1
Kenya	2.3
Guinea-Bissau	2.5
South Sudan	2.6
United Republic of Tanzania	2.6
Central African Republic	2.7
Equatorial Guinea	2.9
Cameroon	3.8
Malawi	4.5
Uganda	6.0
Mozambique	7.4
Zambia	7.5
Namibia	9.1
Zimbabwe	9.2
South Africa	12.7
Botswana	14.0
Swaziland	18.9
Lesotho	20.1
Comoros	
Ethiopia	
Seychelles	
AMR	
Honduras	0.1
Mexico	0.1
Peru	0.1
Bolivia (Plurinational State of)	0.2
Chile	0.2
Colombia	0.2
Costa Rica	0.2
Ecuador	0.2
El Salvador	0.2
Nicaragua	0.2
Argentina	0.3
Cuba	0.3
Guatemala	0.3
Panama	0.3
Venezuela (Bolivarian Republic of)	0.3
Dominican Republic	0.4
Uruguay	0.4
Belize	0.5
Paraguay	0.5
Suriname	0.6
Jamaica	1.0
Haiti	1.1
Guyana	2.0
Antigua and Barbuda	
Bahamas	
Barbados	
Brazil	
Canada	
Dominica	
Grenada	
Saint Kitts and Nevis	
Saint Lucia	
Saint Vincent and the Grenadines	
Trinidad and Tobago	
United States of America	
SEAR	
Bangladesh	<0.1
Nepal	<0.1
Sri Lanka	<0.1
Thailand	0.2
Myanmar	0.3
Indonesia	0.5
Bhutan	
Democratic People's Republic of Korea	
India	
Maldives	
Timor-Leste	
EUR	
Poland	<0.1
Slovakia	<0.1
Slovenia	<0.1
Sweden	<0.1
Uzbekistan	<0.1
Denmark	0.1
Norway	0.1
Armenia	0.2
Azerbaijan	0.2
Ireland	0.2
Kazakhstan	0.2
Kyrgyzstan	0.2
Georgia	0.3
Tajikistan	0.4
Belarus	0.6
Republic of Moldova	0.6
Albania	
Andorra	
Austria	
Belgium	
Bosnia and Herzegovina	
Bulgaria	
Croatia	
Cyprus	
Czech Republic	
Estonia	
Finland	
France	
Germany	
Greece	
Hungary	
Iceland	
Israel	
Italy	
Latvia	
Lithuania	
Luxembourg	
Malta	
Monaco	
Montenegro	
Netherlands	
Portugal	
Romania	
Russian Federation	
San Marino	
Serbia	
Spain	
Switzerland	
The Former Yugoslav Republic of Macedonia	
Turkey	
Turkmenistan	
Ukraine	
United Kingdom	
EMR	
Afghanistan	<0.1
Egypt	<0.1
Lebanon	<0.1
Syrian Arab Republic	<0.1
Tunisia	<0.1
Yemen	<0.1
Morocco	0.1
Oman	0.1
Iran (Islamic Republic of)	0.2
Pakistan	0.2
Sudan	0.2
Somalia	0.5
Djibouti	1.1
Bahrain	
Iraq	
Jordan	
Kuwait	
Libya	
Qatar	
Saudi Arabia	
United Arab Emirates	
WPR	
Cambodia	<0.1
Philippines	0.1
Fiji	0.2
Lao People's Democratic Republic	0.2
Malaysia	0.3
Viet Nam	0.3
Papua New Guinea	0.4
Australia	
Brunei Darussalam	
China	
Cook Islands	
Japan	
Kiribati	
Marshall Islands	
Micronesia (Federated States of)	
Mongolia	
Nauru	
New Zealand	
Niue	
Palau	
Republic of Korea	
Samoa	
Singapore	
Solomon Islands	
Tonga	
Tuvalu	
Vanuatu	

TUBERCULOSIS

SDG Target 3.3
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Indicator 3.3.2: Tuberculosis incidence per 1000 population

SITUATION

Tuberculosis (TB) is a treatable and curable disease, but remains a major global health problem. In 2014, there were 9.6 million new TB cases (133 per 100 000 population) and 1.5 million TB deaths, including 0.4 million deaths among HIV-positive people.[1]

TB occurs in every part of the world. In 2014, the largest numbers of new TB cases occurred in the WHO South-East Asia Region and WHO Western Pacific Region, accounting for 58% of new cases globally. Five countries accounted for 54% of all new cases – India, Indonesia, China, Nigeria and Pakistan. However, Africa carried the most severe burden, with 281 cases per 100 000 population – more than twice the global average of 133.

In 2014, the TB incidence rate in low-income countries was over 10 times greater than that in high-income countries, while the TB mortality rate (among HIV-negative people) was almost 20 times higher. In high-income countries, the case fatality ratio (mortality divided by incidence) averages about 6%. Worldwide, the case fatality ratio varies widely between countries, indicating large inequities in access to health services, including those for TB detection and treatment (Fig. A.5.2).

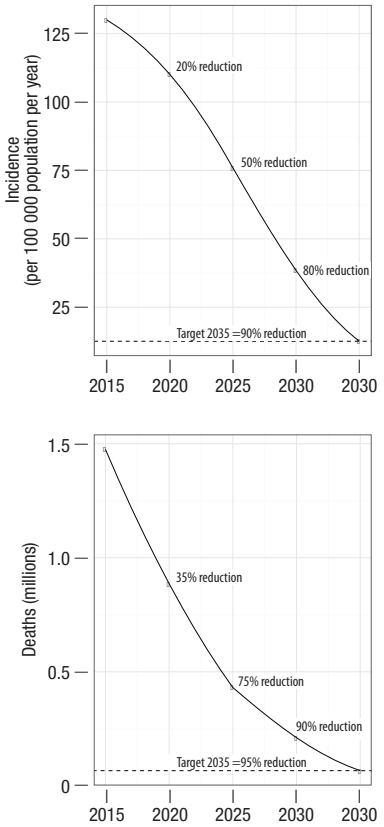
With timely diagnosis and correct treatment, almost all TB cases can be cured. Globally, the treatment success rate among new cases reported by national TB programmes has been sustained at around 85% for several years. In all settings, cases of multidrug-resistant TB (about 0.5 million new cases per year) are harder to treat since current treatment options require lengthy treatment with less effective and more costly drugs – globally the cure rate in such cases is about 50%.

ACHIEVING THE 2030 TARGET

The 2030 targets set out in the WHO End TB Strategy[2,3] include an 80% reduction in the TB incidence rate and a 90% reduction in the number of TB deaths, compared with levels in 2015 (Fig. A.5.1). Achieving these targets will require that between 2015 and 2025: (a) the annual decline in the global TB incidence rate must accelerate from 2% per year to 4–5% per year by 2020 and then to 10% per year by 2025; (b) the global case fatality ratio must fall to 10% by 2020 and then to 6% by 2025.

A decline in incidence of 10% per year is equivalent to historically best-ever performances at national level (for example, in countries in Western Europe during the 1950s and 1960s). Universal coverage of essential services to detect and treat TB must be achieved by 2025 to reduce the global case fatality ratio to 6% – which implicitly means that all people with TB access diagnosis and treatment.

Figure A.5.1.
Trajectories of TB incidence and number of TB deaths required to achieve the targets set out in the WHO End TB Strategy



Acceleration in the rate at which TB incidence falls after 2025 will require a technological breakthrough – in particular a post-exposure vaccine or a short, efficacious and safe treatment for latent TB infection. The risk of TB disease developing among the approximately 2–3 billion people who are already infected with *Mycobacterium tuberculosis* could then be substantially reduced.

In order to achieve both the 2030 targets and earlier milestones, the WHO End TB Strategy consists of three pillars:

1. Integrated, patient-centred TB care and prevention
2. Bold policies and supportive systems
3. Intensified research and innovation.

EQUITY

In theory, equity in access to diagnosis and treatment within countries can be assessed using subnational estimates of the case fatality ratio. Unfortunately, subnational estimates of TB incidence and mortality are not available for most countries. An alternative is to use the ratio of TB deaths (recorded in a vital registration system of sufficient geographical coverage and quality) to case notifications as a proxy for the case fatality ratio. Examples of such analyses will be included in WHO global TB reports from 2016 onwards. The best recent data on within-country equity in high TB burden settings were produced from 19 national TB-prevalence surveys completed in Africa and Asia during 2009–2015. These consistently indicate higher detection and reporting gaps for men than for women, and higher detection and reporting gaps in specific age groups such as the elderly in some countries.

DATA GAPS

Although the data available to estimate TB disease burden improved considerably during the MDG era, data gaps remain. Direct measurement of TB incidence requires that notifications of TB cases are a good proxy of TB incidence. Currently, this is the case only in countries that have both high-performance surveillance systems and high levels of access to quality health care. Elsewhere, notification data are not a good proxy for TB incidence, and adjustments have to be made to correct for under-reporting and under-diagnosis. National TB-prevalence surveys and other special studies can help to measure the level of under-reporting of detected cases. Improved reporting and estimation of TB deaths requires the development or strengthening of CRVS systems, especially in Africa.

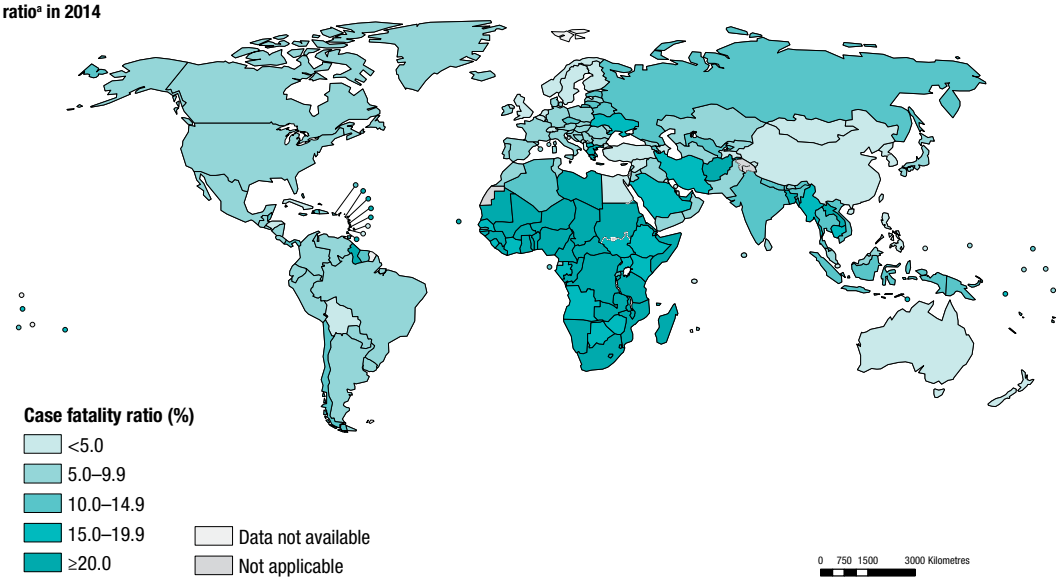
REFERENCES

[1] Unless otherwise noted, all statistics in the text, table and figures are taken from: Global tuberculosis report 2015. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/191102/1/9789241565059_eng.pdf?ua=1, accessed 11 April 2016).

[2] The End TB Strategy. Geneva: World Health Organization (http://www.who.int/tb/strategy/end-tb/en/, accessed 27 March 2016).

[3] Resolution WHA67.1. Global strategy and targets for tuberculosis prevention, care and control after 2015. In: Sixty-seventh World Health Assembly, Geneva, 19–24 May 2014. Resolutions and decisions. Annexes. Geneva: World Health Organization; 2014 (WHA67/2014/REC/1; http://apps.who.int/gb/ebwha/pdf_files/WHA67-REC1/A67_2014_REC1-en.pdf, accessed 27 March 2016).

Figure A.5.2
TB case fatality ratio[a] in 2014



[a] Calculated as TB mortality, including TB deaths among HIV-positive people, divided by TB incidence.

Table A.5.1.
TB incidence (per 100 000 population), 2014

AFR

Mauritius	22
Seychelles	26
Comoros	35
Burkina Faso	54
Mali	58
Togo	58
Benin	61
Rwanda	63
Algeria	78
Eritrea	78
Sao Tome and Principe	97
Niger	98
Mauritania	111
Burundi	126
Cabo Verde	138
Senegal	138
South Sudan	146
Chad	159
Uganda	161
Equatorial Guinea	162
Côte d'Ivoire	165
Ghana	165
Gambia	174
Guinea	177
Ethiopia	207
Cameroon	220
Malawi	227
Madagascar	235
Kenya	246
Zimbabwe	278
Liberia	308
Sierra Leone	310
Nigeria	322
Democratic Republic of the Congo	325
United Republic of Tanzania	327
Guinea-Bissau	369
Angola	370
Central African Republic	375
Congo	381
Botswana	385
Zambia	406
Gabon	444
Mozambique	551
Namibia	561
Swaziland	733
South Africa	834
Lesotho	852

AMR

Dominica	0.7
Barbados	0.9
Grenada	1.3
United States of America	3.1
Jamaica	4.7
Canada	5.2
Saint Kitts and Nevis	7.2
Antigua and Barbuda	7.6
Saint Lucia	9.1
Cuba	9.4
Costa Rica	11
Bahamas	12
Chile	16
Mexico	21
Trinidad and Tobago	22
Argentina	24
Saint Vincent and the Grenadines	24
Venezuela (Bolivarian Republic of)	24
Uruguay	30
Colombia	33
Belize	37
Suriname	38
El Salvador	41
Honduras	43
Paraguay	43
Brazil	44
Panama	46
Ecuador	54
Guatemala	57
Nicaragua	58
Dominican Republic	60
Guyana	103
Bolivia (Plurinational State of)	120
Peru	120
Haiti	200

SEAR

Maldives	41
Sri Lanka	65
Nepal	158
Bhutan	164
India	167
Thailand	171
Bangladesh	227
Myanmar	369
Indonesia	399
Democratic People's Republic of Korea	442
Timor-Leste	498

EUR

San Marino	1.6
Monaco	2.2
Iceland	3.3
Czech Republic	4.6
Greece	4.8
Cyprus	5.3
Finland	5.6
Israel	5.8
Netherlands	5.8
Italy	6.0
Germany	6.2
Switzerland	6.3
Luxembourg	6.6
Slovakia	6.7
Denmark	7.1
Ireland	7.4
Sweden	7.5
Slovenia	7.7
Austria	7.8
Norway	8.1
France	8.7
Belgium	9.0
Andorra	9.2
Croatia	12
Hungary	12
Malta	12
Spain	12
United Kingdom	12
The Former Yugoslav Republic of Macedonia	15
Turkey	18
Albania	19
Estonia	20
Montenegro	21
Poland	21
Serbia	24
Portugal	25
Bulgaria	27
Bosnia and Herzegovina	42
Armenia	45
Latvia	49
Belarus	58
Lithuania	62
Turkmenistan	64
Azerbaijan	77
Romania	81
Uzbekistan	82
Russian Federation	84
Tajikistan	91
Ukraine	94
Kazakhstan	99
Georgia	106
Kyrgyzstan	142
Republic of Moldova	153

EMR

United Arab Emirates	1.6
Jordan	5.5
Oman	9.6
Saudi Arabia	12
Bahrain	14
Egypt	15
Lebanon	16
Syrian Arab Republic	17
Kuwait	21
Iran (Islamic Republic of)	22
Qatar	29
Tunisia	33
Libya	40
Iraq	43
Yemen	48
Sudan	94
Morocco	106
Afghanistan	189
Pakistan	270
Somalia	274
Djibouti	619

WPR

Niue	0.0
Australia	6.4
New Zealand	7.4
Cook Islands	12
Tonga	14
Japan	18
Samoa	19
Palau	42
Singapore	49
Brunei Darussalam	62
Vanuatu	63
Fiji	67
China	68
Nauru	73
Republic of Korea	86
Solomon Islands	86
Malaysia	103
Viet Nam	140
Mongolia	170
Lao People's Democratic Republic	189
Tuvalu	190
Micronesia (Federated States of)	195
Philippines	288
Marshall Islands	335
Cambodia	390
Papua New Guinea	417
Kiribati	497

MALARIA

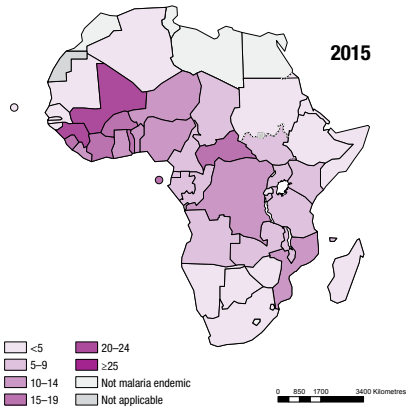
SDG Target 3.3
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Indicator 3.3.3: Malaria incidence per 1000 population

SITUATION

Almost half the world's population, living in nearly 100 countries and territories, are at risk of malaria. In 2015, the malaria incidence rate was 91 per 1000 persons at risk, with an estimated 214 million cases and 438 000 deaths – more than two thirds of these deaths occurring in children under 5 years of age. Sub-Saharan Africa bears the highest burden with an incidence rate of 246 per 1000 persons at risk, accounting for roughly 90% of cases and deaths globally.[1]

Figure A.6.1.
Percentage of deaths caused by malaria in children under 5 years of age in sub-Saharan Africa, 2015

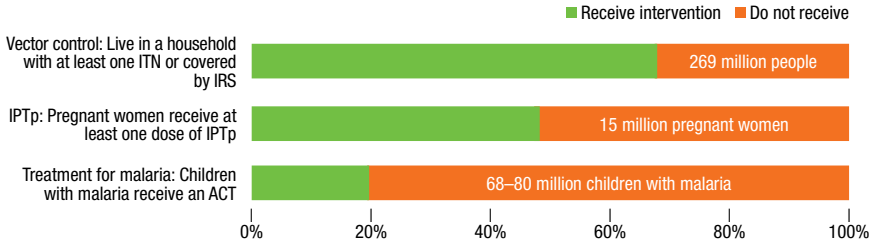


The *Plasmodium falciparum* malaria parasite is responsible for the majority of malaria deaths. However, *P. vivax* caused nearly 14 million cases in 2015, accounting for about half of the total number of malaria cases outside Africa, and can also cause severe disease and death.

ACHIEVING THE 2030 TARGET

Global targets towards malaria elimination include 90% reductions by 2030 in the 2015 global malaria case incidence and mortality rates, the elimination of malaria from at least 35 more countries and the prevention of malaria re-establishment in all countries identified as malaria free.[2]

Figure A.6.2.
Proportion and number of people not receiving key malaria interventions, sub-Saharan Africa, 2014



The Global Technical Strategy for Malaria 2016–2030 involves: (a) ensuring universal access to malaria prevention, diagnosis and treatment; (b) accelerating efforts towards elimination and the attainment of malaria-free status; and (c) transforming malaria surveillance into a core intervention. Key interventions against malaria include sleeping under insecticide-treated mosquito nets (ITNs), indoor residual spraying of insecticides, intermittent preventive treatment in pregnancy, and increasing care-seeking, diagnostic testing and treatment with artemisinin-based combination therapies.

Major obstacles to achieving the 2030 target include inadequate funding, with an estimated funding gap of US$ 2.4 billion (53%) in 2013,[3] resulting in gaps in intervention coverage (Fig. A.6.2), resistance of malaria mosquitoes to the insecticides used in ITNs and for indoor residual spraying, and resistance of *P. falciparum* to artemisinin and other treatments.

EQUITY

Use of ITNs among vulnerable groups such as young children and pregnant women is higher than in the population as a whole, while children aged 5–19 years have lower rates of use (Fig. A.6.3). As malaria incidence falls, the disease often becomes increasingly concentrated in marginalized population groups, including high-risk occupational groups; ethnic, religious and political minorities; and communities living in hard-to-reach areas and border regions. The provision of services to these groups may be more difficult and more costly due to infrastructural challenges, security concerns, language barriers, traditional beliefs and political considerations.

DATA GAPS

In evaluating trends in reported malaria incidence between 2000–2015, only 13 out of 44 countries in the WHO African Region had data sufficient for monitoring without the need for mathematical modelling. In other WHO regions, 53 out of 61 countries at risk of malaria had sufficient reported data for monitoring trends. In the absence of reliable data a geostatistical model is used to derive incidence estimates in Africa. Estimates of deaths due to malaria in high-burden countries are also derived from models, which for children in Africa rely upon verbal autopsy studies, which in turn largely rely upon the presence of fever to identify malaria deaths. Monitoring malaria incidence by key equity stratifiers will require a much greater investment in surveillance systems than is currently made.

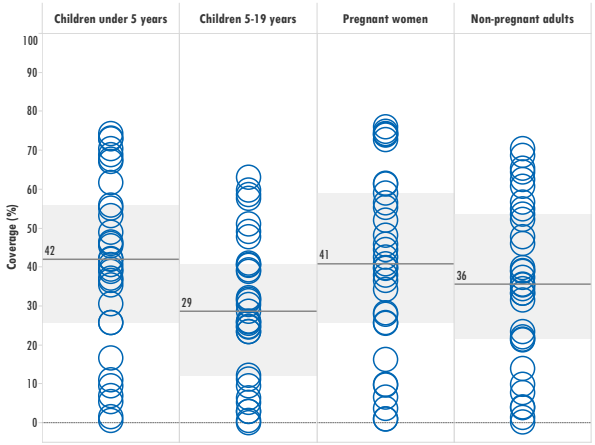
REFERENCES

1 Unless otherwise noted, all statistics in text, table and figures are taken from: World Malaria Report 2015. Geneva: World Health Organization; 2015 (http://www.who.int/malaria/publications/world-malaria-report-2015/report/en/, accessed 28 March 2016).

2 Global Technical Strategy for Malaria 2016–2030. Geneva: World Health Organization; 2015 (http://www.who.int/malaria/publications/atoz/9789241564991/en/, accessed 28 March 2016).

3 Health in 2015: from MDGs to SDGs. Geneva: World Health Organization; 2015 (http://www.who.int/gho/publications/mdgs-sdgs/en/, accessed 28 March 2016).

Figure A.6.3.
Proportion of people sleeping under an ITN in the WHO African Region, 2005–2014[a]



[a] Based on the results of household surveys in 33 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Table A.6.1.
Malaria incidence (per 1000 population at risk), 2013

AFR

Algeria	<0.1
Cabo Verde	0.7
Botswana	1.1
Swaziland	3.6
South Africa	5.0
Namibia	5.4
Eritrea	17.4
Mauritania	24.9
Madagascar	83.3
Sao Tome and Principe	93.0
Guinea-Bissau	112.1
Ethiopia	117.8
Rwanda	121.1
Senegal	128.1
United Republic of Tanzania	130.6
Zimbabwe	138.9
Angola	145.7
South Sudan	153.8
Chad	157.9
Comoros	170.6
Congo	187.5
Gabon	210.6
Equatorial Guinea	211.1
Zambia	214.2
Malawi	217.8
Uganda	231.8
Gambia	233.1
Kenya	266.3
Burundi	269.4
Cameroon	271.8
Democratic Republic of the Congo	295.2
Benin	303.0
Niger	317.1
Ghana	318.5
Central African Republic	325.0
Nigeria	342.9
Mozambique	352.3
Liberia	368.8
Togo	378.9
Côte d'Ivoire	385.2
Guinea	403.4
Sierra Leone	406.0
Burkina Faso	418.4
Mali	460.9
Lesotho	
Mauritius	
Seychelles	

AMR

Argentina	0.0
Paraguay	0.0
Costa Rica	<0.1
Ecuador	<0.1
El Salvador	<0.1
Belize	0.2
Dominican Republic	0.2
Mexico	0.2
Panama	0.5
Nicaragua	1.6
Guatemala	2.2
Honduras	3.2
Bolivia (Plurinational State of)	5.1
Colombia	8.9
Brazil	9.9
Suriname	12.6
Haiti	13.6
Peru	30.4
Venezuela (Bolivarian Republic of)	40.7
Guyana	129.3
Antigua and Barbuda	
Bahamas	
Barbados	
Canada	
Chile	
Cuba	
Dominica	
Grenada	
Jamaica	
Saint Kitts and Nevis	
Saint Lucia	
Saint Vincent and the Grenadines	
Trinidad and Tobago	
United States of America	
Uruguay	

SEAR

Sri Lanka	0.0
Bhutan	<0.1
Nepal	1.2
Democratic People's Republic of Korea	2.1
Thailand	6.5
India	23.7
Indonesia	41.8
Myanmar	45.0
Bangladesh	68.7
Timor-Leste	89.7
Maldives	

EUR

Armenia	0.0
Azerbaijan	0.0
Georgia	0.0
Kyrgyzstan	0.0
Russian Federation	0.0
Turkmenistan	0.0
Uzbekistan	0.0
Tajikistan	<0.1
Turkey	4.3
Albania	
Andorra	
Austria	
Belarus	
Belgium	
Bosnia and Herzegovina	
Bulgaria	
Croatia	
Cyprus	
Czech Republic	
Denmark	
Estonia	
Finland	
France	
Germany	
Greece	
Hungary	
Iceland	
Ireland	
Israel	
Italy	
Kazakhstan	
Latvia	
Lithuania	
Luxembourg	
Malta	
Monaco	
Montenegro	
Netherlands	
Norway	
Poland	
Portugal	
Republic of Moldova	
Romania	
San Marino	
Serbia	
Slovakia	
Slovenia	
Spain	
Sweden	
Switzerland	
The Former Yugoslav Republic of Macedonia	
Ukraine	
United Kingdom	

EMR

Iraq	0.0
Oman	0.0
Syrian Arab Republic	0.0
Iran (Islamic Republic of)	<0.1
Saudi Arabia	<0.1
Pakistan	12.8
Afghanistan	15.7
Djibouti	25.0
Yemen	34.7
Sudan	37.7
Somalia	78.8
Bahrain	
Egypt	
Jordan	
Kuwait	
Lebanon	
Libya	
Morocco	
Qatar	
Tunisia	
United Arab Emirates	

WPR

China	<0.1
Republic of Korea	0.2
Philippines	0.4
Viet Nam	0.9
Malaysia	3.2
Cambodia	10.6
Lao People's Democratic Republic	29.8
Vanuatu	31.3
Solomon Islands	75.4
Papua New Guinea	185.1
Australia	
Brunei Darussalam	
Cook Islands	
Fiji	
Japan	
Kiribati	
Marshall Islands	
Micronesia (Federated States of)	
Mongolia	
Nauru	
New Zealand	
Niue	
Palau	
Samoa	
Singapore	
Tonga	
Tuvalu	

HEPATITIS

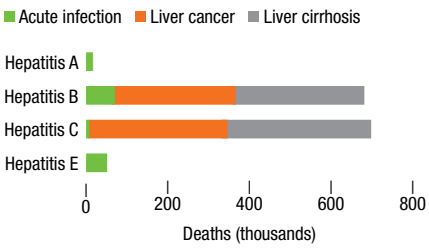
SDG Target 3.3
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Indicator 3.3.4: Hepatitis B incidence per 100 000 population

SITUATION

Viral hepatitis is caused by five different viruses with transmission occurring either through contaminated food or water (hepatitis A and E) or through exposure to blood or body fluids (hepatitis B, C and D). Viral hepatitis infection kills an estimated 1.45 million people per year.[1] Approximately 90% of deaths are due to chronic HBV and HCV infections that cause cirrhosis and hepatocellular carcinoma (Fig. A.7.1). The majority (85%) of viral hepatitis deaths occur in Asia, East Africa, North Africa and West Africa. Despite the high disease burden and available prevention and treatment interventions, hepatitis has not received the same attention as other diseases with a comparable burden of disease, such as HIV, TB or malaria.

Figure A.7.1.
Global deaths due to hepatitis, by virus type and sequela, 2013[1]



ACHIEVING THE 2030 TARGET

Vaccination will remain a priority preventive intervention. Three-dose HBV vaccine coverage among infants is a coverage indicator that is a leading determinant of the number of new HBV infections per 100 000 population in a given year – which is the selected SDG indicator. HBV vaccination coverage has increased dramatically in recent years (Figure A.7.3). Other preventive interventions include expanding blood and injection safety within and beyond health-care settings, and taking harm-reduction programmes to scale for people who use drugs. Effective treatment can cure more than 90% of patients with chronic HCV infection and suppress viral replication for most patients with chronic HBV infection. The expansion of treatment coverage will require innovations in diagnostics, including point-of-care technologies, reductions in prices of medicines and a public health approach to treatment and care.

Table A.7.1.
Key interventions of the Global Health Sector Strategy for viral hepatitis

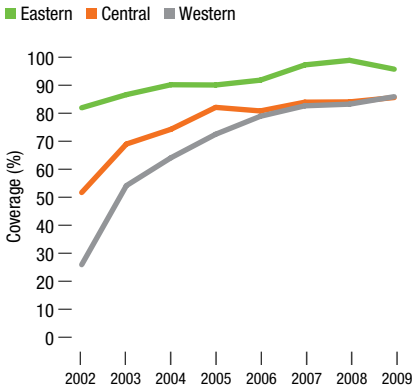
Prevention interventions	1. Three-dose hepatitis B vaccine for infants 2. Prevention of HBV mother-to-child transmission using hepatitis B birth dose or other approaches 3. Blood safety and injection safety, including use of engineered devices 4. Harm reduction for persons who use drugs
Treatment interventions	5. Diagnosis of HBV and HCV 6. Treatment of HBV and HCV

The WHO Global Health Sector Strategy 2016–2021 for viral hepatitis[2] focuses on HBV and HCV. It proposes to increase the coverage of preventive interventions and to scale up testing and treatment (Table A.7.1). The specific targets are a 90% reduction in new cases of chronic HBV and HCV infection and a reduction in hepatitis deaths from 1.4 million to fewer than 500 000 by 2030.

EQUITY

Efforts to combat hepatitis should be implemented in a way that reduces inequities within countries. For example, in China, the coverage of HepBOT (HBV vaccine birth dose administered in a timely way – within 24 hours) was highest in the wealthier Eastern provinces. Between 2002 and 2010, a pro-poor strategy provided HBV vaccine free of charge in the Western area and in poverty-affected regions of the Central area leading to a marked reduction in national coverage gaps (Fig. A.7.2).

Figure A.7.2.
Coverage of HepBOT in the Eastern, Central and Western areas of China, 2002–2009, 2010 survey[4]



DATA GAPS

In order to address the important data gaps on hepatitis that exist in most countries, WHO in 2016 published its *Technical Considerations and Case Definitions to Improve Viral Hepatitis Surveillance*, along with a new framework for the monitoring and evaluation of viral hepatitis programmes. The proposed key impact indicator is the number of new hepatitis B infections per 100 000 population in a given year, and will be based on biomarker surveys as described in the WHO guidance. In 2005, the WHO Regional Committee for the Western Pacific adopted a resolution for hepatitis B control that (among other things) called for biomarker surveys, with many countries in the Region having already conducted such surveys to evaluate the impact of universal hepatitis B vaccination.[5]

REFERENCES

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2. Draft global health sector strategies on HIV, viral hepatitis and STIs, 2016–2021. Geneva: World Health Organization. In preparation. These three draft strategies will be finalized for consideration by the Sixty-ninth World Health Assembly, 23–28 May 2016 (draft versions available at: HYPERLINK "wlmailhtml:-CSCO-3h--UrlBlockedError.aspx"\o "http://www.who.int/hiv/strategy2016-2021/en/" \t "_blank"http://www.who.int/hiv/strategy2016-2021/en/, accessed 16 April 2016).
3. WHO/UNICEF coverage estimates 2014 revision. July 2015 (see: http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html).
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5. Progress towards meeting the 2012 hepatitis B control milestone: WHO Western Pacific Region, 2011. Wkly Epidemiol Rec. 2011:86(19):180–88.

Figure A.7.3.
Infants receiving three doses of hepatitis B vaccine, by WHO region, 1989–2014[3]

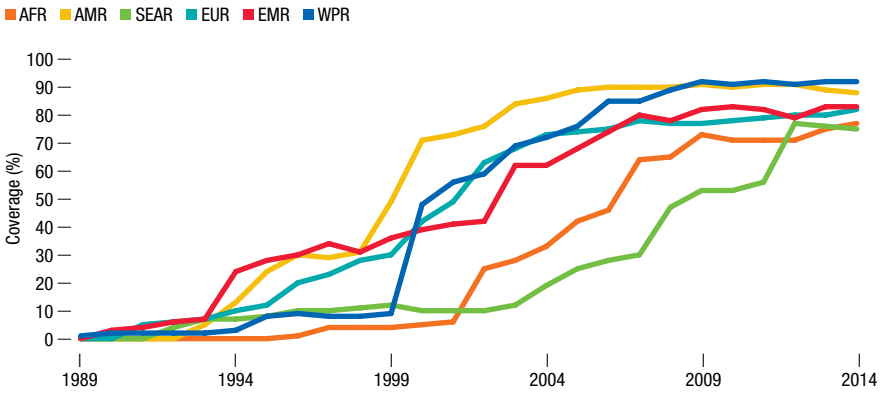
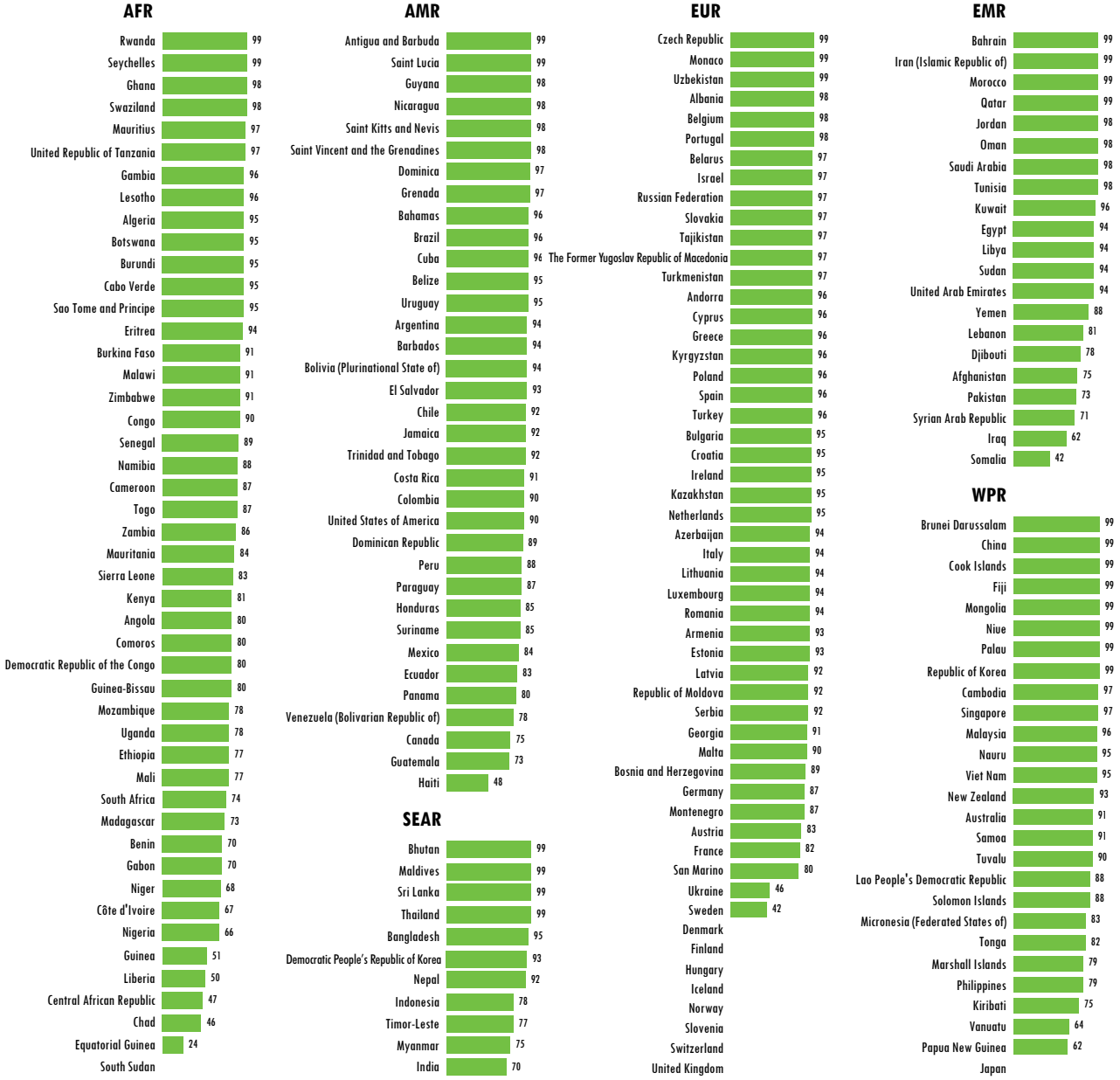


Table A.7.2.
Infants receiving three doses of hepatitis B vaccine, 2014[3]



NEGLECTED TROPICAL DISEASES

SDG Target 3.3
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Indicator 3.3.5: Number of people requiring interventions against neglected tropical diseases

SITUATION

Key interventions against neglected tropical diseases (NTDs) include mass treatment; individual treatment and care; water, sanitation and hygiene (WASH); vector control; and veterinary public health, as well as supportive interventions to strengthen health systems.

The end of the epidemic will be first evidenced by reductions in the number of people requiring mass or individual treatment and care, as diseases are eliminated or controlled. Treatment and care are the interventions covered in this section. Some of the other wide-ranging interventions listed above can be addressed by SDG targets and indicators for UHC (Target 3.8) and access to water and sanitation (Targets 6.1 and 6.2).

In 2014, at least 1.7 billion people required mass or individual treatment and care for NTDs in 185 countries.[1] Of these, 1.1 billion were in lower-middle-income countries (Fig. A.8.1). The 520 million people requiring treatment in low-income countries represented 60% of their populations.

Almost all of these 1.7 billion people required mass treatment for at least one of the following NTDs: lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiases (STH) and trachoma. More than 2.7 million people needed individual treatment and care for other NTDs such as Buruli ulcer, dengue, guinea-worm disease, human African trypanosomiasis (HAT), leprosy, the leishmaniases and yaws (Fig. A.8.2).

ACHIEVING THE 2030 TARGET

In 2014, 50 countries had achieved national elimination or were under surveillance for elimination of at least one NTD. For example, the number of people requiring mass treatment for lymphatic filariasis has decreased from a high of 1.4 billion in 2011 to 1.1 billion in 2014.

For NTDs targeted for elimination or eradication in World Health Assembly (WHA) resolutions,[2] ending the epidemic implies a reduction in the number of people requiring treatment and care towards zero. The control of other NTDs means a reduction in the frequency of intervention. Taken together, existing WHA-endorsed targets should lead to a 90% reduction in the average number of people requiring treatment and care per year.

Reducing the number of people requiring treatment and care does not depend solely on the actions of the health sector: controlling STH requires universal access to water and sanitation; controlling dengue requires vector control as an adaptive response to urbanization and climate change.

Disaggregation by disease will be an important element in monitoring successes and failures.

EQUITY

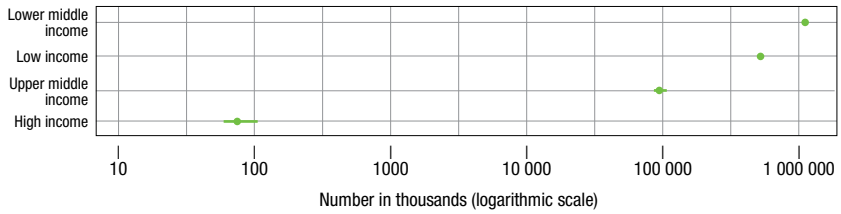
People requiring interventions against NTDs are poor and marginalized. Monitoring NTDs and intervention coverage is therefore key to ensuring that the least well off are prioritized from the beginning of the path towards UHC and universal access to safe water and sanitation.[3,4] Indeed, NTD monitoring can help the health and WASH sectors to achieve their universal access goals by better targeting the poorest and most marginalized populations.

DATA GAPS

Gaps in NTD reporting systems include the number of people requiring treatment and care for dengue in the WHO African Region, for Chagas disease and for zoonotic NTDs, as well as the number of new cases requiring and requesting surgery or rehabilitation. Based on reporting systems for donated medicines, data disaggregation by sex and by urban or rural area is optional or dependent upon which diseases are co-endemic. Some disaggregation by age is available.

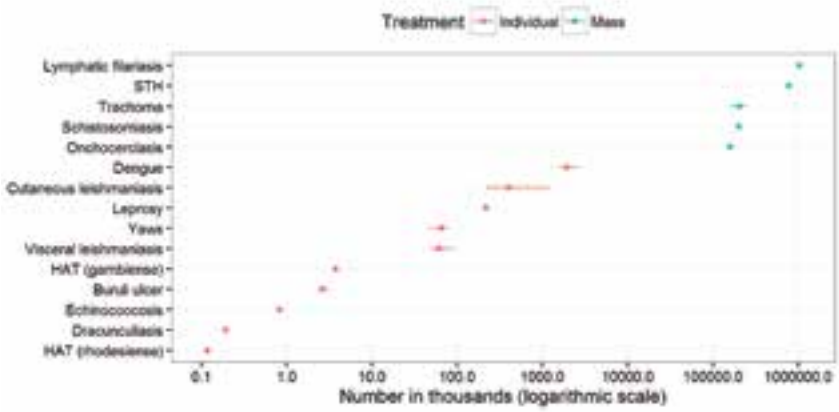
Figures A.8.1 to A.8.3 present conservative estimates of the number of people requiring treatment and care for NTDs, assuming perfect co-endemicity of some NTDs at the level of the smallest available unit and age group. By 2030, improved co-endemicity data and models will be used to validate this approach. Any changes over time in case detection rates will have to be taken into account when making comparisons to the baseline.

Figure A.8.1.
Reported number of people requiring interventions against NTDs, by country income group, 2014[a]



[a] Horizontal line reflects 95% uncertainty intervals around missing values in 2014.

Figure A.8.2.
Reported number of people requiring interventions against NTDs, by disease, 2014[a,b]



[a] Horizontal lines reflect 95% uncertainty intervals around missing values in 2014.

[b] Data for dengue are not available from the WHO African Region; data for echinococcosis are available from some countries of the WHO European Region only; data for other NTDs including Chagas disease and zoonotic NTDs are not currently available.

REFERENCES

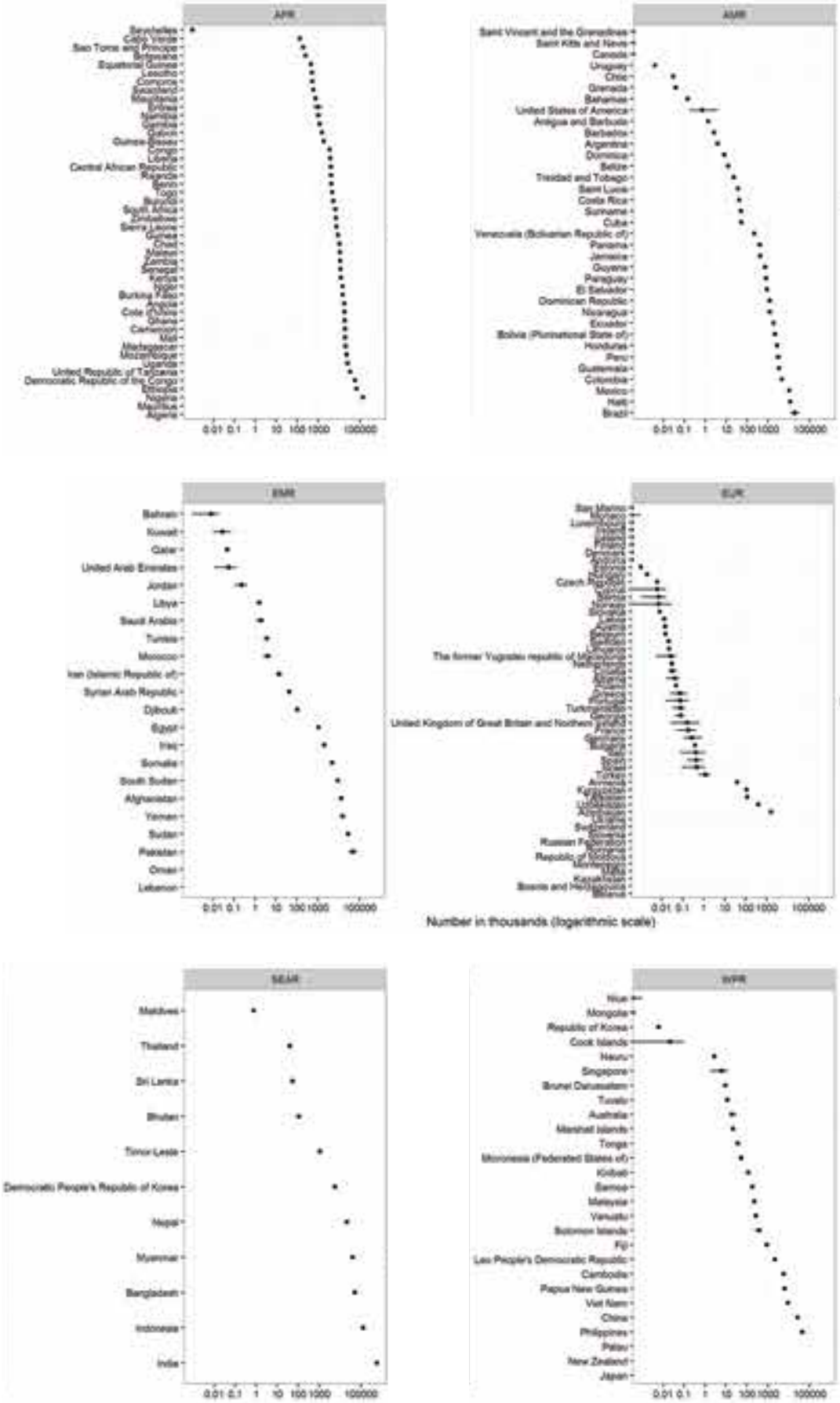
[1] Unless otherwise noted, all statistics in the text and figures are taken from: Global Health Observatory [website]. Geneva: World Health Organization (http://www.who.int/gho/en/), and the Preventive Chemotherapy and Transmission Control (PCT) databank. Geneva: World Health Organization (http://www.who.int/neglected_diseases/preventive_chemotherapy/databank/en/).

[2] Eradication of guinea-worm disease (2015) and yaws (2020); global elimination of leprosy (2020), lymphatic filariasis (2020), trachoma (2020), onchocerciasis (2025) and HAT (2020, with zero incidence in 2030); regional elimination of schistosomiasis (2020), rabies (2020) and visceral leishmaniasis (2020); regional interruption of intra-domiciliary transmission of Chagas disease (2020).

[3] Tracking universal health coverage: first global monitoring report. Geneva and Washington (DC): World Health Organization and World Bank; 2015 (http://www.who.int/healthinfo/universal_health_coverage/report/2015/en/, accessed 25 March 2016).

[4] Water sanitation & hygiene for accelerating and sustaining progress on neglected tropical diseases. A global strategy 2015–2020. Geneva: World Health Organization; 2015 (http://www.who.int/water_sanitation_health/publications/wash-and-ntd-strategy/en/, accessed 29 March 2015).

Figure A.8.3.
Reported number of people requiring interventions against NTDs, by country, 2014[a]



[a] Horizontal lines reflect 95% uncertainty intervals around missing values in 2014. A country is shown as not having available data when the uncertainty interval exceeds two orders of magnitude.

NONCOMMUNICABLE DISEASES

SDG Target 3.4
By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and well-being

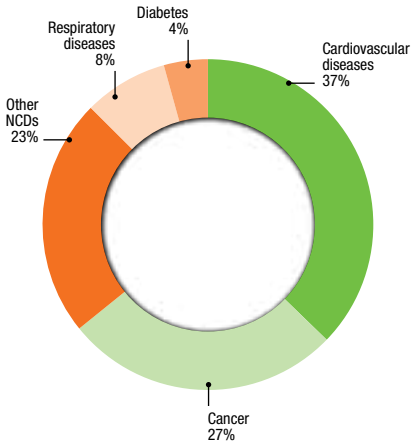
Indicator 3.4.1: Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease

SITUATION

In 2012, NCDs were responsible for around 38 million deaths per year, accounting for 68% of all deaths worldwide.[1] Of deaths under the age of 70 (commonly referred to as premature deaths) an estimated 52% were due to NCDs. Over three quarters of those premature deaths were caused by cardiovascular disease (CVD), cancer, diabetes and chronic respiratory disease (CRD) (Fig A.9.1).

In terms of mortality the leading NCD is CVD which claimed 17.5 million lives in 2012 (46% of all NCD deaths) – 6 million of which were under age 70. Of the 17.5 million deaths, 7.4 million were due to coronary heart disease and 6.7 million to stroke. Cancers kill around half as many people as CVD (8.2 million, with 4.3 million under age 70), while CRD and diabetes account for 4.0 million and 1.5 million deaths, respectively. Diabetes is also a risk factor for CVD, with about 10% of cardiovascular deaths caused by higher-than-optimal blood glucose.[2]

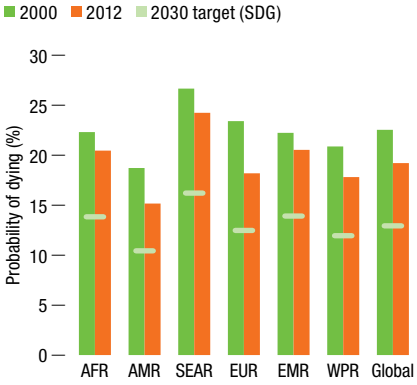
Figure A.9.1.
Causes of premature (under age 70) NCD mortality, 2012



ACHIEVING THE 2030 TARGET

Globally, premature mortality from the four main NCDs declined by 15% between 2000 and 2012 (Figure A.9.2). This rate of decline is insufficient to meet the 2030 SDG target. Achieving the target for NCDs will require major interventions in a context characterized by ageing populations, rapid unplanned urbanization and the globalization of markets that promote tobacco use, physical inactivity and unhealthy diets. Efforts will focus on the development and implementation of strong national plans that emphasize the prevention of key NCD risk factors and treatment access for all.

Figure A.9.2.
Probability of dying from any of the four main NCDs between ages 30 and 70, by WHO region and globally, 2000 and 2012



The United Nations Political Declaration on NCDs adopted at the United Nations General Assembly in 2011, and the United Nations Outcome Document on NCDs adopted at the United Nations General Assembly in 2014 include a roadmap of commitments made by governments. The WHO Global Action Plan for the Prevention and Control of NCDs 2013–2020 endorsed by the WHA in May 2013 sets priorities and provides strategic guidance on how countries can implement the roadmap of commitments. The Global Action Plan includes targets that focus on risk factors such as tobacco use, alcohol consumption, physical inactivity, high salt intake, obesity, diabetes and hypertension, as well as targets on access to essential NCD medicines and technologies, and to drug therapy and counselling for those with existing NCDs.

Major obstacles to reducing NCD mortality include: (a) a lack of planning (around a quarter of all countries did not have a policy or an operational plan and/or strategy for addressing NCDs in 2015); (b) the marketing of harmful products such as tobacco; (c) rapid, unplanned urbanization; and (d) the increased size of the ageing population.

EQUITY

Overall declines in NCD mortality can mask increasing inequalities within countries.[3] Where data are of sufficient quality to measure NCD mortality by socioeconomic status, those with lower status generally have higher mortality than those with higher status.[4] In many countries, NCD inequalities are the most important source of inequalities in total mortality and life expectancy. Achieving global targets for NCDs will increasingly depend upon the ability of governments to implement policies and services that work effectively across all social groups.

DATA GAPS

National estimates of NCD mortality are primarily derived from data collected in CRVS systems. Only around one third of deaths worldwide are recorded in civil registry systems with cause-of-death information based on medical certification.[5] Alternative data sources may be used – as a first step, countries may set up sample registration systems using verbal autopsy to determine causes of death. However, distinguishing among noncommunicable causes of death using verbal autopsy remains challenging. Disaggregating on key socioeconomic stratifiers is also a challenge even in high-income countries with gold-standard data-collection systems. Instead, CRVS data may be disaggregated geographically to identify disparities in NCD mortality.

REFERENCES

1. Unless otherwise noted, all mortality statistics in the text, table and figures are taken from: Global Health Estimates 2013: Deaths by Cause, Age and Sex, Estimates for 2000–2012. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/global_burden_disease/en/).
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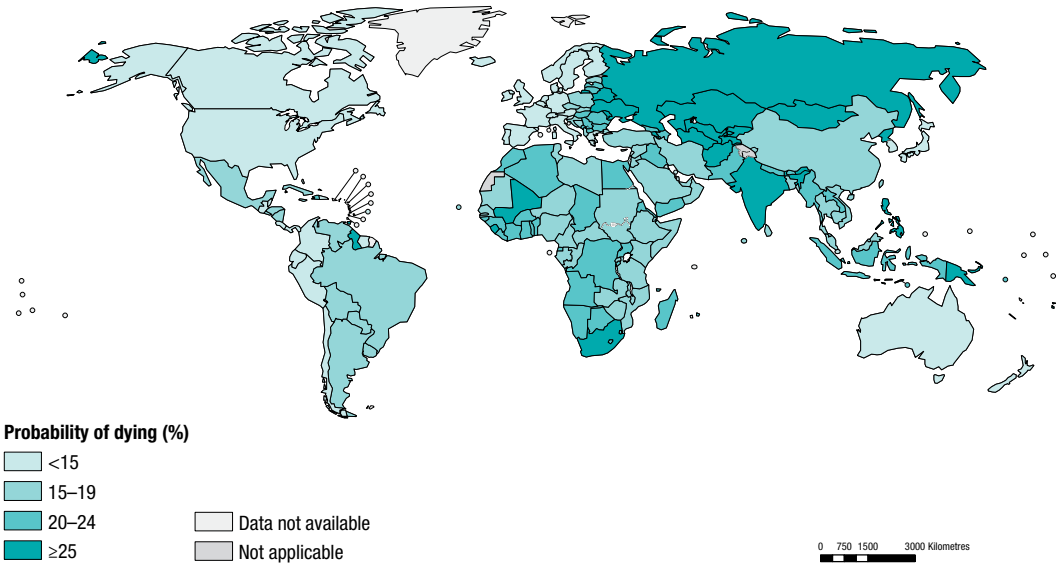
4. Di Cesare M, Khang Y-H, Asaria P, Blakely T, Cowan MJ, Farzadfar F et al. Inequalities in non-communicable diseases and effective responses. Lancet. 2013;381(9866):585–97.
5. World Health Statistics 2012. Part II. Civil registration and vital statistics systems. Geneva: World Health Organization; 2012 (http://apps.who.int/iris/bitstream/10665/44844/1/9789241564441_eng.pdf?ua=1&ua=1, accessed 3 April 2016).

Figure A.9.3.
Probability of dying from any of the four main NCDs between ages 30 and 70 (%), 2012[a]



[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis. Estimate for Guyana is provisional.

Table A.9.1.
Probability of dying from any of the four main NCDs between ages 30 and 70 (%), 2012[a]

AFR	
Gabon	15.0
Cabo Verde	15.1
Ethiopia	15.2
Mauritania	15.8
United Republic of Tanzania	16.1
Senegal	16.7
Mozambique	17.3
Kenya	18.1
Zambia	18.1
Central African Republic	18.5
Malawi	18.7
Gambia	19.1
Rwanda	19.1
Zimbabwe	19.3
Niger	19.6
Congo	19.8
Nigeria	19.8
South Sudan	19.8
Cameroon	19.9
Namibia	20.0
Togo	20.2
Ghana	20.3
Botswana	20.9
Guinea	20.9
Liberia	21.2
Uganda	21.2
Swaziland	21.4
Algeria	22.1
Benin	22.1
Guinea-Bissau	22.4
Chad	23.2
Côte d'Ivoire	23.3
Equatorial Guinea	23.4
Madagascar	23.4
Comoros	23.5
Democratic Republic of the Congo	23.6
Burkina Faso	23.8
Lesotho	23.9
Mauritius	24.0
Angola	24.2
Eritrea	24.2
Burundi	24.3
Mali	25.6
South Africa	26.8
Sierra Leone	27.5

AMR	
Canada	10.7
Peru	11.2
Chile	11.9
Ecuador	11.9
Costa Rica	12.2
Colombia	12.4
Panama	12.5
Guatemala	13.5
Suriname	13.6
Bahamas	13.8
Barbados	13.8
United States of America	14.3
Belize	14.4
Dominican Republic	14.8
Honduras	15.7
Mexico	15.7
Venezuela (Bolivarian Republic of)	15.7
Cuba	16.5
El Salvador	16.9
Jamaica	17.0
Uruguay	17.1
Argentina	17.5
Bolivia (Plurinational State of)	18.3
Paraguay	18.5
Brazil	19.4
Nicaragua	19.4
Haiti	23.9
Trinidad and Tobago	26.2
Guyana[b]	28.4

SEAR	
Maldives	15.9
Thailand	16.2
Bangladesh	17.5
Sri Lanka	17.6
Bhutan	20.5
Nepal	21.6
Indonesia	23.1
Timor-Leste	23.7
Myanmar	24.3
India	26.2
Democratic People's Republic of Korea	27.1

EUR	
Switzerland	9.1
Cyprus	9.5
Israel	9.5
Italy	9.8
Sweden	9.9
Iceland	10.2
Norway	10.7
Spain	10.8
Ireland	11.1
Finland	11.2
France	11.4
Luxembourg	11.4
Malta	11.6
Portugal	11.9
Austria	12.0
United Kingdom	12.0
Belgium	12.2
Netherlands	12.2
Germany	12.3
Slovenia	12.6
Greece	12.9
Denmark	13.3
Czech Republic	17.0
Bosnia and Herzegovina	17.5
Croatia	17.7
Turkey	18.4
Albania	18.8
Estonia	18.8
Slovakia	19.4
Poland	20.0
Georgia	21.6
The Former Yugoslav Republic of Macedonia	22.1
Montenegro	22.2
Lithuania	22.4
Romania	22.6
Azerbaijan	23.3
Bulgaria	24.0
Hungary	24.0
Latvia	24.1
Serbia	24.5
Belarus	26.2
Republic of Moldova	26.5
Ukraine	28.2
Kyrgyzstan	28.5
Tajikistan	28.8
Armenia	29.7
Russian Federation	29.9
Uzbekistan	31.0
Kazakhstan	33.9
Turkmenistan	40.8

EMR	
Kuwait	11.8
Lebanon	12.4
Bahrain	13.3
Qatar	14.2
Saudi Arabia	16.7
Tunisia	17.2
Iran (Islamic Republic of)	17.3
Sudan	17.4
Libya	17.6
Oman	17.8
Djibouti	18.8
United Arab Emirates	18.9
Somalia	19.1
Syrian Arab Republic	19.1
Jordan	19.8
Pakistan	20.5
Morocco	22.8
Yemen	23.1
Iraq	23.7
Egypt	24.5
Afghanistan	30.5

WPR	
Japan	9.3
Republic of Korea	9.3
Australia	9.4
Singapore	10.5
New Zealand	10.7
Brunei Darussalam	16.8
Viet Nam	17.4
Cambodia	17.7
China	19.4
Malaysia	19.6
Solomon Islands	24.1
Lao People's Democratic Republic	24.2
Papua New Guinea	26.4
Philippines	27.9
Fiji	30.8
Mongolia	32.0

[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

[b] Provisional estimate.

SUICIDE

SDG Target 3.4
By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and well-being

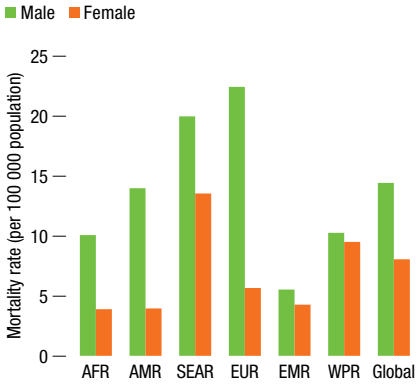
Indicator 3.4.2: Suicide mortality rate

SITUATION

Mental disorders occur in all regions and cultures of the world. The most prevalent of these disorders are depression and anxiety, which are estimated to affect nearly one in 10 (676 million) people. At its worst, depression can lead to suicide. Other key risk factors for suicide include previous attempts and easy access to means of suicide, such as pesticides or firearms.

In 2012, there were over 800 000 estimated suicide deaths worldwide, with 86% of these occurring in people under 70 years of age.[1] Globally, among young adults aged 15–29 years, suicide accounts for 8.5% of all deaths and is ranked as the second leading cause of death, after road traffic injuries. In high-income countries, three times as many men die by suicide than women, while globally the corresponding figure is 1.8 times as many (Figure A.10.1).

Figure A.10.1.
Suicide mortality rates, by sex, by WHO region and globally, 2012



There has been a 9% decrease globally in the number of suicide deaths between 2000 and 2012, at the same time as the global population has increased. The global suicide mortality rate has fallen 21% over the same period, which is mostly driven by decreases among both sexes in the WHO European Region and WHO Western Pacific Region. However, after controlling for population ageing, increases have been observed in around 50 individual countries, including some high-income countries, where some of the highest rates remain (Figure A.10.2)

In the past half century, the decriminalization of suicide in many countries has made it possible for those with suicidal thoughts to seek help, if available. Comprehensive national strategies or action plans, especially in high-income countries,[2] and the restricting in some countries of access to the means of suicide (such as pesticides or firearms) have also contributed to the improvements observed.[3] New treatments have also become available for depression, for both acute episodes and relapse prevention, based on medications and psychological interventions that are effective and produce fewer side-effects.

However, rates of recognition of depression remain low, both by those suffering from it and by health care providers. According to the World Mental Health Surveys,[4] even in high-resource settings only around half of those with depression receive any treatment, with about 40% receiving treatment considered to be minimally adequate. In low-income countries coverage is much lower. In Nigeria, for example, only one fifth of those with a depressive episode receive any treatment and only 1 in 50 receives treatment that is minimally adequate.

ACHIEVING THE 2030 TARGET

Moderate and severe depression are both included within the Mental Health Action Plan 2013–2020 target to increase service coverage for people with severe mental disorders by 20% by 2020.[5] WHO Member States have committed to developing and providing comprehensive, integrated and responsive mental health and social services in community-based settings.[6] Suicide prevention is also an integral component of the Action Plan, with the target of reducing the rate of suicide in countries by 10% by 2020.

For national responses to be effective, a comprehensive multisectoral suicide-prevention strategy is needed. This should include the early identification and effective management of suicidal behaviours, as well as follow-up and community-based support for those who attempt suicide, reducing the harmful use of alcohol and restricting access to the most common means of suicide (including pesticides, firearms and certain medications). In addition to suicide-mortality data, suicide-attempt data equally needs to be part of a surveillance system.

EQUITY

The stigma surrounding depression and suicide, which impedes the seeking of help and service provision, is exacerbated for marginalized and discriminated-against groups. Additionally, many facilities in LMIC do not have the capacity to provide basic treatment for depression, as health workers are not trained in mental health issues and medicines are not available.[7]

DATA GAPS

The complete recording of suicide deaths in death-registration systems requires good linkages with coronial and police systems, but can be seriously impeded by stigma, social and legal considerations, and delays in determining cause of death. Less than one half of WHO Member States have well-functioning death-registration systems that record causes of death. In particular, very few low-income and African countries have functioning death-registration systems.

While depression is known to be prevalent, the available data are not adequate to provide reliable estimates of global and regional trends. Country health information systems do not routinely collect data on a core set of mental health indicators in over two thirds of countries, and are unable to provide reliable information on the extent of service coverage, even for severe mental disorders.

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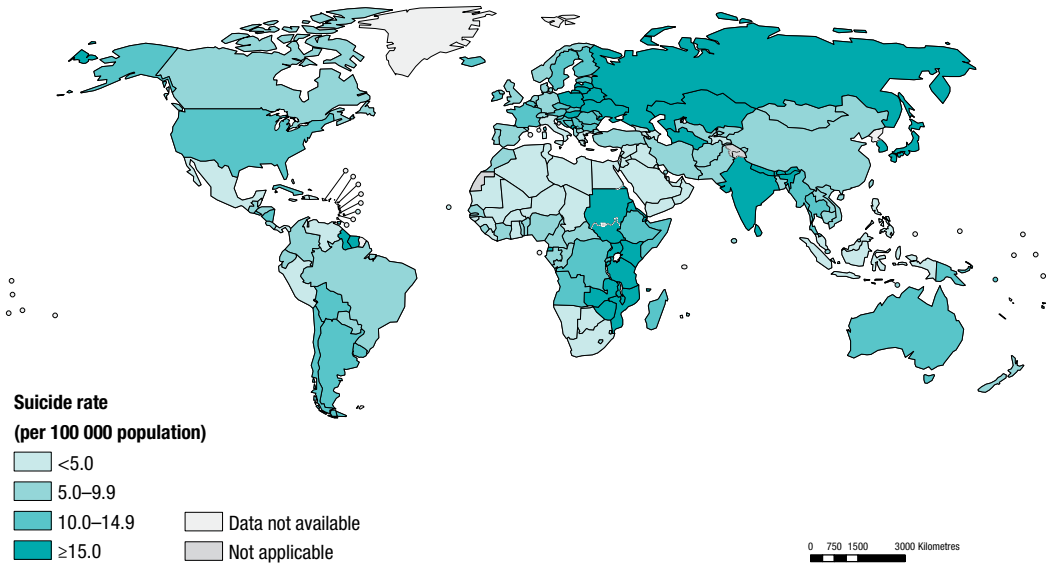
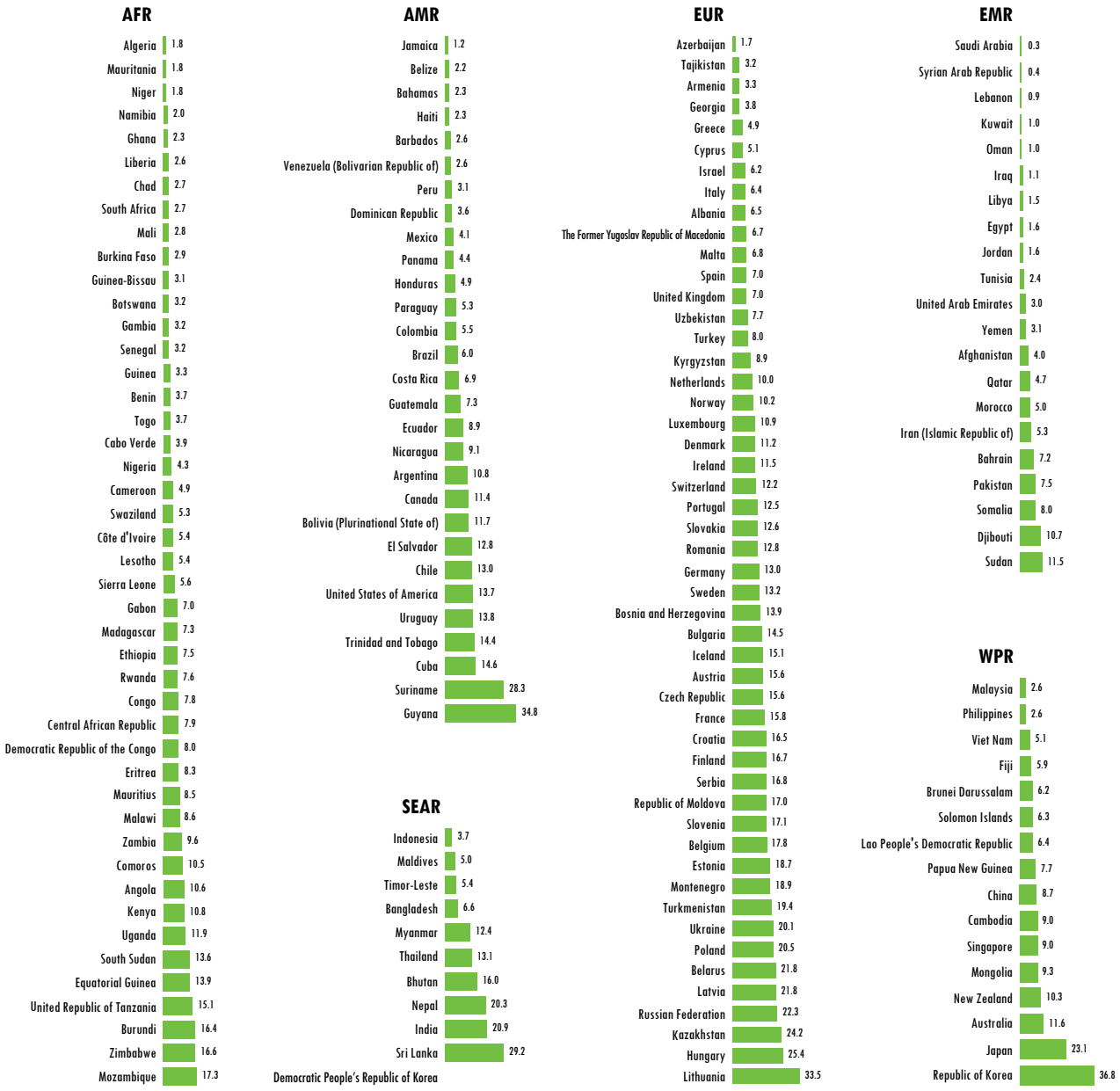
Figure A.10.2.
Age-standardized suicide mortality rate, 2012[a]



[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

Table A.10.1.
Suicide mortality rate (per 100 000 population), 2012[a]



[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

SUBSTANCE ABUSE

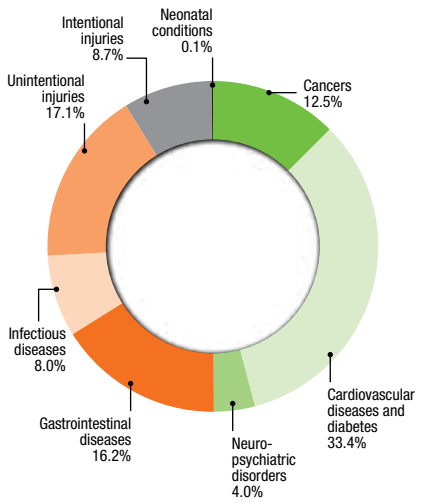
SDG Target 3.5
Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

Indicator 3.5.1: Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance-use disorders
Indicator 3.5.2: Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol

SITUATION

Substance use and substance use disorders cause a significant public health burden. In 2012, 3.3 million deaths – 5.9% of all deaths worldwide – were attributable to alcohol consumption, with a significant proportion of alcohol-attributable deaths from NCDs and injuries (Fig A.11.1).[1] Worldwide alcohol consumption in 2015 was projected to be 6.3 litres of pure alcohol per person aged 15 or older. In 2010, 38% of the world population aged 15 or older had drunk alcohol in the past 12 months, with 16% of them engaged in heavy episodic drinking. There is considerable global variation in alcohol use. Consumption is increasing in the WHO Western Pacific Region and WHO South-East Asia Region, while remaining stable or slightly decreasing in other WHO regions.

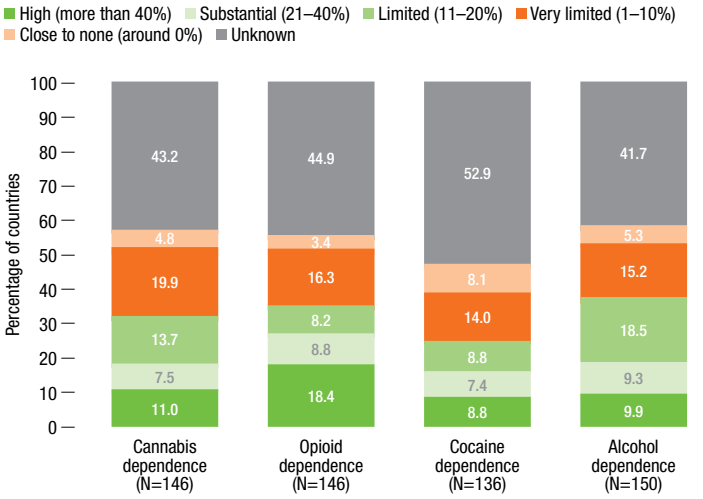
Figure A.11.1.
Distribution of alcohol-attributable deaths, by disease or injury cause, 2012



About 5% of the global population between the ages of 15 and 64 used illicit drugs in 2013. It is estimated that in 2013, some 27 million people in the world suffered from drug use disorders. Almost half of them (12.2 million) injected drugs, an estimated 1.65 million of whom were living with HIV.[2]

Substance use disorders, primarily alcohol use disorders, constitute a significant disease burden in most WHO regions with the exception of the WHO Eastern Mediterranean Region where alcohol consumption is very limited. Available data indicate that treatment coverage for alcohol and drug use disorders is inadequate (Fig A.11.2), though further work is needed to improve the measurement of such coverage.

Figure A.11.2.
Treatment coverage for substance dependence based on assessment by national focal points[4]



ACHIEVING THE 2030 TARGET

Key cost-effective policy options for reducing the harmful use of alcohol include public health oriented pricing policies, restricting the availability of alcoholic beverages, comprehensive restrictions or bans on alcohol advertising and marketing, anti-drink-driving policies and effective health services responses. The effective implementation of alcohol-control measures requires: (a) commitment and appropriate infrastructure in governments; (b) technical capacity to create, enforce and sustain the necessary policy and legal frameworks; (c) strengthened international activities regarding the production and dissemination of knowledge on trends in alcohol consumption, alcohol-attributable harm and societal responses; and (d) mobilization and pooling of available resources to support global and national actions to reduce the harmful use of alcohol in identified priority areas.[3]

With regard to drug use disorders, action will be based upon strengthening public health responses to the world drug problem. Such responses include public health measures to prevent drug use and reduce vulnerability and risks, treatment and care for people with drug use disorders, prevention and management of the harms associated with drug use, ensuring access to controlled medicines for medical and scientific purposes, and appropriate monitoring and evaluation procedures. Evidence-based treatment, care and rehabilitation services for people with drug use disorders are an essential element of a comprehensive drug policy. A continuum of treatment services should be available, from screening and brief interventions through early diagnosis and formal treatment, to rehabilitation and social reintegration programmes and mutual help organizations.

EQUITY

Surveys and mortality studies, particularly from the developed world, suggest that there are more drinkers, more drinking occasions and more drinkers with low-risk drinking patterns in higher socioeconomic groups, while abstainers are more common in the poorest social groups. However, people with lower socioeconomic status may be more vulnerable to the tangible problems and consequences of alcohol consumption, as well as of drug use, due to differential exposure to multiple risk factors, differential psychosocial support and barriers in access to quality health care.[5]

DATA GAPS

Data on alcohol consumption, health consequences and policy responses are regularly collected and recorded, though the estimation of unrecorded alcohol consumption continues to present challenges for many countries. Improving data on patterns of drug use and their health consequences and on treatment coverage for substance-use disorders will require intensified international collaboration and the strengthening of national monitoring systems in many countries.

REFERENCES

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Figure A.11.3.
Total alcohol per capita (>15 years of age) consumption, in litres of pure alcohol, projected estimates, 2015[6]

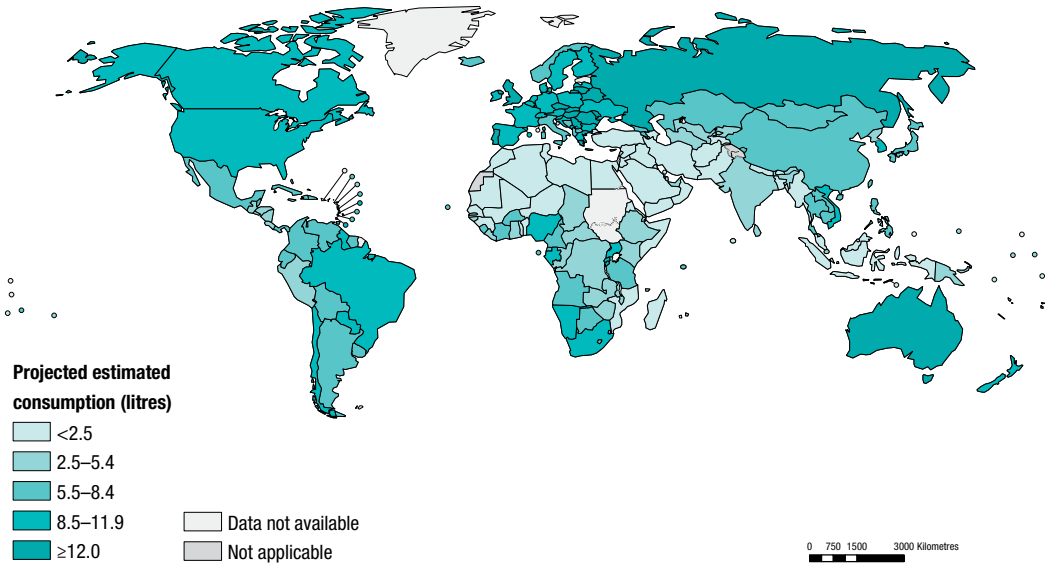


Table A.11.1.
Total alcohol per capita (>15 years of age) consumption, in litres of pure alcohol, projected estimates, 2015[6]

AFR

Mauritania	0.1
Comoros	0.2
Niger	0.3
Senegal	0.5
Algeria	0.6
Guinea	0.7
Mali	1.0
Eritrea	1.4
Madagascar	1.9
Togo	1.9
Mozambique	2.0
Benin	2.2
Malawi	2.5
Gambia	3.2
Democratic Republic of the Congo	3.4
Central African Republic	3.8
Congo	3.9
Kenya	4.0
Mauritius	4.0
Zambia	4.0
Ethiopia	4.3
Guinea-Bissau	4.3
Chad	4.4
Zimbabwe	4.8
Liberia	5.2
Ghana	5.4
Lesotho	6.4
Swaziland	6.4
Côte d'Ivoire	6.5
Seychelles	6.7
Sao Tome and Principe	6.8
Cabo Verde	7.2
Burkina Faso	7.4
Angola	7.6
Botswana	7.7
Cameroon	7.7
Equatorial Guinea	8.1
United Republic of Tanzania	8.1
Sierra Leone	8.2
Burundi	9.8
Rwanda	10.0
Uganda	10.5
Nigeria	11.3
South Africa	11.5
Gabon	11.8
Namibia	11.8
South Sudan	

AMR

Antigua and Barbuda	3.2
El Salvador	3.5
Guatemala	3.9
Honduras	4.0
Bahamas	4.2
Nicaragua	4.6
Costa Rica	5.1
Jamaica	5.1
Peru	5.2
Cuba	5.5
Bolivia (Plurinational State of)	5.8
Haiti	5.9
Ecuador	6.1
Barbados	6.5
Suriname	6.5
Colombia	6.6
Dominica	6.6
Trinidad and Tobago	6.6
Mexico	6.8
Saint Kitts and Nevis	7.0
Uruguay	7.0
Saint Vincent and the Grenadines	7.2
Argentina	7.6
Dominican Republic	7.6
Panama	7.7
Belize	8.3
Venezuela (Bolivarian Republic of)	8.3
Guyana	8.6
United States of America	9.0
Brazil	9.1
Chile	9.3
Paraguay	9.6
Canada	10.3
Grenada	10.4
Saint Lucia	10.4

SEAR

Bangladesh	0.2
Indonesia	0.6
Myanmar	0.7
Maldives	1.0
Bhutan	1.1
Timor-Leste	1.2
Nepal	2.1
Democratic People's Republic of Korea	4.4
Sri Lanka	4.5
India	4.6
Thailand	8.3

EUR

Azerbaijan	2.1
Tajikistan	2.4
Turkey	2.4
Israel	3.1
Kyrgyzstan	3.9
Uzbekistan	4.8
Turkmenistan	5.0
Armenia	5.5
The Former Yugoslav Republic of Macedonia	5.7
Italy	6.1
Albania	6.6
Georgia	6.7
Iceland	6.9
Norway	7.0
Malta	7.2
Bosnia and Herzegovina	7.5
Kazakhstan	8.2
Austria	8.5
Sweden	8.7
Andorra	9.1
Cyprus	9.1
Greece	9.3
Netherlands	9.6
Denmark	10.2
Switzerland	10.4
Germany	10.6
Latvia	10.6
Spain	10.6
Belgium	10.8
Ireland	10.9
Slovenia	10.9
Luxembourg	11.2
Bulgaria	11.3
Montenegro	11.5
Poland	11.5
France	11.6
Croatia	11.7
Ukraine	11.8
Finland	11.9
United Kingdom	12.0
Hungary	12.4
Portugal	12.5
Slovakia	12.5
Romania	12.9
Serbia	12.9
Czech Republic	14.1
Russian Federation	14.5
Lithuania	16.2
Belarus	17.1
Republic of Moldova	17.4
Estonia	
Monaco	
San Marino	

EMR

Libya	0.0
Kuwait	0.1
Pakistan	0.1
Saudi Arabia	0.2
Yemen	0.2
Egypt	0.3
Iraq	0.5
Somalia	0.5
Jordan	0.7
Morocco	0.7
Djibouti	0.9
Oman	0.9
Afghanistan	1.0
Iran (Islamic Republic of)	1.0
Tunisia	1.2
Qatar	1.3
Syrian Arab Republic	1.4
Lebanon	2.2
Bahrain	2.4
United Arab Emirates	4.3
Sudan	

WPR

Brunei Darussalam	0.8
Vanuatu	1.2
Tuvalu	1.3
Solomon Islands	1.6
Malaysia	1.7
Tonga	2.1
Kiribati	2.9
Singapore	2.9
Nauru	3.0
Papua New Guinea	3.1
Fiji	3.2
Micronesia (Federated States of)	3.5
Cook Islands	4.8
Philippines	5.6
Cambodia	6.1
Japan	7.5
Lao People's Democratic Republic	7.5
China	7.6
Niue	7.7
Mongolia	7.8
Viet Nam	8.7
Republic of Korea	10.9
New Zealand	11.2
Australia	12.6
Marshall Islands	
Palau	
Samoa	

ROAD TRAFFIC INJURIES

SDG Target 3.6
By 2020, halve the number of global deaths and injuries from road traffic accidents

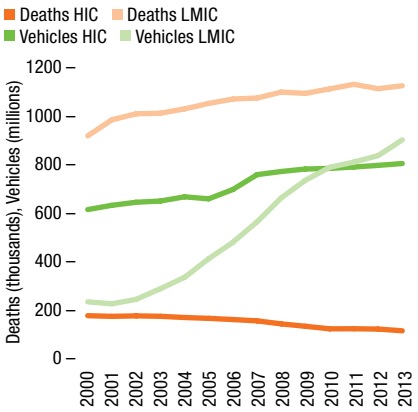
Indicator 3.6.1: Death rate due to road traffic injuries

SITUATION

According to the latest WHO estimates, around 1.25 million people died from road traffic injuries in 2013, with another 20–50 million people sustaining non-fatal injuries as a result of road traffic collisions or crashes.[1] Road traffic injuries are the ninth leading cause of death globally, and the leading cause among people age 15–29 years. Almost 60% of road traffic deaths occur among people aged 15–44 years.

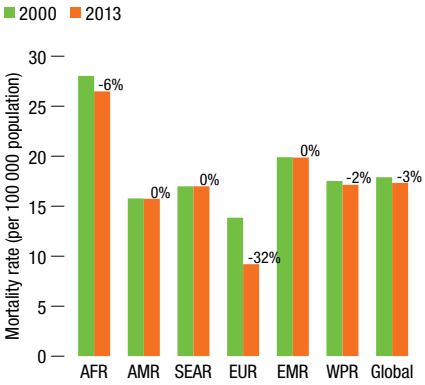
While the number of registered vehicles increased by 90% between 2000 and 2013, the increase in numbers of deaths due to road traffic injuries was much less dramatic (Fig. A.12.1), suggesting that interventions to improve global road safety have had some impact on mortality. Indeed, 79 countries reduced the number of deaths on their roads between 2010 and 2013, showing that improvements are possible and that many more lives could be saved if countries took further action.

Figure A.12.1.
Trends in road traffic deaths and vehicle numbers in high-income countries and in LMIC, 2000–2013



Over 90% of road traffic deaths occur in LMIC, which account for 82% of the world's population, but only 54% of the world's registered vehicles. Several factors are at work, including poor or poorly implemented regulations, inadequate road and vehicle quality, a higher proportion of vulnerable road users and increasing vehicle numbers. Increasing rates of road traffic deaths in some regions are partly attributable to the rapid rate of motorization in many developing countries that has occurred without concomitant investments in road safety strategies. Additionally, in most LMIC, a much higher proportion of road users are pedestrians, cyclists and users of motorized two- or three-wheeled vehicles compared to high-income countries. Half of the world's road traffic deaths occur among motorcyclists (23%), pedestrians (22%) and cyclists (4%).

Figure A.12.2.
Trends in road traffic death rates, by WHO region and globally, 2000–2013



While some countries have recently enacted laws relating to key risk factors for road traffic injuries, their enforcement is lacking in the vast majority of countries. For example, only one quarter of countries rate their enforcement of seat-belt laws as good.[1]

ACHIEVING THE 2030 TARGET

SDG Target 3.6 aims to halve the global number of road traffic deaths by 2020. This is much more ambitious than the target set at the Decade of Action for Road Safety 2011–2020, which was endorsed by the United Nations General Assembly in 2010[2] and which aimed to avoid the predicted increase in current levels. However, if current trends continue, with a projected 47% increase in road vehicles by 2030, then global road traffic deaths will increase. Under a more optimistic scenario, where increases in vehicles per capita are associated with fatality rates falling to those observed in high-income countries over the last two decades, global deaths would decrease to around 1 million per year by 2030.

Substantial additional efforts will therefore be required to make progress towards the SDG target of reducing deaths to 625 000. There is a strong evidence base on the types of interventions and government actions that are effective – the key is to ensure their implementation.[3] Key interventions include enacting and enforcing comprehensive legislation on key risk factors, improving road infrastructure (particularly with regard to the safety of vulnerable road users), improving vehicle standards and improving post-crash health care.

EQUITY

Road traffic crashes, injuries and deaths occur mostly in poorer countries with vulnerable users – pedestrians, cyclists and motorcyclists, as well as children, the aged and disabled – being at increased risk. Those in the workforce are also at increased risk, and road injury can impoverish some families.

DATA GAPS

Information on road injury deaths is available from death registration systems for 93 countries and from police and transport authority databases and surveillance systems for around 180 countries. There is generally substantial under-reporting in both data sources for most LMIC. Very few low-income countries have functioning death registration systems. Additionally, the lack of harmonized definitions for road injury deaths, the use of different data sources and the quality of reporting systems all contribute to difficulties in accurately assessing the number of road injury deaths.

WHO will prioritize the provision of technical support to countries, capacity-building and working in partnership over the next 5 years to help Member States achieve the ambitious SDG target by 2020.

REFERENCES

[1] Unless otherwise noted, all statistics in the text, table and figures are taken from: Global status report on road safety 2015. Geneva: World Health Organization; 2015 (http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/, accessed 3 April 2016).

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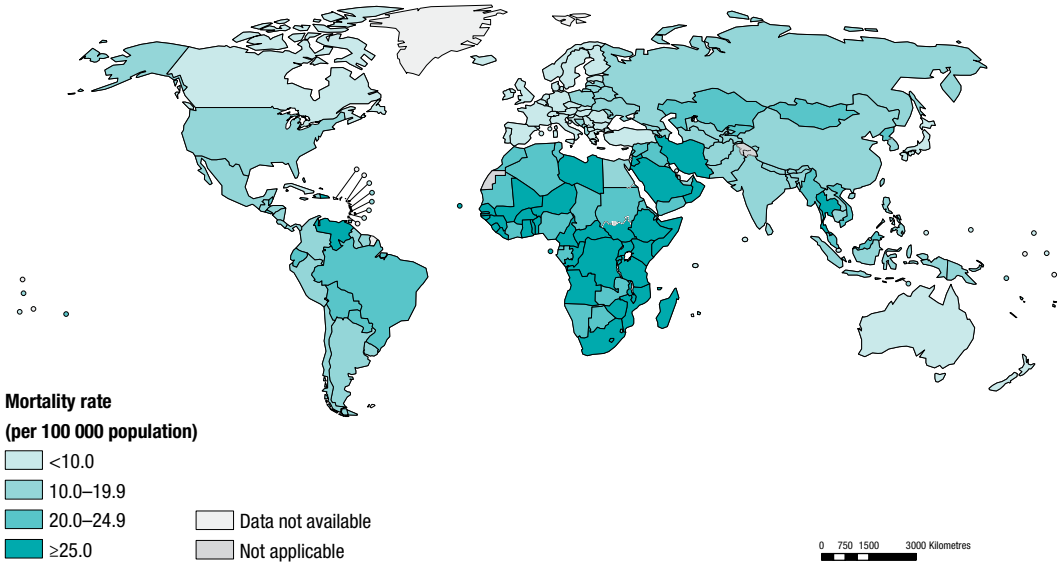
Figure A.12.3.
Road traffic mortality rate (per 100 000 population), 2013[a]



[a] WHO Member States with a population of less than 90 000 in 2015 who did not participate in the survey for the Global status report on road safety 2015 were not included in the analysis.

Table A.12.1.
Road traffic mortality rate (per 100 000 population), 2013[a]

AFR

Seychelles	8.6
Mauritius	12.2
Nigeria	20.5
Equatorial Guinea	22.9
Gabon	22.9
Botswana	23.6
Algeria	23.8
Namibia	23.9
Chad	24.1
Eritrea	24.1
Côte d'Ivoire	24.2
Swaziland	24.2
Mauritania	24.5
Zambia	24.7
South Africa	25.1
Ethiopia	25.3
Mali	25.6
Cabo Verde	26.1
Ghana	26.2
Congo	26.4
Niger	26.4
Angola	26.9
Senegal	27.2
Guinea	27.3
Sierra Leone	27.3
Uganda	27.4
Guinea-Bissau	27.5
Cameroon	27.6
Benin	27.7
South Sudan	27.9
Comoros	28.0
Lesotho	28.2
Zimbabwe	28.2
Madagascar	28.4
Kenya	29.1
Gambia	29.4
Burkina Faso	30.0
Sao Tome and Principe	31.1
Togo	31.1
Burundi	31.3
Mozambique	31.6
Rwanda	32.1
Central African Republic	32.4
United Republic of Tanzania	32.9
Democratic Republic of the Congo	33.2
Liberia	33.7
Malawi	35.0

AMR

Canada	6.0
Antigua and Barbuda	6.7
Barbados	6.7
Cuba	7.5
Saint Vincent and the Grenadines	8.2
Panama	10.0
United States of America	10.6
Jamaica	11.5
Mexico	12.3
Chile	12.4
Argentina	13.6
Bahamas	13.8
Costa Rica	13.9
Peru	13.9
Trinidad and Tobago	14.1
Haiti	15.1
Dominica	15.3
Nicaragua	15.3
Uruguay	16.6
Colombia	16.8
Guyana	17.3
Honduras	17.4
Saint Lucia	18.1
Guatemala	19.0
Suriname	19.1
Ecuador	20.1
Paraguay	20.7
El Salvador	21.1
Bolivia (Plurinational State of)	23.2
Brazil	23.4
Belize	24.4
Dominican Republic	29.3
Venezuela (Bolivarian Republic of)	45.1

SEAR

Maldives	3.5
Bangladesh	13.6
Bhutan	15.1
Indonesia	15.3
India	16.6
Timor-Leste	16.6
Nepal	17.0
Sri Lanka	17.4
Myanmar	20.3
Democratic People's Republic of Korea	20.8
Thailand	36.2

EUR

Monaco	0.0
Sweden	2.8
United Kingdom	2.9
San Marino	3.2
Switzerland	3.3
Netherlands	3.4
Denmark	3.5
Israel	3.6
Spain	3.7
Norway	3.8
Ireland	4.1
Germany	4.3
Iceland	4.6
Finland	4.8
France	5.1
Malta	5.1
Cyprus	5.2
Austria	5.4
Czech Republic	6.1
Italy	6.1
Slovenia	6.4
Slovakia	6.6
Belgium	6.7
Estonia	7.0
Andorra	7.6
Hungary	7.7
Serbia	7.7
Portugal	7.8
Bulgaria	8.3
Luxembourg	8.7
Romania	8.7
Turkey	8.9
Greece	9.1
Croatia	9.2
The Former Yugoslav Republic of Macedonia	9.4
Azerbaijan	10.0
Latvia	10.0
Poland	10.3
Lithuania	10.6
Ukraine	10.6
Uzbekistan	11.2
Georgia	11.8
Montenegro	11.9
Republic of Moldova	12.5
Belarus	13.7
Albania	15.1
Turkmenistan	17.4
Bosnia and Herzegovina	17.7
Armenia	18.3
Tajikistan	18.8
Russian Federation	18.9
Kyrgyzstan	22.0
Kazakhstan	24.2

EMR

Bahrain	8.0
United Arab Emirates	10.9
Egypt	12.8
Pakistan	14.2
Qatar	15.2
Afghanistan	15.5
Kuwait	18.7
Syrian Arab Republic	20.0
Iraq	20.2
Morocco	20.8
Yemen	21.5
Lebanon	22.6
Sudan	24.3
Tunisia	24.4
Djibouti	24.7
Oman	25.4
Somalia	25.4
Jordan	26.3
Saudi Arabia	27.4
Iran (Islamic Republic of)	32.1
Libya	73.4

WPR

Micronesia (Federated States of)	1.9
Kiribati	2.9
Singapore	3.6
Japan	4.7
Palau	4.8
Australia	5.4
Marshall Islands	5.7
Fiji	5.8
New Zealand	6.0
Tonga	7.6
Brunei Darussalam	8.1
Philippines	10.5
Republic of Korea	12.0
Lao People's Democratic Republic	14.3
Samoa	15.8
Vanuatu	16.6
Papua New Guinea	16.8
Cambodia	17.4
China	18.8
Solomon Islands	19.2
Mongolia	21.0
Malaysia	24.0
Cook Islands	24.2
Viet Nam	24.5

[a] WHO Member States with a population of less than 90 000 in 2015 who did not participate in the survey for the Global status report on road safety 2015 were not included in the analysis.

SEXUAL AND REPRODUCTIVE HEALTH

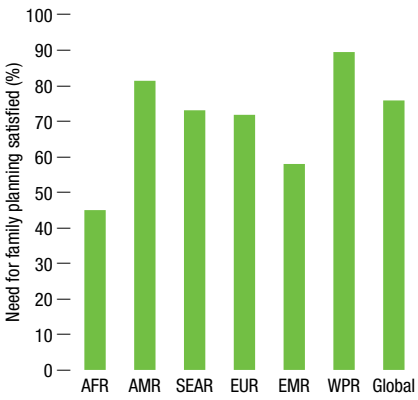
SDG Target 3.7
By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

Indicator 3.7.1: Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods
Indicator 3.7.2: Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1000 women in that age group

SITUATION

Globally in 2015, 76% of women of reproductive age who were married or in-union had their need for family planning with a modern method met (Fig. A.13.1). While 9 out of 10 women of reproductive age who were married or in-union in the WHO Western Pacific Region had their family planning need satisfied, less than half of those in the WHO African Region did.[1]

Figure A.13.1.
Need for family planning satisfied with modern methods among married or in-union women of reproductive age, by WHO region and globally, 2015



Among adolescents in particular, access to contraception is only one part of the picture determining pregnancy rates. In some settings, important cultural factors are in play, including traditions of child marriage. Globally, more than 700 million women alive in 2014 had been married before their 18th birthday. About 250 million of these had entered into union before the age of 15.[2]

Early childbearing poses increased health risks to adolescent mothers. Maternal causes are a leading cause of death among girls aged 15–19 years globally.[3]

Globally, the adolescent birth rate (ABR) in 2015 was 44 per 1000 women aged 15–19 years. The ABR in low-income countries (97 per 1000 women aged 15–19 years) was five times higher than in high-income countries (19 per 1000 women aged 15–19 years).[4]

ACHIEVING THE 2030 TARGET

The level of demand for family planning satisfied by modern methods is below 75% in 93 predominantly LMIC with survey data for 2005–2015. Eighty-five countries with data for the same period have an ABR of 50 or more per 1000 women aged 15–19 years.

Ensuring access to sexual and reproductive health information and services by all who need them, including adolescents, is among the components of the Global Strategy for Women's, Children's and Adolescents' Health, launched by the Secretary-General of the United Nations in September 2015.

Since high fertility rates are correlated with an increased lifetime risk of dying from maternal causes, improvements in sexual and reproductive health-care services are expected to reduce maternal mortality, as well as improve the health of adolescent girls.

EQUITY

In more than half of the 71 LMIC with data for 2005–2013, the median met need for family planning with either modern or traditional methods was at least 16 percentage points higher among women with secondary or higher education level than among those with no education.[5]

Over the same period, the median ABR of the poorest quintile was four times higher that of the richest quintile in 54 LMIC (Fig. A.13.2).[5] Girls who become mothers frequently miss out on education and socioeconomic opportunities. Thus, high ABRs may contribute to a large gender gap in education and perpetuate a vicious cycle of poverty.

DATA GAPS

Household surveys are the main source of data on use of contraceptives. Ninety-eight countries have such data from surveys conducted in 2010 or more recent. Although the majority of estimates of met need for family planning follow the standard method of calculation, there can be differences in the precise definition or method of calculation of this indicator. Data for adolescent births among 15–19 year-olds for 2010 or more recent are available from CRVS, censuses or household surveys from 149 countries. In the absence of CRVS systems, data on births among 10–14 year-olds are limited.

REFERENCES

1 Model-based estimates and projections of family planning indicators 2015. New York (NY): United Nations, Department of Economic and Social Affairs, Population Division; 2015 (http://www.un.org/en/development/desa/population/theme/family-planning/cp_model.shtml, accessed 21 April 2016). Special tabulations were prepared for estimates by WHO region.

2 Ending child marriage: progress and prospects. New York: United Nations Children's Fund; 2014 (http://www.unicef.org/media/files/Child_Marriage_Report_7_17_LR..pdf, accessed 3 April 2016).

3 Health for the world's adolescents [multimedia online report]. Geneva: World Health Organization; 2015(http://www.who.int/maternal_child_adolescent/topics/adolescence/second-decade/en/, accessed 5 May 2016).

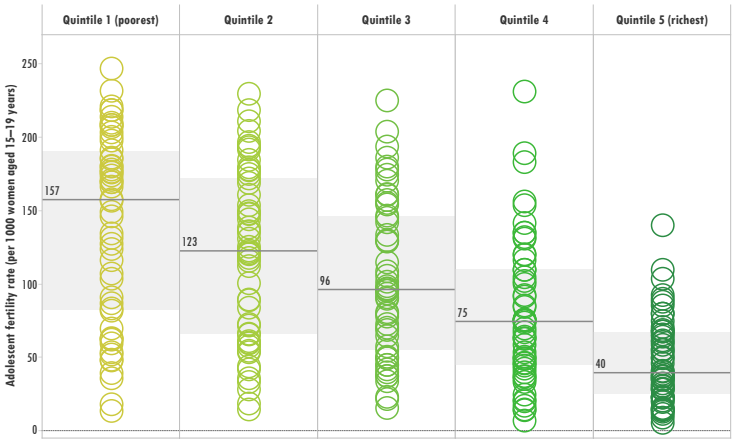
4 World Population Prospects: The 2015 Revision. DVD Edition. New York (NY): United Nations, Department of Economic and Social Affairs, Population Division; 2015 (http://esa.un.org/unpd/wpp/Download/Standard/Fertility/, accessed 13 April 2016). Estimates refer to the average of two five-year periods, 2010-2015 and 2015-2020.

5 Health Equity Monitor, Global Health Observatory [online database]. Geneva: World Health Organization (http://www.who.int/gho/health_equity/en/), accessed 2 May 2016).

6 World Fertility Data 2015. New York (NY): United Nations, Department of Economic and Social Affairs, Population Division; 2015. (http://www.un.org/en/development/desa/population/publications/dataset/fertility/wfd2015.shtml, accessed 13 April 2016).

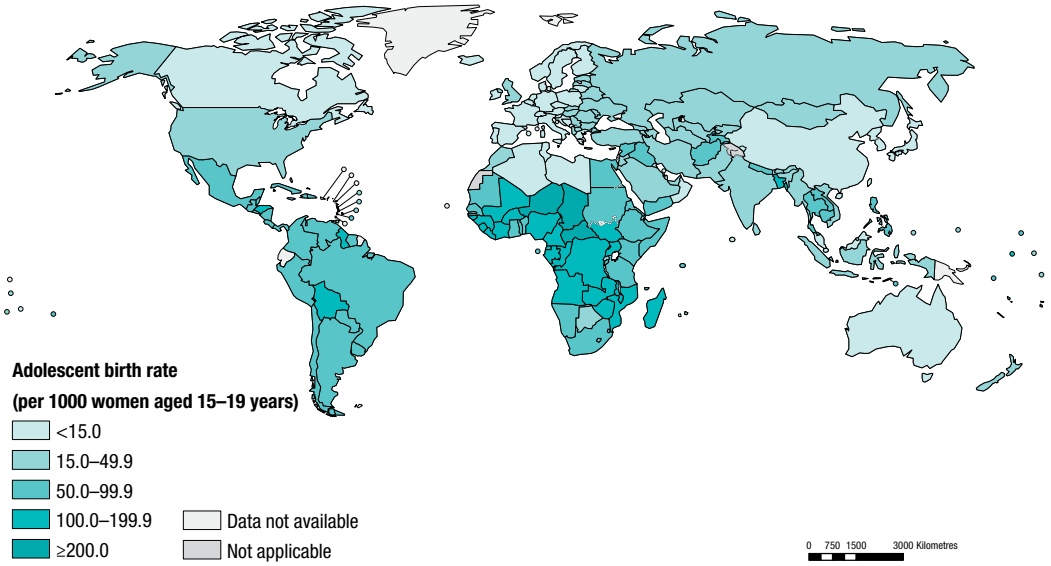
7 World Contraceptive Use 2016. New York (NY): United Nations, Department of Economic and Social Affairs, Population Division; 2016. Forthcoming.

Figure A.13.2.
Adolescent fertility rate in LMIC, by wealth quintile, 2005–2013[a]



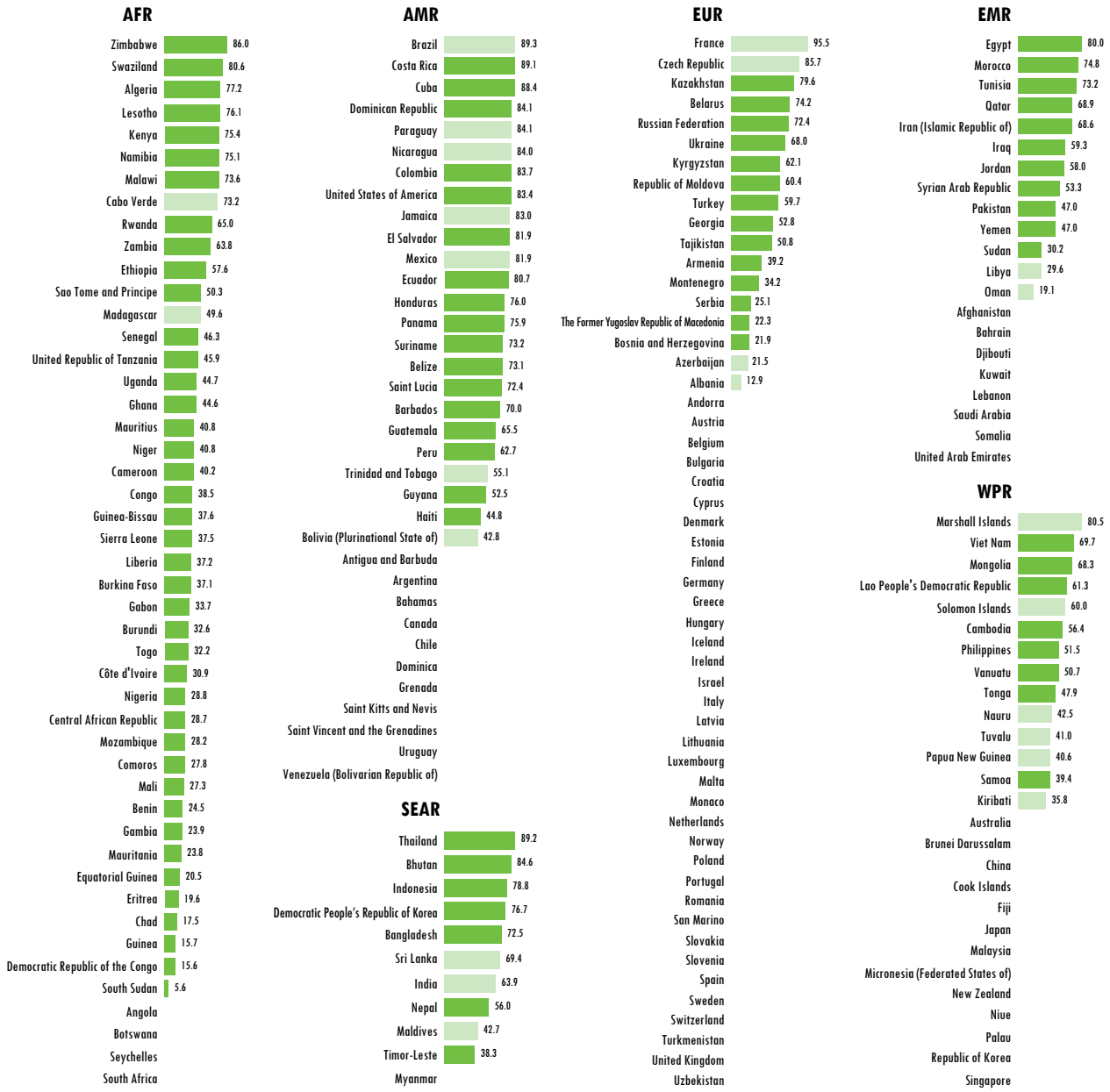
[a] Based on the results of DHS in 54 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Figure A.13.3.
Adolescent birth rate, 2005–2015[6,a]



[a] Data refer to the latest available for 2005–2015.

Table A.13.1.
Proportion of married or in-union women of reproductive age who have their need for family planning satisfied with modern methods, 2005–2015[7,a]



[a] The latest available data for 2005–2015 are shown. Data from 2005–2009 are shown in pale green.

MORTALITY DUE TO AIR POLLUTION

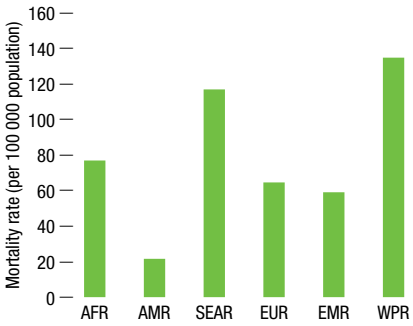
SDG Target 3.9
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Indicator 3.9.1: Mortality rate attributed to household and ambient air pollution

SITUATION

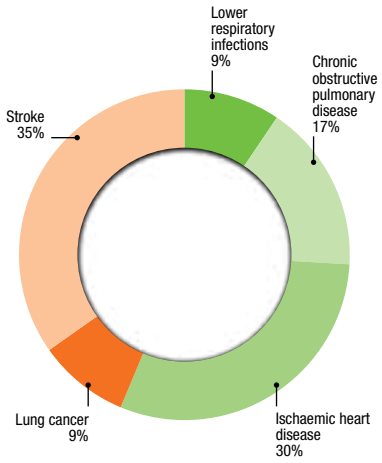
Globally in 2012, household air pollution from cooking with unclean fuels or inefficient technologies caused 4.3 million deaths.[1] Ambient (or outdoor) air pollution (for example, from traffic, industrial sources, waste burning or residential fuel combustion) caused 3.0 million deaths during the same year.[2] Jointly, air pollution caused an estimated 6.5 million deaths, or 11.6% of all global deaths in 2012, making it the largest single environmental health risk. Mortality rates from air pollution varied among WHO regions (Fig. A.14.1).

Figure A.14.1.
Mortality rate attributed to household and ambient air pollution, by WHO region, 2012



Air pollution is a major risk factor for NCDs in adults, causing cardiovascular diseases, stroke, chronic obstructive pulmonary disease and lung cancer, as well as increasing the risks for acute respiratory infections. Among children under 5 years of age, household air pollution is estimated to cause half of all pneumonia deaths. Fig. A.14.2 shows the distribution of deaths attributable to air pollution by disease type.

Figure A.14.2.
Distribution of deaths attributable to household and ambient air pollution by disease type, 2012



ACHIEVING THE 2030 TARGET

Although the proportion of households cooking with polluting fuels and technologies is decreasing, their absolute number has remained stable over the last 30 years due to population growth. Exposure to ambient air pollution is decreasing in most high-income countries, but increasing in many LMIC. As the number of older adults increases worldwide, more people are at risk from air pollution.

As countries develop there will be a pressing need for the large-scale implementation of policies and measures that address the main sources of air pollution, such as improving access to cleaner household fuels, implementing clean and efficient city transport systems and regulating industrial and other emissions, and for the monitoring of results in terms of air quality and health. International initiatives, including the United Nations Secretary-General's Sustainable Energy for All, the Global Alliance for Clean Cookstoves, and the Climate and Clean Air Coalition, along with numerous civil society organizations, have been mobilizing efforts and support for reducing the main sources of air pollution. International agreements on climate change, such as the recent COP21 in Paris and the SDGs can stimulate action on air pollution reduction and yield further health benefits.

Major obstacles to reducing the levels of mortality caused by air pollution include: (a) lack of access to clean fuels and efficient technologies for the poor, and lack of "smart" financial incentives for using clean fuels or substitutes for fossil fuels; (b) lack of integration of health considerations into decision-making in sectors such as transport, waste management and industry, and failure to harness the considerable benefits and savings for health that could be achieved by better engagement with other sectors; (c) lack of monitoring of air pollution levels, sources and consequences on public health needed to help direct action by the health sector and other sectors to improve health and health equity.

EQUITY

Older adults are at greatest risk from air pollution, followed by children under 5 years of age. Women and children are at a particularly high risk of disease caused by exposure to household air pollution – accounting for 60% of all premature deaths attributed to such pollution.[1]

DATA GAPS

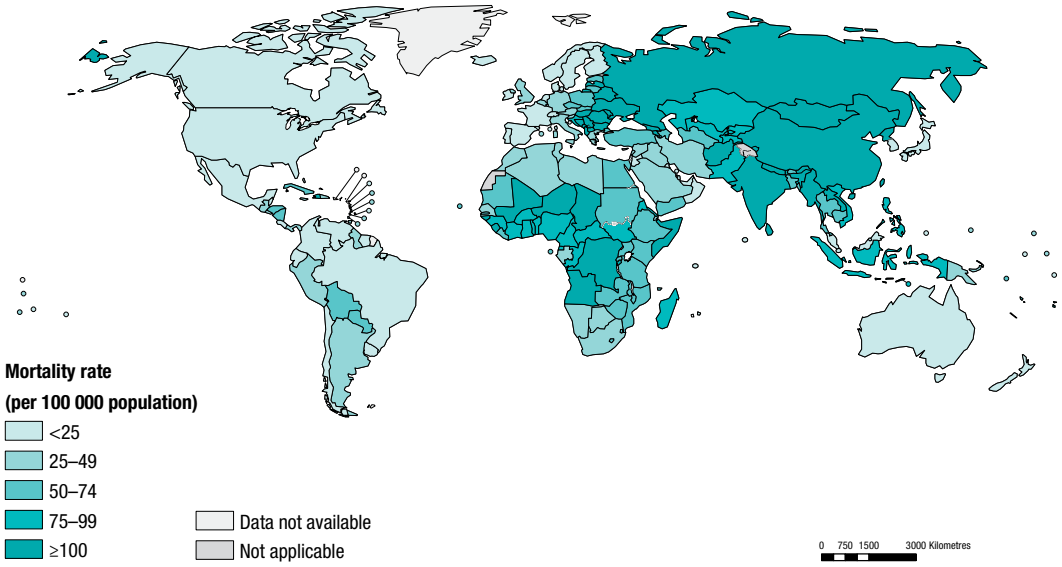
National estimates of mortality from air pollution are calculated using country data on the proportion of households using polluting fuel or technology combinations, mean levels of particulate matter in the ambient air, and estimates of deaths by cause. Data on household fuel use for cooking are available from household surveys for most LMIC and there is ongoing work with national surveying agencies and country statistical offices to gather data on other household energy end uses (such as space heating and lighting; see the section on clean household energy for more details). Concentrations of particulate matter with an aerodynamic diameter of < 10 µm or < 2.5 µm (PM_{10} and $PM_{2.5}$ respectively) are being measured in 3000 cities around the world and modelled globally using satellite remote sensing (see the section on ambient air pollution). Data on deaths by cause are most limited: useable death-registration data cover only about one third of global deaths, mainly in high-income countries. There is also a need for more studies on the effectiveness of interventions in reducing air pollution and improving health, especially in LMIC.

REFERENCES

[1] Unless otherwise noted, all statistics in text, table and figures are taken from: Global Health Observatory [website]. Geneva: World Health Organization. (http://www.who.int/gho/en/)

[2] Air pollution: a global assessment of exposure and burden of disease. Geneva: World Health Organization; 2016. Forthcoming.

Figure A.14.3.
Mortality rate attributed to household and ambient air pollution, by WHO region, 2012[a]



[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

Table A.14.1.
Mortality rate attributed to household and ambient air pollution (per 100 000 population), 2012[a]

AFR	
Mauritius	21.2
Algeria	31.5
Botswana	38.1
Senegal	43.2
South Africa	44.2
Gabon	47.0
Namibia	47.9
United Republic of Tanzania	50.5
Zimbabwe	52.6
Ethiopia	56.8
Kenya	57.1
Cabo Verde	58.2
Swaziland	62.7
Comoros	63.4
Zambia	64.1
Mauritania	64.5
Mozambique	65.1
Rwanda	68.3
Liberia	69.9
Uganda	70.0
Gambia	70.9
Malawi	72.0
Lesotho	74.5
Eritrea	75.8
Ghana	80.8
Togo	81.0
Madagascar	84.4
Guinea	87.9
Cameroon	89.6
Côte d'Ivoire	89.8
Congo	90.2
Nigeria	90.4
Benin	92.0
South Sudan	95.0
Central African Republic	95.9
Burkina Faso	96.4
Equatorial Guinea	98.3
Angola	104.4
Guinea-Bissau	105.2
Burundi	106.0
Niger	109.7
Mali	116.0
Democratic Republic of the Congo	116.4
Chad	121.8
Sierra Leone	142.3

AMR	
Canada	5.4
United States of America	12.1
Ecuador	15.0
Barbados	18.1
Belize	18.6
Costa Rica	18.8
Bahamas	20.3
Venezuela (Bolivarian Republic of)	20.9
Brazil	21.3
Chile	22.4
Suriname	22.7
Uruguay	22.7
Colombia	23.6
Mexico	24.1
Panama	25.4
Argentina	26.2
Trinidad and Tobago	27.9
Dominican Republic	29.4
Peru	32.6
Guatemala	42.5
Guyana	42.7
Jamaica	42.9
El Salvador	44.6
Cuba	50.5
Bolivia (Plurinational State of)	52.0
Honduras	53.2
Paraguay	56.6
Nicaragua	62.3
Haiti	112.6

SEAR	
Maldives	20.5
Bhutan	59.9
Thailand	65.3
Bangladesh	68.2
Indonesia	83.9
Timor-Leste	89.6
Nepal	104.2
Sri Lanka	119.4
Myanmar	127.4
India	130.0
Democratic People's Republic of Korea	234.1

EUR	
Sweden	0.4
Finland	6.0
Iceland	6.4
Norway	12.7
Spain	14.7
Israel	15.8
Portugal	16.8
France	17.2
Ireland	17.3
Switzerland	18.5
Cyprus	19.8
Luxembourg	19.8
Denmark	20.3
Netherlands	24.0
United Kingdom	25.7
Belgium	30.2
Malta	31.1
Germany	32.5
Austria	34.2
Italy	35.3
Slovenia	41.9
Greece	45.1
Turkey	51.0
Estonia	54.2
Czech Republic	59.5
Slovakia	66.3
Azerbaijan	68.0
Poland	68.9
Turkmenistan	72.9
Lithuania	73.4
Uzbekistan	83.2
Croatia	89.5
Kazakhstan	93.3
Tajikistan	97.6
Kyrgyzstan	99.5
Belarus	103.8
Russian Federation	110.0
Republic of Moldova	114.5
Latvia	115.1
Hungary	123.0
Montenegro	123.5
Armenia	125.4
The Former Yugoslav Republic of Macedonia	128.9
Serbia	137.2
Romania	138.2
Ukraine	139.1
Albania	171.4
Bulgaria	174.8
Bosnia and Herzegovina	223.6
Georgia	292.3

EMR	
United Arab Emirates	7.5
Qatar	9.0
Bahrain	11.1
Oman	13.5
Kuwait	14.2
Jordan	21.7
Saudi Arabia	28.1
Morocco	28.8
Lebanon	29.7
Syrian Arab Republic	30.9
Iraq	32.2
Libya	33.2
Iran (Islamic Republic of)	35.3
Djibouti	40.5
Tunisia	43.7
Egypt	52.1
Yemen	57.4
Sudan	64.3
Pakistan	88.8
Afghanistan	112.6
Somalia	116.8

WPR	
Brunei Darussalam	0.2
Australia	0.4
New Zealand	0.5
Singapore	20.5
Malaysia	22.4
Republic of Korea	23.7
Japan	24.2
Papua New Guinea	44.3
Solomon Islands	52.9
Cambodia	71.4
Fiji	76.9
Philippines	82.7
Viet Nam	84.0
Lao People's Democratic Republic	107.6
Mongolia	132.2
China	163.1

[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

MORTALITY DUE TO UNSAFE WATER, UNSAFE SANITATION AND LACK OF HYGIENE

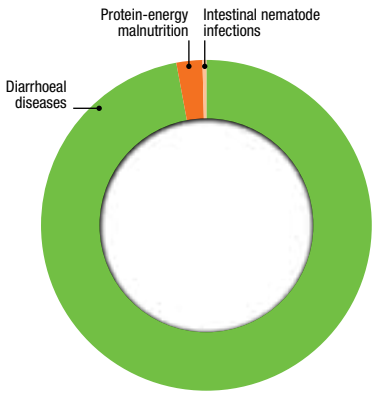
SDG Target 3.9
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Indicator 3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe WASH services)

SITUATION

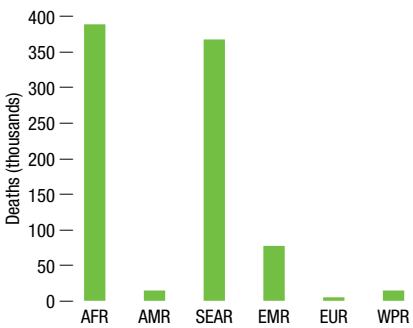
Worldwide in 2012, an estimated 871 000 deaths were caused by contamination of drinking-water, water bodies and soil, inadequate hand-washing facilities, and by practices resulting from inappropriate or inadequate services.[1] Unsafe water, sanitation and hygiene (WASH) services mainly cause deaths from diarrhoeal diseases, but also from protein-energy malnutrition, intestinal nematode infections, and schistosomiasis[2] (Fig. A.15.1).

Figure A.15.1.
Major causes of WASH-service-related mortality, 2012



Almost half (45%) of the deaths in 2012 occurred in the WHO African Region (Figure A.15.2), where 13% of the global population lived. This resulted in a disproportionately high burden to the Region, with a mortality rate of 43 per 100 000 population attributed to unsafe WASH services – more than triple the 2012 global rate of 12 per 100 000 population.

Figure A.15.2.
Number of deaths attributed to unsafe WASH services, by WHO region, 2012



ACHIEVING THE 2030 TARGET

Reducing the burden of disease from inadequate WASH services requires: (a) improved coverage of safe drinking-water supply to prevent consumption of contaminated water and enable personal hygiene; (b) adequate sanitation in households and other setting (such as schools and health facilities) and safe management of faecal waste to reduce human excreta in the environment; (c) adequate hygiene practices such as hand-washing after defecation, or before food preparation and consumption; and (d) improved access to health care and proper case management of diarrhoea. Ensuring the availability and sustainable management of water and sanitation for all is covered by SDG 6 (see the sections on drinking-water services and sanitation). This goal contains targets addressing all the elements required to sustainably reduce the health impacts resulting from inadequate WASH services.

Major obstacles to reducing mortality resulting from inadequate WASH services and related lack of hygiene include: (a) natural threats such as water scarcity due to climate change; (b) inappropriate governance, institutional arrangements and financing in water supply and sanitation; (c) rapid expansion of unplanned settlements; (d) depletion of water resources through pollution and environmental degradation; and (e) lack of access to health-care services.

EQUITY

Within countries, inequalities in mortality rates exist between urban and rural areas, between slums and formal settlements, and between high-socioeconomic status and low-socioeconomic status population groups.[3,4]

DATA GAPS

National estimates of mortality from inadequate WASH services are based on the prevalence of use of inadequate water and sanitation, along with hand-washing prevalence, in combination with relevant health statistics and epidemiological data. Data on access to water and sanitation are available from household surveys for most LMIC. Data on hand-washing prevalence observations are available for only about 20 countries and require additional assessments, but show consistently low hand-washing prevalences. For many LMIC only limited quality data are available on causes of death. Extensive modelling is thus required to obtain estimates for this SDG indicator.

Improved evidence of the links between water and sanitation service levels and hygiene practices and health, and the systematic assessment of adequate indicators, would increase the accuracy of current estimates.

REFERENCES

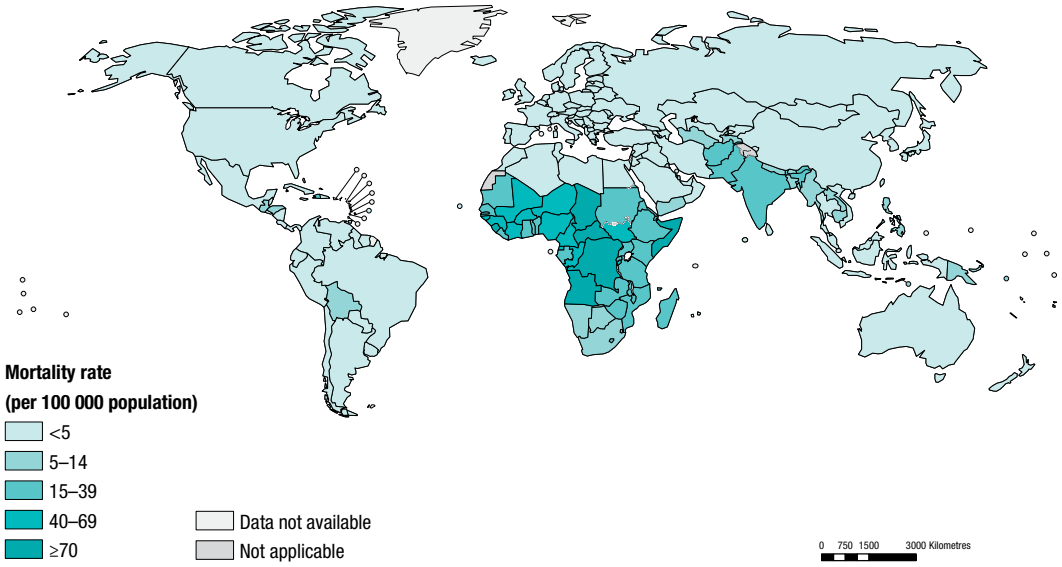
[1] Unless otherwise noted, all statistics in text, table and figures are taken from: Preventing disease through healthy environments. A global assessment of the burden of disease from environmental risks. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196_eng.pdf?ua=1, accessed 3 April 2016) and from: Preventing diarrhoea through better water, sanitation and hygiene. Exposures and impacts in low- and middle-income countries. Geneva: World Health Organization, 2015 (http://apps.who.int/iris/bitstream/10665/150112/1/9789241564823_eng.pdf?ua=1&ua=1, accessed 19 April 2016).

[2] Although most schistosomiasis deaths may be attributed to unsafe WASH services, the proportion attributed has not been quantified using epidemiological methods.

[3] Stevens GA, Dias RH, Ezzati M. The effects of 3 environmental risks on mortality disparities across Mexican communities. Proc Natl Acad Sci U S A. 2008;105(44):16860–5 (http://www.pnas.org/content/105/44/16860.full, accessed 3 April 2016).

[4] Gakidou E, Oza S, Vidal Fuertes C, Li AY, Lee DK, Sousa A et al. Improving child survival through environmental and nutritional interventions. The importance of targeting interventions toward the poor. JAMA. 2007;298(16):1876–87 (http://jama.jamanetwork.com/article.aspx?articleid=209285, accessed 3 April 2016).

Figure A.15.3.
Mortality rate attributed to exposure to unsafe WASH services (per 100 000 population), 2012[a]



[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

Table A.15.1.
Mortality rate attributed to exposure to unsafe WASH services (per 100 000 population), 2012[a]

AFR	
Mauritius	0.9
Algeria	2.4
Cabo Verde	4.5
Botswana	9.2
Namibia	9.8
South Africa	12.1
Rwanda	19.4
Ghana	20.0
Gambia	21.0
Swaziland	22.7
Zambia	24.5
Liberia	25.0
Senegal	25.4
Malawi	26.1
Madagascar	26.6
Zimbabwe	27.1
United Republic of Tanzania	27.6
Gabon	28.1
Lesotho	28.3
Comoros	28.6
Mauritania	28.9
Ethiopia	29.6
Uganda	30.3
Benin	32.2
Kenya	32.5
Eritrea	34.9
Mozambique	37.9
Togo	37.9
Guinea	40.7
Burkina Faso	40.9
Cameroon	40.9
Côte d'Ivoire	44.1
Congo	48.1
Guinea-Bissau	48.9
South Sudan	50.0
Nigeria	50.9
Equatorial Guinea	57.3
Mali	61.1
Burundi	68.4
Niger	69.2
Sierra Leone	90.4
Chad	92.8
Central African Republic	102.3
Democratic Republic of the Congo	107.8
Angola	111.2

AMR	
Bahamas	0.1
Barbados	0.2
Chile	0.2
Trinidad and Tobago	0.2
Uruguay	0.3
Canada	0.6
United States of America	0.6
Argentina	0.7
Costa Rica	0.7
Cuba	0.7
Colombia	0.8
Suriname	0.8
Brazil	1.1
Mexico	1.1
Belize	1.2
Peru	1.3
Venezuela (Bolivarian Republic of)	1.3
Ecuador	1.8
Dominican Republic	1.9
Jamaica	1.9
Paraguay	2.3
El Salvador	2.4
Nicaragua	3.5
Guyana	4.0
Panama	4.1
Bolivia (Plurinational State of)	7.0
Honduras	7.9
Guatemala	9.2
Haiti	28.5

SEAR	
Maldives	0.6
Democratic People's Republic of Korea	1.4
Thailand	1.9
Sri Lanka	3.3
Indonesia	3.6
Bangladesh	6.0
Bhutan	7.1
Timor-Leste	10.3
Myanmar	10.4
Nepal	12.9
India	27.4

EUR	
Hungary	0.0
Bosnia and Herzegovina	<0.1
Bulgaria	<0.1
Croatia	<0.1
Estonia	<0.1
Greece	<0.1
Iceland	<0.1
Latvia	<0.1
Lithuania	<0.1
Malta	<0.1
Montenegro	<0.1
Poland	<0.1
Republic of Moldova	<0.1
Romania	<0.1
Slovakia	<0.1
Slovenia	<0.1
The Former Yugoslav Republic of Macedonia	<0.1
Austria	0.1
Italy	0.1
Luxembourg	0.1
Portugal	0.1
Albania	0.2
Belarus	0.2
Finland	0.2
Georgia	0.2
Netherlands	0.2
Russian Federation	0.2
Cyprus	0.3
Ireland	0.3
Serbia	0.3
Spain	0.3
Switzerland	0.3
Ukraine	0.4
United Kingdom	0.4
Belgium	0.5
Czech Republic	0.5
France	0.5
Israel	0.5
Norway	0.5
Denmark	0.8
Turkey	0.8
Germany	0.9
Armenia	1.1
Sweden	1.1
Kazakhstan	1.2
Kyrgyzstan	1.8
Azerbaijan	2.1
Uzbekistan	2.4
Turkmenistan	5.8
Tajikistan	7.5

EMR	
Kuwait	<0.1
Qatar	<0.1
United Arab Emirates	<0.1
Bahrain	0.1
Saudi Arabia	0.2
Lebanon	0.4
Oman	0.4
Libya	0.6
Tunisia	0.8
Iran (Islamic Republic of)	0.9
Jordan	1.0
Egypt	1.6
Syrian Arab Republic	1.8
Morocco	3.4
Iraq	3.9
Yemen	13.0
Pakistan	20.7
Djibouti	26.4
Afghanistan	34.6
Sudan	34.6
Somalia	98.8

WPR	
Australia	<0.1
Brunei Darussalam	<0.1
Japan	0.1
Singapore	0.1
Republic of Korea	0.2
China	0.4
Malaysia	0.4
New Zealand	0.6
Viet Nam	2.0
Fiji	3.0
Mongolia	3.1
Philippines	5.1
Cambodia	5.6
Solomon Islands	10.4
Papua New Guinea	12.4
Lao People's Democratic Republic	13.9

[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

MORTALITY DUE TO UNINTENTIONAL POISONING

SDG Target 3.9
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

Indicator 3.9.3: Mortality rate attributed to unintentional poisoning

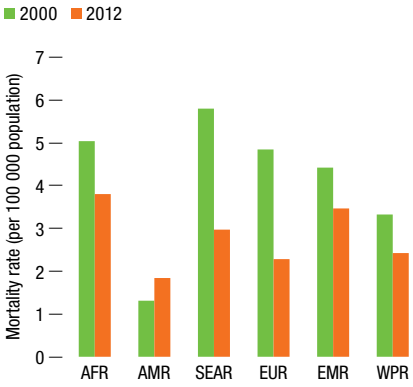
SITUATION

Worldwide in 2012, an estimated 193 000 deaths were caused by unintentional poisonings.[1] In LMIC, pesticides, kerosene, household chemicals, carbon monoxide and drugs are common causes of poisoning. In high-income countries, substances involved mainly include drugs, carbon monoxide, and personal care and cleaning products in the home. Poisoning can also arise from environmental contamination, for example mass lead poisoning resulting from informal recycling or gold extraction, or from industrial emissions. Occupational exposures to heavy metals, pesticides, solvents, paints, cleaning substances, various vapours and gases, and other chemicals used in industrial production may also occur.[2]

ACHIEVING THE 2030 TARGET

Globally, the mortality rate attributed to unintentional poisonings decreased by 34% between 2000 and 2012. The most important decreases during that period (of approximately 50%) were achieved in the WHO South-East Asia Region and the WHO European Region (Fig. A.16.1).

Figure A.16.1.
Mortality rate from unintentional poisonings, by WHO region, 2000 and 2012



Safe storage, labelling and restricting access to hazardous chemicals and drugs, adequate information about product hazards, personal protection and limiting the use of medications to doses prescribed by health-care professionals all contribute to preventing unintentional poisonings. Other approaches include ensuring the availability and use of less-toxic and less-hazardous alternatives where possible, and, in occupational settings, the implementation of engineering controls and training.

The Strategic Approach to International Chemicals Management was adopted by the International Conference on Chemicals Management in 2006, with its overall objective being to achieve:

> *...the sound management of chemicals throughout their life cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.*

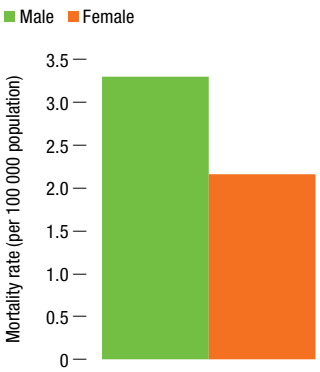
At its Fourth session in 2015, the Conference endorsed the overall orientation and guidance provided as a voluntary tool that will assist in the prioritization of efforts for achieving the above goal.[3]

Major obstacles to reducing the rates of mortality due to unintentional poisonings include the large number of chemicals available on the market – not all of which have been tested for toxicity or are covered by comprehensive regulations. The perceived lack of effective safer alternatives and lack of incentives to use them are further obstacles to reducing exposure to toxic chemicals. Many countries still lack the necessary regulatory and policy frameworks and institutional capacities needed to assess and prevent the negative health impacts of chemicals. More than half of WHO Member States do not have a poisons-information centre. A greater emphasis on prevention would also contribute to the more-effective management of chemicals and a reduction in poisonings.

EQUITY

Globally, the highest mortality rates from unintentional poisonings occur in children under 5 years of age and adults over 55 years. The mortality rate is also 50% higher in men than in women (Fig. A.16.2). Higher levels of exposure in men may occur in occupational settings.

Figure A.16.2.
Global mortality rate from unintentional poisonings, by sex, 2012



DATA GAPS

National estimates of mortality due to unintentional poisonings are primarily derived from data collected in CRVS systems. In countries with high-quality CRVS systems, accurate registration of deaths from unintentional poisonings, and in particular distinguishing these from intentional poisonings, remains a challenge. Nevertheless, only around one third of deaths worldwide are recorded in civil registry systems with cause-of-death information based on medical certification. Alternative data sources may be used. As a first step, countries may set up sample registration systems using verbal autopsy to determine cause of death.

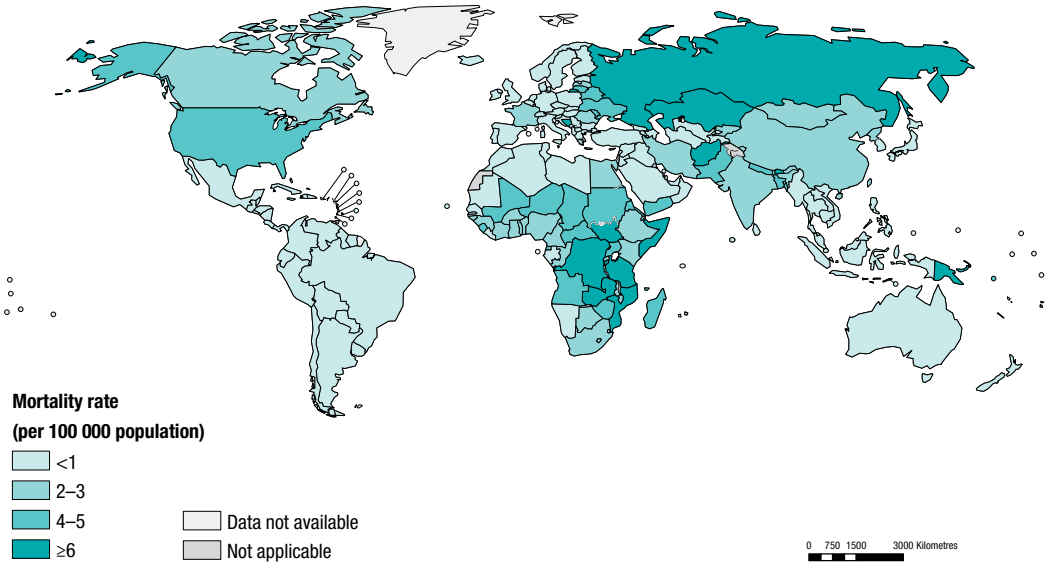
REFERENCES

1 Unless otherwise noted, all mortality statistics shown in the text, table and figures are taken from: Global Health Estimates 2013: Deaths by Cause, Age and Sex, Estimates for 2000–2012. Geneva: World Health Organization; 2014 (http://www.who.int/healthinfo/global_burden_disease/en/).

2 Preventing disease through healthy environments. A global assessment of the burden of disease from environmental risks. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196_eng.pdf?ua=1, accessed 3 April 2016).

3 International Conference on Chemicals Management. Fourth session. Meeting document SAICM/ICCM.4/6 (http://www.saicm.org/index.php?option=com_content&view=article&id=525&Itemid=700, accessed 3 April 2016).

Figure A.16.3.
Mortality rate from unintentional poisoning (per 100 000 population), 2012[a]



[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

Table A.16.1.
Mortality rate from unintentional poisoning (per 100 000 population), 2012[a]

AFR	
Cabo Verde	0.3
Mauritius	0.3
Algeria	1.1
Namibia	1.1
Senegal	1.5
Gabon	1.8
Gambia	1.8
Mauritania	1.8
Liberia	1.9
Benin	2.2
Ghana	2.2
Lesotho	2.2
Nigeria	2.4
South Africa	2.5
Swaziland	2.5
Botswana	2.7
Burkina Faso	2.7
Cameroon	2.7
Congo	2.8
Togo	2.8
Guinea-Bissau	3.0
Guinea	3.1
Côte d'Ivoire	3.2
Malawi	3.3
Rwanda	3.3
Comoros	3.5
Ethiopia	3.5
Kenya	3.8
Niger	4.0
Madagascar	4.1
Mali	4.1
Zimbabwe	4.4
Chad	4.6
Central African Republic	4.7
Eritrea	4.7
Equatorial Guinea	5.0
Uganda	5.1
Angola	5.5
Sierra Leone	5.7
Democratic Republic of the Congo	6.2
United Republic of Tanzania	6.6
South Sudan	6.9
Burundi	7.0
Zambia	7.9
Mozambique	8.1

AMR	
Brazil	0.1
Colombia	0.3
Costa Rica	0.3
Honduras	0.3
Paraguay	0.3
Trinidad and Tobago	0.3
Belize	0.5
Dominican Republic	0.5
El Salvador	0.5
Nicaragua	0.5
Chile	0.6
Panama	0.6
Suriname	0.6
Venezuela (Bolivarian Republic of)	0.6
Ecuador	0.7
Guyana	0.7
Peru	0.7
Barbados	0.8
Mexico	0.8
Argentina	0.9
Bahamas	0.9
Uruguay	0.9
Jamaica	1.0
Guatemala	1.2
Cuba	1.3
Bolivia (Plurinational State of)	1.7
Haiti	1.9
Canada	2.0
United States of America	4.3

SEAR	
Thailand	0.1
Maldives	0.3
Sri Lanka	0.4
Timor-Leste	0.8
Indonesia	1.1
Myanmar	1.1
India	3.2
Democratic People's Republic of Korea	3.3
Bangladesh	5.7
Nepal	5.9
Bhutan	8.1

EUR	
Israel	0.1
Netherlands	0.2
Germany	0.3
Malta	0.3
Armenia	0.4
Austria	0.4
Portugal	0.4
Cyprus	0.5
Iceland	0.5
Italy	0.6
Serbia	0.6
The Former Yugoslav Republic of Macedonia	0.6
Slovakia	0.7
Turkey	0.7
Estonia	0.8
Greece	0.8
Azerbaijan	0.9
Croatia	0.9
Georgia	0.9
Hungary	0.9
Luxembourg	0.9
Spain	0.9
Montenegro	1.0
Norway	1.0
Slovenia	1.0
Sweden	1.0
United Kingdom	1.0
Belgium	1.1
Czech Republic	1.1
Denmark	1.1
Uzbekistan	1.1
Bulgaria	1.2
Switzerland	1.2
Albania	1.4
Finland	1.5
Ireland	1.5
Poland	1.7
Tajikistan	1.7
Turkmenistan	1.9
France	2.0
Romania	2.3
Latvia	2.4
Kyrgyzstan	2.7
Belarus	4.4
Republic of Moldova	5.0
Lithuania	5.3
Ukraine	5.7
Kazakhstan	6.3
Russian Federation	6.4
Bosnia and Herzegovina	7.5

EMR	
Bahrain	0.4
Oman	0.4
Kuwait	0.5
Syrian Arab Republic	0.5
Qatar	0.6
United Arab Emirates	0.6
Iraq	0.7
Lebanon	0.7
Saudi Arabia	0.8
Morocco	1.1
Jordan	1.2
Tunisia	1.2
Libya	1.4
Egypt	2.1
Iran (Islamic Republic of)	2.5
Djibouti	3.7
Yemen	4.2
Pakistan	5.4
Sudan	5.6
Afghanistan	7.4
Somalia	10.0

WPR	
Philippines	0.2
Singapore	0.2
New Zealand	0.4
Republic of Korea	0.6
Malaysia	0.7
Japan	0.8
Viet Nam	0.9
Cambodia	1.0
Lao People's Democratic Republic	1.0
Brunei Darussalam	1.2
Australia	1.3
China	2.9
Mongolia	3.8
Fiji	4.7
Solomon Islands	5.2
Papua New Guinea	11.9

[a] WHO Member States with a population of less than 250 000 in 2012 were not included in the analysis.

TOBACCO USE

SDG Target 3.a
Strengthen the implementation of the WHO Framework Convention on Tobacco Control in all countries, as appropriate

Indicator 3.a.1: Age-standardized prevalence of current tobacco use among persons aged 15 years and older

SITUATION

In 2015, over 1.1 billion people smoked tobacco.[1] Far more males than females currently smoke tobacco (Fig. A.17.1). Even though the prevalence of tobacco smoking is declining worldwide and in many countries, it appears to be increasing in the WHO Eastern Mediterranean Region and WHO African Region. In other regions, such as the WHO European Region and WHO Western Pacific Region, tobacco smoking is still prevalent and efforts must be intensified to reduce it.

Figure A.17.1.
Number of current tobacco smokers, by sex and WHO region, 2015

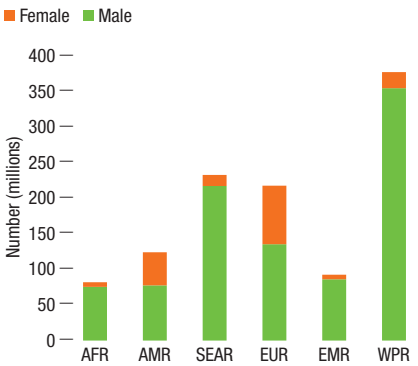
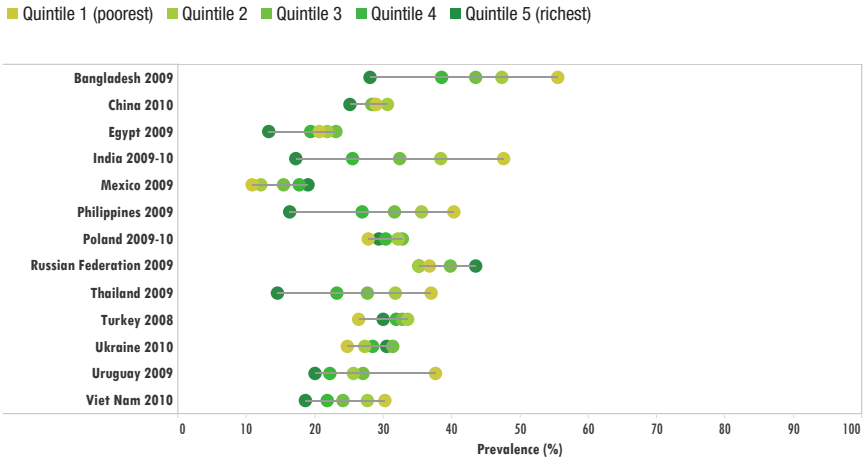


Figure A.17.2.
Prevalence of current tobacco use among people aged 15 years and above, by wealth quintile in 13 countries[3]



ACHIEVING THE 2030 TARGET

The WHO Framework Convention on Tobacco Control (WHO FCTC), the United Nations Tobacco Control Treaty – ratified by 180 Parties representing 90% of the global population – is the first public health treaty negotiated under the auspices of WHO and is designed to counter the tobacco epidemic. The WHO FCTC requires its Parties to implement policies designed to reduce both the demand for tobacco products and their supply, using an intersectoral approach to ensure buy-in from different sectors, including civil society. These policies include, among others: (a) raising taxes on tobacco; (b) banning smoking in public places; (c) use of pictorial health warnings; (d) bans on tobacco advertising; (e) controlling the illicit trade in tobacco products; (f) identifying alternative crops to tobacco farming; (g) preventing sales to and by minors; and (h) collecting and sharing data on tobacco use and prevention efforts.

The main obstacle to implementation of the WHO FCTC is industry interference. For example, the tobacco industry is fiercely challenging the implementation of pictorial health warnings and plain packaging in multiple countries, arguing that the packaging regulations impinge upon trademark and intellectual property rights. International trade and investment agreements are also being used by the tobacco industry to challenge tobacco-control measures in countries. The key to success of global implementation of the WHO FCTC is its integration in broader health and development agendas, including to ensure that sufficient and sustained resources are available for its implementation. Over the past ten years the Convention evolved significantly and has provided an example of how an international legal regime can become an appropriate response to the effects of globalization on health. More than 80% of Parties have either adopted new or strengthened their existing tobacco control laws and regulations. Although implementation is uneven across articles to the Convention, progress continues to be made (Fig. A.17.3).

EQUITY

Analyses of the association between smoking prevalence and socioeconomic status within countries using multi-country surveys have found that current smoking is often more prevalent in lower socioeconomic strata (Fig. A.17.2), regardless of the country income level, gender, age group or other stratifier considered.[2]

DATA GAPS

Nationally representative household surveys commonly include questions about tobacco use. However, there are differences in the questions asked, including differences in the type of tobacco use assessed (for example, cigarette smoking, any tobacco smoking or any tobacco use) and frequency of use (for example, daily use or current use). The prevalence estimates presented in this report were calculated using a statistical model that adjusts the survey data to obtain comparable estimates. To minimize this issue in the future, WHO has developed a standard set of tobacco survey questions which may be used in any survey.[4] The WHO database on tobacco contains recent data (since 2010) from nationally representative surveys for 146 Member States. In 20 countries, no data are available since 2005.

The global progress reports on the implementation of the WHO FCTC are based on the information obtained from each Party to the Convention, who is obligated to report on its implementation every two years.

REFERENCES

1 Unless otherwise noted, all statistics in text, table and figures are taken from: Data on current tobacco smoking derived from: WHO global report on trends in tobacco smoking 2000–2025. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/156262/1/9789241564922_eng.pdf?ua=1, accessed 4 April 2016).

2 (a) Inequalities in young people's health: HBSC international report from the 2005/2006 Survey. Copenhagen: World Health Organization Regional Office for Europe; 2008 (http://www.euro.who.int/__data/assets/pdf_file/0005/53852/E91416.pdf?ua=1, accessed 4 April 2016); (b) Hosseinpoor AR, Parker LA, Tursan d'Espaignet E, Chatterji S. Socioeconomic inequality in smoking in low-income and middle-income countries: Results from the World Health Survey. PLoS One. 2012;7(8):e42843; (c) Sreeramareddy CT, Pradhan PM, Sin S. Prevalence, distribution, and social determinants of tobacco use in 30 sub-Saharan African countries. BMC Med. 2014;12(1):1.

3 Palipudi KM, Gupta PC, Sinha DN, Andes LJ, Asma S, McAfee T. Social determinants of health and tobacco use in thirteen low and middle income countries: evidence from Global Adult Tobacco Survey. PLOS one. 2012;7(3):e33466.

4 Global Adult Tobacco Survey Collaborative Group. Tobacco questions for surveys: a subset of key questions from the Global Adult Tobacco Survey (GATS). Second edition. Atlanta (GA): Centers for Disease Control and Prevention; 2011 (http://www.who.int/tobacco/surveillance/tqs/en/, accessed 4 April 2016).

5 2016 Global progress report on implementation of the WHO FCTC. Forthcoming.

Figure A.17.3.
Average implementation rate of substantive WHO FCTC articles (%), 2014–2016[5]

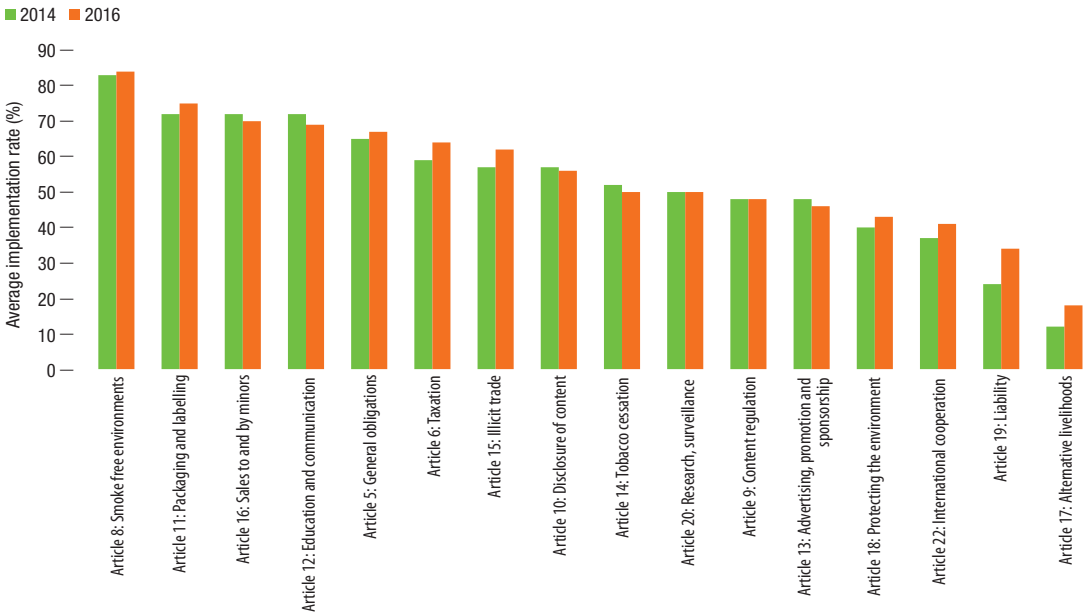
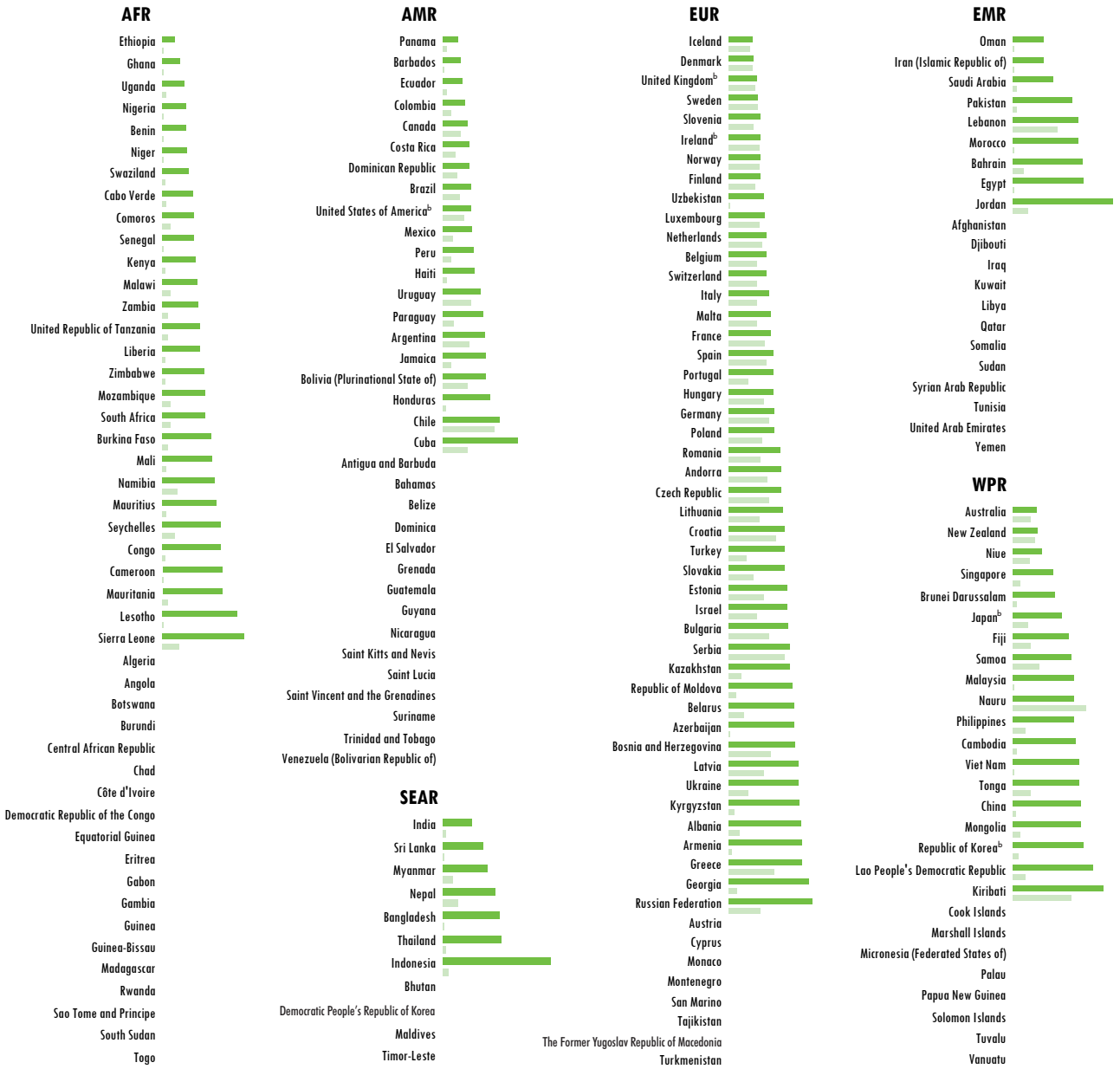


Table A.17.1.
Age-standardized prevalence of tobacco smoking among persons 15 years and older, by sex, 2015[a]



[a] Darker green bars represent the prevalence among males. Pale green bars represent the prevalence among females.

[b] Cigarette use only.

ESSENTIAL MEDICINES AND VACCINES

SDG Target 3.b
Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

Indicator 3.b.1: Proportion of the population with access to affordable medicines and vaccines on a sustainable basis
Indicator 3.b.2: Total net official development assistance to medical research and basic health sectors[1]

SITUATION

Despite improvements in recent decades, the availability of essential medicines at public health facilities is often poor. Recent data show that, for selected essential medicines, median availability was only 60% and 56% in the public sector of low-income and middle-income countries respectively. Availability may be better in the private sector but is still suboptimal at 66% and 67% respectively.[2] In addition, "median" availability data hide significant disparities and inequities in both access and affordability within a region or within a country. Access to medicines for chronic conditions and NCDs is even worse than that for acute conditions. In nine low-income countries with recent facility surveys, median availability was 56% for 12 antibiotics and 35% for 17 NCD essential medicines.[3]

Even when available, medical products are not necessarily affordable to patients. Studies have shown that in some LMIC where patients have to pay for medicines in the public sector, the prices of some generic medicines are on average 2.9 times higher than international reference prices, and 4.6 times in private facilities.[2] Treatments for NCD in particular are simply beyond reach in many countries.

The availability of medical devices is also a critical issue. Most countries do not have the capacity to regulate those products. As a consequence, national procurement and reimbursement mechanisms for medical devices are often weak or hazardous. Only 43% of countries have a national list of approved medical devices for procurement or reimbursement, while 41% do not have national standards or recommended lists of medical devices for different types of health-care facilities or specific procedures.[4]

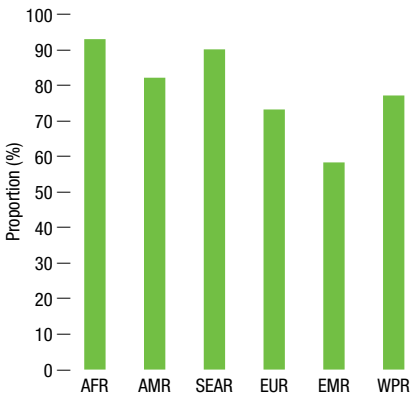
The lack of research and development (R&D) for health issues primarily affecting populations in developing countries was first brought into the international spotlight 25 years ago, by the Commission on Health Research for Development. The Commission showed that less than 10% of global health research expenditure was spent on the health issues of developing countries – which at that time represented more than 90% of the global burden of preventable mortality (referred to as the "10/90 gap").[5] Recent studies have shown that such gaps remain, with only 1% of all health R&D investments in 2010 allocated to health issues primarily affecting developing countries. Such health issues were addressed in less than 2% of all clinical trials in 2012 and were targeted by only 1% of 336 newly approved chemical entities between 2000 and 2011.[6,7] Such gaps are partially attributable to the lack of research capacity in low-income countries which accounted for: (a) 0.1% of all health research expenditures in 2010; (b) less than 1% of all clinical trial participants in 2012; and (c) less than 1% of all biomedical research publications authored in 2011.[6]

These indicators sketch a clear picture of the gap in health R&D for health issues that primarily affect populations in developing countries. At present, little data are available for the indicators specified under the relevant health-related SDGs. However, a general picture can be obtained by considering the amount and proportion of public, private and not-for-profit R&D investments that target health issues that primarily affect developing countries. In 2014, US$ 3.4 billion in public, private and not-for-profit R&D investments were allocated to medical product development addressing health issues that primarily affect developing countries[8] – representing approximately 0.004% of the global gross domestic product (GDP) that year.[9] In 2014, 64% of all R&D investments in these health issues were made by the public sector, 20% by the not-for-profit sector and 16% by the private sector.[10]

ACHIEVING THE 2030 TARGET

A major obstacle to ensuring access to quality-assured medical products is the lack of capacity to regulate the domestic market. Promoting the exchange of information and looking at greater convergence and harmonization of regulatory systems will create favourable conditions for accelerating the availability of safe and effective medicines and medical products. Countries should also maintain an essential medicines list.

Figure A.18.1.
Proportion of countries with an available essential medicines list, by WHO region, 2011[11]



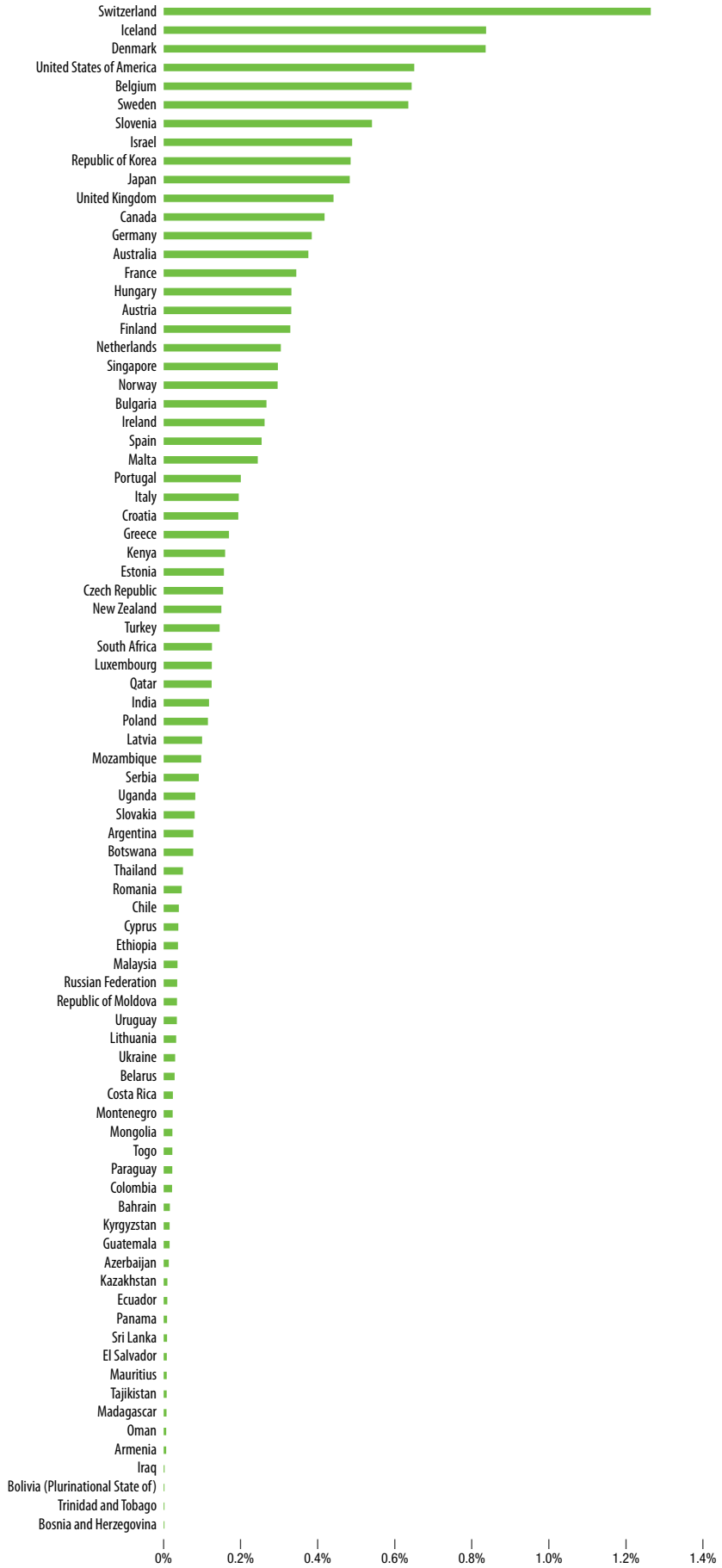
New medical products, such as biotherapeutic products, anti-cancer medicines, new vaccines and NCD medicines, are becoming increasingly more expensive. WHO promotes collaboration with key partners (such as WTO and WIPO) to support Member States in the areas of intellectual property management, innovation and access to medical products by increasing transparency on the patenting of essential medicines and addressing patent barriers to access.

Addressing antimicrobial resistance and promoting the responsible use of medicines are also crucial activities. The Global Action Plan on Antimicrobial Resistance adopted in 2015 pointed out that equitable access to, and appropriate use of, existing and new antimicrobial medicines are needed to preserve the ability to treat serious infections and diseases.[12]

The WHA has adopted multiple resolutions that have laid out the key strategies closely related to SDG Target 3.b. For example, continued support is essential for improving access to interventions for priority diseases. Understanding global and national demand, especially for some "vulnerable" products that are in short supply globally, is a critical issue, especially given the experience of market shaping by global organizations. Using this experience to develop a systematic approach to assessing demand will be important in retaining these products on the global market and preventing shortages and stock outs.

In its 2012 report, the WHO Consultative Expert Working Group on Research and Development: Financing and Coordination proposed a target amount equal to 0.01% of GDP for government funding in R&D for health issues that primarily affect developing countries.[13] According to data derived from Policy Cures 2014 G-FINDER survey[14], no country has achieved this target, with one country, the United States of America, close to reaching this level. Total spending on health R&D in general is much larger: a dozen countries spent more than 0.4% of GDP, half of them spent more than 0.6% (Figure A.18.2). The WHO Global Observatory on Health R&D[15] is being established to obtain more detailed information to better assess the investments in health R&D for health issues that primarily affect developing countries. This should improve priority setting for R&D and eventually lead to significant improvements in affordable access to new interventions based on needs, including for diseases with a high potential to cause epidemics.

Figure A.18.2.
Gross domestic expenditure on health R&D as percentage of GDP, 2009–2013[a]



[a] The data shown correspond to the latest year reported by country within the period 2009–2013. Source: OECD, Eurostat, Ibero-American and Inter-American Network on Science and Technology Indicators, UNESCO.

EQUITY

People who can afford private facilities may have better access than people who have to rely on public services in countries where public services face major challenges. There are also specific inequalities – for example, major efforts are needed to improve and increase the availability of paediatric medicines. In addition to more investment in the development of paediatric formulations, there is also a need to ensure that existing medicines for children are made available in all countries.

DATA GAPS

Most countries do not have a regular reliable system for monitoring access to affordable medicines and vaccines. Monitoring access to essential medicines and vaccines requires regular facility surveys or a routine and well-functioning reporting system that includes a quality control component. All countries need to develop systems that routinely monitor the availability, quality and prices of medicines.

The Global Observatory on Health R&D[15] is a new platform that collates information on health R&D from multiple sources to help identify gaps and opportunities for health R&D and to help define priorities for new R&D investments based on public health needs. However, the data gaps remain large with data on funding for health R&D not available for many countries and not for all of the health issues that primarily affect developing countries.

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HEALTH WORKFORCE

SDG Target 3.c
Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least-developed countries and small-island developing States

Indicator 3.c.1: Health worker density and distribution

SITUATION

A 2015 analysis estimated the global health workforce to be slightly above 43 million workers, including 20.7 million nurses/midwives, 9.8 million physicians and approximately 13 million other health workers.[1] Relative to population density, the WHO Africa Region and WHO South-East Asia Region, which bear the greatest burdens of preventable disease, have the lowest density of health workers compared to the wealthier regions of Europe and the Americas by a significant magnitude (Table A.19.1).

Table A.19.1.
Median density of health workforce (per 10 000 population) among the top five cadres, by WHO region, 2000–2013

Region	Physicians	Nursing and midwifery[a]	Dentistry	Pharmaceutical
AFR	2.4	10.7	0.5	1.0
AMR	20.0	24.1	4.1	3.2
SEAR	6.1	9.0	1.0	3.9
EUR	32.3	41.7	5.6	8.6
EMR	10.3	10.7	1.5	5.6
WPR	13.5	24.1	0.2	3.5
Global	12.3	17.6	0.8	3.6

[a] In many countries the distinction between nursing and midwifery personnel is difficult to disaggregate given the way data are reported.

ACHIEVING THE 2030 TARGET

The vision of the Global strategy on human resources for health (GSHRH): Workforce 2030[1] is to accelerate progress towards UHC and the SDGs by ensuring equitable access to health workers within strengthened health systems. Needs-based estimates, relative to an SDG threshold of 44.5 skilled health professionals[2] per 10 000 population indicated a shortage of approximately 17.4 million health workers in 2013 (Fig. A.19.1) corresponding to almost 2.6 million physicians, over 9 million nurses and midwives, and around 5.8 million other health-care cadres.[3]

EQUITY

Evaluating inequalities in access to health workers requires indicators of the distribution of health workers within and between countries. Where data are available, physician densities within countries vary considerably. For urban and rural areas this ranges from equality in Japan, the Republic of Korea and Turkey[4] to up to two-fold greater density in urban areas in European OECD countries. Between-country inequalities can be assessed using the level of dependency on foreign-trained health professionals. A 2015 analysis indicated that foreign-born physicians accounted for 22% of active physicians in OECD countries in 2010/11 (up from 20% in 2000–2001), with India accounting for the largest share of foreign-born physicians.[5]

DATA GAPS

A shortage of timely, good-quality, comparable and disaggregated data impedes full understanding of the state of the health workforce at national and sub-national levels. Only one in four countries in the WHO African Region have published human resources for health (HRH) data since 2010, compared to one in two in the WHO Eastern Mediterranean Region and eight in 10 in the WHO European Region. HRH data are seldom available in a comprehensive and inclusive manner, even in well-developed health information systems. Such data are also often confined to the public sector and to a small number of health cadres (namely, dentists, midwives, nurses, pharmacists and physicians). The GSHRH puts forward the implementation of national health workforce accounts (NHWA) as a structured, labour-market-driven approach to collecting HRH data. This involves measuring a minimum dataset on every health worker (on cadre, location of practice, qualification and salary), on national educational capacities (graduates, financing) and on the mobility (internal and international) and performance of the health workforce. The progressive implementation of NHWA would enable countries to develop evidence-informed solutions to drive equitable access to a health worker and thus make progress towards achieving UHC and the SDGs.

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2. Primarily nurses/midwives and physicians.
3. Refers to the seven other broad categories of the health workforce as defined by the WHO Global Health Workforce Statistics database (see: http://www.who.int/hrh/statistics/hwfstats/en/) – namely: dentistry personnel; pharmaceutical personnel; laboratory health workers; environment and public health workers; community and traditional health workers; health management and support workers; and other health workers. A multiplier for "all other cadres" was developed based on the values of countries with available data.
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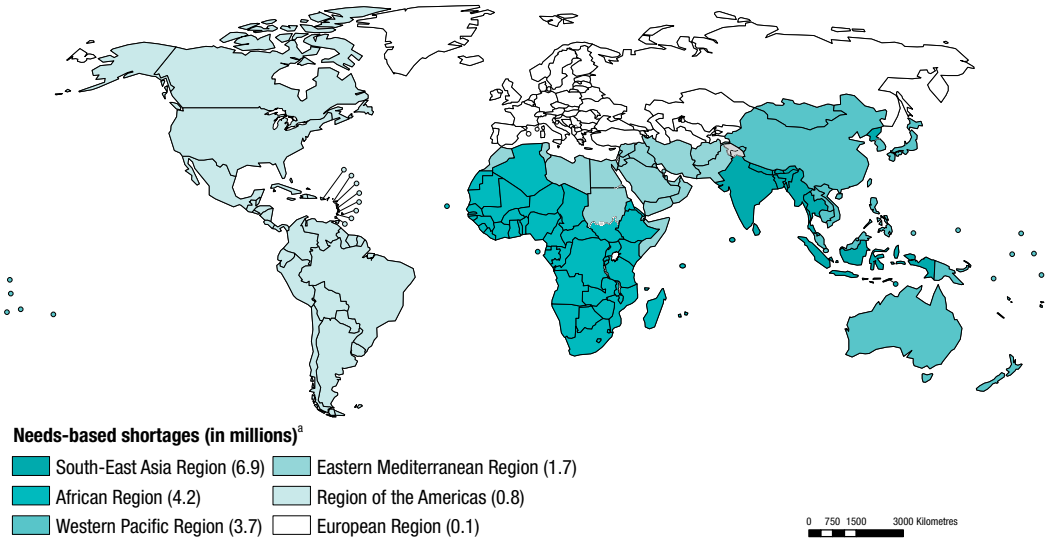
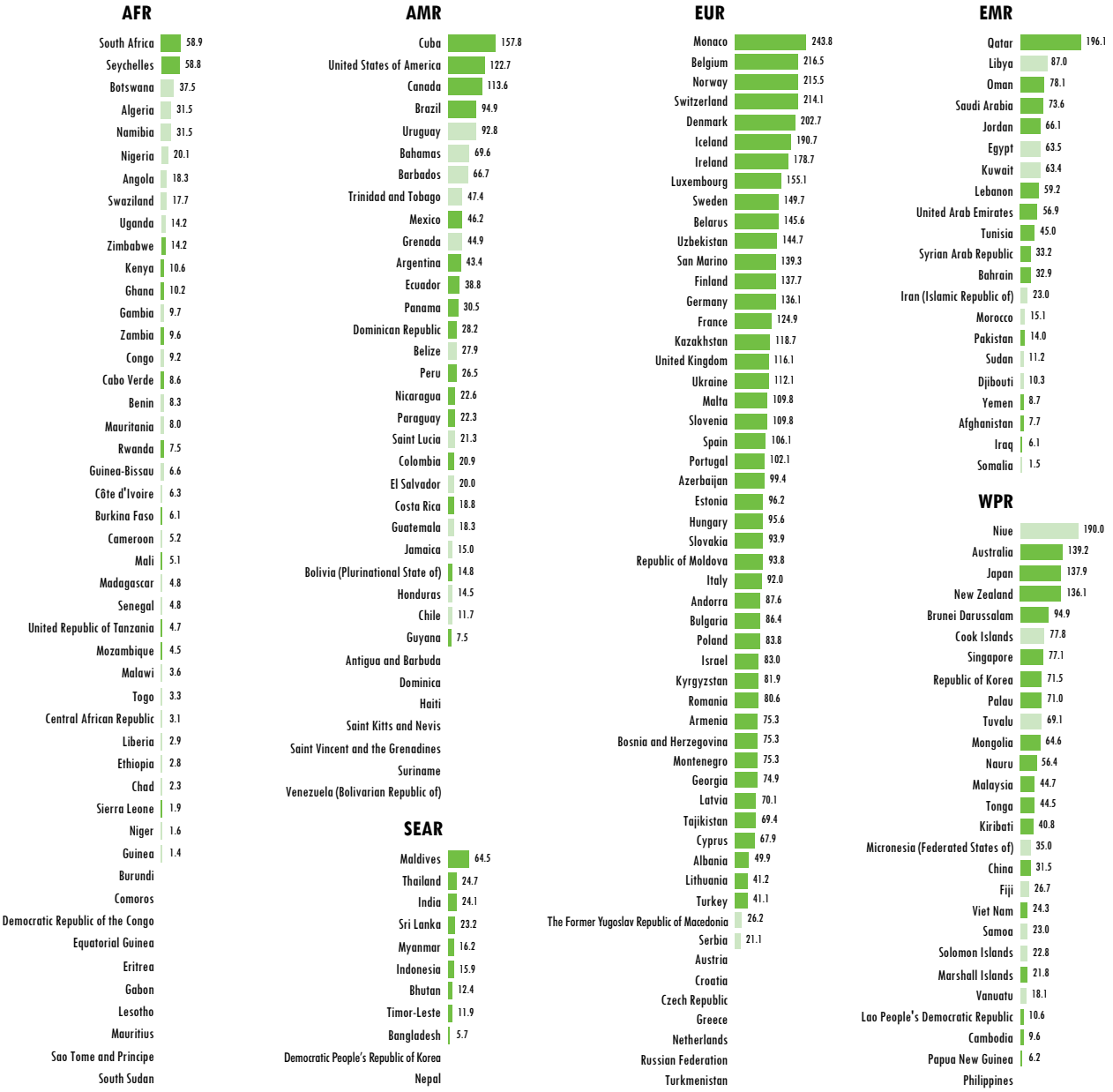
Figure A.19.1.
Estimates of health worker needs-based shortages,[a] by WHO region, 2013



[a] Needs-based shortage is estimated as the difference between need and supply by country for those with current supply below the SDG threshold.

Table A.19.2.
Skilled health professionals density (per 10 000 population), 2005–2013[a]



[a] For countries, the latest available data for 2005–2013 are shown. Data from 2005–2009 are shown in pale green. Skilled health professionals refer to the latest available values (2005-2013) in the WHO Global Health Workforce Statistics database (http://who.int/hrh/statistics/hwfstats/en/) aggregated across physicians and nurses/midwives.

NATIONAL AND GLOBAL HEALTH RISKS

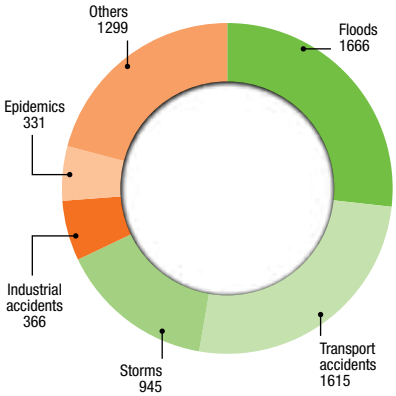
SDG Target 3.d
Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

Indicator 3.d.1: International Health Regulations (IHR) capacity and health emergency preparedness index

SITUATION

All communities face the risk of emergencies and disasters and, in an increasingly connected world, many of these events can "go global". The most common emergencies and disasters are caused by floods, transport accidents, storms, industrial accidents and epidemics (Fig. A.20.1).[1] Emergencies and disasters account for a large number of deaths, injuries, illnesses and disabilities. In addition to their devastating health impacts, such events also disrupt health services, impose a heavy economic burden and threaten development gains. Emergencies caused by natural disasters alone cost over US$ 100 billion annually.[2] The natural disasters section in this Annex discusses the SDG targets and indicator relating specifically to natural disasters.[3]

Figure A.20.1.
Cumulative number of reported disasters, by type, 2006–2015



The continued and increasing risks of emerging and re-emerging infectious disease outbreaks due to virulent, drug-resistant and lethal microorganisms are a major concern, as is the risk of bioterrorism – for example, involving a deliberately dispersed pathogenic biological agent. To help the international community prevent and respond to acute public health risks that have the potential to become global threats, the revised International Health Regulations (IHR) entered into force in 2007. These require countries to report certain disease outbreaks and other public health events to WHO. The IHR cover five categories of hazards: infectious, zoonoses, food safety, chemical and radio nuclear. Other types of hazards (such as hydrometeorological, geophysical and societal) are not included under the IHR.

Despite progress in the implementation of IHR core capacities in recent years, the situation in 2015 was far from satisfactory, particularly in the WHO African Region (Fig. A.20.2). In fact, 84 of the 196 IHR States Parties (43%) have requested and obtained an extension up to 2016 to meet IHR core capacity requirements. Limitations remain in preparedness, surveillance, response capacity and other critical capacities. The Ebola virus disease outbreak in West Africa, the Middle East respiratory syndrome coronavirus, the 2009 H1N1 influenza pandemic and several cholera outbreaks have repeatedly demonstrated that the world remains unprepared to rapidly and effectively respond to serious public health events. The Ebola epidemic in West Africa has stimulated in-depth reflections on the state of global health security, not least in terms of the inadequate global capacity for quick response. The epidemic also revealed weaknesses in the funding mechanisms used to finance outbreak responses. It is essential for all countries to evaluate their level of preparedness and to enhance their capacity to respond to all hazards based upon a whole-of-society approach.

ACHIEVING THE 2030 TARGET

SDG Target 3.d provides an impetus for strengthening the implementation of IHR core capacities, and increasing national and community emergency and disaster risk management capacities. The overall global strategic direction for strengthening national and community capacities for emergency and disaster risk management for health in the post-2015 era is supported by the Sendai Framework for Disaster Risk Reduction 2015–2030. Enhancing the resilience of national health systems, including through the integration of disaster risk management into health care and strengthening IHR implementation in all countries, will be a central element. Effective emergency and disaster risk management policies and programmes should be guided by comprehensive all-hazards and whole-of-society approaches across the emergency management cycle – prevention/mitigation, preparedness, response and recovery. Further integration into an all-hazards emergency risk approach with indicators will be desirable.

EQUITY

Emergencies disproportionately affect vulnerable populations, including the poor, children, women, the elderly, disabled and displaced populations. During emergencies, continuity of care is often disrupted, leaving behind fragmented health infrastructures. Inequalities are often poorly addressed in disaster-response and recovery planning.

DATA GAPS

The current IHR monitoring process involves a self-assessment questionnaire sent to State Parties on the implementation status of 13 core capacities. Since 2010, 194 countries have responded with an annual average of 71% reporting completeness. While the questionnaire itself is standard, the nature of self assessment may limit the quality and comparability of data and monitoring across countries. Therefore, a new IHR monitoring and evaluation framework has been developed comprising the four comprehensive components of annual reporting to the WHA, joint external evaluation and after action review and exercises.

One hundred countries have also responded to a global survey of country capacities for emergency and disaster risk management for health most recently conducted by WHO in 2015. The survey covers the capacities required for integrating health with multisectoral disaster risk management arrangements, as well as the health-sector capacities required for all-hazards emergency and disaster risk management.

Data for reporting on the indicators used for the Sendai Framework global targets will need to be enhanced to take account of the broad range of hazards (including infectious diseases) that are within the scope of the Framework, and aligned with the SDGs.

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[3] Including SDG Targets 1.5, 11.5 and 13.1.

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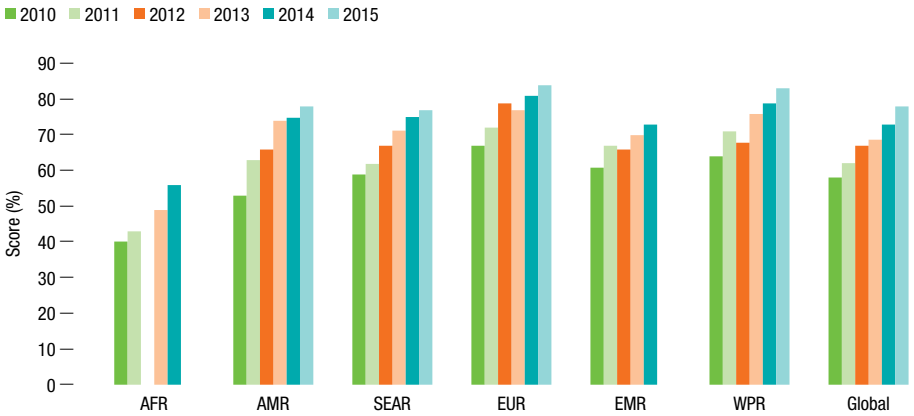
Figure A.20.2.
IHR implementation: annual average of 13 core capacity scores,[4] by WHO region, 2010–2015[a]



[a] A regional annual average is not shown if the number of State Parties reporting for the respective year is fewer than half of the total number of State Parties in the region.

Table A.20.1.
IHR implementation: average of 13 core capacity scores,[4] 2010–2015[a,b]

AFR

South Africa	100
Zambia	92
Cameroon	91
Côte d'Ivoire	87
Seychelles	87
Niger	79
Ethiopia	78
Democratic Republic of the Congo	75
Togo	74
Algeria	73
Eritrea	73
Uganda	73
Ghana	69
Kenya	69
Mozambique	69
Mauritius	68
Zimbabwe	68
Nigeria	67
United Republic of Tanzania	67
Namibia	66
Sierra Leone	64
Lesotho	63
Botswana	62
Cabo Verde	58
Guinea	57
Burundi	56
Swaziland	56
Mali	55
Burkina Faso	50
Guinea-Bissau	50
South Sudan	50
Gabon	48
Rwanda	46
Benin	44
Chad	43
Malawi	40
Gambia	33
Senegal	30
Comoros	29
Madagascar	29
Mauritania	29
Congo	28
Equatorial Guinea	27
Liberia	26
Central African Republic	24
Angola	18
Sao Tome and Principe	18

AMR

Cuba	100
Brazil	99
Canada	99
Mexico	97
Venezuela (Bolivarian Republic of)	95
El Salvador	93
United States of America	91
Barbados	90
Ecuador	90
Peru	89
Antigua and Barbuda	88
Guatemala	87
Colombia	86
Costa Rica	85
Guyana	85
Uruguay	84
Argentina	83
Paraguay	83
Jamaica	81
Chile	79
Nicaragua	78
Honduras	75
Suriname	72
Bolivia (Plurinational State of)	71
Dominican Republic	71
Trinidad and Tobago	71
Panama	70
Dominica	66
Grenada	66
Bahamas	61
Saint Kitts and Nevis	60
Saint Lucia	58
Belize	55
Haiti	48
Saint Vincent and the Grenadines	35

SEAR

Thailand	98
Indonesia	96
India	94
Bangladesh	88
Myanmar	86
Nepal	77
Democratic People's Republic of Korea	73
Sri Lanka	71
Timor-Leste	71
Bhutan	68
Maldives	61

EUR

Germany	99
Ukraine	99
Norway	98
Armenia	96
Finland	96
Slovakia	96
Netherlands	95
Portugal	95
France	94
Tajikistan	94
Spain	92
Sweden	92
Czech Republic	91
Denmark	91
Hungary	91
Switzerland	91
Belarus	90
Latvia	90
Luxembourg	88
Austria	87
Russian Federation	87
The Former Yugoslav Republic of Macedonia	86
Azerbaijan	84
Iceland	84
Turkmenistan	84
Lithuania	83
Uzbekistan	83
Belgium	82
Georgia	81
Republic of Moldova	80
Monaco	79
Ireland	78
Kazakhstan	78
Romania	78
Turkey	78
Italy	77
Greece	76
Malta	76
Slovenia	75
Poland	74
Estonia	72
Croatia	71
Israel	71
Bulgaria	69
Cyprus	62
Montenegro	59
Bosnia and Herzegovina	55
Kyrgyzstan	50
Serbia	47
San Marino	40
Andorra	29
United Kingdom[b]	
Albania	

EMR

Saudi Arabia	99
Jordan	97
Qatar	97
United Arab Emirates	97
Bahrain	96
Oman	96
Morocco	95
Egypt	93
Iraq	91
Kuwait	86
Iran (Islamic Republic of)	85
Lebanon	76
Sudan	71
Tunisia	65
Libya	64
Syrian Arab Republic	63
Djibouti	46
Yemen	46
Afghanistan	45
Pakistan	43
Somalia	6

WPR

Australia	100
Japan	100
Republic of Korea	100
China	99
Malaysia	99
Singapore	99
Viet Nam	99
Fiji	98
New Zealand	98
Brunei Darussalam	92
Palau	91
Philippines	89
Tuvalu	89
Mongolia	86
Samoa	75
Lao People's Democratic Republic	74
Tonga	74
Micronesia (Federated States of)	64
Papua New Guinea	64
Cook Islands	63
Niue	61
Kiribati	60
Solomon Islands	57
Cambodia	52
Marshall Islands	51
Vanuatu	43
Nauru	42

[a] Country values are the average of 13 core capacity scores for the latest available year.

[b] Data provided in a format that could not be included in the analysis.

CHILD STUNTING

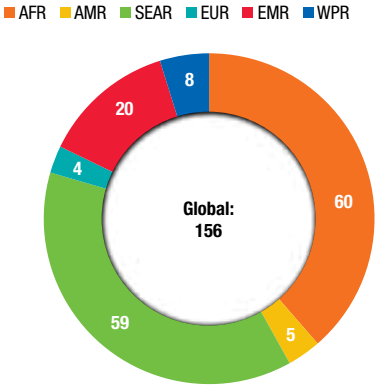
SDG Target 2.2
By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

Indicator 2.2.1: Prevalence of stunting (height for age < -2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age

SITUATION

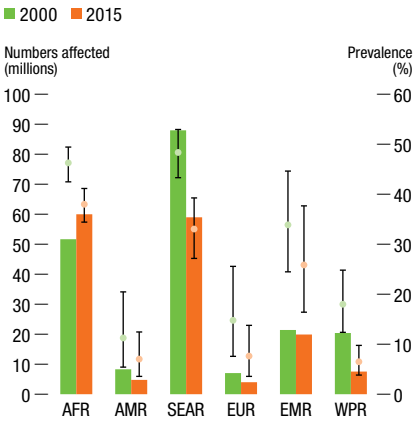
Globally in 2015 an estimated 156 million children (23% of all children) were affected by stunting.[1] Stunting prevalence was highest in the WHO African Region (38%) followed by the WHO South-East Asia Region (33%). Over three quarters of all stunted children under 5 years of age lived in either the WHO African Region (60 million children) or WHO South-East Asia Region (59 million children) (Fig. A.21.1).

Figure A.21.1.
Children under 5 years of age affected by stunting (in millions), by WHO region, 2015



The global nutrition target on stunting aims to achieve a 40% reduction between 2012 and 2025 in the number of affected children. Although the prevalence of stunting is decreasing in all regions, Africa faces a rise in the absolute number of stunted children (Fig. A.21.2). In the WHO South-East Asia Region the estimated number of stunted children decreased between 2000 and 2015 from 88 million to 59 million – while in Africa the number increased from 52 to 60 million over the same period.

Figure A.21.2.
Childhood stunting prevalence and numbers affected,[a] by WHO region, 2000 and 2015



[a] Prevalence are shown as points, with vertical lines representing 95% uncertainty intervals. Numbers affected are shown as bars.

ACHIEVING THE 2030 TARGET

Key strategies and actions to achieve the global nutrition targets have been identified in the WHA-endorsed Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition, the Global Nutrition Targets Policy Briefs[2] and the Second International Conference on Nutrition (ICN2) Framework for Action.[3] These strategies indicate that actions are needed across different sectors (including health, agriculture, water and sanitation, education, trade and social protection) to sustainably improve nutrition. Accordingly, countries should develop national multisectoral nutrition plans and have multisectoral platforms for nutrition.[4] Achieving the global nutrition targets thus relies upon achieving a number of SDGs – such as universal access to safe and healthy food, and UHC – while also playing a key role in the achievement of others.

Child stunting, a chronic outcome of poor nutrition and poor environmental conditions, can be prevented under a life-course approach through interventions that enhance nutritional status in adolescents and women of reproductive age, that ensure appropriate infant and young child feeding, and that improve access to safe water and adequate sanitation, immunization and treatment for infectious diseases.

WHO provides updated guidance on effective actions to address the multiple forms of malnutrition,[6] including the promotion, protection and support of breastfeeding, advice on adequate complementary feeding, management of acute malnutrition, and the provision of vitamins and minerals to different age groups through supplementation or fortification of staple foods. Such actions need to be implemented on a sufficiently large scale to have an impact on the nutritional status of target groups.

EQUITY

Children are at greater risk of stunting if they are born in rural areas, poor households or to mothers denied basic education. For example, in 66 national surveys from LMIC from 2005 or later, the median survey prevalence of stunting in children born to mothers with no education was 38.7% compared with a median survey prevalence of 23.4% among children whose mothers had completed at least secondary school (Fig. A.21.3).[7]

DATA GAPS

Child length or height is commonly measured in household surveys in LMIC, with a typical frequency of every 3–5 years. In a number of countries, length or height are more routinely collected as part of a nutrition surveillance system. To interpret and compare stunting rates, data should be analysed based on the WHO Child Growth Standards, which have now been adopted in over 130 countries. However, there are countries where survey or surveillance data are not reported in a standard format. Guidance on minimum data-quality criteria and standardized reporting are under development. The WHO Global Database on Child Growth and Malnutrition[8] contains recent stunting data (since 2010) from nationally representative surveys in 103 Member States. In 61 countries – most of which are high-income countries with a small burden of stunting – there are no data available since 2005.

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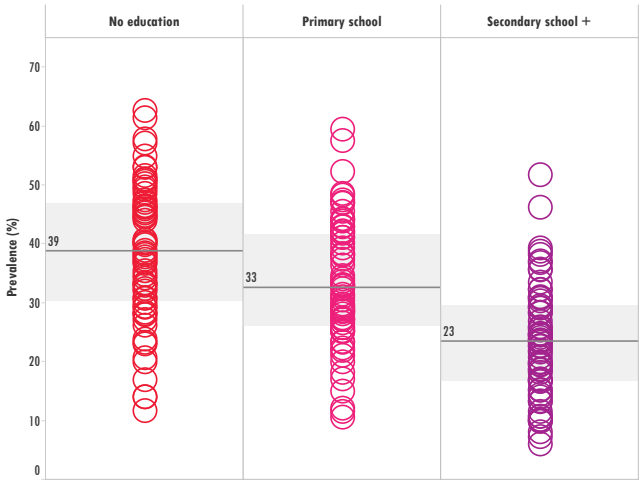
Figure A.21.3.
Prevalence of stunting in children under 5 years of age in LMIC, by maternal educational level, 2005–2013[a]



[a] Based on the results of DHS and MICS in 66 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Table A.21.1.
Prevalence of stunting in children under 5 years of age, 2005–2015[a,a]

AFR

Seychelles	7.9
Algeria	11.7
Sao Tome and Principe	17.2
Gabon	17.5
Ghana	18.8
Senegal	19.4
Congo	21.2
Mauritania	22.0
Namibia	23.1
South Africa	23.9
Gambia	25.0
Swaziland	25.5
Kenya	26.0
Equatorial Guinea	26.2
Togo	27.5
Guinea-Bissau	27.6
Zimbabwe	27.6
Angola	29.2
Côte d'Ivoire	29.6
South Sudan	31.1
Guinea	31.3
Botswana	31.4
Cameroon	31.7
Comoros	32.1
Liberia	32.1
Burkina Faso	32.9
Nigeria	32.9
Lesotho	33.2
Benin	34.0
Uganda	34.2
United Republic of Tanzania	34.7
Rwanda	37.9
Sierra Leone	37.9
Mali	38.5
Chad	39.9
Zambia	40.0
Ethiopia	40.4
Central African Republic	40.7
Malawi	42.4
Democratic Republic of the Congo	42.6
Niger	43.0
Mozambique	43.1
Madagascar	49.2
Eritrea	50.3
Burundi	57.5
Cabo Verde	
Mauritius	

AMR

Chile	1.8
United States of America	2.1
Saint Lucia	2.5
Costa Rica	5.6
Jamaica	5.7
Brazil	7.1
Dominican Republic	7.1
Barbados	7.7
Argentina	8.2
Suriname	8.8
Uruguay	10.7
Paraguay	10.9
Guyana	12.0
Colombia	12.7
Venezuela (Bolivarian Republic of)	13.4
Mexico	13.6
El Salvador	14.0
Peru	14.6
Bolivia (Plurinational State of)	18.1
Panama	19.1
Belize	19.3
Haiti	21.9
Honduras	22.7
Nicaragua	23.0
Ecuador	25.2
Guatemala	48.0
Antigua and Barbuda	
Bahamas	
Canada	
Cuba	
Dominica	
Grenada	
Saint Kitts and Nevis	
Saint Vincent and the Grenadines	
Trinidad and Tobago	

SEAR

Sri Lanka	14.7
Thailand	16.3
Maldives	20.3
Democratic People's Republic of Korea	27.9
Bhutan	33.6
Myanmar	35.1
Bangladesh	36.1
Indonesia	36.4
Nepal	37.4
India	38.7
Timor-Leste	50.2

EUR

Germany	1.3
Belarus	4.5
The Former Yugoslav Republic of Macedonia	4.9
Serbia	6.0
Republic of Moldova	6.4
Bosnia and Herzegovina	8.9
Montenegro	9.4
Turkey	9.5
Georgia	11.3
Kyrgyzstan	12.9
Kazakhstan	13.1
Azerbaijan	18.0
Turkmenistan	18.9
Uzbekistan	19.6
Armenia	20.8
Albania	23.1
Tajikistan	26.8
Andorra	
Austria	
Belgium	
Bulgaria	
Croatia	
Cyprus	
Czech Republic	
Denmark	
Estonia	
Finland	
France	
Greece	
Hungary	
Iceland	
Ireland	
Israel	
Italy	
Latvia	
Lithuania	
Luxembourg	
Malta	
Monaco	
Netherlands	
Norway	
Poland	
Portugal	
Romania	
Russian Federation	
San Marino	
Slovakia	
Slovenia	
Spain	
Sweden	
Switzerland	
Ukraine	
United Kingdom	

EMR

Kuwait	5.8
Iran (Islamic Republic of)	6.8
Jordan	7.8
Saudi Arabia	9.3
Tunisia	10.1
Oman	14.1
Morocco	14.9
Libya	21.0
Egypt	22.3
Iraq	22.6
Somalia	25.3
Syrian Arab Republic	27.5
Djibouti	33.5
Sudan	38.2
Afghanistan	40.9
Pakistan	45.0
Yemen	46.8
Bahrain	
Lebanon	
Qatar	
United Arab Emirates	

WPR

Australia	2.0
Republic of Korea	2.5
Japan	7.1
Tonga	8.1
China	9.4
Tuvalu	10.0
Mongolia	10.8
Malaysia	17.2
Viet Nam	19.4
Brunei Darussalam	19.7
Nauru	24.0
Vanuatu	28.5
Philippines	30.3
Cambodia	32.4
Solomon Islands	32.8
Lao People's Democratic Republic	43.8
Papua New Guinea	49.5
Cook Islands	
Fiji	
Kiribati	
Marshall Islands	
Micronesia (Federated States of)	
New Zealand	
Niue	
Palau	
Samoa	
Singapore	

[a] Data shown are the latest available for 2005–2015. Data from 2005–2009 are shown in pale green.

CHILD WASTING AND OVERWEIGHT

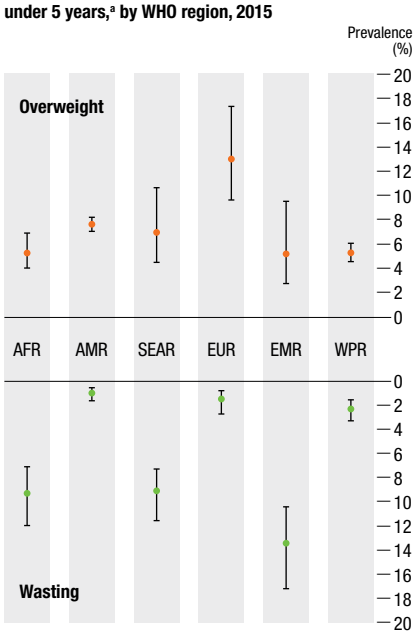
SDG Target 2.2
By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

Indicator 2.2.2: Prevalence of malnutrition (weight for height > +2 or < -2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)

SITUATION

Overweight refers to a child who is too heavy for their height. This form of malnutrition results from consuming more calories than are needed and increases the risk of NCDs later in life. Globally, 42 million children under 5 years – 6% of all children – were estimated to be overweight in 2015, with the highest prevalence observed in the WHO European Region (Fig. A.22.1).[1] Between 2000 and 2015, the prevalence of overweight in children under 5 years increased both globally and in most WHO regions.

Figure A.22.1.
Prevalence of overweight and wasting among children under 5 years,[a] by WHO region, 2015



[a] Vertical lines represent 95% uncertainty intervals.

Wasting refers to a child whose weight is too low for their height. This is usually caused by sudden weight loss due to acute disease or inadequate food intake. Wasting increases a child's risk of dying. Because wasting can be reversed with appropriate food and medical attention, the prevalence of wasting can change rapidly from year to year. Wasting affected 50 million children under 5 years (7% of all children) globally in 2015. Both the highest prevalence of wasting (13.5%) and number of wasted children (24 million) were found in the WHO South-East Asia Region.

ACHIEVING THE 2030 TARGET

The 2025 global targets for wasting and overweight are:[2]

- to reduce and maintain childhood wasting to less than <5%
- no increase in childhood overweight.

Childhood wasting needs to be addressed in vulnerable or marginalized groups as well as in humanitarian crises. Moderate acute malnutrition needs to be addressed in addition to severe acute malnutrition. Effective early-warning systems that include disease surveillance can help prevent widespread hunger and morbidity by triggering an alert linked to immediate intervention. Functional data collection and analysis to detect changes in the prevalence of childhood wasting are key elements of such systems.

Effective prevention strategies include sustainable solutions to improve year-round access to an appropriate diet, strengthening of safety nets (including cash transfers or the distribution of specific nutrient-dense food supplements), and improved access to safe water, adequate sanitation and health-care services. Improved coverage of community and facility management of severe acute malnutrition is needed, as the implementation of treatment guidelines has proven to be effective in lowering child morbidity and mortality.[3]

Although the global target is no increase in child overweight prevalence, when translated into country-specific settings this may imply more intense efforts for many countries to reverse their rising trends. Childhood overweight can be prevented through actions such as the promotion of exclusive breastfeeding and adequate complementary feeding, the regulation of marketing of complementary foods and of foods and non-alcoholic beverages to children, and the promotion of physical activity from the early stages of life to address sedentary lifestyles.[4] To address overweight in school-age children, the school food environment should also be improved.

EQUITY

Children from poorer households are more likely to be wasted than children from richer households. However, the degree of within-country economic-related inequality varies from country to country. In half of the 76 surveys in LMICs (Fig. A.22.2), there was little or no difference in the prevalence of wasting between the richest and poorest quintiles (2 percentage points or less). On the other hand, noticeable levels of inequality (differences of at least 5 percentage points between the richest and poorest quintiles) existed in one quarter of the study countries.[5]

DATA GAPS

The prevalence of wasting and of overweight are both calculated from measurements of children's length/height and weight, which are commonly measured in household surveys in LMIC with a typical frequency of every 3–5 years. Surveys measuring child length/height and weight are not conducted frequently in high-income countries, where overweight may be a problem. In some cases, data are not analysed using the WHO Child Growth Standards, thus limiting their comparability, or one or both indicators are not reported. Data on overweight among school-age children and adolescents (aged 5–19 years) – a complementary outcome indicator – are collected less often and less systematically than data on children under 5 years of age.

REFERENCES

1 Unless otherwise noted, all statistics in the text, table and figures are taken from: UNICEF-WHO-The World Bank Group. Joint child malnutrition estimates – Levels and trends (2015 edition) (see: http://www.who.int/nutgrowthdb/estimates2014/en/).

2 Global Targets 2025. To improve maternal, infant and young child nutrition [website]. Geneva: World Health Organization (http://www.who.int/nutrition/global-target-2025/en/).

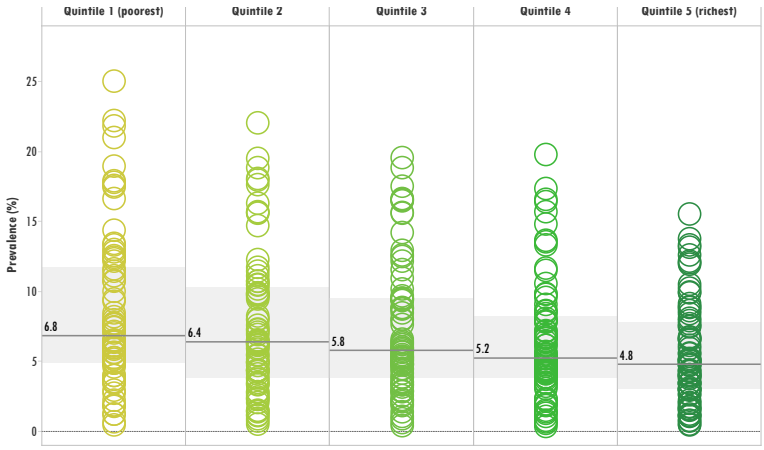
3 Ashworth A, Chopra M, McCoy D, Sanders D, Jackson D, Karaolis N et al. WHO guidelines for management of severe malnutrition in rural South African hospitals: effect on case fatality and the influence of operational factors. Lancet. 2004;363(9415):1110–5 (http://www.ncbi.nlm.nih.gov/pubmed/15064029, accessed 11 April 2016).

4 Global nutrition targets 2025: childhood overweight policy brief. Geneva: World Health Organization; 2014 (WHO/NMH/NHD/14.6; http://apps.who.int/iris/bitstream/10665/149021/2/WHO_NMH_NHD_14.6_eng.pdf, accessed 11 April 2016); and Report of the Commission on Ending Childhood Obesity. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204176/1/9789241510066_eng.pdf, accessed 11 April 2016).

5 WHO and International Center for Equity in Health/Pelotas. State of inequality. Reproductive, maternal, newborn and child health. Geneva: World Health Organization; 2015.

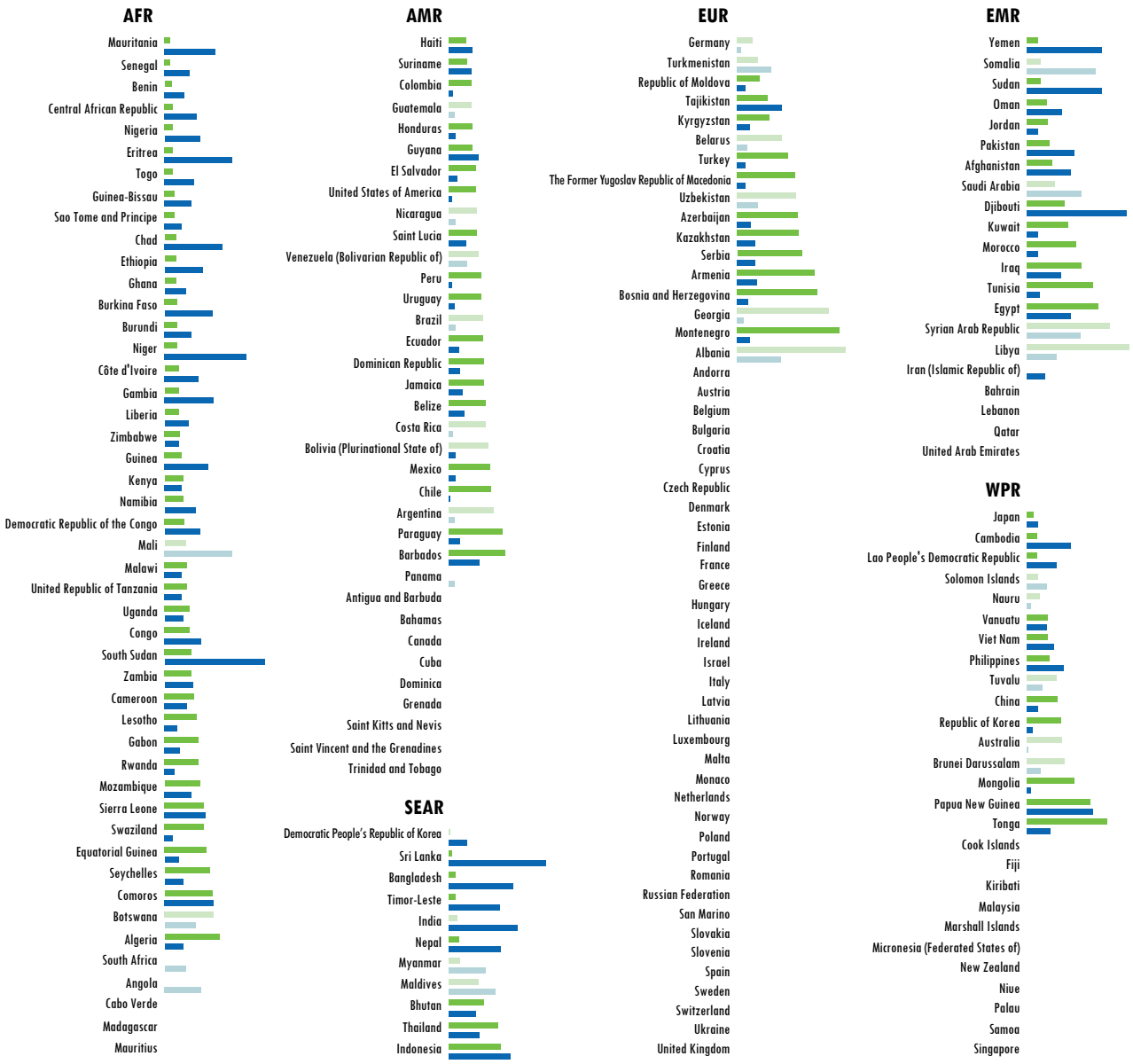
6 Global Database on Child Growth and Malnutrition [online database]. Geneva: World Health Organization (http://www.who.int/nutgrowthdb/database/en/).

Figure A.22.2.
Prevalence of wasting in LMIC, by household wealth quintile, 2005–2013[a]



[a] Based on the results of DHS and MICS in 76 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Table A.22.1.
Prevalence of wasting (blue bar) and of overweight (green bar) in children under 5 years of age, 2005–2015[6,a]



[a] Data shown are the latest available for 2005–2015. Data from 2005–2009 are shown in pale green (overweight) or pale blue (wasting). Within each WHO region, countries are sorted in order of ascending overweight prevalence.

DRINKING-WATER SERVICES

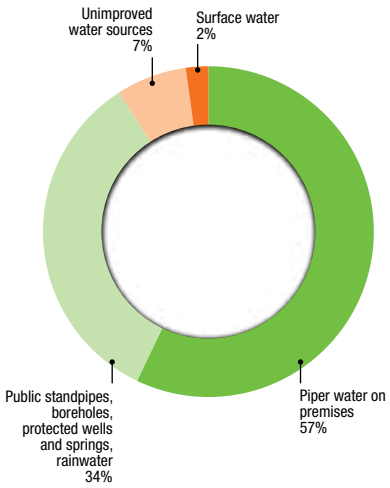
SDG Target 6.1
By 2030, achieve universal and equitable access to safe and affordable drinking-water for all

Indicator 6.1.1: Proportion of population using safely managed drinking-water services

SITUATION

Due to the limited availability of direct data, the proxy measure "use of an improved drinking-water source" was used to monitor progress towards the relevant MDG target. This proxy measure included piped water on premises, public standpipes, boreholes, protected wells and springs, or rainwater. By 2010, the MDG target of 88% coverage had been met (Fig. A.23.1) and in 2015, 6.6 billion people used an improved drinking-water source, with 0.7 billion using unimproved sources or surface water.[1]

Figure A.23.1.
Drinking-water sources used globally, 2015

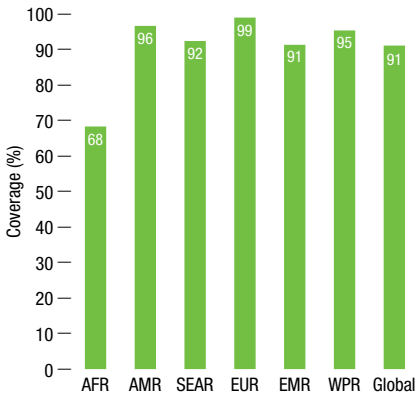


By 2015, there were only three countries with less than 50% coverage, with coverage of >90% estimated in all WHO regions with the exception of the WHO African Region (Fig. A.23.2).

However, it is estimated that globally one quarter of improved sources are faecally contaminated, and that approximately 1.8 billion people drink water containing such contamination.[2] Improved water sources may also be distant from home. In many sub-Saharan African countries people – usually women and girls – must travel long distances to haul water from community sources.

For the SDGs a more ambitious indicator has been selected – the proportion of population using safely managed drinking-water services, which is defined as an improved water source which is located on premises, available when needed, and free from faecal (and priority chemical) contamination. Preliminary estimates available for 140 countries (representing 85% of the global population) indicate that the coverage of safely managed drinking-water services is much lower than the coverage of improved sources, at 68% in urban areas and only 20% in rural areas.[3]

Figure A.23.2.
Use of improved drinking-water sources, by WHO region, 2015



ACHIEVING THE 2030 TARGET

The coverage of safely managed drinking-water services will be well below that of improved water sources for many countries, and rates of progress will need to be faster than they were during the MDG period to reach the target of universal coverage by 2030. The increased focus on water quality will require greater attention to hazard identification and risk management in drinking-water supply. Water Safety Planning, as introduced in the 2004 Guidelines for Drinking Water Quality, can play a key role in reducing and eliminating microbial contamination of drinking-water. Drinking-water suppliers will also need to ensure that water sources are not contaminated with toxic chemicals such as arsenic and fluoride which can occur naturally, especially in groundwater.

The recent emergence of drinking-water regulators has resulted in at least 136 such regulatory authorities being established globally. These will increasingly contribute to the improvement of drinking-water services required to meet the SDG target, and regulatory data will be crucial for monitoring SDG Target 6.1. As regulatory oversight does not always extend to rural water supplies, it will need to be complemented with information from household surveys on the availability and quality of water, both at source and in the home.

EQUITY

Rural areas have consistently lower improved-water coverage than urban areas. Within both rural and urban areas, rich households have greater access to improved water supplies than poor households. The median gap between the richest and poorest quintiles is nine percentage points in urban areas, and 20 percentage points in rural areas (Fig. A.23.3). Achieving the SDGs will require a more systematic approach to monitoring inequalities in access by location and wealth, as well as by other inequality stratifiers.

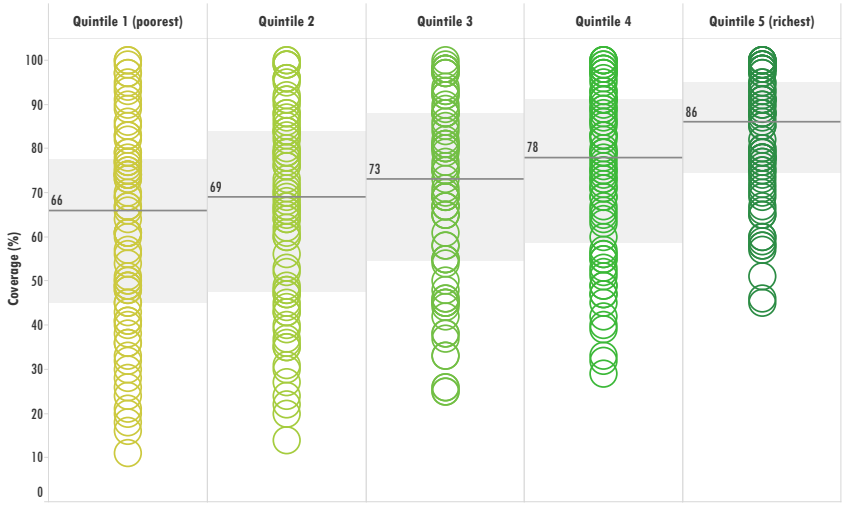
DATA GAPS

Nationally representative data on water quality are scarce, and tracking compliance will be complicated by differences in drinking-water standards between countries and regions. Monitoring the SDG indicator for drinking-water will require new sources of data on water quality and availability, and the first global baseline estimates are expected to be produced in 2017. Assessing affordability and disaggregating access by different disadvantaged population groups will present additional challenges.

REFERENCES

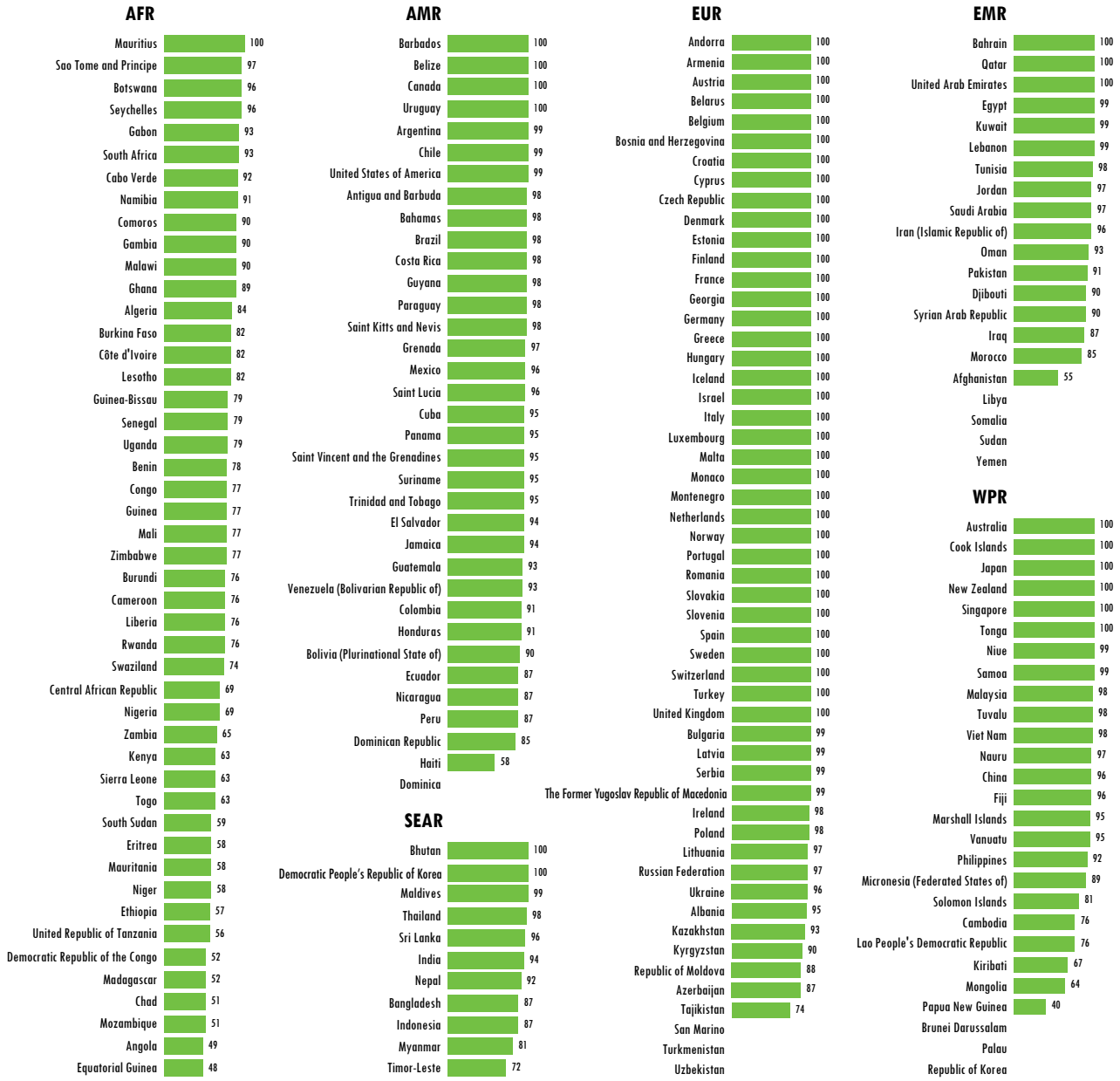
1. Unless otherwise noted, all statistics in the text, table and figures are taken from: Progress on sanitation and drinking water – 2015 update and MDG assessment. New York (NY) and Geneva: UNICEF and World Health Organization; 2015 (http://www.who.int/water_sanitation_health/monitoring/jmp-2015-update/en/, accessed 5 April 2016).
2. Bain R, Cronk R, Hossain R, Bonjour S, Onda K, Wright J et al. Global assessment of exposure to faecal contamination through drinking water based on a systematic review. Trop Med Int Health. 2014;19(8):917–27.
3. Hutton, G, Varughese M. The costs of meeting the 2030 Sustainable Development Goals targets on drinking water, sanitation and hygiene. Washington (DC): World Bank; 2016.

Figure A.23.3.
Access to improved drinking-water in rural areas, by wealth quintile[a]



[a] Based on data from 75 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Table A.23.1.
Proportion of population using improved drinking-water sources, 2015



SANITATION

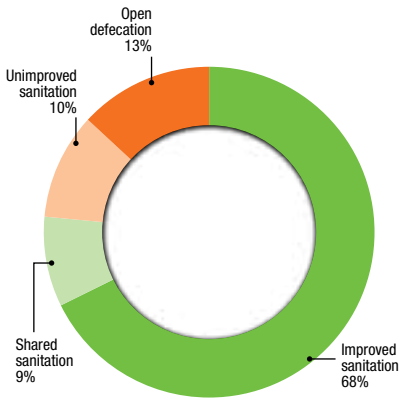
SDG Target 6.2
By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

Indicator 6.2.1: Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water

SITUATION

The indicator used to track progress towards the MDG target for sanitation was "use of an improved sanitation facility", which included piped sewerage, septic tanks, pit latrines with slabs or composting toilets not shared with other households. The coverage of improved sanitation facility use rose from 54% to around 68% globally between 1990 and 2015 (Fig. A.24.1) – missing the MDG target by nine percentage points, equating to almost 700 million people.[1] In 2015, 946 million people practised open defecation worldwide.

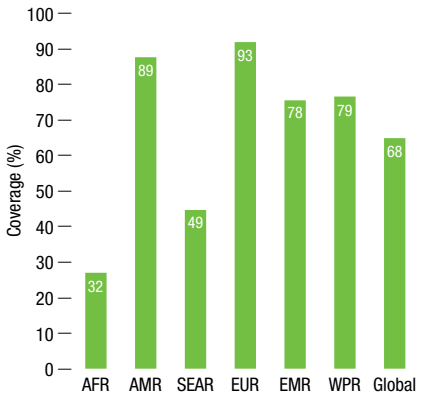
Figure A.24.1.
Sanitation facilities used globally, 2015



Sanitation coverage varies widely in developing countries – in 46 countries, less than 50% of the population use an improved sanitation facility. Countries with the lowest coverage are now concentrated in Africa and South-East Asia (Fig. A.24.2). Data from 57 countries, mostly in Africa, show that the median coverage for hand-washing facilities in the home was only 26%.[1]

The indicator for tracking SDG Target 6.2 builds on the MDG indicator. A safely managed sanitation service is defined as an improved sanitation facility which is not shared with other households, and in which excreta is safely disposed of in situ or treated offsite. To fully meet the target, households must also have hand-washing facilities (including soap and water) available. The coverage of safely managed sanitation services is likely to be well below improved sanitation coverage for many countries. Preliminary coverage estimates for 140 countries (representing 85% of the global population) indicate that safely managed sanitation coverage is only 26% in urban areas compared to 34% in rural areas.[2]

Figure A.24.2.
Use of improved sanitation facilities, by WHO region, 2015



ACHIEVING THE 2030 TARGET

To achieve the SDG target, unprecedented improvements will need to be made in reducing open defecation, promoting hand-washing, and improving the management and treatment of faecal wastes from both sewered and onsite facilities, especially in urban settings. Sanitation Safety Planning is a step-by-step risk-based approach which can help to improve faecal waste management in both onsite and offsite systems. The approach underscores the leadership role of the health sector in bringing together stakeholders from different sectors to identify health risks in the sanitation system and to agree upon improvements and regular monitoring approaches, in order to maximize the health, economic and environmental gains of safely managed sanitation services. These gains will contribute to achieving the SDG targets for reducing death and diseases (including neglected tropical diseases) related to a lack of WASH services.

EQUITY

An estimated 70% of people without access to improved sanitation and 90% of those practising open defecation live in rural areas. There are also strong inequalities by wealth, especially in urban settings where the median gap between the richest and poorest quintiles is over 50 percentage points (Fig. A.24.3).

DATA GAPS

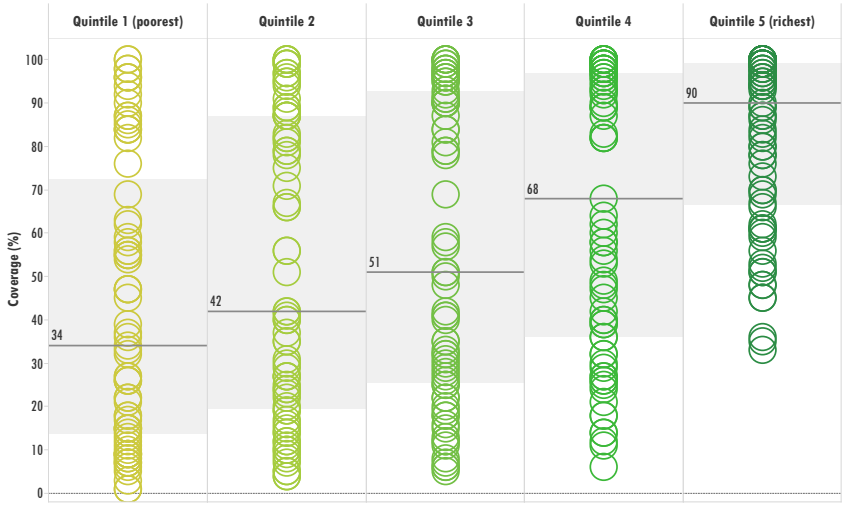
Household surveys collect data on the types of sanitation facilities, as well as the presence of hand-washing materials as a proxy for hygiene. Monitoring the coverage of safely managed sanitation services will be based upon combined information derived from household surveys with additional data on the emptying of onsite sanitation, and treatment of sewerage and faecal sludge, obtained from administrative or other national sources. Global data on the management of faecal wastes remain scarce, particularly for onsite sanitation systems. However, relevant data in global databases such as UNSD, EUROSTAT, IB-NET, AquaStat and Global Water Intelligence show the promise of availability of national data. Hand-washing data from DHS and MICS surveys will need to be complemented by comparable data for high-income countries. A first global baseline for SDG Target 6.2 will be prepared by 2017.

REFERENCES

[1] Unless otherwise noted, all statistics in the text, table and figures are taken from: Progress on sanitation and drinking water – 2015 update and MDG assessment. New York (NY) and Geneva: UNICEF and World Health Organization; 2015 (http://www.who.int/water_sanitation_health/monitoring/jmp-2015-update/en/, accessed 5 April 2016).

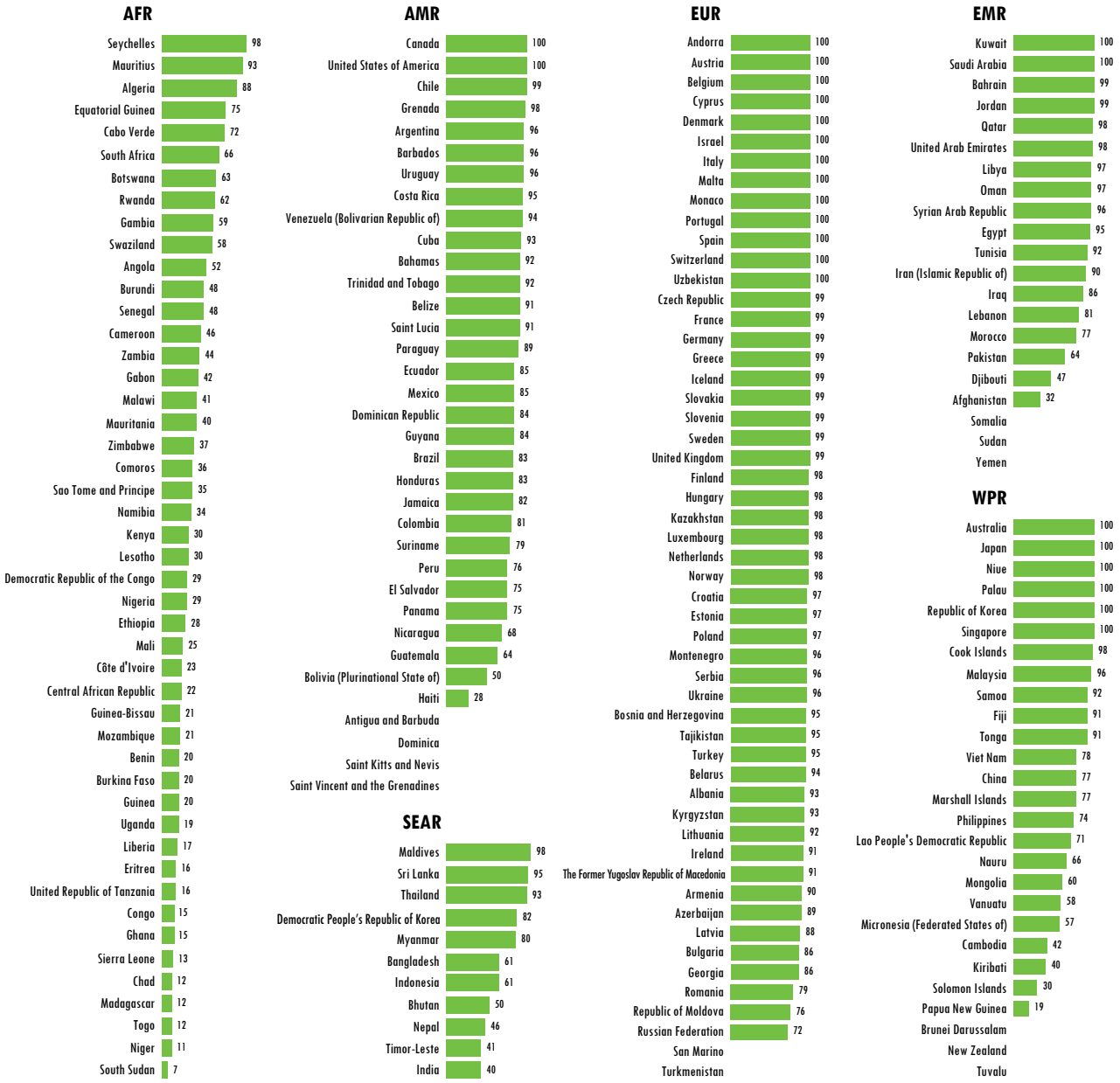
[2] Hutton, G, Varughese M. The costs of meeting the 2030 Sustainable Development Goals targets on drinking water, sanitation and hygiene. Washington, DC: World Bank; 2016.

Figure A.24.3.
Access to improved sanitation in urban areas, by wealth quintile[a]



[a] Based on data from 75 countries. Each circle represents a country value; numbers and horizontal lines indicate the median value (middle point) for each subgroup; light grey bands indicate the interquartile range (middle 50%) for each subgroup.

Table A.24.1.
Proportion of population using improved sanitation, 2015



CLEAN HOUSEHOLD ENERGY

SDG Target 7.1
By 2030, ensure universal access to affordable, reliable and modern energy services

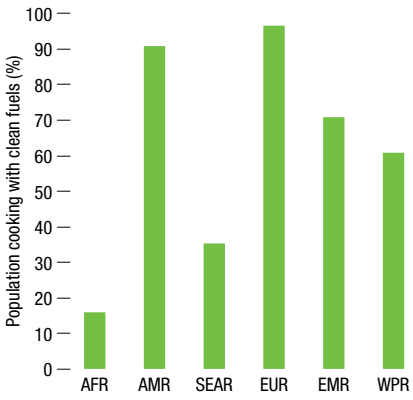
Indicator 7.1.2: Proportion of population with primary reliance on clean fuels and technology

SITUATION

In 2014, some 3.1 billion people relied primarily on polluting fuels (solid fuels and kerosene) for cooking (Fig. A.25.1).[1] The smoke or household air pollution arising from inefficient energy use in the home for cooking, heating and lighting is laced with health-damaging pollutants like fine particulate matter, carbon monoxide, nitrogen dioxides and poly-aromatic hydrocarbons.

In 2012, exposure to such household air pollution from the inefficient use of energy for cooking is estimated to have caused around 4.3 million deaths from ischaemic heart disease, stroke, chronic obstructive pulmonary disease, lung cancer and childhood pneumonia.[2]

Figure A.25.1.
Percentage of population cooking with clean fuels, by WHO region, 2014



ACHIEVING THE 2030 TARGET

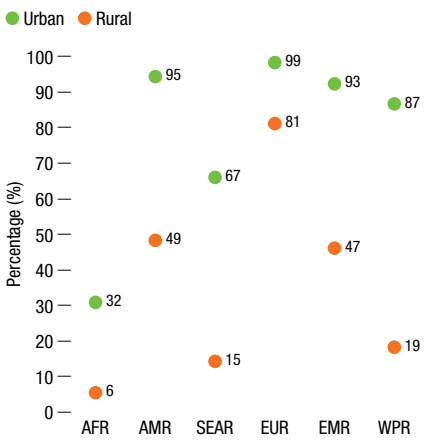
Although significant progress is being made the global transition to clean household energy use is proceeding slowly. To date, international and national policies, programmes and targeted interventions have put forward solutions, but have had difficulty in substantially altering long-term trends. There is a need for further investment and innovation in household energy technologies, such as advanced combustion cookstoves, or cleaner fuels, to ensure that affordable, acceptable and healthy solutions are available for even the poorest households. Currently there are a number of global initiatives working to ensure access to clean household energy. These include the United Nations Secretary-General's Sustainable Energy for All initiative, the Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea, and the Global Alliance for Clean Cookstoves.

Recent WHO guidelines[3] provide the normative guidance to help drive such innovation and ensure that interventions that bring health benefits are disseminated. These guidelines: (a) provide health-based recommendations on which fuels should not be used in the home (unprocessed coal, kerosene); (b) set out technical specifications in the form of emission-rate targets on which fuels and technology combinations at point of use can be considered clean for health; and (c) emphasize the importance of addressing all main household energy end-uses, including space heating and lighting, in addition to cooking. Recommendations are also provided on how to maximize health and other co-benefits during the transition to "universal" access to clean and modern energy services in order support the development and implementation of effective energy policies with health benefits.

EQUITY

Reliance on polluting fuels and technologies in the home is closely linked to poverty and social inequity. Urban families are far more likely to use clean fuels than rural families (Fig. A.25.2). In homes that use polluting fuels and technologies, women and children typically bear the largest burden from inefficient household energy use. Further adding to this unequal burden are the additional health and safety risks from household energy use that mainly impact women and children such as burns, unintentional childhood poisoning (from kerosene use) and injuries, as well as the time loss and drudgery associated with fuel collection.

Figure A.25.2.
Percentage of population cooking with clean fuels, by WHO region and area of residence, 2014



DATA GAPS

Nationally representative household surveys and censuses are the primary data sources for deriving estimates of household energy use and its health impacts over time. Data on main cooking fuel are quite comprehensive, with recent surveys available for all but two LMIC (a total of 103 countries). Monitoring of the fuels and technologies mainly used for space heating and lighting (in addition to the type of technology or device used for cooking) is more limited. Accordingly, WHO is leading an ongoing effort, in cooperation with surveying agencies, national statistical offices, international agencies and associated initiatives, to enhance and harmonize multi-purpose household-survey instruments to more comprehensively assess household energy use.

REFERENCES

[1] Unless otherwise noted, all statistics in the text, tables and figures are taken from: Burning opportunity: clean household energy for health, sustainable development, and wellbeing of women and children. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204717/1/9789241565233_eng.pdf, accessed 3 April 2016).

[2] Global Health Observatory [website]. Geneva: World Health Organization. (http://www.who.int/gho/en/).

[3] WHO guidelines for indoor air quality. Household fuel combustion. Geneva: World Health Organization; 2014 (http://www.who.int/indoorair/guidelines/hhfc/en/, accessed 6 April 2016).

Figure A.25.3.
Proportion of population with primary reliance on clean fuels (%), 2014

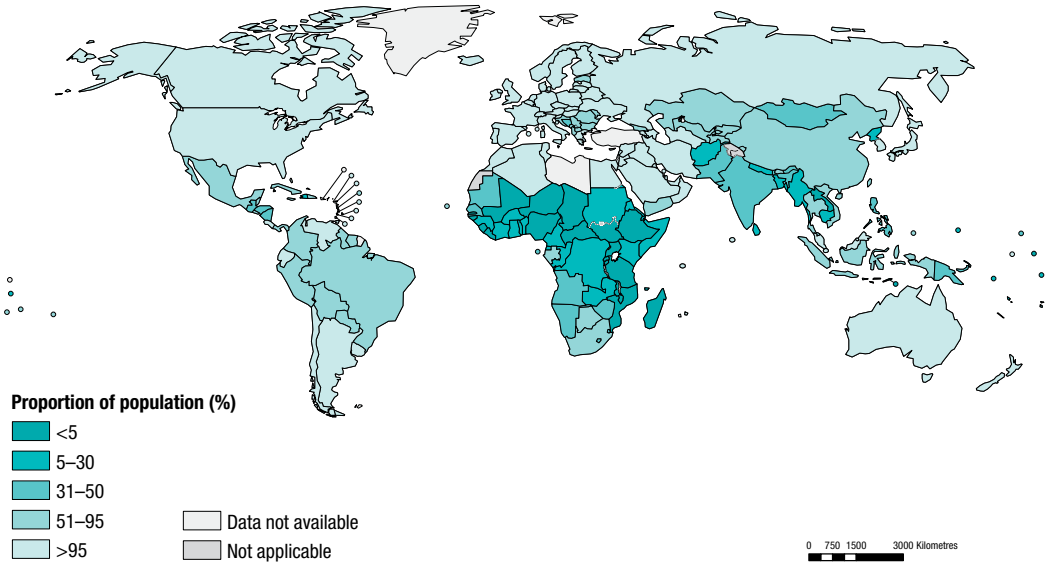


Table A.25.1.
Proportion of population with primary reliance on clean fuels (%), 2014

AFR	
Algeria	>95
Mauritius	>95
Seychelles	>95
South Africa	82
Gabon	73
Cabo Verde	71
Botswana	63
Angola	48
Namibia	46
Mauritania	45
Senegal	36
Swaziland	35
Lesotho	32
Zimbabwe	31
Sao Tome and Principe	30
Equatorial Guinea	22
Ghana	21
Cameroon	18
Congo	18
Côte d'Ivoire	18
Zambia	16
Eritrea	14
Benin	7
Burkina Faso	7
Comoros	7
Democratic Republic of the Congo	6
Guinea	6
Kenya	6
Togo	6
Burundi	<5
Central African Republic	<5
Chad	<5
Ethiopia	<5
Gambia	<5
Guinea-Bissau	<5
Liberia	<5
Madagascar	<5
Malawi	<5
Mali	<5
Mozambique	<5
Niger	<5
Nigeria	<5
Rwanda	<5
Sierra Leone	<5
South Sudan	<5
Uganda	<5
United Republic of Tanzania	<5
AMR	
Antigua and Barbuda	>95
Argentina	>95
Bahamas[a]	>95
Barbados	>95
Canada[a]	>95
Chile	>95
Costa Rica	>95
Ecuador	>95
Grenada	>95
Saint Kitts and Nevis[a]	>95
Saint Lucia	>95
Saint Vincent and the Grenadines	>95
Trinidad and Tobago	>95
United States of America[a]	>95
Uruguay	>95
Venezuela (Bolivarian Republic of)	>95
Brazil	93
Jamaica	93
Dominica	92
Dominican Republic	92
Colombia	91
Suriname	91
Belize	87
Cuba	87
Mexico	86
Panama	86
El Salvador	83
Bolivia (Plurinational State of)	79
Peru	68
Paraguay	64
Guyana	61
Nicaragua	49
Honduras	48
Guatemala	36
Haiti	9
SEAR	
Maldives	>95
Thailand	76
Bhutan	68
Indonesia	57
India	34
Nepal	26
Sri Lanka	19
Bangladesh	10
Myanmar	9
Democratic People's Republic of Korea	7
Timor-Leste	<5
EUR	
Andorra[a]	>95
Armenia	>95
Austria[a]	>95
Azerbaijan	>95
Belarus	>95
Belgium[a]	>95
Cyprus[a]	>95
Czech Republic	>95
Denmark[a]	>95
Finland[a]	>95
France[a]	>95
Germany[a]	>95
Greece[a]	>95
Hungary[a]	>95
Iceland[a]	>95
Ireland[a]	>95
Israel[a]	>95
Italy[a]	>95
Latvia	>95
Lithuania[a]	>95
Luxembourg[a]	>95
Malta[a]	>95
Monaco[a]	>95
Netherlands[a]	>95
Norway[a]	>95
Poland[a]	>95
Portugal[a]	>95
Russian Federation	>95
San Marino[a]	>95
Slovakia	>95
Slovenia	>95
Spain[a]	>95
Sweden[a]	>95
Switzerland[a]	>95
Turkmenistan	>95
Ukraine	>95
United Kingdom[a]	>95
Croatia	94
Republic of Moldova	93
Estonia	92
Kazakhstan	92
Uzbekistan	90
Romania	82
Bulgaria	79
Kyrgyzstan	76
Montenegro	74
Tajikistan	72
Serbia	71
Albania	67
The Former Yugoslav Republic of Macedonia	61
Georgia	55
Bosnia and Herzegovina	40
Turkey	
EMR	
Bahrain[a]	>95
Egypt	>95
Iran (Islamic Republic of)	>95
Iraq	>95
Jordan	>95
Kuwait[a]	>95
Lebanon	>95
Morocco	>95
Oman[a]	>95
Qatar	>95
Saudi Arabia	>95
Syrian Arab Republic	>95
Tunisia	>95
United Arab Emirates	>95
Yemen	62
Pakistan	45
Sudan	23
Afghanistan	17
Djibouti	10
Somalia	9
Libya	
WPR	
Australia[a]	>95
Brunei Darussalam[a]	>95
Japan[a]	>95
Malaysia	>95
Nauru	>95
New Zealand[a]	>95
Republic of Korea	>95
Singapore[a]	>95
Niue	91
Cook Islands	80
Tonga	63
Palau	58
China	57
Viet Nam	51
Philippines	45
Marshall Islands	41
Fiji	37
Mongolia	32
Papua New Guinea	31
Tuvalu	30
Samoa	27
Micronesia (Federated States of)	25
Vanuatu	16
Cambodia	13
Solomon Islands	9
Kiribati	<5
Lao People's Democratic Republic	<5

[a] For high-income countries with no information on clean fuel use, usage is assumed to be >95%.

AMBIENT AIR POLLUTION

SDG Target 11.6
By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

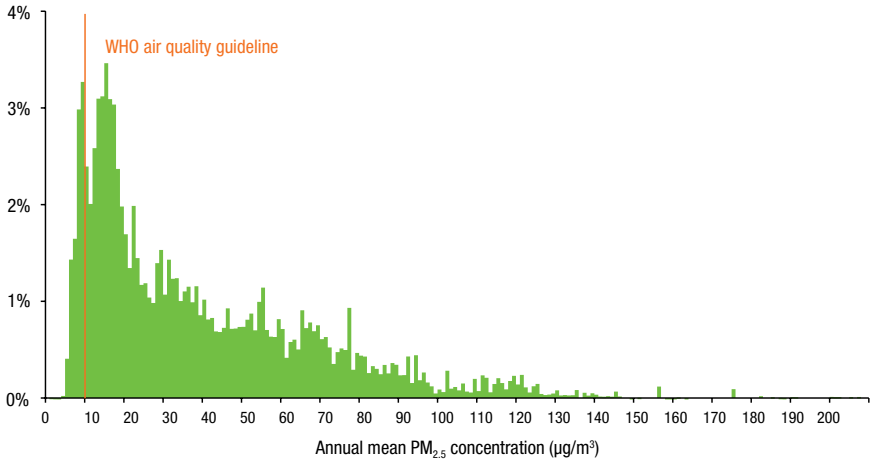
Indicator 11.6.2: Annual mean levels of fine particulate matter in cities (population weighted)

SITUATION

Worldwide in 2012, an estimated 3.0 million deaths were caused by exposure to outdoor pollution, specifically ambient particulate matter.[1] Globally, no improvement in outdoor air quality has been made over the last decade. As shown in Fig. A.26.1, 90% of the population living in cities in 2014 was exposed to particulate matter in concentrations exceeding the WHO air quality guidelines.[2] There are, however, important regional variations. For example, in many high-income countries, including in Europe and North America, air pollution has decreased markedly in recent decades due to efforts to reduce smog-forming emissions and particulate matter. In contrast, air pollution has increased in LMIC, including in South-East Asia, largely as a result of population growth and increasing industrialization without adequate control measures.

Ambient air pollution is caused by inefficient energy production, distribution and use, especially in the industrial, transportation and building sectors (both residential and commercial), and by poor waste management. Transport systems based primarily on individual motorized transport can lead to further deterioration in air quality.

Figure A.26.1.
Distribution of world's urban population by concentration of particulate matter with an aerodynamic diameter of 2.5 µm or less ($PM_{2.5}$), 2014



ACHIEVING THE 2030 TARGET

Investments in sustainable policy options in transport (public transport, walking and cycling), clean and renewable energy, efficient buildings, waste reduction and recycling (to avoid burning solid and agricultural waste) and energy-efficient industry, all lead to reductions in air pollution levels. These sustainable policies incorporate both improved technologies and non-technological measures to reduce demand and consumption, increase levels of recycling and improve efficiency. For example, in many high-income countries, including in Europe and North America, air pollution has decreased because of efforts to reduce both smog-forming emissions (for example by requiring cleaner-burning transportation fuels) and particulate matter (for example by requiring particle filters on diesel trucks). Setting standards, regulation and monitoring of air quality to track results have all contributed to the adoption of policies and technologies that have resulted in cleaner air.

Resolution WHA68.8 on Health and the environment: addressing the health impact of air pollution was adopted unanimously by all 194 WHO Member States in May 2015, and calls on WHO and its Member States to further strengthen efforts and international cooperation to address air pollution. Such efforts include monitoring and evaluating the health impacts of air pollution, developing health-based guidance for sector-specific policies, and building national capacity for intersectoral collaboration to address air pollution as a serious threat to public health.

Major obstacles to improving ambient air quality include the continued adoption of outdated models of urban and city development that lead to pollution and ill health. For example, urban sprawl is inefficient and very difficult to alter. Sustainability and health benefits therefore need to be mainstreamed into urban development to help plan for efficient, healthier and cleaner urban futures. In addition, working across the many sectors that relate to health and air pollution presents challenges. The polluting sectors are largely unaware of the potential health benefits that cleaner policies could bring, while the health sector often lacks access to the knowledge, tools and skills needed to support intersectoral action to tackle air pollution. Health research has focused on demonstrating the health impacts of air pollution and less on the assessment of effective interventions, or ways of engaging with other sectors in defining the best policy options for health. Scaling up health-sector efforts to enhance the global response to the adverse health effects of air pollution, as proposed in resolution WHA68.8, could prevent this major cause of avoidable deaths.

EQUITY

Within cities, air pollution affects all income groups, as particulate matter travels long distances and everyone breathes the same air. However, people living near busy roads or other pollution sources may be more affected.

DATA GAPS

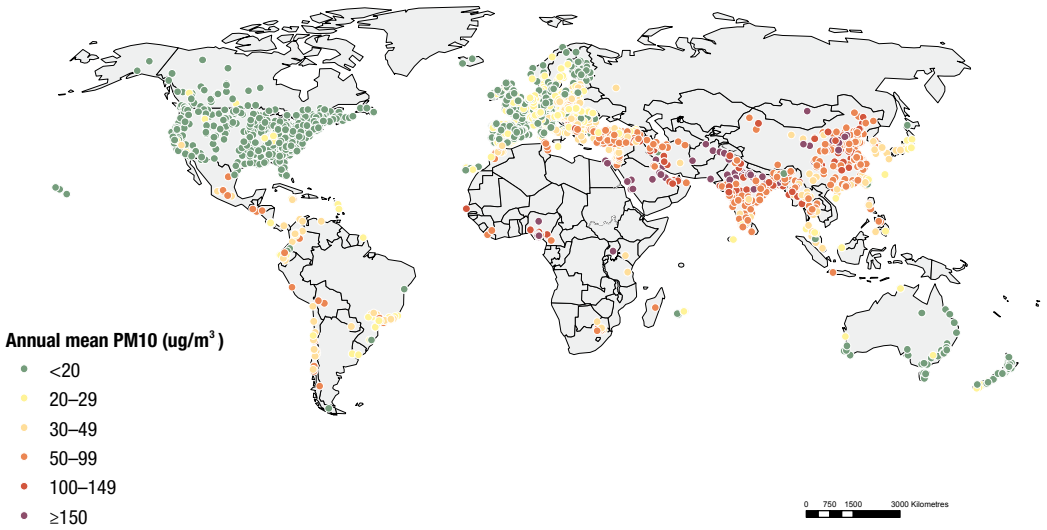
The monitoring of air pollution in cities has improved in some parts of the world, and WHO currently accesses data from about 3000 cities in 108 countries. However, air quality remains unmeasured in many cities, and information on the sources of air pollution is still lacking in many countries, thus limiting the ability of decision-makers to assess risk, set targets and measure progress. Remote satellite sensing along with air-pollution models derived from emission inventories have allowed for the estimation of exposure to particulate matter in data-scarce regions. All data are brought together in the estimates of exposure to air pollution reported in WHO databases. Nevertheless, monitoring data are still widely lacking for other pollutants and for differentials of exposure by different population groups, thus limiting the assessment of related inequalities. There is also a lack of systematic tracking of the adoption of policies that lead to reduced air pollution.

REFERENCES

[1] Unless otherwise noted, all statistics in text, table and figures are taken from: Air pollution: a global assessment of exposure and burden of disease. Geneva: World Health Organization; 2016. Forthcoming.

[2] For more information on the WHO air quality guidelines see: http://www.who.int/phe/health_topics/outdoorair/outdoorair_aqg/en/

Figure A.26.2.
Concentration of particulate matter with an aerodynamic diameter of 10 µm or less (PM_{10}) in nearly 3000 urban areas (µg/m³), 2008–2015[a]



[a] The mean annual concentration of fine suspended particles of less than 10 microns in diameter is a common measure of air pollution.

Table A.26.1.
Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas (µg/m³), 2014

AFR	
Seychelles	5.0
Liberia	6.1
Comoros	7.0
Mauritius	14.3
Sierra Leone	16.8
Kenya	16.9
Namibia	18.8
Botswana	19.3
Côte d'Ivoire	19.3
Guinea	19.4
Swaziland	19.9
Lesotho	21.7
Ghana	22.2
Mozambique	22.4
United Republic of Tanzania	24.1
Zimbabwe	24.1
Malawi	25.6
Togo	25.9
Algeria	26.0
Benin	27.9
Guinea-Bissau	28.9
Zambia	29.6
Equatorial Guinea	32.0
Madagascar	32.4
South Sudan	32.5
South Africa	32.6
Mali	34.8
Eritrea	35.7
Gabon	35.9
Ethiopia	36.7
Burkina Faso	36.9
Nigeria	38.9
Angola	42.8
Gambia	43.0
Senegal	43.7
Burundi	49.4
Rwanda	50.6
Niger	51.8
Central African Republic	56.2
Congo	57.6
Chad	61.8
Democratic Republic of the Congo	63.2
Cameroon	64.0
Uganda	80.3
Mauritania	86.2
Cabo Verde	
Sao Tome and Principe	

AMR	
Saint Kitts and Nevis	0.0
Canada	7.3
United States of America	8.5
Uruguay	11.6
Brazil	11.9
Panama	12.8
Trinidad and Tobago	13.2
Ecuador	13.5
Argentina	14.5
Antigua and Barbuda	15.0
Barbados	16.2
Guyana	16.2
Dominica	16.3
Suriname	16.3
Cuba	16.5
Dominican Republic	17.0
Grenada	17.0
Paraguay	17.0
Jamaica	17.2
Saint Lucia	18.2
Colombia	18.4
Costa Rica	19.2
Mexico	20.6
Belize	20.7
Bahamas	22.0
Venezuela (Bolivarian Republic of)	24.3
Haiti	24.6
Chile	25.5
Nicaragua	26.1
Bolivia (Plurinational State of)	31.9
Guatemala	33.7
Peru	37.0
El Salvador	37.1
Honduras	40.3
Saint Vincent and the Grenadines	

SEAR	
Timor-Leste	15.0
Indonesia	18.1
Thailand	27.5
Sri Lanka	28.6
Democratic People's Republic of Korea	31.6
Bhutan	39.0
Myanmar	56.7
India	73.6
Nepal	75.7
Bangladesh	89.7
Maldives	

EUR	
Sweden	5.9
Finland	7.1
Iceland	7.7
Estonia	8.5
Norway	9.1
Portugal	9.6
Ireland	10.0
Monaco	10.0
Spain	10.0
Andorra	10.5
Denmark	10.5
United Kingdom	12.5
Switzerland	12.6
France	12.7
Greece	12.7
Germany	14.5
Malta	14.5
Netherlands	14.9
Kyrgyzstan	15.7
Belgium	16.0
Luxembourg	16.6
Ukraine	17.0
Albania	17.1
Republic of Moldova	17.1
Russian Federation	17.1
Austria	17.2
Cyprus	17.2
Belarus	18.1
Italy	18.6
Israel	19.3
Slovenia	19.4
Lithuania	19.5
Latvia	20.2
Slovakia	20.3
Romania	20.4
Croatia	20.5
Czech Republic	20.9
Serbia	21.5
Kazakhstan	21.9
Hungary	22.9
Georgia	23.3
Montenegro	24.3
Armenia	25.1
Poland	25.8
Turkmenistan	26.3
Azerbaijan	26.4
Bulgaria	30.5
Turkey	35.7
Uzbekistan	39.1
The Former Yugoslav Republic of Macedonia	43.0
Tajikistan	51.2
Bosnia and Herzegovina	56.0
San Marino	

EMR	
Somalia	16.9
Morocco	19.3
Lebanon	31.3
Syrian Arab Republic	34.3
Tunisia	36.4
Jordan	38.3
Iran (Islamic Republic of)	41.1
Yemen	42.2
Djibouti	46.0
Oman	47.4
Iraq	52.0
Sudan	53.1
Libya	58.5
Bahrain	60.1
Afghanistan	64.1
United Arab Emirates	64.5
Pakistan	68.7
Kuwait	78.8
Egypt	101.8
Qatar	105.3
Saudi Arabia	131.6

WPR	
Cook Islands	0.0
New Zealand	5.3
Brunei Darussalam	5.4
Australia	5.8
Micronesia (Federated States of)	8.0
Fiji	11.4
Papua New Guinea	12.1
Japan	13.0
Vanuatu	13.0
Malaysia	16.7
Singapore	17.0
Cambodia	25.0
Philippines	27.6
Republic of Korea	27.9
Viet Nam	28.7
Mongolia	33.5
Lao People's Democratic Republic	33.6
China	61.8
Kiribati	
Marshall Islands	
Nauru	
Niue	
Palau	
Samoa	
Solomon Islands	
Tonga	
Tuvalu	

NATURAL DISASTERS

SDG Target 13.1
Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries[1]

Indicator 13.1.2: Number of deaths, missing and persons affected by disaster per 100 000 people[2]

SITUATION

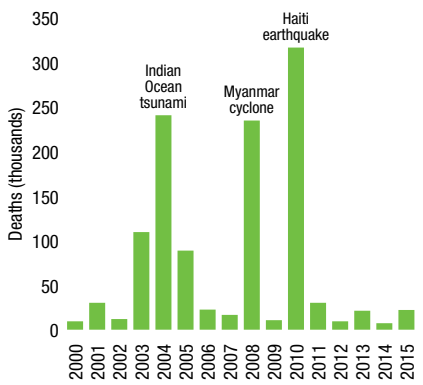
Globally, 331 natural disasters were registered in 2015, causing 22 662 deaths and affecting 90.2 million people.[3] Technological disasters, including industrial and transport disasters, accounted for one third of all types of disaster in 2015 but affect smaller numbers of people as they tend to be more localized. Biological hazards, including epidemics, are addressed separately in the section on natural and global health risks.

Both the number of reported disasters and total number of people affected have been declining over the last 15 years. The total number of deaths due to natural disasters was the lowest in 2014, but the long-term mortality trend is dominated by major events (Fig. A.27.1). Since 2000, three major natural disasters have been associated with more than 100 000 deaths – the Asia tsunami in 2004; the Myanmar cyclone in 2008; and the Haiti earthquake in 2010. Deaths due to extreme temperatures in Europe exceeded 50 000 in 2003 and 2010.

Hydrological and meteorological disasters accounted for 51% and 30% respectively of all natural disasters in 2015. Of the 1.4 million disaster-related deaths that occurred during the period 2000–2015, 58% occurred in Asia and 19% in the Americas. In Africa and Europe the corresponding percentage was 11% in each case.

The Hyogo Framework for Action 2005–2015 has been instrumental in stimulating countries, development partners and other agencies to take action to reduce disaster risk,[4] and may have helped decrease mortality rates in the case of some hazards, such as floods.[5]

Figure A.27.1.
Number of people reported killed in natural disasters, 2000–2015



Many countries (81%) have national multisectoral legislation or policies for emergency and disaster risk management, with two thirds having a policy in place for health sector emergency and disaster risk management.[6]

ACHIEVING THE 2030 TARGET

Many countries are struggling to provide the financial, human and logistical resources required to strengthen capacities and manage risks before, during and after disasters. Continuing progress in health and other sectors will be needed for early-warning systems, safe health facilities, and disaster preparedness, response and recovery in order to reduce health consequences and strengthen resilience.

Health is central to the Sendai Framework for Disaster Risk Reduction 2015–2030,[7] and is explicitly mentioned in the goal and expected outcome. As part of the post-2015 development agenda, the Sendai Framework aims to substantially reduce disaster risk and the loss of lives, livelihoods and health through integrated and multisectoral actions to: (a) prevent new risks; (b) mitigate existing disaster risks; (c) reduce hazard exposure; and (d) enhance preparedness for response and recovery.

The WHO Six-year strategic plan to minimize the health impact of emergencies and disasters 2014–2019[8] outlines the policies and programmatic implications for the health sector. Effective emergency and disaster risk management health policies and programmes should be guided by a comprehensive approach across the emergency-management cycle of prevention/mitigation; preparedness; and response and recovery.

EQUITY

Within affected populations, the impact of disasters is usually greater among vulnerable and lower socioeconomic status groups. For this reason the INFORM natural disaster risk index (Fig. A.27.2) includes a vulnerability dimension.[9] Further efforts are needed to reduce exposure and vulnerability, and to tackle underlying disaster risk drivers, such as the consequences of poverty and inequality, climate change and variability, unplanned and rapid urbanization, and poor land management.

DATA GAPS

Estimates of deaths and of people affected may vary widely due to technical challenges; limited resources for disaster-related data collection and reporting; inadequate vital registration systems; and political and other reporting biases.

Given the data-management challenges and the volatility of country-specific disaster impacts, WHO recommends that the relevant indicators are reported as averages for the last 5 years when monitoring progress towards the SDG Target 13.1.

REFERENCES

1. The same indicator is also proposed for the following two SDG targets relating to disasters: (a) SDG Target 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters; and (b) SDG Target 11.5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
2. This indicator may be revised to reflect the future revision of indicators for monitoring in the context of the Sendai Framework.
3. Unless otherwise noted, all statistics in text, table and figures are taken from: The International Disaster Database [online database]. Brussels: Centre for Research on the Epidemiology of Disasters – CRED (http://www.emdat.be/database, accessed 11 February 2016).
4. Hyogo Framework for Action 2005–2015: Building the resilience of nations and communities to disasters. Extract from the final report of the World Conference on Disaster Reduction (A/CONF.206/6). Geneva: United Nations Office for Disaster Risk Reduction; 2007 (http://www.unisdr.org/we/inform/publications/1037, accessed 6 April 2016).
5. Field CB, Barros V, Stocker TF, Quin D et al. editors. Managing the risks of extreme events and disasters to advance climate change adaptation. Special report of working groups I and II of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press; 2012.
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8. Policy and strategies. Humanitarian Health Action [website]. Geneva: World Health Organization (http://www.who.int/hac/techguidance/preparedness/policy_and_strategies/en/, accessed 6 April 2016).
9. Inter-Agency Standing Committee and the European Commission. INFORM Index for Risk Management. 14 December 2015; v. 0.2.7 (http://www.inform-index.org, accessed 29 February 2016). Natural disaster risk index computed as the geometric mean of natural disaster exposure, socioeconomic and disadvantaged group vulnerability, and national coping capacity.

Figure A.27.2.
INFORM natural disaster risk index, 2014

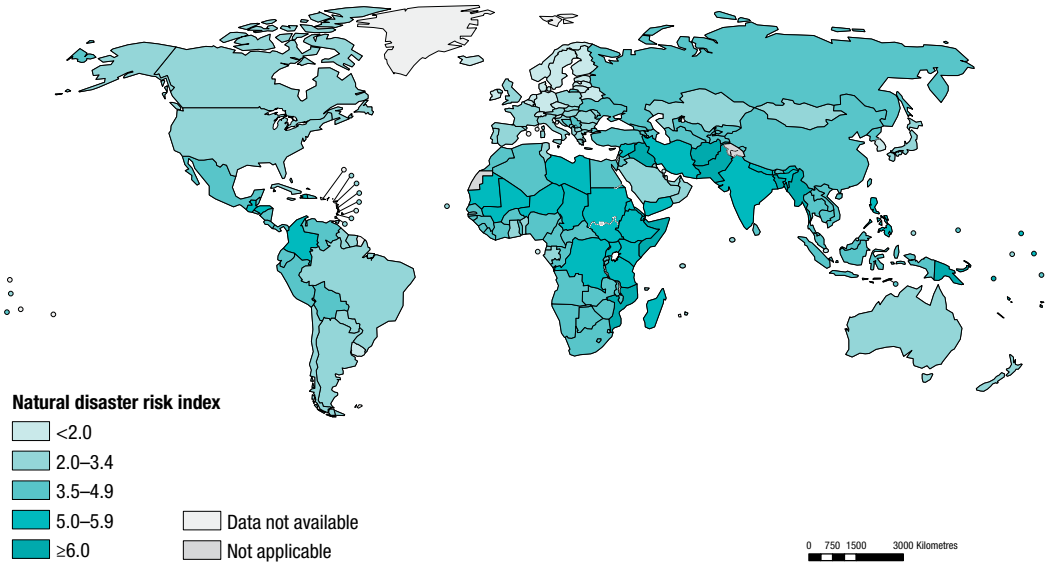


Table A.27.1.
Average death rate due to natural disasters (per 100 000 population), 2011–2015[a]

AFR	
Cabo Verde	0.0
Central African Republic	0.0
Equatorial Guinea	0.0
Eritrea	0.0
Ethiopia	0.0
Gabon	0.0
Guinea	0.0
Guinea-Bissau	0.0
Liberia	0.0
Sao Tome and Principe	0.0
Seychelles	0.0
Togo	0.0
Zambia	0.0
Algeria	<0.1
Benin	<0.1
Burkina Faso	<0.1
Cameroon	<0.1
Chad	<0.1
Congo	<0.1
Côte d'Ivoire	<0.1
Democratic Republic of the Congo	<0.1
Gambia	<0.1
Mali	<0.1
Mauritania	<0.1
Nigeria	<0.1
Rwanda	<0.1
Senegal	<0.1
Sierra Leone	<0.1
South Africa	<0.1
Uganda	<0.1
United Republic of Tanzania	<0.1
Angola	0.1
Botswana	0.1
Comoros	0.1
Kenya	0.1
Burundi	0.2
Ghana	0.2
Lesotho	0.2
Madagascar	0.2
Malawi	0.2
Mauritius	0.2
Mozambique	0.2
Niger	0.2
Swaziland	0.2
Zimbabwe	0.2
South Sudan	0.3
Namibia	0.9

AMR	
Antigua and Barbuda	0.0
Bahamas	0.0
Barbados	0.0
Belize	0.0
Grenada	0.0
Guyana	0.0
Jamaica	0.0
Suriname	0.0
Trinidad and Tobago	0.0
Uruguay	0.0
Argentina	<0.1
Canada	<0.1
Chile	<0.1
Costa Rica	<0.1
Cuba	<0.1
Dominican Republic	<0.1
Ecuador	<0.1
Honduras	<0.1
Mexico	<0.1
Panama	<0.1
Paraguay	<0.1
United States of America	<0.1
Venezuela (Bolivarian Republic of)	<0.1
Brazil	0.1
El Salvador	0.1
Peru	0.1
Colombia	0.2
Guatemala	0.2
Nicaragua	0.2
Haiti	0.4
Bolivia (Plurinational State of)	0.5
Saint Lucia	0.7
Saint Vincent and the Grenadines	2.2

SEAR	
Bhutan	0.0
Maldives	0.0
Timor-Leste	0.0
Bangladesh	<0.1
Indonesia	<0.1
Myanmar	0.1
Democratic People's Republic of Korea	0.2
India	0.2
Thailand	0.3
Sri Lanka	0.4
Nepal	7.2

EUR	
Albania	0.0
Armenia	0.0
Azerbaijan	0.0
Belarus	0.0
Cyprus	0.0
Estonia	0.0
Finland	0.0
Hungary	0.0
Iceland	0.0
Kyrgyzstan	0.0
Latvia	0.0
Lithuania	0.0
Luxembourg	0.0
Malta	0.0
Montenegro	0.0
Republic of Moldova	0.0
Slovakia	0.0
The Former Yugoslav Republic of Macedonia	0.0
Turkmenistan	0.0
Austria	<0.1
Belgium	<0.1
Bulgaria	<0.1
Croatia	<0.1
Czech Republic	<0.1
Denmark	<0.1
France	<0.1
Germany	<0.1
Greece	<0.1
Ireland	<0.1
Israel	<0.1
Italy	<0.1
Kazakhstan	<0.1
Netherlands	<0.1
Norway	<0.1
Poland	<0.1
Portugal	<0.1
Romania	<0.1
Russian Federation	<0.1
Slovenia	<0.1
Spain	<0.1
Sweden	<0.1
Switzerland	<0.1
Tajikistan	<0.1
Ukraine	<0.1
United Kingdom	<0.1
Uzbekistan	<0.1
Bosnia and Herzegovina	0.1
Serbia	0.1
Georgia	0.2
Turkey	0.2

EMR	
Bahrain	0.0
Djibouti	0.0
Egypt	0.0
Jordan	0.0
Kuwait	0.0
Lebanon	0.0
Qatar	0.0
Syrian Arab Republic	0.0
Tunisia	0.0
United Arab Emirates	0.0
Iraq	<0.1
Libya	<0.1
Morocco	<0.1
Oman	<0.1
Saudi Arabia	<0.1
Yemen	<0.1
Iran (Islamic Republic of)	0.1
Sudan	0.1
Pakistan	0.4
Somalia	0.4
Afghanistan	0.8

WPR	
Brunei Darussalam	0.0
Kiribati	0.0
Mongolia	0.0
Singapore	0.0
Tonga	0.0
Australia	<0.1
China	<0.1
Malaysia	<0.1
Republic of Korea	<0.1
Viet Nam	0.1
Lao People's Democratic Republic	0.2
Papua New Guinea	0.2
Fiji	0.4
Cambodia	0.7
New Zealand	0.9
Vanuatu	0.9
Micronesia (Federated States of)	1.3
Solomon Islands	2.0
Samoa	2.4
Philippines	2.5
Japan	3.4

[a] The death rate is an average over the period 2011–2015. WHO Member States with a population of less than 90 000 in 2015 were not included in the analysis.

HOMICIDE

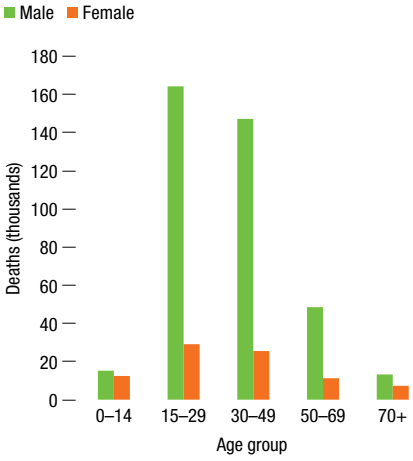
SDG Target 16.1
Significantly reduce all forms of violence and related death rates everywhere

Indicator 16.1.1: Number of victims of intentional homicide per 100 000 population, by sex and age

SITUATION

Homicide and collective violence account for around 10% of global injury-related deaths. In 2012, there were an estimated 475 000 murders. Four fifths of homicide victims are men, and 65% are men aged 15–49 years (Fig. A.28.1).[1] The WHO Region of the Americas had the highest rate of homicides (19.4 per 100 000 population); in the LMIC in this region, the rate reached 28.5 per 100 000 population. The WHO Western Pacific Region had the lowest murder rate (2.0 per 100 000 population). One of the main drivers of homicide rates is access to guns, with approximately half of all homicides committed with a firearm. Among women, intimate partner homicide accounts for almost 38% of all murders compared to 6% of all murders among men.

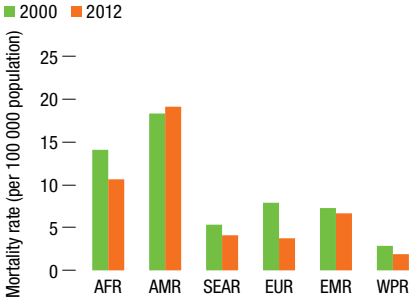
Figure A.28.1.
Global age–sex distribution of homicide deaths, 2012



During the period 2000–2012 there was a marked decline in homicide rates with estimated falls of around 17% globally (from 8.0 to 6.7 per 100 000 population), and 39% in high-income countries (from 6.2 to 3.8 per 100 000 population). In the WHO European Region, homicide rates fell by more than one half since 2000. In other regions, modest declines were observed with the exception of the WHO Region of the Americas where homicide rates continued to be very high (Fig. A.28.2).

Prevalence estimates for intimate partner violence are substantially higher in the WHO African Region, the WHO Eastern Mediterranean Region and the WHO South-East Asia Region, compared to other regions of the world, but only half of countries in these regions are implementing wide-scale social and cultural norm-change strategies to address sexual and intimate partner violence.[2,3]

Figure A.28.2.
Trends in homicide rates, by WHO region, 2000–2012



ACHIEVING THE 2030 TARGET

The vision of the global violence-prevention community for the post-2015 era is to cut worldwide levels of interpersonal violence by half within the next 30 years.[4,5] While not as ambitious as the SDG targets, which aim to eliminate several forms of violence in the next 15 years, this vision aligns well with SDGs 5 and 16 that explicitly target violence reduction. Several United Nations agencies have focused on violence reduction as a priority, including WHO,[6] UNESCO, UNODC, UNDP, UNICEF and United Nations Women, as well as the United Nations General Assembly. A 15-year global plan of action for strengthening the role of the health system in addressing interpersonal violence, in particular against women and girls, and against children, will be considered by WHO Member States at the 2016 World Health Assembly.

EQUITY

Physical or sexual violence against women, harmful practices such as child marriage and female genital mutilation, and violence against children are common in many countries and specific SDG targets to address these issues have been set for 2030. Homicide and most forms of interpersonal violence are strongly associated with social determinants such as social norms, gender inequality, poverty and unemployment, along with other cross-cutting risk factors such as easy access to, and misuse of, alcohol and firearms.

DATA GAPS

At present, 102 countries have data from death registration systems or police data that are sufficient for estimating levels and trends in homicide rates with around two thirds of these countries having information from both sources and 30% having only police and/or justice system data. There is generally substantial under-reporting in both data sources for most LMIC, and methods need to be developed to assess the completeness of police and/or justice system data. Very few low-income and African countries have functioning death-registration systems. Additionally, the lack of consistent definitions for homicides in justice system databases, the use of different data sources, and the quality of the reporting systems all contribute to the difficulty of accurately assessing homicide rates.

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[3] This is addressed by SDG 5.2: Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.

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Figure A.28.3.
Mortality rate due to homicide (per 100 000 population), 2012

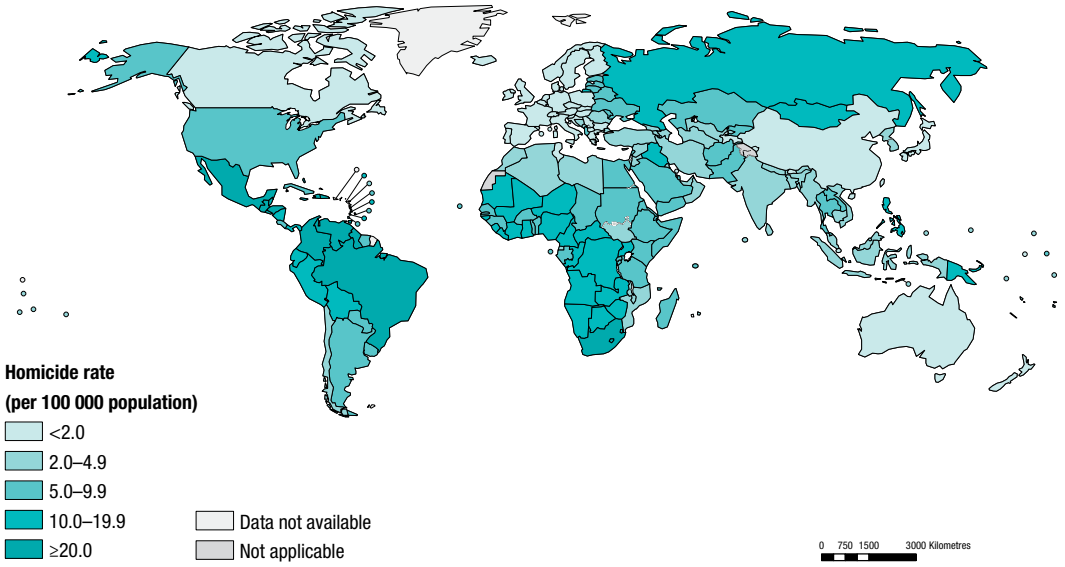


Table A.28.1.
Mortality rate due to homicide (per 100 000 population), 2012

AFR

Malawi	2.0
Mauritius	2.7
Mozambique	3.4
Equatorial Guinea	3.5
Algeria	4.4
South Sudan	4.8
Rwanda	5.8
Benin	6.3
Burundi	6.7
Sao Tome and Principe	7.2
Kenya	7.4
Eritrea	7.7
Senegal	7.9
Comoros	8.0
Ethiopia	8.0
United Republic of Tanzania	8.0
Madagascar	8.1
Cabo Verde	8.8
Guinea	8.8
Gabon	9.3
Togo	9.3
Chad	9.4
Gambia	9.4
Seychelles	9.5
Burkina Faso	9.8
Ghana	10.0
Guinea-Bissau	10.1
Nigeria	10.1
Niger	10.3
Congo	10.4
Zambia	10.5
Angola	10.7
Mali	11.0
Liberia	11.2
Mauritania	11.3
Cameroon	11.7
Uganda	12.0
Côte d'Ivoire	12.2
Botswana	12.4
Sierra Leone	13.0
Democratic Republic of the Congo	13.3
Central African Republic	13.5
Zimbabwe	15.1
Swaziland	19.4
Namibia	19.7
South Africa	35.7
Lesotho	37.5

AMR

Canada	1.8
Antigua and Barbuda	4.4
Chile	4.6
Cuba	5.0
United States of America	5.4
Argentina	6.0
Grenada	6.2
Dominica	6.8
Uruguay	7.9
Costa Rica	8.5
Suriname	9.4
Paraguay	9.7
Barbados	9.8
Peru	11.0
Nicaragua	13.0
Ecuador	13.8
Saint Kitts and Nevis	13.8
Bolivia (Plurinational State of)	13.9
Saint Vincent and the Grenadines	14.0
Saint Lucia	15.3
Panama	19.3
Guyana	20.2
Mexico	22.0
Dominican Republic	25.4
Haiti	26.6
Bahamas	32.1
Brazil	32.4
Trinidad and Tobago	35.3
Guatemala	39.9
Colombia	43.9
El Salvador	43.9
Belize	44.7
Jamaica	45.1
Venezuela (Bolivarian Republic of)	57.6
Honduras	103.9

SEAR

Bhutan	1.9
Bangladesh	3.1
Nepal	3.3
Maldives	3.5
Sri Lanka	3.8
Myanmar	4.2
India	4.3
Democratic People's Republic of Korea	4.7
Indonesia	4.7
Timor-Leste	4.9
Thailand	5.5

EUR

Luxembourg	0.2
Iceland	0.6
Norway	0.6
Switzerland	0.6
San Marino	0.7
Slovenia	0.7
Andorra	0.8
Germany	0.8
Spain	0.8
Sweden	0.8
Austria	0.9
Czech Republic	0.9
Denmark	0.9
Italy	0.9
Netherlands	0.9
France	1.0
Belgium	1.1
Monaco	1.1
Poland	1.1
Ireland	1.2
Croatia	1.3
Finland	1.4
Portugal	1.4
Slovakia	1.4
Hungary	1.5
United Kingdom	1.5
Greece	1.6
Serbia	1.6
Tajikistan	1.8
The Former Yugoslav Republic of Macedonia	1.8
Bulgaria	1.9
Cyprus	2.0
Armenia	2.1
Israel	2.1
Romania	2.1
Azerbaijan	2.4
Turkey	2.7
Malta	2.8
Montenegro	2.8
Uzbekistan	3.2
Bosnia and Herzegovina	3.4
Turkmenistan	4.3
Georgia	4.8
Albania	5.0
Ukraine	5.2
Estonia	5.4
Belarus	6.2
Lithuania	6.7
Latvia	7.0
Republic of Moldova	7.5
Kyrgyzstan	9.1
Kazakhstan	9.2
Russian Federation	13.1

EMR

Bahrain	0.8
Tunisia	1.8
Morocco	2.5
Syrian Arab Republic	2.5
Libya	2.6
Jordan	2.9
Kuwait	3.1
United Arab Emirates	4.1
Iran (Islamic Republic of)	4.8
Oman	4.8
Egypt	5.1
Lebanon	5.4
Yemen	5.4
Somalia	5.5
Saudi Arabia	6.5
Sudan	6.5
Djibouti	7.0
Qatar	7.1
Afghanistan	7.3
Pakistan	8.9
Iraq	18.6

WPR

Japan	0.4
Singapore	0.6
Australia	1.1
China	1.1
New Zealand	1.2
Nauru	1.3
Republic of Korea	2.0
Brunei Darussalam	2.1
Fiji	2.3
Cambodia	2.4
Niue	2.8
Vanuatu	2.9
Cook Islands	3.1
Palau	3.1
Samoa	3.7
Viet Nam	4.0
Tuvalu	4.2
Malaysia	4.3
Micronesia (Federated States of)	4.6
Marshall Islands	4.7
Tonga	4.7
Solomon Islands	4.9
Lao People's Democratic Republic	7.1
Kiribati	8.2
Mongolia	10.1
Papua New Guinea	10.8
Philippines	12.4

CONFLICTS

SDG Target 16.1
Significantly reduce all forms of violence and related death rates everywhere

Indicator 16.1.2: Conflict-related deaths per 100 000 population, by sex, age and cause

SITUATION

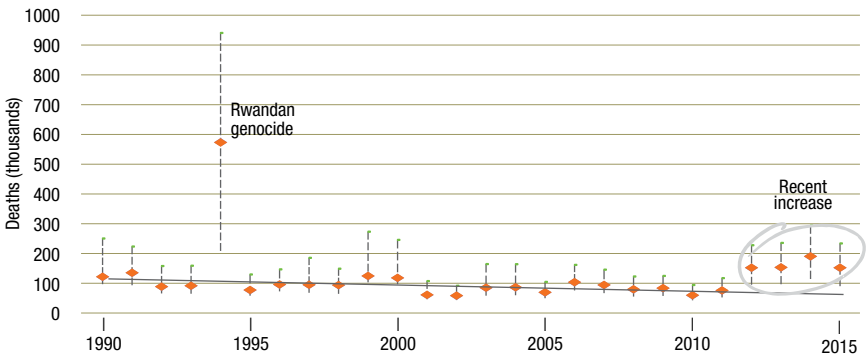
In 2015, it is provisionally estimated that 152 000 people (90% uncertainty range 89 500–234 600) were killed in wars and conflicts, corresponding to around 0.3% of all global deaths.[1] This estimate does not include deaths due to the indirect effects of war and conflict on the spread of diseases, poor nutrition and collapse of health services.

Between around 1990 and 2011 there was a decline in both the number and intensity of wars and conflicts.[2] Although WHO estimates of global direct conflict deaths (injury deaths) vary substantially by year, there was a statistically significant average decline during 1990–2010 of 2% per year if the Rwandan genocide of 1994 is excluded (Fig. A.29.1).

Since 2011, however, there has been an upturn in the number of conflict deaths, notably due to the increased level of conflict in the Middle East[1,3] (Fig. A.29.2). It appears likely that conflict mortality levels for 2015 may be similar to or exceed those for 1990. It is estimated that in 2014, there were at least 17 conflicts that killed more than 1000 people each, compared to 15 in 2013. Ongoing conflicts in Afghanistan, Iraq and the Syrian Arab Republic account for significant numbers of conflict-related deaths, with these three countries accounting for an estimated two thirds of global conflict deaths in 2014. Nigeria's ongoing conflicts were the fourth deadliest – double the previous year's figure as conflict with the militant group Boko Haram intensified. Sudan and South Sudan are also suffering from conflict as are an increased number of African countries.

Although factors contributing to specific conflicts differ from conflict to conflict, important broader factors include the longstanding and intractable Middle East crisis, remnants of the Cold War and sectarian religious divisions. Many conflicts are also driven by underlying causes, including poverty, poor governance and neglect, and local grievances.

Figure A.29.1.
Trends in global injury deaths due to conflicts, 1990–2015



ACHIEVING THE 2030 TARGET

To break cycles of insecurity and reduce the risk of their recurrence, national reformers and their international partners need to build the legitimate institutions that can provide a sustained level of citizen security, justice and employment – offering a stake in society to groups that may otherwise receive more respect and recognition from engaging in armed violence than in lawful activities, while punishing infractions capably and fairly.[4] SDG 16 provides a global framework for greater focus and action in conflict and post-conflict countries. This will require greater integration of the efforts of the health sector with other sectors, and of humanitarian and development support.

EQUITY

While men account for the large majority of injury deaths in conflicts, there is increasing documentation and evidence of high rates of sexual violence against women in conflict situations. A recent review suggested that approximately one in five refugees or displaced women in complex humanitarian settings experienced sexual violence.[5] This is likely to be an underestimation of the true prevalence given the stigma often associated with disclosure. A high prevalence of rape has been documented for the Liberian civil war (with estimates ranging from 9–15% of Liberian women) and for the Rwandan genocide.[6]

Fragile and conflict or post-conflict situations present the most profound challenges to development in the world today. In both fragile and conflict-affected states, poverty levels are usually high and welfare levels low. The stability and social cohesion necessary for development are frequently lacking. And often there are no strong and legitimate institutions to address poverty and manage conflict. Violent conflict is also more likely to re-emerge in such areas, leading to further impoverishment, undercutting social cohesion and eroding institutions.

War and conflict impede the maintenance of public health interventions and health services and are major obstacles in efforts to eradicate, eliminate or control diseases such as malaria and HIV infection. Polio is a particularly telling example – the battle against the virus has now become entirely focused on conflict zones such as those in Afghanistan and Pakistan. War and conflict also adversely affect the economy and people's livelihoods and may cause serious malnutrition and famines.

DATA GAPS

High-intensity conflicts usually result in the complete breakdown of death registration and other statistical monitoring systems, if these existed previously. Conflict mortality estimates tend to rely on body counts,[7] reporting by nongovernmental organizations and groups[8,9,10] or on surveys or retrospectively reported deaths in households or sibships.[11] All of these methods are potentially subject to substantial measurement problems, possible advocacy biases and limitations due to danger and the security situation. As a result, there is wide variation in reported estimates of global conflict deaths from various sources, and wide uncertainty levels in such estimates.[1,2,12] There is even greater potential uncertainty for statistics on sexual violence during conflicts as these are prone to both undercounting and overcounting.[6]

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Figure A.29.2.
Trends in global injury deaths due to conflicts, by WHO region, 1990–2015

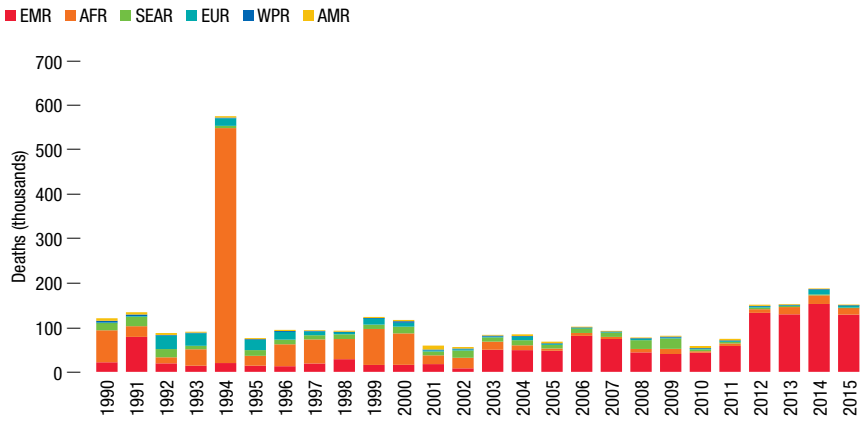
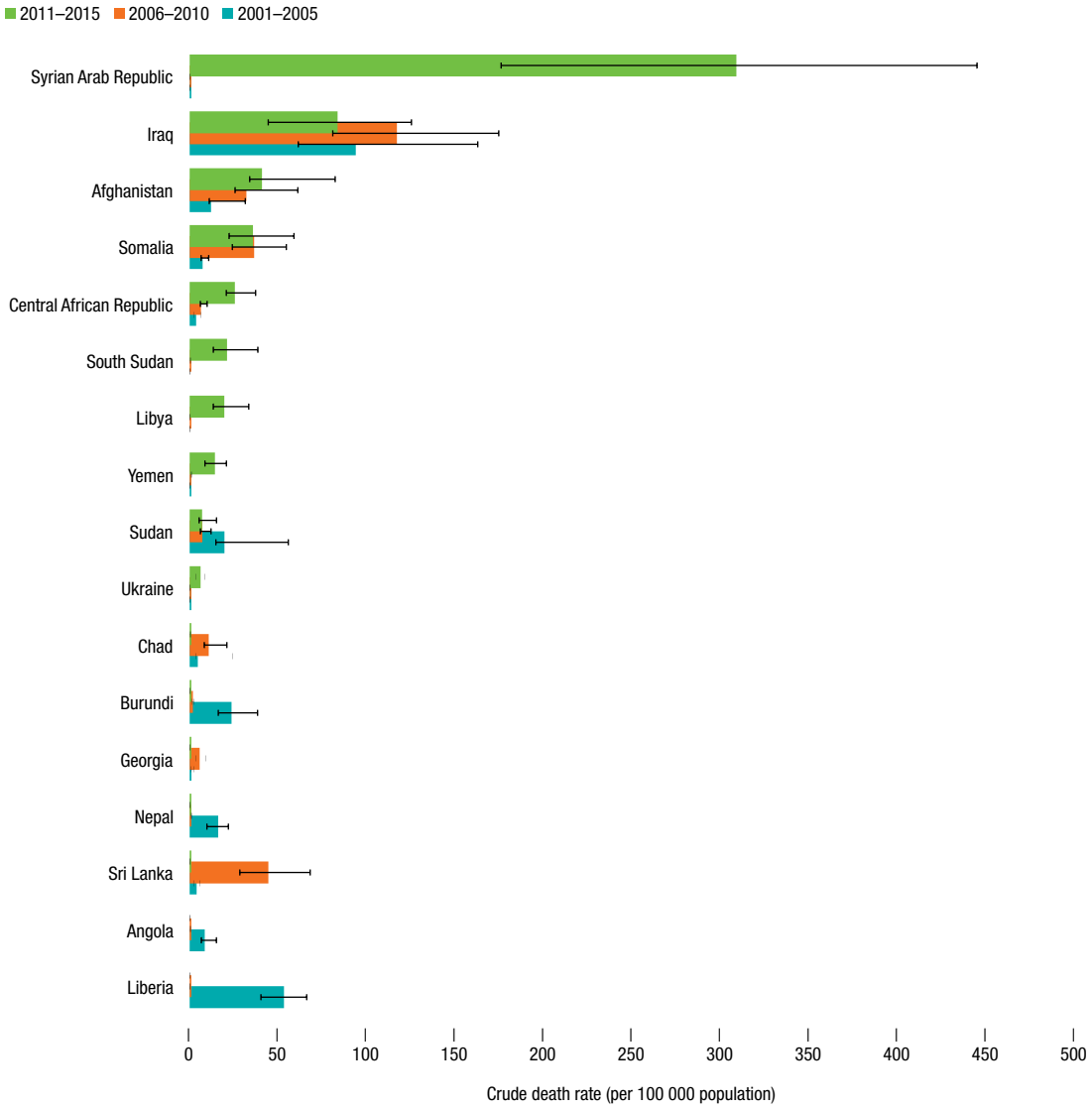


Figure A.29.3.
Estimated direct deaths from major conflicts (per 100 000 population), 2001–2015[a]



[a] Countries with estimated conflict deaths exceeding 5 per 100 000 population in 2011–2015 or 10 per 100 000 population in earlier 5 year periods. The death rate is an average over each five year period.

ANNEX B

TABLES OF HEALTH STATISTICS BY COUNTRY, WHO REGION AND GLOBALLY

Explanatory notes

The statistics shown represent official WHO statistics based on the evidence available in early 2016. They have been compiled primarily using publications and databases produced and maintained by WHO or United Nations groups of which WHO is a member. A number of statistics have been derived from data produced and maintained by other international organizations.

Wherever possible, estimates have been computed using standardized categories and methods in order to enhance cross-national comparability. This approach may result in some cases in differences between the estimates presented here and the official national statistics prepared and endorsed by individual WHO Member States. It is important to stress that these estimates are also subject to considerable uncertainty, especially for countries with weak statistical and health information systems where the quality of underlying empirical data is limited.

For indicators with a reference period expressed as a range, figures refer to the latest available year in the range unless otherwise noted.

Unless otherwise stated, the WHO regional and global aggregates for rates and ratios are weighted averages when relevant, while for absolute numbers they are the sums. Aggregates are calculated only if data are available for at least 50% of the population within an indicated group. For indicators with a reference period expressed as a range, aggregates are for the reference period shown in the heading unless otherwise noted. Some WHO regional and global aggregates may include country estimates that are not available for reporting.

More details on the indicators and estimates presented here are available at the WHO Global Health Observatory.[1]

– indicates data are not available or not applicable.

1 The Global Health Observatory (GHO) is WHO's portal providing access to data and analyses for monitoring the global health situation. See: http://www.who.int/gho/en/, accessed 16 April 2016.

ANNEX B PART 1

Member State	Total population[a] (000s)	Life expectancy at birth[a,b] (years)			Healthy life expectancy at birth[a,b] (years)	Health SDGs 3.1		3.2		3.3
		Male	Female	Both sexes		Maternal mortality ratio[c] (per 100 000 live births)	Proportion of births attended by skilled health personnel[d] (%)	Under-five mortality rate[e] (per 1000 live births)	Neonatal mortality rate[e] (per 1000 live births)	New HIV infections among adults 15–49 years old[f] (per 1000 uninfected population)
	2015	2015			2015	2015	2006–2014	2015	2015	2014
Afghanistan	32 527	59.3	61.9	60.5	52.2	396	45	91.1	35.5	<0.1
Albania	2 897	75.1	80.7	77.8	68.8	29	99	14.0	6.2	–
Algeria	39 667	73.8	77.5	75.6	66.0	140	97	25.5	15.5	<0.1
Andorra	70	–	–	–	–	–	–	2.8	1.4	–
Angola	25 022	50.9	54.0	52.4	45.8	477	47	156.9	48.7	2.1
Antigua and Barbuda	92	74.1	78.6	76.4	67.5	–	100[ab]	8.1	4.9	–
Argentina	43 417	72.7	79.9	76.3	67.6	52	100	12.5	6.3	0.3
Armenia	3 018	71.6	77.7	74.8	66.8	25	100	14.1	7.4	0.2
Australia	23 969	80.9	84.8	82.8	71.9	6	99[ab]	3.8	2.2	–
Austria	8 545	79.0	83.9	81.5	72.0	4	99[ab]	3.5	2.1	–
Azerbaijan	9 754	69.6	75.8	72.7	64.7	25	97[ab]	31.7	18.2	0.2
Bahamas	388	72.9	79.1	76.1	66.6	80	98[ab]	12.1	6.9	–
Bahrain	1 377	76.2	77.9	76.9	67.0	15	100[ab]	6.2	1.1	–
Bangladesh	160 996	70.6	73.1	71.8	62.3	176	42[ab]	37.6	23.3	<0.1
Barbados	284	73.1	77.9	75.5	66.6	27	99	13.0	8.0	–
Belarus	9 496	66.5	78.0	72.3	65.1	4	100	4.6	1.9	0.6
Belgium	11 299	78.6	83.5	81.1	71.1	7	–	4.1	2.2	–
Belize	359	67.5	73.1	70.1	62.3	28	95	16.5	8.3	0.5
Benin	10 880	58.8	61.1	60.0	52.5	405	77[ab]	99.5	31.8	0.6
Bhutan	775	69.5	70.1	69.8	61.2	148	75	32.9	18.3	–
Bolivia (Plurinational State of)	10 725	68.2	73.3	70.7	62.2	206	85	38.4	19.6	0.2
Bosnia and Herzegovina	3 810	75.0	79.7	77.4	68.6	11	100	5.4	4.0	–
Botswana	2 262	63.3	68.1	65.7	56.9	129	100	43.6	21.9	14.0
Brazil	207 848	71.4	78.7	75.0	65.5	44	99[ab]	16.4	8.9	–
Brunei Darussalam	423	76.3	79.2	77.7	70.4	23	100[ab]	10.2	4.3	–
Bulgaria	7 150	71.1	78.0	74.5	66.4	11	94	10.4	5.6	–
Burkina Faso	18 106	59.1	60.5	59.9	52.6	371	66	88.6	26.7	0.5
Burundi	11 179	57.7	61.6	59.6	52.2	712	60	81.7	28.6	0.1
Cabo Verde	521	71.3	75.0	73.3	64.4	42	92	24.5	12.2	0.9
Cambodia	15 578	66.6	70.7	68.7	58.9	161	89[ab]	28.7	14.8	<0.1
Cameroon	23 344	55.9	58.6	57.3	50.3	596	65[ab]	87.9	25.7	3.8
Canada	35 940	80.2	84.1	82.2	72.3	7	98[ab]	4.9	3.2	–
Central African Republic	4 900	50.9	54.1	52.5	45.9	882	40	130.1	42.6	2.7
Chad	14 037	51.7	54.5	53.1	46.1	856	24	138.7	39.3	1.5
Chile	17 948	77.4	83.4	80.5	70.4	22	100	8.1	4.9	0.2
China	1383 925	74.6	77.6	76.1	68.5	27	100	10.7	5.5	–
Colombia	48 229	71.2	78.4	74.8	65.1	64	99	15.9	8.5	0.2
Comoros	788	61.9	65.2	63.5	55.9	335	82	73.5	34.0	–
Congo	4 620	63.2	66.3	64.7	56.6	442	94	45.0	18.0	1.4
Cook Islands	21	–	–	–	–	–	100[ab]	8.1	4.4	–
Costa Rica	4 808	77.1	82.2	79.6	69.7	25	99	9.7	6.2	0.2
Côte d'Ivoire	22 702	52.3	54.4	53.3	47.0	645	56	92.6	37.9	2.1
Croatia	4 240	74.7	81.2	78.0	69.4	8	100	4.3	2.6	–
Cuba	11 390	76.9	81.4	79.1	69.2	39	99	5.5	2.3	0.3
Cyprus	1 165	78.3	82.7	80.5	71.3	7	100[ab]	2.7	1.5	–
Czech Republic	10 543	75.9	81.7	78.8	69.4	4	100[ab]	3.4	1.8	–
Democratic People's Republic of Korea	25 155	67.0	74.0	70.6	64.0	82	100	24.9	13.5	–
Democratic Republic of the Congo	77 267	58.3	61.5	59.8	51.7	693	80	98.3	30.1	0.6
Denmark	5 669	78.6	82.5	80.6	71.2	6	98[ab]	3.5	2.5	0.1
Djibouti	888	61.8	65.3	63.5	55.8	229	87[ab]	65.3	33.4	1.1
Dominica	73	–	–	–	–	–	100[ab]	21.2	15.6	–

Health SDGs										
3.3				3.4		3.5	3.6	3.7		
TB incidence[g] (per 100 000 population)	Malaria incidence[h] (per 1000 population at risk)	Infants receiving three doses of hepatitis B vaccine[i] (%)	Reported number of people requiring interventions against NTDs[j]	Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70[k] (%)	Suicide mortality rate[k] (per 100 000 population)	Total alcohol per capita (>15 years of age) consumption, in litres of pure alcohol, projected estimates[l]	Road traffic mortality rate[m] (per 100 000 population)	Proportion of married or in-union women of reproductive age who have their need for family planning satisfied with modern methods[n] (%)	Adolescent birth rate[o] (per 1000 women aged 15–19 years)	
2014	2013	2014	2014	2012	2012	2015	2013	2005–2015	2005–2015	**Member State**
189	15.7	75	13 406 517	30.5	4.0	1.0	15.5	–	51.9	Afghanistan
19	–	98	42	18.8	6.5	6.6	15.1	12.9	19.7	Albania
78	<0.1	95	–	22.1	1.8	0.6	23.8	77.2	12.4	Algeria
9.2	–	96	0	–	–	9.1	7.6	–	4.4	Andorra
370	145.7	80	17 668 111	24.2	10.6	7.6	26.9	–	190.9	Angola
7.6	–	99	1 395	–	–	3.2	6.7	–	–	Antigua and Barbuda
24	0.0	94	3 948	17.5	10.8	7.6	13.6	–	68.1	Argentina
45	0.0	93	38 929	29.7	3.3	5.5	18.3	39.2	22.7	Armenia
6.4	–	91	18 843	9.4	11.6	12.6	5.4	–	14.2	Australia
7.8	–	83	14	12.0	15.6	8.5	5.4	–	7.9	Austria
77	0.0	94	1 678 393	23.3	1.7	2.1	10.0	21.5	47.2	Azerbaijan
12	–	96	146	13.8	2.3	4.2	13.8	–	34.6	Bahamas
14	–	99	8	13.3	7.2	2.4	8.0	–	13.8	Bahrain
227	68.7	95	49 873 889	17.5	6.6	0.2	13.6	72.5	113.0	Bangladesh
0.9	–	94	2 689	13.8	2.6	6.5	6.7	70.0	49.7	Barbados
58	–	97	–	26.2	21.8	17.1	13.7	74.2	21.6	Belarus
9.0	–	98	15	12.2	17.8	10.8	6.7	–	7.2	Belgium
37	0.2	95	12 254	14.4	2.2	8.3	24.4	73.1	64.0	Belize
61	303.0	70	4 358 651	22.1	3.7	2.2	27.7	24.5	94.0	Benin
164	<0.1	99	107 867	20.5	16.0	1.1	15.1	84.6	28.4	Bhutan
120	5.1	94	2 129 328	18.3	11.7	5.8	23.2	42.8	115.6	Bolivia (Plurinational State of)
42	–	89	–	17.5	13.9	7.5	17.7	21.9	11.0	Bosnia and Herzegovina
385	1.1	95	252 373	20.9	3.2	7.7	23.6	–	39.0	Botswana
44	9.9	96	18 680 873	19.4	6.0	9.1	23.4	89.3	64.8	Brazil
62	–	99	9 339	16.8	6.2	0.8	8.1	–	16.6	Brunei Darussalam
27	–	95	379	24.0	14.5	11.3	8.3	–	40.8	Bulgaria
54	418.4	91	14 961 395	23.8	2.9	7.4	30.0	37.1	130.0	Burkina Faso
126	269.4	95	5 332 985	24.3	16.4	9.8	31.3	32.6	85.0	Burundi
138	0.7	95	135 100	15.1	3.9	7.2	26.1	73.2	–	Cabo Verde
390	10.6	97	5 566 529	17.7	9.0	6.1	17.4	56.4	57.0	Cambodia
220	271.8	87	19 449 659	19.9	4.9	7.7	27.6	40.2	119.0	Cameroon
5.2	–	75	0	10.7	11.4	10.3	6.0	–	12.6	Canada
375	325.0	47	4 050 725	18.5	7.9	3.8	32.4	28.7	229.0	Central African Republic
159	157.9	46	10 477 490	23.2	2.7	4.4	24.1	17.5	203.4	Chad
16	–	92	30	11.9	13.0	9.3	12.4	–	51.5	Chile
68	<0.1	99	26 227 888	19.4	8.7	7.6	18.8	–	6.2	China
33	8.9	90	4 524 693	12.4	5.5	6.6	16.8	83.7	84.0	Colombia
35	170.6	80	523 106	23.5	10.5	0.2	28.0	27.8	70.0	Comoros
381	187.5	90	3 568 201	19.8	7.8	3.9	26.4	38.5	147.0	Congo
12	–	99	22	–	–	4.8	24.2	–	56.0	Cook Islands
11	<0.1	91	41 518	12.2	6.9	5.1	13.9	89.1	61.2	Costa Rica
165	385.2	67	18 131 745	23.3	5.4	6.5	24.2	30.9	125.0	Côte d'Ivoire
12	–	95	31	17.7	16.5	11.7	9.2	–	11.8	Croatia
9.4	–	96	52 997	16.5	14.6	5.5	7.5	88.4	52.5	Cuba
5.3	–	96	6	9.5	5.1	9.1	5.2	–	4.2	Cyprus
4.6	–	99	6	17.0	15.6	14.1	6.1	85.7	11.1	Czech Republic
442	2.1	93	5 643 102	27.1	–	4.4	20.8	76.7	0.7	Democratic People's Republic of Korea
325	295.2	80	57 568 918	23.6	8.0	3.4	33.2	15.6	138.0	Democratic Republic of the Congo
7.1	–	–	0	13.3	11.2	10.2	3.5	–	2.4	Denmark
619	25.0	78	107 995	18.8	10.7	0.9	24.7	–	20.6	Djibouti
0.7	–	97	8 063	–	–	6.6	15.3	–	47.2[ac]	Dominica

ANNEX B PART 1

Member State	Total population[a] (000s)	Life expectancy at birth[a,b] (years)			Healthy life expectancy at birth[a,b] (years)	Health SDGs				
						3.1		3.2		3.3
		Male	Female	Both sexes		Maternal mortality ratio[c] (per 100 000 live births)	Proportion of births attended by skilled health personnel[d] (%)	Under-five mortality rate[e] (per 1000 live births)	Neonatal mortality rate[e] (per 1000 live births)	New HIV infections among adults 15–49 years old[f] (per 1000 uninfected population)
	2015	2015			2015	2015	2006–2014	2015	2015	2014
Dominican Republic	10 528	70.9	77.1	73.9	65.1	92	98[ab]	30.9	21.7	0.4
Ecuador	16 144	73.5	79.0	76.2	67.0	64	96	21.6	10.8	0.2
Egypt	91 508	68.8	73.2	70.9	62.2	33	92	24.0	12.8	<0.1
El Salvador	6 127	68.8	77.9	73.5	64.1	54	98[ab]	16.8	8.3	0.2
Equatorial Guinea	845	56.6	60.0	58.2	51.2	342	68[ab]	94.1	33.1	2.9
Eritrea	5 228	62.4	67.0	64.7	55.9	501	34	46.5	18.4	0.2
Estonia	1 313	72.7	82.0	77.6	68.9	9	99[ab]	2.9	1.5	–
Ethiopia	99 391	62.8	66.8	64.8	56.1	353	16	59.2	27.7	–
Fiji	892	67.0	73.1	69.9	62.9	30	99	22.4	9.6	0.2
Finland	5 503	78.3	83.8	81.1	71.0	3	100[ab]	2.3	1.3	–
France	64 395	79.4	85.4	82.4	72.6	8	98[ab]	4.3	2.2	–
Gabon	1 725	64.7	67.2	66.0	57.2	291	89[ab]	50.8	23.2	1.4
Gambia	1 991	59.8	62.5	61.1	53.8	706	57	68.9	29.9	1.1
Georgia	4 000	70.3	78.3	74.4	66.5	36	100	11.9	7.2	0.3
Germany	80 689	78.7	83.4	81.0	71.3	6	99[ab]	3.7	2.1	–
Ghana	27 410	61.0	63.9	62.4	55.3	319	71	61.6	28.3	0.7
Greece	10 955	78.3	83.6	81.0	71.9	3	–	4.6	2.9	–
Grenada	107	71.2	76.1	73.6	65.0	27	99[ab]	11.8	6.0	–
Guatemala	16 343	68.5	75.2	71.9	62.1	88	66	29.1	13.4	0.3
Guinea	12 609	58.2	59.8	59.0	51.7	679	45[ab]	93.7	31.3	1.1
Guinea-Bissau	1 844	57.2	60.5	58.9	51.5	549	45[ab]	92.5	39.7	2.5
Guyana	767	63.9	68.5	66.2	58.9	229	92[ab]	39.4	22.8	2.0
Haiti	10 711	61.5	65.5	63.5	55.4	359	37	69.0	25.4	1.1
Honduras	8 075	72.3	77.0	74.6	64.9	129	83	20.4	11.0	0.1
Hungary	9 855	72.3	79.1	75.9	67.4	17	99[ab]	5.9	3.5	–
Iceland	329	81.2	84.1	82.7	72.7	3	–	2.0	0.9	–
India	1311 051	66.9	69.9	68.3	59.5	174	74[ab]	47.7	27.7	–
Indonesia	257 564	67.1	71.2	69.1	62.2	126	87	27.2	13.5	0.5
Iran (Islamic Republic of)	79 109	74.5	76.6	75.5	66.6	25	96	15.5	9.5	0.2
Iraq	36 423	66.2	71.8	68.9	60.0	50	91	32.0	18.4	–
Ireland	4 688	79.4	83.4	81.4	71.5	8	100[ab]	3.6	2.3	0.2
Israel	8 064	80.6	84.3	82.5	72.8	5	–	4.0	2.1	–
Italy	59 798	80.5	84.8	82.7	72.8	4	100[ab]	3.5	2.1	–
Jamaica	2 793	73.9	78.6	76.2	66.9	89	99	15.7	11.6	1.0
Japan	126 573	80.5	86.8	83.7	74.9	5	100[ab]	2.7	0.9	–
Jordan	7 595	72.5	75.9	74.1	65.0	58	100	17.9	10.6	–
Kazakhstan	17 625	65.7	74.7	70.2	63.3	12	100	14.1	7.0	0.2
Kenya	46 050	61.1	65.8	63.4	55.6	510	62	49.4	22.2	2.3
Kiribati	112	63.7	68.8	66.3	59.1	90	80	55.9	23.7	–
Kuwait	3 892	73.7	76.0	74.7	65.8	4	100[ab]	8.6	3.2	–
Kyrgyzstan	5 940	67.2	75.1	71.1	63.8	76	98	21.3	11.5	0.2
Lao People's Democratic Republic	6 802	64.1	67.2	65.7	57.9	197	40	66.7	30.1	0.2
Latvia	1 971	69.6	79.2	74.6	67.1	18	98[ab]	7.9	5.2	–
Lebanon	5 851	73.5	76.5	74.9	65.7	15	–	8.3	4.8	<0.1
Lesotho	2 135	51.7	55.4	53.7	46.6	487	78	90.2	32.7	20.1
Liberia	4 503	59.8	62.9	61.4	52.7	725	61[ab]	69.9	24.1	0.6
Libya	6 278	70.1	75.6	72.7	63.8	9	100	13.4	7.2	–
Lithuania	2 878	68.1	79.1	73.6	66.0	10	100[ab]	5.2	2.5	–
Luxembourg	567	79.8	84.0	82.0	71.8	10	100[ab]	1.9	0.9	–
Madagascar	24 235	63.9	67.0	65.5	56.9	353	44	49.6	19.7	0.2
Malawi	17 215	56.7	59.9	58.3	51.2	634	87[ab]	64.0	21.8	4.5
Malaysia	30 331	72.7	77.3	75.0	66.5	40	99[ab]	7.0	3.9	0.3
Maldives	364	76.9	80.2	78.5	69.6	68	96	8.6	4.9	–
Mali	17 600	58.2	58.3	58.2	51.1	587	57	114.7	37.8	1.3

Health SDGs										
3.3				3.4		3.5	3.6	3.7		
TB incidence[g] (per 100 000 population)	Malaria incidence[h] (per 1000 population at risk)	Infants receiving three doses of hepatitis B vaccine[i] (%)	Reported number of people requiring interventions against NTDs[j]	Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70[k] (%)	Suicide mortality rate[k] (per 100 000 population)	Total alcohol per capita (>15 years of age) consumption, in litres of pure alcohol, projected estimates[l]	Road traffic mortality rate[m] (per 100 000 population)	Proportion of married or in-union women of reproductive age who have their need for family planning satisfied with modern methods[n] (%)	Adolescent birth rate[o] (per 1000 women aged 15–19 years)	
2014	2013	2014	2014	2012	2012	2015	2013	2005–2015	2005–2015	**Member State**
60	0.2	89	1 192 636	14.8	3.6	7.6	29.3	84.1	90.0	Dominican Republic
54	<0.1	83	1 806 145	11.9	8.9	6.1	20.1	80.7	–	Ecuador
15	–	94	1 117 250	24.5	1.6	0.3	12.8	80.0	56.0	Egypt
41	<0.1	93	874 565	16.9	12.8	3.5	21.1	81.9	72.0	El Salvador
162	211.1	24	465 062	23.4	13.9	8.1	22.9	20.5	176.0	Equatorial Guinea
78	17.4	94	976 756	24.2	8.3	1.4	24.1	19.6	76.0	Eritrea
20	–	93	1	18.8	18.7	–	7.0	–	15.6	Estonia
207	117.8	77	67 843 988	15.2	7.5	4.3	25.3	57.6	71.2	Ethiopia
67	–	99	899 436	30.8	5.9	3.2	5.8	–	27.5	Fiji
5.6	–	–	0	11.2	16.7	11.9	4.8	–	7.3	Finland
8.7	–	82	178	11.4	15.8	11.6	5.1	95.5	6.2	France
444	210.6	70	1 534 672	15.0	7.0	11.8	22.9	33.7	115.0	Gabon
174	233.1	96	1 200 503	19.1	3.2	3.2	29.4	23.9	88.0	Gambia
106	0.0	91	79	21.6	3.8	6.7	11.8	52.8	41.5	Georgia
6.2	–	87	265	12.3	13.0	10.6	4.3	–	7.8	Germany
165	318.5	98	18 697 745	20.3	2.3	5.4	26.2	44.6	65.0	Ghana
4.8	–	96	73	12.9	4.9	9.3	9.1	–	8.3	Greece
1.3	–	97	39	–	–	10.4	–	–	–	Grenada
57	2.2	73	3 255 245	13.5	7.3	3.9	19.0	65.5	91.0[ac]	Guatemala
177	403.4	51	8 842 314	20.9	3.3	0.7	27.3	15.7	146.0	Guinea
369	112.1	80	1 884 916	22.4	3.1	4.3	27.5	37.6	136.7	Guinea-Bissau
103	129.3	98	720 357	28.4[ad]	34.8	8.6	17.3	52.5	101.0	Guyana
200	13.6	48	11 358 721	23.9	2.3	5.9	15.1	44.8	66.0	Haiti
43	3.2	85	2 709 120	15.7	4.9	4.0	17.4	76.0	101.0	Honduras
12	–	–	2	24.0	25.4	12.4	7.7	–	19.8	Hungary
3.3	–	–	0	10.2	15.1	6.9	4.6	–	7.1	Iceland
167	23.7	70	577 240 673	26.2	20.9	4.6	16.6	63.9	28.1	India
399	41.8	78	127 979 175	23.1	3.7	0.6	15.3	78.8	47.0	Indonesia
22	<0.1	99	14 373	17.3	5.3	1.0	32.1	68.6	37.7	Iran (Islamic Republic of)
43	0.0	62	2 044 142	23.7	1.1	0.5	20.2	59.3	82.0	Iraq
7.4	–	95	0	11.1	11.5	10.9	4.1	–	9.2	Ireland
5.8	–	97	471	9.5	6.2	3.1	3.6	–	10.2	Israel
6.0	–	94	418	9.8	6.4	6.1	6.1	–	5.8	Italy
4.7	–	92	411 692	17.0	1.2	5.1	11.5	83.0	45.7	Jamaica
18	–	–	–	9.3	23.1	7.5	4.7	–	4.4	Japan
5.5	–	98	236	19.8	1.6	0.7	26.3	58.0	26.0	Jordan
99	–	95	–	33.9	24.2	8.2	24.2	79.6	36.4	Kazakhstan
246	266.3	81	12 294 911	18.1	10.8	4.0	29.1	75.4	96.0	Kenya
497	–	75	115 336	–	–	2.9	2.9	35.8	49.9	Kiribati
21	–	96	29	11.8	1.0	0.1	18.7	–	7.1	Kuwait
142	0.0	96	111 553	28.5	8.9	3.9	22.0	62.1	42.1	Kyrgyzstan
189	29.8	88	2 183 445	24.2	6.4	7.5	14.3	61.3	94.0	Lao People's Democratic Republic
49	–	92	13	24.1	21.8	10.6	10.0	–	15.3	Latvia
16	–	81	–	12.4	0.9	2.2	22.6	–	–	Lebanon
852	–	96	517 204	23.9	5.4	6.4	28.2	76.1	94.0	Lesotho
308	368.8	50	3 892 705	21.2	2.6	5.2	33.7	37.2	147.0	Liberia
40	–	94	1 634	17.6	1.5	0.0	73.4	29.6	6.0	Libya
62	–	94	22	22.4	33.5	16.2	10.6	–	13.9	Lithuania
6.6	–	94	0	11.4	10.9	11.2	8.7	–	6.4	Luxembourg
235	83.3	73	20 491 358	23.4	7.3	1.9	28.4	49.6	148.0	Madagascar
227	217.8	91	11 136 578	18.7	8.6	2.5	35.0	73.6	143.0	Malawi
103	3.2	96	225 248	19.6	2.6	1.7	24.0	–	12.7	Malaysia
41	–	99	747	15.9	5.0	1.0	3.5	42.7	13.7	Maldives
58	460.9	77	19 462 713	25.6	2.8	1.0	25.6	27.3	172.0	Mali

ANNEX B PART 1

Member State	Total population[a] (000s)	Life expectancy at birth[a,b] (years)			Healthy life expectancy at birth[a,b] (years)	Health SDGs				
						3.1		3.2		3.3
		Male	Female	Both sexes		Maternal mortality ratio[c] (per 100 000 live births)	Proportion of births attended by skilled health personnel[d] (%)	Under-five mortality rate[e] (per 1000 live births)	Neonatal mortality rate[e] (per 1000 live births)	New HIV infections among adults 15–49 years old[f] (per 1000 uninfected population)
	2015	2015			2015	2015	2006–2014	2015	2015	2014
Malta	419	79.7	83.7	81.7	71.7	9	100[ab]	6.4	4.4	–
Marshall Islands	53	–	–	–	–	–	90	36.0	16.7	–
Mauritania	4 068	61.6	64.6	63.1	55.1	602	65	84.7	35.7	0.4
Mauritius	1 273	71.4	77.8	74.6	66.8	53	100[ab]	13.5	8.4	0.4
Mexico	127 017	73.9	79.5	76.7	67.4	38	99	13.2	7.0	0.1
Micronesia (Federated States of)	104	68.1	70.6	69.4	62.5	100	100[ab]	34.7	18.8	–
Monaco	38	–	–	–	–	–	–	3.5	1.9	–
Mongolia	2 959	64.7	73.2	68.8	62.0	44	99[ab]	22.4	11.1	–
Montenegro	626	74.1	78.1	76.1	67.9	7	99	4.7	3.1	–
Morocco	34 378	73.3	75.4	74.3	64.9	121	74	27.6	17.6	0.1
Mozambique	27 978	55.7	59.4	57.6	49.6	489	54[ab]	78.5	27.1	7.4
Myanmar	53 897	64.6	68.5	66.6	59.2	178	78[ab]	50.0	26.4	0.3
Namibia	2 459	63.1	68.3	65.8	57.5	265	88	45.4	15.9	9.1
Nauru	10	–	–	–	–	–	97[ab]	35.4	22.7	–
Nepal	28 514	67.7	70.8	69.2	61.1	258	48[ab]	35.8	22.2	<0.1
Netherlands	16 925	80.0	83.6	81.9	72.2	7	–	3.8	2.4	–
New Zealand	4 529	80.0	83.3	81.6	71.6	11	97[ab]	5.7	3.1	–
Nicaragua	6 082	71.5	77.9	74.8	63.7	150	88[ab]	22.1	9.8	0.2
Niger	19 899	60.9	62.8	61.8	54.2	553	29	95.5	26.8	<0.1
Nigeria	182 202	53.4	55.6	54.5	47.7	814	35	108.8	34.3	2.0
Niue	2	–	–	–	–	–	100[ab]	23.0	12.5	–
Norway	5 211	79.8	83.7	81.8	72.0	5	99	2.6	1.5	0.1
Oman	4 491	75.0	79.2	76.6	66.7	17	99	11.6	5.2	0.1
Pakistan	188 925	65.5	67.5	66.4	57.8	178	52[ab]	81.1	45.5	0.2
Palau	21	–	–	–	–	–	100	16.4	9.0	–
Panama	3 929	74.7	81.1	77.8	68.1	94	91	17.0	9.6	0.3
Papua New Guinea	7 619	60.6	65.4	62.9	56.4	215	43[ab]	57.3	24.5	0.4
Paraguay	6 639	72.2	76.0	74.0	65.2	132	96[ab]	20.5	10.9	0.5
Peru	31 377	73.1	78.0	75.5	65.6	68	90	16.9	8.2	0.1
Philippines	100 699	65.3	72.0	68.5	61.1	114	73	28.0	12.6	0.1
Poland	38 612	73.6	81.3	77.5	68.7	3	100[ab]	5.2	3.1	<0.1
Portugal	10 350	78.2	83.9	81.1	71.4	10	99	3.6	2.0	–
Qatar	2 235	77.4	80.0	78.2	67.7	13	100	8.0	3.8	–
Republic of Korea	50 293	78.8	85.5	82.3	73.2	11	100[ab]	3.4	1.6	–
Republic of Moldova	4 069	67.9	76.2	72.1	64.8	23	99	15.8	11.9	0.6
Romania	19 511	71.4	78.8	75.0	66.8	31	99[ab]	11.1	6.3	–
Russian Federation	143 457	64.7	76.3	70.5	63.3	25	100[ab]	9.6	5.0	–
Rwanda	11 610	60.9	71.1	66.1	56.6	290	91[ab]	41.7	18.7	1.1
Saint Kitts and Nevis	56	–	–	–	–	–	100[ab]	10.5	6.5	–
Saint Lucia	185	72.6	77.9	75.2	66.1	48	99	14.3	9.3	–
Saint Vincent and the Grenadines	109	71.3	75.2	73.2	64.6	45	99[ab]	18.3	11.5	–
Samoa	193	70.9	77.5	74.0	66.6	51	83[ab]	17.5	9.5	–
San Marino	32	–	–	–	–	–	–	2.9	0.7	–
Sao Tome and Principe	190	65.6	69.4	67.5	59.1	156	93[ab]	47.3	17.1	0.1
Saudi Arabia	31 540	73.2	76.0	74.5	64.5	12	98[ab]	14.5	7.9	–
Senegal	15 129	64.6	68.6	66.7	58.3	315	59	47.2	20.8	<0.1
Serbia	8 851	72.9	78.4	75.6	67.7	17	98	6.7	4.2	–
Seychelles	96	69.1	78.0	73.2	65.5	–	99[ab]	13.6	8.6	–
Sierra Leone	6 453	49.3	50.8	50.1	44.4	1 360	60	120.4	34.9	0.7
Singapore	5 604	80.0	86.1	83.1	73.9	10	100[ab]	2.7	1.0	–
Slovakia	5 426	72.9	80.2	76.7	68.1	6	100[ab]	7.3	4.2	<0.1
Slovenia	2 068	77.9	83.7	80.8	71.1	9	100[ab]	2.6	1.4	<0.1
Solomon Islands	584	67.9	70.8	69.2	62.1	114	86	28.1	12.2	–

Health SDGs										
3.3				3.4		3.5	3.6	3.7		
TB incidence[g] (per 100 000 population)	Malaria incidence[h] (per 1000 population at risk)	Infants receiving three doses of hepatitis B vaccine[i] (%)	Reported number of people requiring interventions against NTDs[j]	Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70[k] (%)	Suicide mortality rate[k] (per 100 000 population)	Total alcohol per capita (>15 years of age) consumption, in litres of pure alcohol, projected estimates[l]	Road traffic mortality rate[m] (per 100 000 population)	Proportion of married or in-union women of reproductive age who have their need for family planning satisfied with modern methods[n] (%)	Adolescent birth rate[o] (per 1000 women aged 15–19 years)	
2014	2013	2014	2014	2012	2012	2015	2013	2005–2015	2005–2015	**Member State**
12	–	90	–	11.6	6.8	7.2	5.1	–	13.1	Malta
335	–	79	21 468	–	–	–	5.7	80.5	85.0	Marshall Islands
111	24.9	84	762 932	15.8	1.8	0.1	24.5	23.8	71.0	Mauritania
22	–	97	–	24.0	8.5	4.0	12.2	40.8	29.4	Mauritius
21	0.2	84	10 287 100	15.7	4.1	6.8	12.3	81.9	70.9	Mexico
195	–	83	52 463	–	–	3.5	1.9	–	32.6	Micronesia (Federated States of)
2.2	–	99	0	–	–	–	0.0	–	–	Monaco
170	–	99	0	32.0	9.3	7.8	21.0	68.3	26.7	Mongolia
21	–	87	–	22.2	18.9	11.5	11.9	34.2	13.4	Montenegro
106	–	99	4 025	22.8	5.0	0.7	20.8	74.8	32.0	Morocco
551	352.3	78	22 815 820	17.3	17.3	2.0	31.6	28.2	167.0	Mozambique
369	45.0	75	40 777 860	24.3	12.4	0.7	20.3	–	30.3	Myanmar
561	5.4	88	1 049 353	20.0	2.0	11.8	23.9	75.1	82.0	Namibia
73	–	95	2 751	–	–	3.0	–	42.5	105.3[ac]	Nauru
158	1.2	92	21 352 583	21.6	20.3	2.1	17.0	56.0	71.0	Nepal
5.8	–	95	30	12.2	10.0	9.6	3.4	–	4.5	Netherlands
7.4	–	93	–	10.7	10.3	11.2	6.0	–	19.1	New Zealand
58	1.6	98	1 214 110	19.4	9.1	4.6	15.3	84.0	92.0	Nicaragua
98	317.1	68	14 885 196	19.6	1.8	0.3	26.4	40.8	206.0	Niger
322	342.9	66	140 381 164	19.8	4.3	11.3	20.5	28.8	122.0	Nigeria
0.0	–	99	0	–	–	7.7	–	–	14.3	Niue
8.1	–	–	7	10.7	10.2	7.0	3.8	–	5.0	Norway
9.6	0.0	98	–	17.8	1.0	0.9	25.4	19.1	13.5	Oman
270	12.8	73	47 386 262	20.5	7.5	0.1	14.2	47.0	44.0	Pakistan
42	–	99	–	–	–	–	4.8	–	27.0	Palau
46	0.5	80	400 364	12.5	4.4	7.7	10.0	75.9	91.1	Panama
417	185.1	62	6 327 334	26.4	7.7	3.1	16.8	40.6	–	Papua New Guinea
43	0.0	87	815 045	18.5	5.3	9.6	20.7	84.1	63.0	Paraguay
120	30.4	88	3 011 439	11.2	3.1	5.2	13.9	62.7	65.0	Peru
288	0.4	79	44 803 112	27.9	2.6	5.6	10.5	51.5	57.0	Philippines
21	–	96	48	20.0	20.5	11.5	10.3	–	14.0	Poland
25	–	98	75	11.9	12.5	12.5	7.8	–	10.5	Portugal
29	–	99	48	14.2	4.7	1.3	15.2	68.9	13.4	Qatar
86	0.2	99	6	9.3	36.8	10.9	12.0	–	1.7	Republic of Korea
153	–	92	–	26.5	17.0	17.4	12.5	60.4	26.7	Republic of Moldova
81	–	94	–	22.6	12.8	12.9	8.7	–	38.9	Romania
84	0.0	97	–	29.9	22.3	14.5	18.9	72.4	26.6	Russian Federation
63	121.1	99	4 148 711	19.1	7.6	10.0	32.1	65.0	45.0	Rwanda
7.2	–	98	0	–	–	7.0	–	–	–	Saint Kitts and Nevis
9.1	–	99	36 119	–	–	10.4	18.1	72.4	42.5	Saint Lucia
24	–	98	0	–	–	7.2	8.2	–	70.0	Saint Vincent and the Grenadines
19	–	91	182 172	–	–	–	15.8	39.4	44.0	Samoa
1.6	–	80	0	–	–	–	3.2	–	1.3[ac]	San Marino
97	93.0	95	194 856	–	–	6.8	31.1	50.3	92.0	Sao Tome and Principe
12	<0.1	98	1 968	16.7	0.3	0.2	27.4	–	17.6	Saudi Arabia
138	128.1	89	11 792 254	16.7	3.2	0.5	27.2	46.3	80.0	Senegal
24	–	92	7	24.5	16.8	12.9	7.7	25.1	22.0	Serbia
26	–	99	1	–	–	6.7	8.6	–	61.2	Seychelles
310	406.0	83	7 564 272	27.5	5.6	8.2	27.3	37.5	125.0	Sierra Leone
49	–	97	6 066	10.5	9.0	2.9	3.6	–	2.7	Singapore
6.7	–	97	8	19.4	12.6	12.5	6.6	–	21.2	Slovakia
7.7	–	–	–	12.6	17.1	10.9	6.4	–	4.6	Slovenia
86	75.4	88	383 910	24.1	6.3	1.6	19.2	60.0	62.0	Solomon Islands

ANNEX B PART 1

Member State	Total population[a] (000s)	Life expectancy at birth[a,b] (years)			Healthy life expectancy at birth[a,b] (years)	Health SDGs				
						3.1		3.2		3.3
		Male	Female	Both sexes		Maternal mortality ratio[c] (per 100 000 live births)	Proportion of births attended by skilled health personnel[d] (%)	Under-five mortality rate[e] (per 1000 live births)	Neonatal mortality rate[e] (per 1000 live births)	New HIV infections among adults 15–49 years old[f] (per 1000 uninfected population)
	2015	2015			2015	2015	2006–2014	2015	2015	2014
Somalia	10 787	53.5	56.6	55.0	47.8	732	9	136.8	39.7	0.5
South Africa	54 490	59.3	66.2	62.9	54.5	138	94	40.5	11.0	12.7
South Sudan	12 340	56.1	58.6	57.3	49.9	789	17	92.6	39.3	2.6
Spain	46 122	80.1	85.5	82.8	72.4	5	–	4.1	2.8	–
Sri Lanka	20 715	71.6	78.3	74.9	67.0	30	99	9.8	5.4	<0.1
Sudan	40 235	62.4	65.9	64.1	55.9	311	20	70.1	29.8	0.2
Suriname	543	68.6	74.7	71.6	63.1	155	90	21.3	11.5	0.6
Swaziland	1 287	56.6	61.1	58.9	50.9	389	88[ab]	60.7	14.2	18.9
Sweden	9 779	80.7	84.0	82.4	72.0	4	–	3.0	1.6	<0.1
Switzerland	8 299	81.3	85.3	83.4	73.1	5	–	3.9	2.7	–
Syrian Arab Republic	18 502	59.9	69.9	64.5	56.1	68	96[ab]	12.9	7.0	<0.1
Tajikistan	8 482	66.6	73.6	69.7	62.1	32	87	44.8	20.5	0.4
Thailand	67 959	71.9	78.0	74.9	66.8	20	100	12.3	6.7	0.2
The former Yugoslav Republic of Macedonia	2 078	73.5	77.8	75.7	67.5	8	100	5.5	3.5	–
Timor-Leste	1 185	66.6	70.1	68.3	60.7	215	29[ab]	52.6	22.3	–
Togo	7 305	58.6	61.1	59.9	52.8	368	45	78.4	26.7	1.0
Tonga	106	70.6	76.4	73.5	66.0	124	96	16.7	6.9	–
Trinidad and Tobago	1 360	67.9	74.8	71.2	63.3	63	100[ab]	20.4	13.2	–
Tunisia	11 254	73.0	77.8	75.3	66.7	62	74	14.0	8.2	<0.1
Turkey	78 666	72.6	78.9	75.8	66.2	16	97[ab]	13.5	7.1	–
Turkmenistan	5 374	62.2	70.5	66.3	59.8	42	100	51.4	22.6	–
Tuvalu	10	–	–	–	–	–	93	27.1	17.6	–
Uganda	39 032	60.3	64.3	62.3	54.0	343	58	54.6	18.7	6.0
Ukraine	44 824	66.3	76.1	71.3	64.1	24	99	9.0	5.5	–
United Arab Emirates	9 157	76.4	78.6	77.1	67.9	6	100[ab]	6.8	3.5	–
United Kingdom	64 716	79.4	83.0	81.2	71.4	9	–	4.2	2.4	–
United Republic of Tanzania	53 470	59.9	63.8	61.8	54.1	398	49	48.7	18.8	2.6
United States of America	321 774	76.9	81.6	79.3	69.1	14	99	6.5	3.6	–
Uruguay	3 432	73.3	80.4	77.0	67.9	15	98	10.1	5.1	0.4
Uzbekistan	29 893	66.1	72.7	69.4	62.4	36	100	39.1	20.4	<0.1
Vanuatu	265	70.1	74.0	72.0	64.6	78	89	27.5	11.6	–
Venezuela (Bolivarian Republic of)	31 108	70.0	78.5	74.1	65.2	95	100	14.9	8.9	0.3
Viet Nam	93 448	71.3	80.7	76.0	66.6	54	94	21.7	11.4	0.3
Yemen	26 832	64.3	67.2	65.7	57.7	385	43	41.9	22.1	<0.1
Zambia	16 212	59.0	64.7	61.8	53.6	224	64	64.0	21.4	7.5
Zimbabwe	15 603	59.0	62.3	60.7	52.3	443	80	70.7	23.5	9.2
WHO region										
African Region	989 173	58.2	61.7	60.0	52.3	542	54	81.3	28.0	2.6
Region of the Americas	986 705	74.0	79.9	77.0	67.3	52	96	14.7	7.7	0.3
South-East Asia Region	1 928 174	67.3	70.7	68.9	60.5	164	59	42.5	24.3	0.2
European Region	910 053	73.2	80.2	76.8	68.0	16	99	11.3	6.0	0.4
Eastern Mediterranean Region	643 784	67.4	70.4	68.8	60.1	166	67	52.0	26.6	0.1
Western Pacific Region	1 855 126	74.5	78.7	76.6	68.7	41	95	13.5	6.7	0.1
Global	7 313 015	69.1	73.8	71.4	63.1	216	73	42.5	19.2	0.5

Health SDGs										
3.3				3.4		3.5	3.6	3.7		
TB incidence[g] (per 100 000 population)	Malaria incidence[h] (per 1000 population at risk)	Infants receiving three doses of hepatitis B vaccine[i] (%)	Reported number of people requiring interventions against NTDs[j]	Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70[k] (%)	Suicide mortality rate[k] (per 100 000 population)	Total alcohol per capita (>15 years of age) consumption, in litres of pure alcohol, projected estimates[l]	Road traffic mortality rate[m] (per 100 000 population)	Proportion of married or in-union women of reproductive age who have their need for family planning satisfied with modern methods[n] (%)	Adolescent birth rate[o] (per 1000 women aged 15–19 years)	
2014	2013	2014	2014	2012	2012	2015	2013	2005–2015	2005–2015	**Member State**
274	78.8	42	4 891 026	19.1	8.0	0.5	25.4	–	64.0	Somalia
834	5.0	74	6 645 340	26.8	2.7	11.5	25.1	–	54.0	South Africa
146	153.8	–	9 326 151	19.8	13.6	–	27.9	5.6	158.0	South Sudan
12	–	96	440	10.8	7.0	10.6	3.7	–	8.4	Spain
65	0.0	99	54 216	17.6	29.2	4.5	17.4	69.4	20.3	Sri Lanka
94	37.7	94	28 468 689	17.4	11.5	–	24.3	30.2	87.0	Sudan
38	12.6	85	51 774	13.6	28.3	6.5	19.1	73.2	65.3	Suriname
733	3.6	98	597 165	21.4	5.3	6.4	24.2	80.6	87.0	Swaziland
7.5	–	42	21	9.9	13.2	8.7	2.8	–	5.1	Sweden
6.3	–	–	–	9.1	12.2	10.4	3.3	–	2.0	Switzerland
17	0.0	71	43 885	19.1	0.4	1.4	20.0	53.3	54.0	Syrian Arab Republic
91	<0.1	97	120 617	28.8	3.2	2.4	18.8	50.8	54.0	Tajikistan
171	6.5	99	41 360	16.2	13.1	8.3	36.2	89.2	60.0	Thailand
15	–	97	27	22.1	6.7	5.7	9.4	22.3	18.7	The former Yugoslav Republic of Macedonia
498	89.7	77	1 108 842	23.7	5.4	1.2	16.6	38.3	50.0	Timor-Leste
58	378.9	87	4 613 894	20.2	3.7	1.9	31.1	32.2	85.0	Togo
14	–	82	36 738	–	–	2.1	7.6	47.9	30.0	Tonga
22	–	92	23 048	26.2	14.4	6.6	14.1	55.1	35.5	Trinidad and Tobago
33	–	98	3 737	17.2	2.4	1.2	24.4	73.2	6.7[ac]	Tunisia
18	4.3	96	1 215	18.4	8.0	2.4	8.9	59.7	29.0	Turkey
64	0.0	97	77	40.8	19.4	5.0	17.4	–	21.0	Turkmenistan
190	–	90	11 772	–	–	1.3	–	41.0	42.0	Tuvalu
161	231.8	78	25 344 345	21.2	11.9	10.5	27.4	44.7	140.0	Uganda
94	–	46	–	28.2	20.1	11.8	10.6	68.0	27.2	Ukraine
1.6	–	94	57	18.9	3.0	4.3	10.9	–	34.2	United Arab Emirates
12	–	–	159	12.0	7.0	12.0	2.9	–	19.3	United Kingdom
327	130.6	97	33 868 257	16.1	15.1	8.1	32.9	45.9	72.1	United Republic of Tanzania
3.1	–	90	712	14.3	13.7	9.0	10.6	83.4	26.6	United States of America
30	–	95	4	17.1	13.8	7.0	16.6	–	63.5	Uruguay
82	0.0	99	394 573	31.0	7.7	4.8	11.2	–	29.5	Uzbekistan
63	31.3	64	268 165	–	–	1.2	16.6	50.7	78.0	Vanuatu
24	40.7	78	219 026	15.7	2.6	8.3	45.1	–	94.5	Venezuela (Bolivarian Republic of)
140	0.9	95	8 965 475	17.4	5.1	8.7	24.5	69.7	36.0	Viet Nam
48	34.7	88	15 458 773	23.1	3.1	0.2	21.5	47.0	67.0	Yemen
406	214.2	86	11 466 594	18.1	9.6	4.0	24.7	63.8	145.0	Zambia
278	138.9	91	7 044 670	19.3	16.6	4.8	28.2	86.0	120.0	Zimbabwe
										WHO region
281	268.6	77	610 719 989	20.7	7.0	6.3	26.6	45.5	100.3	African Region
28	10.1	88	63 845 195	15.4	8.9	8.1	15.9	81.4	51.7	Region of the Americas
211	26.0	75	824 180 314	24.5	17.1	3.7	17.0	73.5	33.9	South-East Asia Region
37	<0.1	82	2 348 690	18.4	13.8	10.2	9.3	71.7	17.6	European Region
117	20.1	83	112 950 729	20.8	4.8	0.7	19.9	58.4	46.1	Eastern Mediterranean Region
85	4.2	92	96 316 570	18.0	9.9	7.6	17.3	89.7	15.3	Western Pacific Region
133	98.6	82	1 728 493 416	19.4	11.4	6.3	17.4	76.0	44.1	**Global**

ANNEX B PART 2

Member State	Health SDGs						
	3.9			3.a		3.c	3.d
	Mortality rate attributed to household and ambient air pollution[p] (per 100 000 population)	Mortality rate attributed to exposure to unsafe WASH services[q] (per 100 000 population)	Mortality rate from unintentional poisoning[k] (per 100 000 population)	Age-standardized prevalence of tobacco smoking among persons 15 years and older[r] (%)		Skilled health professionals density[s] (per 10 000 population)	Average of 13 International Health Regulations core capacity scores[t]
				Male	Female		
	2012	2012	2012	2015		2005–2013	2010–2015
Afghanistan	112.6	34.6	7.4	–	–	7.7	45
Albania	171.4	0.2	1.4	51.2	7.6	49.9	–
Algeria	31.5	2.4	1.1	–	–	31.5	73
Andorra	–	–	–	37.2	27.8	87.6	29
Angola	104.4	111.2	5.5	–	–	18.3	18
Antigua and Barbuda	–	–	–	–	–	–	88
Argentina	26.2	0.7	0.9	29.5	18.4	43.4	83
Armenia	125.4	1.1	0.4	52.3	1.5	75.3	96
Australia	0.4	<0.1	1.3	16.7	13.1	139.2	100
Austria	34.2	0.1	0.4	–	–	–	87
Azerbaijan	68.0	2.1	0.9	46.5	0.4	99.4	84
Bahamas	20.3	0.1	0.9	–	–	69.6	61
Bahrain	11.1	0.1	0.4	48.8	7.6	32.9	96
Bangladesh	68.2	6.0	5.7	39.8	0.7	5.7	88
Barbados	18.1	0.2	0.8	13.1	0.9	66.7	90
Belarus	103.8	0.2	4.4	46.2	10.6	145.6	90
Belgium	30.2	0.5	1.1	26.5	20.0	216.5	82
Belize	18.6	1.2	0.5	–	–	27.9	55
Benin	92.0	32.2	2.2	17.7	1.0	8.3	44
Bhutan	59.9	7.1	8.1	–	–	12.4	68
Bolivia (Plurinational State of)	52.0	7.0	1.7	30.5	17.1	14.8	71
Bosnia and Herzegovina	223.6	<0.1	7.5	47.2	30.0	75.3	55
Botswana	38.1	9.2	2.7	–	–	37.5	62
Brazil	21.3	1.1	0.1	19.3	11.3	94.9	99
Brunei Darussalam	0.2	<0.1	1.2	29.3	3.1	94.9	92
Bulgaria	174.8	<0.1	1.2	42.4	28.2	86.4	69
Burkina Faso	96.4	40.9	2.7	36.0	4.5	6.1	50
Burundi	106.0	68.4	7.0	–	–	–	56
Cabo Verde	58.2	4.5	0.3	22.2	3.5	8.6	58
Cambodia	71.4	5.6	1.0	44.1	2.8	9.6	52
Cameroon	89.6	40.9	2.7	43.8	0.9	5.2	91
Canada	5.4	0.6	2.0	17.7	12.2	113.6	99
Central African Republic	95.9	102.3	4.7	–	–	3.1	24
Chad	121.8	92.8	4.6	–	–	2.3	43
Chile	22.4	0.2	0.6	40.0	36.0	11.7	79
China	163.1	0.4	2.9	47.6	1.8	31.5	99
Colombia	23.6	0.8	0.3	16.0	6.2	20.9	86
Comoros	63.4	28.6	3.5	23.1	6.0	–	29
Congo	90.2	48.1	2.8	43.2	1.7	9.2	28
Cook Islands	–	–	–	–	–	77.8	63
Costa Rica	18.8	0.7	0.3	18.5	8.3	18.8	85
Côte d'Ivoire	89.8	44.1	3.2	–	–	6.3	87
Croatia	89.5	<0.1	0.9	39.4	33.5	–	71
Cuba	50.5	0.7	1.3	52.7	17.8	157.8	100
Cyprus	19.8	0.3	0.5	–	–	67.9	62
Czech Republic	59.5	0.5	1.1	37.4	29.0	–	91
Democratic People's Republic of Korea	234.1	1.4	3.3	–	–	–	73
Democratic Republic of the Congo	116.4	107.8	6.2	–	–	–	75
Denmark	20.3	0.8	1.1	17.6	16.4	202.7	91
Djibouti	40.5	26.4	3.7	–	–	10.3	46
Dominica	–	–	–	–	–	–	66
Dominican Republic	29.4	1.9	0.5	18.8	9.4	28.2	71
Ecuador	15.0	1.8	0.7	14.0	3.3	38.8	90

Selected health-related SDGs										
2.2			6.1	6.2	7.1	11.6	13.1	16.1		
Prevalence of stunting in children under 5[u] (%)	Prevalence of wasting in children under 5[u] (%)	Prevalence of overweight in children under 5[u] (%)	Proportion of population using improved drinking-water sources[v] (%)	Proportion of population using improved sanitation[v] (%)	Proportion of population with primary reliance on clean fuels[w] (%)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas[x] (µg/m3)	Average death rate due to natural disasters[y] (per 100 000 population)	Mortality rate due to homicide[z] (per 100 000 population)	Estimated direct deaths from major conflicts[aa] (per 100 000 population)	
2005–2015	2005–2015	2005–2015	2015	2015	2014	2014	2011–2015	2012	2011–2015	**Member State**
40.9	9.5	5.4	55	32	17	64.1	0.8	7.3	40.9	Afghanistan
23.1	9.4	23.4	95	93	67	17.1	0.0	5.0	<0.1	Albania
11.7	4.1	12.4	84	88	>95	26.0	<0.1	4.4	1.0	Algeria
–	–	–	100	100	>95[ae]	10.5	–	0.8	–	Andorra
29.2	8.2	–	49	52	48	42.8	0.1	10.7	0.0	Angola
–	–	–	98	–	>95	15.0	0.0	4.4	–	Antigua and Barbuda
8.2	1.2	9.9	99	96	>95	14.5	<0.1	6.0	0.0	Argentina
20.8	4.2	16.8	100	90	>95	25.1	0.0	2.1	0.0	Armenia
2.0	0.0	7.7	100	100	>95[ae]	5.8	<0.1	1.1	<0.1	Australia
–	–	–	100	100	>95[ae]	17.2	<0.1	0.9	<0.1	Austria
18.0	3.1	13.0	87	89	>95	26.4	0.0	2.4	0.3	Azerbaijan
–	–	–	98	92	>95[ae]	22.0	0.0	32.1	0.0	Bahamas
–	–	–	100	99	>95[ae]	60.1	0.0	0.8	2.0	Bahrain
36.1	14.3	1.4	87	61	10	89.7	<0.1	3.1	<0.1	Bangladesh
7.7	6.8	12.2	100	96	>95	16.2	0.0	9.8	0.0	Barbados
4.5	2.2	9.7	100	94	>95	18.1	0.0	6.2	<0.1	Belarus
–	–	–	100	100	>95[ae]	16.0	<0.1	1.1	<0.1	Belgium
19.3	3.3	7.9	100	91	87	20.7	0.0	44.7	0.0	Belize
34.0	4.5	1.7	78	20	7	27.9	<0.1	6.3	0.0	Benin
33.6	5.9	7.6	100	50	68	39.0	0.0	1.9	0.0	Bhutan
18.1	1.6	8.7	90	50	79	31.9	0.5	13.9	0.0	Bolivia (Plurinational State of)
8.9	2.3	17.4	100	95	40	56.0	0.1	3.4	<0.1	Bosnia and Herzegovina
31.4	7.2	11.2	96	63	63	19.3	0.1	12.4	0.0	Botswana
7.1	1.6	7.3	98	83	93	11.9	0.1	32.4	0.2	Brazil
19.7	2.9	8.3	–	–	>95[ae]	5.4	0.0	2.1	0.0	Brunei Darussalam
–	–	–	99	86	79	30.5	<0.1	1.9	<0.1	Bulgaria
32.9	10.9	2.8	82	20	7	36.9	<0.1	9.8	<0.1	Burkina Faso
57.5	6.1	2.9	76	48	<5	49.4	0.2	6.7	0.1	Burundi
–	–	–	92	72	71	–	0.0	8.8	0.0	Cabo Verde
32.4	9.6	2.0	76	42	13	25.0	0.7	2.4	<0.1	Cambodia
31.7	5.2	6.7	76	46	18	64.0	<0.1	11.7	1.2	Cameroon
–	–	–	100	100	>95[ae]	7.3	<0.1	1.8	<0.1	Canada
40.7	7.4	1.8	69	22	<5	56.2	0.0	13.5	25.6	Central African Republic
39.9	13.0	2.5	51	12	<5	61.8	<0.1	9.4	0.1	Chad
1.8	0.3	9.3	99	99	>95	25.5	<0.1	4.6	<0.1	Chile
9.4	2.3	6.6	96	77	57	61.8	<0.1	1.1	<0.1	China
12.7	0.9	4.8	91	81	91	18.4	0.2	43.9	0.8	Colombia
32.1	11.1	10.9	90	36	7	7.0	0.1	8.0	0.0	Comoros
21.2	8.2	5.9	77	15	18	57.6	<0.1	10.4	0.0	Congo
–	–	–	100	98	80	0.0	–	3.1	–	Cook Islands
5.6	1.0	8.1	98	95	>95	19.2	<0.1	8.5	0.0	Costa Rica
29.6	7.6	3.2	82	23	18	19.3	<0.1	12.2	0.5	Côte d'Ivoire
–	–	–	100	97	94	20.5	<0.1	1.3	0.0	Croatia
–	–	–	95	93	87	16.5	<0.1	5.0	0.0	Cuba
–	–	–	100	100	>95[ae]	17.2	0.0	2.0	0.0	Cyprus
–	–	–	100	99	>95	20.9	<0.1	0.9	<0.1	Czech Republic
27.9	4.0	0.0	100	82	7	31.6	0.2	4.7	0.0	Democratic People's Republic of Korea
42.6	8.1	4.4	52	29	6	63.2	<0.1	13.3	1.8	Democratic Republic of the Congo
–	–	–	100	100	>95[ae]	10.5	<0.1	0.9	<0.1	Denmark
33.5	21.5	8.1	90	47	10	46.0	0.0	7.0	0.1	Djibouti
–	–	–	–	–	92	16.3	–	6.8	–	Dominica
7.1	2.4	7.6	85	84	92	17.0	<0.1	25.4	0.0	Dominican Republic
25.2	2.3	7.5	87	85	>95	13.5	<0.1	13.8	<0.1	Ecuador

ANNEX B PART 2

Member State	Health SDGs						
	3.9			3.a		3.c	3.d
	Mortality rate attributed to household and ambient air pollution[p] (per 100 000 population)	Mortality rate attributed to exposure to unsafe WASH services[q] (per 100 000 population)	Mortality rate from unintentional poisoning[k] (per 100 000 population)	Age-standardized prevalence of tobacco smoking among persons 15 years and older[r] (%)		Skilled health professionals density[s] (per 10 000 population)	Average of 13 International Health Regulations core capacity scores[t]
				Male	Female		
	2012	2012	2012	2015		2005–2013	2010–2015
Egypt	52.1	1.6	2.1	49.9	0.3	63.5	93
El Salvador	44.6	2.4	0.5	–	–	20.0	93
Equatorial Guinea	98.3	57.3	5.0	–	–	–	27
Eritrea	75.8	34.9	4.7	–	–	–	73
Estonia	54.2	<0.1	0.8	41.2	24.9	96.2	72
Ethiopia	56.8	29.6	3.5	8.9	0.5	2.8	78
Fiji	76.9	3.0	4.7	38.7	12.4	26.7	98
Finland	6.0	0.2	1.5	23.2	18.5	137.7	96
France	17.2	0.5	2.0	29.8	25.6	124.9	94
Gabon	47.0	28.1	1.8	–	–	–	48
Gambia	70.9	21.0	1.8	–	–	9.7	33
Georgia	292.3	0.2	0.9	57.7	5.7	74.9	81
Germany	32.5	0.9	0.3	32.4	28.3	136.1	99
Ghana	80.8	20.0	2.2	13.1	0.4	10.2	69
Greece	45.1	<0.1	0.8	52.6	32.7	–	76
Grenada	–	–	–	–	–	44.9	66
Guatemala	42.5	9.2	1.2	–	–	18.3	87
Guinea	87.9	40.7	3.1	–	–	1.4	57
Guinea-Bissau	105.2	48.9	3.0	–	–	6.6	50
Guyana	42.7	4.0	0.7	–	–	7.5	85
Haiti	112.6	28.5	1.9	22.1	2.5	–	48
Honduras	53.2	7.9	0.3	33.3	2.1	14.5	75
Hungary	123.0	0.0	0.9	32.0	24.8	95.6	91
Iceland	6.4	<0.1	0.5	17.0	15.1	190.7	84
India	130.0	27.4	3.2	20.4	1.9	24.1	94
Indonesia	83.9	3.6	1.1	76.2	3.6	15.9	96
Iran (Islamic Republic of)	35.3	0.9	2.5	21.5	0.7	23.0	85
Iraq	32.2	3.9	0.7	–	–	6.1	91
Ireland	17.3	0.3	1.5	22.4[af]	21.9[af]	178.7	78
Israel	15.8	0.5	0.1	41.2	19.3	83.0	71
Italy	35.3	0.1	0.6	28.3	19.7	92.0	77
Jamaica	42.9	1.9	1.0	29.9	5.9	15.0	81
Japan	24.2	0.1	0.8	33.7[af]	10.6[af]	137.9	100
Jordan	21.7	1.0	1.2	70.2	10.7	66.1	97
Kazakhstan	93.3	1.2	6.3	43.9	9.3	118.7	78
Kenya	57.1	32.5	3.8	24.6	2.1	10.6	69
Kiribati	–	–	–	63.9	40.9	40.8	60
Kuwait	14.2	<0.1	0.5	–	–	63.4	86
Kyrgyzstan	99.5	1.8	2.7	50.4	3.6	81.9	50
Lao People's Democratic Republic	107.6	13.9	1.0	56.6	9.1	10.6	74
Latvia	115.1	<0.1	2.4	48.9	24.3	70.1	90
Lebanon	29.7	0.4	0.7	45.4	31.0	59.2	76
Lesotho	74.5	28.3	2.2	55.1	0.4	–	63
Liberia	69.9	25.0	1.9	27.6	2.4	2.9	26
Libya	33.2	0.6	1.4	–	–	87.0	64
Lithuania	73.4	<0.1	5.3	38.1	22.2	41.2	83
Luxembourg	19.8	0.1	0.9	25.8	21.4	155.1	88
Madagascar	84.4	26.6	4.1	–	–	4.8	29
Malawi	72.0	26.1	3.3	25.4	6.0	3.6	40
Malaysia	22.4	0.4	0.7	43.0	1.4	44.7	99
Maldives	20.5	0.6	0.3	–	–	64.5	61
Mali	116.0	61.1	4.1	36.8	3.2	5.1	55
Malta	31.1	<0.1	0.3	29.7	20.2	109.8	76
Marshall Islands	–	–	–	–	–	21.8	51
Mauritania	64.5	28.9	1.8	44.0	3.7	8.0	29
Mauritius	21.2	0.9	0.3	40.1	3.3	–	68

Selected health-related SDGs										
2.2			6.1	6.2	7.1	11.6	13.1	16.1		
Prevalence of stunting in children under 5[u] (%)	Prevalence of wasting in children under 5[u] (%)	Prevalence of overweight in children under 5[u] (%)	Proportion of population using improved drinking-water sources[v] (%)	Proportion of population using improved sanitation[v] (%)	Proportion of population with primary reliance on clean fuels[w] (%)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas[x] (µg/m3)	Average death rate due to natural disasters[y] (per 100 000 population)	Mortality rate due to homicide[z] (per 100 000 population)	Estimated direct deaths from major conflicts[aa] (per 100 000 population)	
2005–2015	2005–2015	2005–2015	2015	2015	2014	2014	2011–2015	2012	2011–2015	**Member State**
22.3	9.5	15.7	99	95	>95	101.8	0.0	5.1	0.4	Egypt
14.0	2.0	6.0	94	75	83	37.1	0.1	43.9	0.0	El Salvador
26.2	3.1	9.7	48	75	22	32.0	0.0	3.5	0.0	Equatorial Guinea
50.3	15.3	1.9	58	16	14	35.7	0.0	7.7	<0.1	Eritrea
–	–	–	100	97	92	8.5	0.0	5.4	<0.1	Estonia
40.4	8.7	2.6	57	28	<5	36.7	0.0	8.0	0.2	Ethiopia
–	–	–	96	91	37	11.4	0.4	2.3	0.0	Fiji
–	–	–	100	98	>95[ae]	7.1	0.0	1.4	<0.1	Finland
–	–	–	100	99	>95[ae]	12.7	<0.1	1.0	<0.1	France
17.5	3.4	7.7	93	42	73	35.9	0.0	9.3	0.0	Gabon
25.0	11.1	3.2	90	59	<5	43.0	<0.1	9.4	0.0	Gambia
11.3	1.6	19.9	100	86	55	23.3	0.2	4.8	<0.1	Georgia
1.3	1.0	3.5	100	99	>95[ae]	14.5	<0.1	0.8	<0.1	Germany
18.8	4.7	2.6	89	15	21	22.2	0.2	10.0	0.0	Ghana
–	–	–	100	99	>95[ae]	12.7	<0.1	1.6	<0.1	Greece
–	–	–	97	98	>95	17.0	0.0	6.2	–	Grenada
48.0	1.1	4.9	93	64	36	33.7	0.2	39.9	0.2	Guatemala
31.3	9.9	3.8	77	20	6	19.4	0.0	8.8	0.2	Guinea
27.6	6.0	2.3	79	21	<5	28.9	0.0	10.1	<0.1	Guinea-Bissau
12.0	6.4	5.3	98	84	61	16.2	0.0	20.2	0.0	Guyana
21.9	5.2	3.6	58	28	9	24.6	0.4	26.6	0.0	Haiti
22.7	1.4	5.2	91	83	48	40.3	<0.1	103.9	<0.1	Honduras
–	–	–	100	98	>95[ae]	22.9	0.0	1.5	0.0	Hungary
–	–	–	100	99	>95[ae]	7.7	0.0	0.6	0.0	Iceland
38.7	15.1	1.9	94	40	34	73.6	0.2	4.3	<0.1	India
36.4	13.5	11.5	87	61	57	18.1	<0.1	4.7	<0.1	Indonesia
6.8	4.0	–	96	90	>95	41.1	0.1	4.8	0.1	Iran (Islamic Republic of)
22.6	7.4	11.8	87	86	>95	52.0	<0.1	18.6	83.6	Iraq
–	–	–	98	91	>95[ae]	10.0	<0.1	1.2	<0.1	Ireland
–	–	–	100	100	>95[ae]	19.3	<0.1	2.1	0.3	Israel
–	–	–	100	100	>95[ae]	18.6	<0.1	0.9	0.0	Italy
5.7	3.0	7.8	94	82	93	17.2	0.0	45.1	0.0	Jamaica
7.1	2.3	1.5	100	100	>95[ae]	13.0	3.4	0.4	<0.1	Japan
7.8	2.4	4.7	97	99	>95	38.3	0.0	2.9	<0.1	Jordan
13.1	4.1	13.3	93	98	92	21.9	<0.1	9.2	<0.1	Kazakhstan
26.0	4.0	4.1	63	30	6	16.9	0.1	7.4	0.6	Kenya
–	–	–	67	40	<5	–	0.0	8.2	–	Kiribati
5.8	2.4	8.7	99	100	>95[ae]	78.8	0.0	3.1	0.1	Kuwait
12.9	2.8	7.0	90	93	76	15.7	0.0	9.1	<0.1	Kyrgyzstan
43.8	6.4	2.0	76	71	<5	33.6	0.2	7.1	0.0	Lao People's Democratic Republic
–	–	–	99	88	>95	20.2	0.0	7.0	0.0	Latvia
–	–	–	99	81	>95	31.3	0.0	5.4	3.8	Lebanon
33.2	2.8	7.4	82	30	32	21.7	0.2	37.5	0.0	Lesotho
32.1	5.6	3.2	76	17	<5	6.1	0.0	11.2	0.0	Liberia
21.0	6.5	22.4	–	97	–	58.5	<0.1	2.6	19.6	Libya
–	–	–	97	92	>95[ae]	19.5	0.0	6.7	0.0	Lithuania
–	–	–	100	98	>95[ae]	16.6	0.0	0.2	0.0	Luxembourg
49.2	–	–	52	12	<5	32.4	0.2	8.1	<0.1	Madagascar
42.4	3.8	5.1	90	41	<5	25.6	0.2	2.0	0.0	Malawi
17.2	–	–	98	96	>95	16.7	<0.1	4.3	<0.1	Malaysia
20.3	10.2	6.5	99	98	>95	–	0.0	3.5	0.0	Maldives
38.5	15.3	4.7	77	25	<5	34.8	<0.1	11.0	3.7	Mali
–	–	–	100	100	>95[ae]	14.5	0.0	2.8	0.0	Malta
–	–	–	95	77	41	–	–	4.7	–	Marshall Islands
22.0	11.6	1.2	58	40	45	86.2	<0.1	11.3	0.3	Mauritania
–	–	–	100	93	>95	14.3	0.2	2.7	0.0	Mauritius

ANNEX B PART 2

Member State	Health SDGs						
	3.9			3.a		3.c	3.d
	Mortality rate attributed to household and ambient air pollution[p] (per 100 000 population)	Mortality rate attributed to exposure to unsafe WASH services[q] (per 100 000 population)	Mortality rate from unintentional poisoning[k] (per 100 000 population)	Age-standardized prevalence of tobacco smoking among persons 15 years and older[r] (%)		Skilled health professionals density[s] (per 10 000 population)	Average of 13 International Health Regulations core capacity scores[t]
				Male	Female		
	2012	2012	2012	2015		2005–2013	2010–2015
Mexico	24.1	1.1	0.8	20.8	6.6	46.2	97
Micronesia (Federated States of)	–	–	–	–	–	35.0	64
Monaco	–	–	–	–	–	243.8	79
Mongolia	132.2	3.1	3.8	47.7	5.3	64.6	86
Montenegro	123.5	<0.1	1.0	–	–	75.3	59
Morocco	28.8	3.4	1.1	45.4	1.4	15.1	95
Mozambique	65.1	37.9	8.1	31.4	5.9	4.5	69
Myanmar	127.4	10.4	1.1	31.6	6.4	16.2	86
Namibia	47.9	9.8	1.1	38.9	11.4	31.5	66
Nauru	–	–	–	43.0	52.0	56.4	42
Nepal	104.2	12.9	5.9	37.1	11.1	–	77
Netherlands	24.0	0.2	0.2	26.2	23.3	–	95
New Zealand	0.5	0.6	0.4	17.2	15.4	136.1	98
Nicaragua	62.3	3.5	0.5	–	–	22.6	78
Niger	109.7	69.2	4.0	18.6	0.2	1.6	79
Nigeria	90.4	50.9	2.4	17.4	1.1	20.1	67
Niue	–	–	–	20.3	11.4	190.0	61
Norway	12.7	0.5	1.0	22.4	22.1	215.5	98
Oman	13.5	0.4	0.4	21.0	1.0	78.1	96
Pakistan	88.8	20.7	5.4	41.9	3.0	14.0	43
Palau	–	–	–	–	–	71.0	91
Panama	25.4	4.1	0.6	10.6	2.6	30.5	70
Papua New Guinea	44.3	12.4	11.9	–	–	6.2	64
Paraguay	56.6	2.3	0.3	28.3	7.9	22.3	83
Peru	32.6	1.3	0.7	21.5	5.9	26.5	89
Philippines	82.7	5.1	0.2	43.0	8.5	–	89
Poland	68.9	<0.1	1.7	32.4	23.7	83.8	74
Portugal	16.8	0.1	0.4	31.5	13.7	102.1	95
Qatar	9.0	<0.1	0.6	–	–	196.1	97
Republic of Korea	23.7	0.2	0.6	49.8[af]	4.2[af]	71.5	100
Republic of Moldova	114.5	<0.1	5.0	45.7	5.4	93.8	80
Romania	138.2	<0.1	2.3	36.9	22.7	80.6	78
Russian Federation	110.0	0.2	6.4	59.0	22.8	–	87
Rwanda	68.3	19.4	3.3	–	–	7.5	46
Saint Kitts and Nevis	–	–	–	–	–	–	60
Saint Lucia	–	–	–	–	–	21.3	58
Saint Vincent and the Grenadines	–	–	–	–	–	–	35
Samoa	–	–	–	41.0	18.9	23.0	75
San Marino	–	–	–	–	–	139.3	40
Sao Tome and Principe	–	–	–	–	–	–	18
Saudi Arabia	28.1	0.2	0.8	27.9	2.9	73.6	99
Senegal	43.2	25.4	1.5	23.4	0.7	4.8	30
Serbia	137.2	0.3	0.6	43.6	39.7	21.1	47
Seychelles	–	–	–	43.0	8.8	58.8	87
Sierra Leone	142.3	90.4	5.7	60.0	12.0	1.9	64
Singapore	20.5	0.1	0.2	28.0	5.0	77.1	99
Slovakia	66.3	<0.1	0.7	39.7	17.6	93.9	96
Slovenia	41.9	<0.1	1.0	22.3	18.1	109.8	75
Solomon Islands	52.9	10.4	5.2	–	–	22.8	57
Somalia	116.8	98.8	10.0	–	–	1.5	6
South Africa	44.2	12.1	2.5	31.4	6.5	58.9	100
South Sudan	95.0	50.0	6.9	–	–	–	50
Spain	14.7	0.3	0.9	31.3	27.1	106.1	92
Sri Lanka	119.4	3.3	0.4	28.4	0.4	23.2	71
Sudan	64.3	34.6	5.6	–	–	11.2	71
Suriname	22.7	0.8	0.6	–	–	–	72

Selected health-related SDGs										
2.2			6.1	6.2	7.1	11.6	13.1	16.1		
Prevalence of stunting in children under 5[u] (%)	Prevalence of wasting in children under 5[u] (%)	Prevalence of overweight in children under 5[u] (%)	Proportion of population using improved drinking-water sources[v] (%)	Proportion of population using improved sanitation[v] (%)	Proportion of population with primary reliance on clean fuels[w] (%)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas[x] (µg/m3)	Average death rate due to natural disasters[y] (per 100 000 population)	Mortality rate due to homicide[z] (per 100 000 population)	Estimated direct deaths from major conflicts[aa] (per 100 000 population)	
2005–2015	2005–2015	2005–2015	2015	2015	2014	2014	2011–2015	2012	2011–2015	**Member State**
13.6	1.6	9.0	96	85	86	20.6	<0.1	22.0	1.1	Mexico
–	–	–	89	57	25	8.0	1.3	4.6	–	Micronesia (Federated States of)
–	–	–	100	100	>95[ae]	10.0	–	1.1	–	Monaco
10.8	1.0	10.5	64	60	32	33.5	0.0	10.1	0.0	Mongolia
9.4	2.8	22.3	100	96	74	24.3	0.0	2.8	0.0	Montenegro
14.9	2.3	10.7	85	77	>95	19.3	<0.1	2.5	<0.1	Morocco
43.1	6.1	7.9	51	21	<5	22.4	0.2	3.4	<0.1	Mozambique
35.1	7.9	2.6	81	80	9	56.7	0.1	4.2	1.6	Myanmar
23.1	7.1	4.1	91	34	46	18.8	0.9	19.7	0.0	Namibia
24.0	1.0	2.8	97	66	>95	–	–	1.3	–	Nauru
37.4	11.3	2.1	92	46	26	75.7	7.2	3.3	<0.1	Nepal
–	–	–	100	98	>95[ae]	14.9	<0.1	0.9	0.0	Netherlands
–	–	–	100	–	>95[ae]	5.3	0.9	1.2	0.0	New Zealand
23.0	1.5	6.2	87	68	49	26.1	0.2	13.0	<0.1	Nicaragua
43.0	18.7	3.0	58	11	<5	51.8	0.2	10.3	0.2	Niger
32.9	7.9	1.8	69	29	<5	38.9	<0.1	10.1	3.1	Nigeria
–	–	–	99	100	91	–	–	2.8	–	Niue
–	–	–	100	98	>95[ae]	9.1	<0.1	0.6	0.3	Norway
14.1	7.5	4.4	93	97	>95[ae]	47.4	<0.1	4.8	0.0	Oman
45.0	10.5	4.8	91	64	45	68.7	0.4	8.9	4.2	Pakistan
–	–	–	–	100	58	–	–	3.1	–	Palau
19.1	1.2	–	95	75	86	12.8	<0.1	19.3	0.0	Panama
49.5	14.3	13.8	40	19	31	12.1	0.2	10.8	0.2	Papua New Guinea
10.9	2.6	11.7	98	89	64	17.0	<0.1	9.7	<0.1	Paraguay
14.6	0.6	7.2	87	76	68	37.0	0.1	11.0	<0.1	Peru
30.3	7.9	5.0	92	74	45	27.6	2.5	12.4	1.1	Philippines
–	–	–	98	97	>95[ae]	25.8	<0.1	1.1	0.0	Poland
–	–	–	100	100	>95[ae]	9.6	<0.1	1.4	0.0	Portugal
–	–	–	100	98	>95	105.3	0.0	7.1	0.0	Qatar
2.5	1.2	7.3	–	100	>95	27.9	<0.1	2.0	0.0	Republic of Korea
6.4	1.9	4.9	88	76	93	17.1	0.0	7.5	0.0	Republic of Moldova
–	–	–	100	79	82	20.4	<0.1	2.1	0.0	Romania
–	–	–	97	72	>95	17.1	<0.1	13.1	0.5	Russian Federation
37.9	2.2	7.7	76	62	<5	50.6	<0.1	5.8	0.7	Rwanda
–	–	–	98	–	>95[ae]	0.0	–	13.8	–	Saint Kitts and Nevis
2.5	3.7	6.3	96	91	>95	18.2	0.7	15.3	–	Saint Lucia
–	–	–	95	–	>95	–	2.2	14.0	–	Saint Vincent and the Grenadines
–	–	–	99	92	27	–	2.4	3.7	–	Samoa
–	–	–	–	–	>95[ae]	–	–	0.7	–	San Marino
17.2	4.0	2.4	97	35	30	–	0.0	7.2	–	Sao Tome and Principe
9.3	11.8	6.1	97	100	>95	131.6	<0.1	6.5	<0.1	Saudi Arabia
19.4	5.8	1.3	79	48	36	43.7	<0.1	7.9	0.1	Senegal
6.0	3.9	13.9	99	96	71	21.5	0.1	1.6	<0.1	Serbia
7.9	4.3	10.2	96	98	>95	5.0	0.0	9.5	–	Seychelles
37.9	9.4	8.9	63	13	<5	16.8	<0.1	13.0	0.0	Sierra Leone
–	–	–	100	100	>95[ae]	17.0	0.0	0.6	0.0	Singapore
–	–	–	100	99	>95	20.3	0.0	1.4	0.0	Slovakia
–	–	–	100	99	>95	19.4	<0.1	0.7	0.0	Slovenia
32.8	4.3	2.5	81	30	9	–	2.0	4.9	0.0	Solomon Islands
25.3	15.0	3.0	–	–	9	16.9	0.4	5.5	35.8	Somalia
23.9	4.7	–	93	66	82	32.6	<0.1	35.7	<0.1	South Africa
31.1	22.7	6.0	59	7	<5	32.5	0.3	4.8	21.1	South Sudan
–	–	–	100	100	>95[ae]	10.0	<0.1	0.8	<0.1	Spain
14.7	21.4	0.6	96	95	19	28.6	0.4	3.8	<0.1	Sri Lanka
38.2	16.3	3.0	–	–	23	53.1	0.1	6.5	7.0	Sudan
8.8	5.0	4.0	95	79	91	16.3	0.0	9.4	0.0	Suriname

ANNEX B PART 2

Member State	Health SDGs						
	3.9			3.a		3.c	3.d
	Mortality rate attributed to household and ambient air pollution[p] (per 100 000 population)	Mortality rate attributed to exposure to unsafe WASH services[q] (per 100 000 population)	Mortality rate from unintentional poisoning[k] (per 100 000 population)	Age-standardized prevalence of tobacco smoking among persons 15 years and older[r] (%)		Skilled health professionals density[s] (per 10 000 population)	Average of 13 International Health Regulations core capacity scores[t]
				Male	Female		
	2012	2012	2012	2015		2005–2013	2010–2015
Swaziland	62.7	22.7	2.5	19.0	2.2	17.7	56
Sweden	0.4	1.1	1.0	20.4	20.8	149.7	92
Switzerland	18.5	0.3	1.2	26.9	19.7	214.1	91
Syrian Arab Republic	30.9	1.8	0.5	–	–	33.2	63
Tajikistan	97.6	7.5	1.7	–	–	69.4	94
Thailand	65.3	1.9	0.1	41.4	2.3	24.7	98
The former Yugoslav Republic of Macedonia	128.9	<0.1	0.6	–	–	26.2	86
Timor-Leste	89.6	10.3	0.8	–	–	11.9	71
Togo	81.0	37.9	2.8	–	–	3.3	74
Tonga	–	–	–	47.3	13.0	44.5	74
Trinidad and Tobago	27.9	0.2	0.3	–	–	47.4	71
Tunisia	43.7	0.8	1.2	–	–	45.0	65
Turkey	51.0	0.8	0.7	39.5	12.4	41.1	78
Turkmenistan	72.9	5.8	1.9	–	–	–	84
Tuvalu	–	–	–	–	–	69.1	89
Uganda	70.0	30.3	5.1	16.4	2.9	14.2	73
Ukraine	139.1	0.4	5.7	49.4	14.0	112.1	99
United Arab Emirates	7.5	<0.1	0.6	–	–	56.9	97
United Kingdom	25.7	0.4	1.0	19.9[af]	18.4[af]	116.1	–[ag]
United Republic of Tanzania	50.5	27.6	6.6	27.5	3.8	4.7	67
United States of America	12.1	0.6	4.3	19.5[af]	15.0[af]	122.7	91
Uruguay	22.7	0.3	0.9	26.7	19.4	92.8	84
Uzbekistan	83.2	2.4	1.1	24.9	1.3	144.7	83
Vanuatu	–	–	–	–	–	18.1	43
Venezuela (Bolivarian Republic of)	20.9	1.3	0.6	–	–	–	95
Viet Nam	84.0	2.0	0.9	47.1	1.3	24.3	99
Yemen	57.4	13.0	4.2	–	–	8.7	46
Zambia	64.1	24.5	7.9	26.5	4.6	9.6	92
Zimbabwe	52.6	27.1	4.4	31.2	2.1	14.2	68
WHO region							
African Region	77.4	43.1	3.8	–	–	12.7	57
Region of the Americas	21.7	1.5	1.8	–	–	32.3	78
South-East Asia Region	117.1	20.1	3.0	–	–	12.5	80
European Region	64.9	0.6	2.3	–	–	71.9	80
Eastern Mediterranean Region	59.3	13.1	3.5	–	–	18.9	74
Western Pacific Region	134.8	0.8	2.4	–	–	34.7	78
Global	91.7	12.4	2.7	–	–	25.0	73

Selected health-related SDGs										
2.2			6.1	6.2	7.1	11.6	13.1	16.1		
Prevalence of stunting in children under 5[u] (%)	Prevalence of wasting in children under 5[u] (%)	Prevalence of overweight in children under 5[u] (%)	Proportion of population using improved drinking-water sources[v] (%)	Proportion of population using improved sanitation[v] (%)	Proportion of population with primary reliance on clean fuels[w] (%)	Annual mean concentrations of fine particulate matter ($PM_{2.5}$) in urban areas[x] (µg/m3)	Average death rate due to natural disasters[y] (per 100 000 population)	Mortality rate due to homicide[z] (per 100 000 population)	Estimated direct deaths from major conflicts[aa] (per 100 000 population)	
2005–2015	2005–2015	2005–2015	2015	2015	2014	2014	2011–2015	2012	2011–2015	**Member State**
25.5	2.0	9.0	74	58	35	19.9	0.2	19.4	0.0	Swaziland
–	–	–	100	99	>95[ae]	5.9	<0.1	0.8	0.0	Sweden
–	–	–	100	100	>95[ae]	12.6	<0.1	0.6	0.0	Switzerland
27.5	11.5	17.9	90	96	>95	34.3	0.0	2.5	309.1	Syrian Arab Republic
26.8	9.9	6.6	74	95	72	51.2	<0.1	1.8	0.1	Tajikistan
16.3	6.7	10.9	98	93	76	27.5	0.3	5.5	0.7	Thailand
4.9	1.8	12.4	99	91	61	43.0	0.0	1.8	0.3	The former Yugoslav Republic of Macedonia
50.2	11.0	1.5	72	41	<5	15.0	0.0	4.9	0.0	Timor-Leste
27.5	6.7	2.0	63	12	6	25.9	0.0	9.3	0.0	Togo
8.1	5.2	17.3	100	91	63	–	0.0	4.7	–	Tonga
–	–	–	95	92	>95	13.2	0.0	35.3	0.0	Trinidad and Tobago
10.1	2.8	14.3	98	92	>95	36.4	0.0	1.8	0.3	Tunisia
9.5	1.7	10.9	100	95	–	35.7	0.2	2.7	0.8	Turkey
18.9	7.2	4.5	–	–	>95	26.3	0.0	4.3	<0.1	Turkmenistan
10.0	3.3	6.3	98	–	30	–	–	4.2	–	Tuvalu
34.2	4.3	5.8	79	19	<5	80.3	<0.1	12.0	1.9	Uganda
–	–	–	96	96	>95	17.0	<0.1	5.2	6.2	Ukraine
–	–	–	100	98	>95	64.5	0.0	4.1	<0.1	United Arab Emirates
–	–	–	100	99	>95[ae]	12.5	<0.1	1.5	<0.1	United Kingdom
34.7	3.8	5.2	56	16	<5	24.1	<0.1	8.0	<0.1	United Republic of Tanzania
2.1	0.5	6.0	99	100	>95[ae]	8.5	<0.1	5.4	<0.1	United States of America
10.7	1.3	7.2	100	96	>95	11.6	0.0	7.9	0.0	Uruguay
19.6	4.5	12.8	–	100	90	39.1	<0.1	3.2	0.0	Uzbekistan
28.5	4.4	4.6	95	58	16	13.0	0.9	2.9	–	Vanuatu
13.4	4.1	6.4	93	94	>95	24.3	<0.1	57.6	<0.1	Venezuela (Bolivarian Republic of)
19.4	5.7	4.6	98	78	51	28.7	0.1	4.0	0.0	Viet Nam
46.8	16.2	2.5	–	–	62	42.2	<0.1	5.4	14.3	Yemen
40.0	6.3	6.2	65	44	16	29.6	0.0	10.5	0.0	Zambia
27.6	3.3	3.6	77	37	31	24.1	0.2	15.1	<0.1	Zimbabwe
										WHO region
37.8	9.3	5.2	68	32	16	36.7	<0.1	10.9	1.4	African Region
6.9	1.0	7.6	96	89	92	14.5	<0.1	19.4	0.2	Region of the Americas
32.9	13.5	5.1	92	49	35	60.2	0.3	4.3	0.1	South-East Asia Region
7.4	1.5	13.0	99	93	>95	18.4	<0.1	3.8	0.5	European Region
25.6	9.2	6.9	91	78	71	62.9	0.2	6.8	19.5	Eastern Mediterranean Region
6.3	2.3	5.2	95	79	61	49.2	0.4	2.0	<0.1	Western Pacific Region
23.2	7.4	6.2	91	68	57	38.4	0.2	6.7	2.0	**Global**

a. World Population Prospects, the 2015 revision (WPP2015). New York (NY): United Nations DESA, Population Division.

b. WHO annual life tables for 1985–2015 based on the WPP2015, on the data held in the WHO Mortality Database and on HIV mortality estimates prepared by UNAIDS. WHO Member States with a population of less than 90 000 in 2015 were not included in the analysis.

c. WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Trends in maternal mortality: 1990 to 2015. Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization; 2015 (http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/, accessed 25 March 2016). WHO Member States with a population of less than 100 000 in 2015 were not included in the analysis.

d. WHO global database on maternal health indicators, 2016 update [online database]. Geneva: World Health Organization (http://www.who.int/gho/maternal_health/en/). Regional averages are estimates for the year 2013 based on comparable definition. For more details of these estimates see: WHO, World Bank. Tracking Universal Health Coverage: First global monitoring report. Geneva: World Health Organization; 2015.

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i. WHO/UNICEF coverage estimates 2014 revision. July 2015 (see: http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html).

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ab. Non-standard definition. For more details see the WHO Global Health Observatory at: http://www.who.int/gho/en/.

ac. Updated, unpublished estimates.

ad. Provisional estimate.

ae. For high-income countries with no information on clean fuel use, usage is assumed to be >95%.

af. Cigarettes use only.

ag. Data provided in a format that could not be included in the analysis.

ANNEX C

WHO REGIONAL GROUPINGS[1]

WHO African Region: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea*, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, South Sudan*, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

WHO Region of the Americas: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, United States of America, Uruguay, Venezuela (Bolivarian Republic of).

WHO South-East Asia Region: Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste*.

WHO European Region: Albania, Andorra*, Armenia*, Austria, Azerbaijan*, Belarus, Belgium, Bosnia and Herzegovina*, Bulgaria, Croatia*, Cyprus, Czech Republic*, Denmark, Estonia*, Finland, France, Georgia*, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakhstan*, Kyrgyzstan*, Latvia*, Lithuania*, Luxembourg, Malta, Monaco, Montenegro*, Netherlands, Norway, Poland, Portugal, Republic of Moldova*, Romania, Russian Federation, San Marino, Serbia*, Slovakia*, Slovenia*, Spain, Sweden, Switzerland, Tajikistan*, The former Yugoslav Republic of Macedonia*, Turkey, Turkmenistan*, Ukraine, the United Kingdom, Uzbekistan*.

WHO Eastern Mediterranean Region: Afghanistan, Bahrain, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

WHO Western Pacific Region: Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands*, Micronesia (Federated States of)*, Mongolia, Nauru*, New Zealand, Niue*, Palau*, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu*, Vanuatu, Viet Nam.

1 Member States indicated with an * may have data for periods prior to their official membership of WHO.

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