EGM ON THE INDICATOR FRAMEWORK   **ESA/STAT/441/2/58A/6**
25-26 February 2015   **English only**
New York

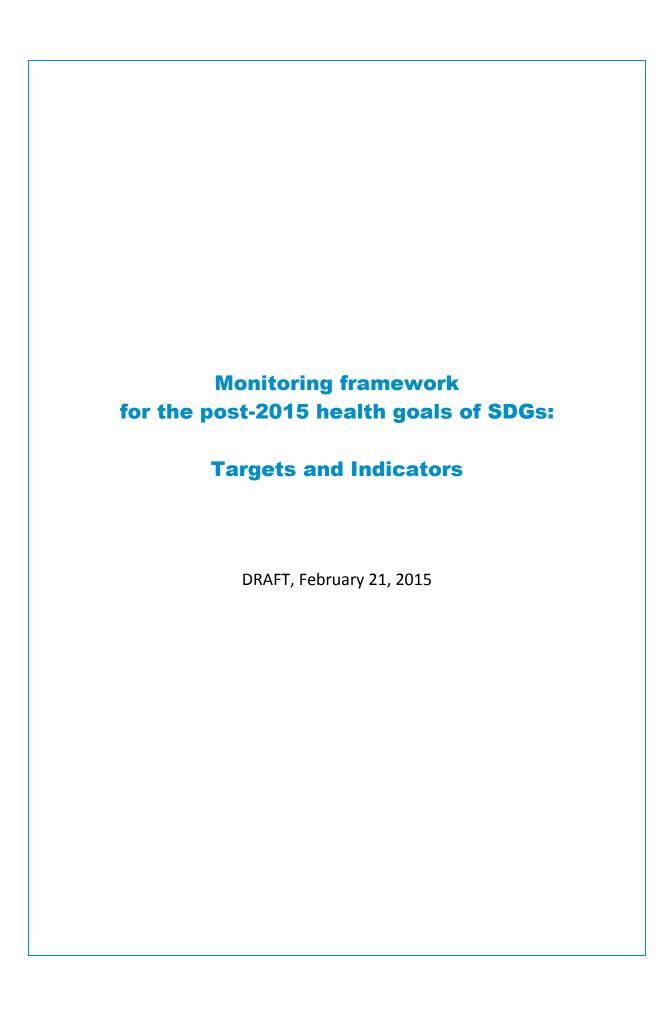*Monitoring Framework for the Post-2015 Health Goals of the SDGs:*
Targets and Indicators

Prepared by

World Health Organization

Monitoring framework
for the post-2015 health goals of SDGs:

Targets and Indicators

DRAFT, February 21, 2015

Contents

Executive summary

1. **Health goal**: Health is a precondition for and outcome of policies to promote sustainable development. The UN General Assembly has endorsed the Open Working Group report in which health is one of 17 sustainable development goals (SDG): "*Ensure healthy lives and promote wellbeing for all at all ages*". Health is also closely linked to many other goals. The overarching health goal has nine subtargets, including three related to the MDGs, three to noncommunicable diseases and injuries, and three cross-cutting or systems focused, such as Universal Health Coverage (UHC). *De facto*, however, there are over 20 subtargets as several contain multiple targets.

2. **Selection of targets and indicators**: The proposed targets and monitoring indicators are based on existing political endorsements, technical soundness, parsimony, measurability and relevance. Currently, over 90 targets have been endorsed by Member States at the World Health Assembly and other governing bodies. There are also hundreds of recommended indicators to cover the wide array of health priorities, synthesized in a 2015 Global Reference Set of 100 Core Health Indicators.

3. **Goal-level indicator**: In order to permit monitoring of progress, an overarching summary health indicator is required as well as indicators for the subgoals. The overarching health indicator is also a measure of progress in other SDGs as health is influenced by economic, social and environmental determinants, and should contain an equity dimension. Even though healthy life expectancy would be the preferred measure, globally comparable data can currently only be generated for a summary measure of mortality, such as life expectancy or number of deaths before age 70.

4. **Proposed target specifics and indicators**: The table summarizes the proposed indicators with targets. Most proposed indicators are based on existing agreements, with targets for 2030, including 9 mortality, 1 fertility, 5 morbidity, 21 risk factor and intervention coverage, and 4 other type of indicators. Other statistics should highlight health inequalities by major stratifiers, including demographic, socioeconomic, and geographic or other characteristics.

5. **Country health information systems:** Strong country systems are at the core of SDG monitoring. Such systems draw upon multiple data sources, including civil registration and vital statistics systems, population-based surveys, health facility and administrative information systems, are led by country institutions and use international standards. The SDG monitoring process should strengthen country health information systems. This requires an integrated and comprehensive approach that meets all country data needs and allows monitoring of progress towards the health-related SDGs, supported by well-aligned investments by international partners where relevant.

6. **Global monitoring and review of progress:** Monitoring of the health goal is more complex now than in the MDG era and a subgroup on health should be established, as part of the future UN Interagency and Expert group for SDG monitoring. The health monitoring subgroup will work with the health subject-specific interagency and expert groups and countries. UN agencies had the responsibility for monitoring specific MDG indicators and have established databases and monitoring architecture. Enhanced and expanded monitoring of health under the SDGs should seek to build on this experience. Regular progress reviews will need to be conducted by Member States, e.g. through the World Health Assembly, complemented by independent review mechanisms including social accountability mechanisms that provide a direct avenue for people's voices. These mechanisms should bring together the technical synthesis with a strategic analysis of improvement efforts required on the part of countries and international partners, and a powerful advocacy component.

Proposed indicators for health goal 3*

Indicator**	Target specifics
3.1 Reduce the global maternal mortality ratio to less than 70 per 100,000 live births	
Maternal deaths per 100,000 live births (MMR)	Reduce the global MMR to less than 70 and no country to have MMR above 140
Skilled birth attendance	
Antenatal care attendance (4 or more visits)	
3.2 End preventable newborn and under-5 child deaths	
Under-five mortality per 1,000 live births	All countries to reduce under-5 mortality to no more than 25 per 1,000 live births
Neonatal mortality per 1,000 live births	All countries reduce neonatal mortality to no more than 12 per 1,000 live births
Full immunization coverage / DTP3 containing vaccine	At least 90% coverage national, 80% in all districts
Care seeking for suspected pneumonia in children under-5	
ORS treatment and zinc treatment in children under-5	
3.3 End the epidemics of AIDS, TB, malaria and NTD and combat hepatitis, water-borne diseases and other communicable diseases	
HIV incidence per 100 susceptible person years (key populations, adults/children/adolescents)	90% reduction
HIV/AIDS deaths per 100,000 population	90% reduction
Antiretroviral therapy coverage	95% awareness, 95% on ART, 95% viral load suppression
TB incidence per 1,000 person years	80% reduction
Number of TB deaths	90% reduction
TB treatment coverage	90% case detection, 90% treatment success
Malaria incident cases per 1,000 person years	90% reduction
Malaria deaths per 100,000 population	90% reduction
People at risk of NTD (Number)	90% reduction
ITN use for malaria in children under-5	
Prevalence of hepatitis B surface antigen in children under 5	90% reduction
Presence of 13 IHR core capacities for surveillance and response	All countries
3.4 Reduce premature mortality from NCDs through prevention and treatment and promote mental health and wellbeing	
Probability of dying of cardiovascular disease, cancer, diabetes, or chronic respiratory disease between ages 30 and 70	30% reduction
Current tobacco use among persons 15 years and over	30% reduction
Suicide-related mortality per 100,000 population	10% reduction
Severe mental illness treatment coverage	20% increase
3.5 Strengthen prevention and treatment of substance abuse, including narcotic drug use and harmful use of alcohol	
Coverage of treatment and care services for people who suffer from substance use disorder (by substance and type)	At least 80% coverage
Coverage of interventions for the prevention of substance abuse interventions among people under 25;	90% coverage
Coverage of opioid substitution therapy in opioid-dependent drug users	40% coverage
Alcohol per capita consumption (Prevalence of heavy episodic drinking)	10% reduction of harmful use of alcohol
Prevalence of drug use disorders	
Coverage of needle and syringe programs among injecting drug users	90% coverage
3.6 Reduce deaths and injuries due to road traffic accidents	
Number of deaths due to road traffic accidents	50% reduction (to 600,000)
3.7 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	
Adolescent birth rate (10-14, 15-19)	
Demand satisfied with modern contraceptives	At least 75% coverage
Coverage of syphilis treatment in pregnant women	
Proportion of abortions that are unsafe	
Knowledge among young people about sexual and reproductive health	
Percentage of primary health care facilities that provide the basic SRH package***	
3.8 Achieve 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	
Fraction of the population protected against impoverishment by out-of-pocket health expenditures	100%
Fraction of households protected from incurring catastrophic out-of-pocket health expenditure	
Coverage with a set of tracer interventions+	Minimum 80% essential health services coverage among all populations (income/ expenditure/ wealth, place of residence, sex
3.9 Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	
Population in urban areas exposed to outdoor air pollution levels above WHO guideline values	Reduce air pollution to below WHO guidelines values for particulate matter (PM) 2.5

* UN Population Division and WHO are proposing further work on a high level indicator and target for the goal 3 "Ensure healthy lives and promote wellbeing for all at all ages". Proposals that have been reviewed in technical meetings include number of deaths before age 70 (40% reduction by 2030), probability of dying before age 70, life expectancy and healthy life expectancy.
** All indicators should be disaggregated where relevant by socioeconomic status, place of residence, gender, age, and other relevant stratifiers.
***family planning, maternal and newborn care with referral to EmONC, sexually transmitted infection and HIV diagnosis and management, safe abortion when it is not against the law and post-abortion care
+ A set of tracer coverage interventions is used to track UHC, including several of the coverage indicators listed under goals 3.1-3.7.

Background

In accordance with the outcome document of the UN Conference on Sustainable Development (Rio+20 conference), the Open Working Group on Sustainable Development Goals (OWG) was established in January 2013 to prepare a proposal on sustainable development goals for consideration by the General Assembly at its 68th session. The Rio+20 outcome document indicated that the sustainable development goals should be limited in number, aspirational and easy to communicate; that they should address all three dimensions of sustainable development (economic, social and environmental); and that they should be coherent with and integrated into the United Nations development agenda beyond 2015. The OWG's proposal for Sustainable Development Goals was developed in 2014 and welcomed by the UN General Assembly in September 2014. The Assembly decided that the OWG proposal "shall be the main basis for integrating sustainable development goals into the post-2015 development agenda, while recognizing that other inputs will also be considered in this intergovernmental negotiation process at the sixty-ninth session of the General Assembly."

During the first half of 2015 an outcome document for the post-2015 development agenda will be developed for adoption at the SDG Summit in September. This outcome document will be developed through a series of intergovernmental negotiations and inputs from technical agencies and will include the following four elements: 1) an introductory declaration 2) sustainable development goals, targets and indicators; 3) means of implementation and a new global partnerships; 4) framework for monitoring and review of implementation.

The Statistical Commission is likely to be formally tasked with providing guidance on targets and indicators. The Statistical Commission has already established a "Friends of the Chair" group on broader measures of progress which has produced a paper on the process which will be discussed at the March 2015 session of the Commission.

The synthesis report of the Secretary General on the post-2015 agenda, "The road to dignity: ending poverty, transforming all lives and protecting the planet" was published in December 2014. The report presents six elements for delivering on the SDGs which "…would help frame and reinforce the universal, integrated and transformative nature of a sustainable development agenda …". The six elements are:
* Dignity: to end poverty and fight inequalities
* People: to ensure healthy lives, knowledge, and the inclusion of women and children
* Prosperity: to grow a strong, inclusive and transformative economy
* Planet: to protect our ecosystems for all societies and our children
* Justice: to promote safe and peaceful societies, and strong institutions
* Partnership: to catalyse global solidarity for sustainable development

This paper aims to summarize the current options for targets and indicators for the health goal, building upon the OWG proposals of one overarching health goal and nine health-related targets or subgoals.[1] It briefly summarizes recent developments in health targets and indicators relevant to the health-related SDGs. The measurement issues and options related to the overall health goal are discussed first, followed by those related to the nine targets and subgoals and a brief summary of the main targets indicators in other SDGs. The paper concludes with a table that summarizes the proposed targets and indicators, with endorsement status, data sources and data availability, disaggregation levels, availability of global estimates and mechanisms, and type of indicator.

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[1] This paper was developed by WHO with inputs from partner agencies during the first proposal of indicators for the health SDG. It also benefitted from discussions at multiple WHO technical expert meetings including Health outcome targets and indicators, 11-12 December 2014, Geneva, and Development of a roadmap for the post-2015 health SDGs.

Current developments and proposals

Early 2014, the UN Technical Support Team developed a compendium of statistical notes to inform the OWG about the measurement aspects of the 29 issues that were discussed during its first stocktaking sessions. This document provided general information about conceptual and methodological tools, indicators and data requirements, challenges and limitations. It included a section on health-related measurement issues, prepared with inputs from WHO, UNICEF and others.[2]

In health there are many official targets, often endorsed by Member States at the World Health Assembly. There are also hundreds of recommended indicators to cover the wide array of diseases and interventions, often endorse by technical expert groups of multiple UN agencies and technical experts. It will be essential to be parsimonious and clear about the health targets and indicators and, as much as possible, base the recommendations on existing guidance and agreements. It will also be important to discuss a top-level indicator for the overarching health goal that will capture all underlying targets and indicators.

Recent initiatives provide a useful basis for the discussions on health targets and indicators. For instance, leaders from 19 global health agencies including multilateral and bilateral agencies worked together in an effort to rationalize indicators and reporting requirements.[3] In September 2014, the leaders agreed upon a global reference list of 100 core indicators which should include indicators for the main SDG health targets. A metadata dictionary of the 100 indicators is available in draft.[4]

The Sustainable Development Solutions Network (SDSN), a global network of academic experts established at the request of the UN Secretary General, has proposed a set of 100 indicators for the monitoring of all SDG.[5] This list includes 14 well-established health indicators, three indicators to be developed and 34 complementary national health indicators.[6] In addition to the specific indicators related to the MDGs or other processes, under the health goal, the SDSN also included healthy life expectancy at birth. A web consultation is conducted early 2015.

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[2] http://unstats.un.org/unsd/statcom/doc14/BG-FOC-Broader-measures.pdf
[3] http://www.internationalhealthpartnership.net/en/key-issues/monitoring-evaluation/
[4] reference http://www.who.int/healthinfo/indicators/en/
[5] http://unsdsn.org/resources/publications/indicators/
[6] The indicators are maternal mortality; neonatal and under-5 mortality; incidence, prevalence and death rates due to HIV; incidence, prevalence and death rates due to tuberculosis; incidence and deaths rates associated with malaria; premature mortality due to leading NCDs; current use of tobacco; harmful use of alcohol; prevalence of overweight and obesity; road traffic injuries per 100,000 population; child immunization coverage (full); contraceptive prevalence rate; healthy life expectancy at birth; mean urban air pollution (PM10 and PM2.5). The SDSN list also includes three "to be developed" health indicators: functioning mental health promotion and prevention in existence; consultations with a licensed provider in a health facility or the community, per year; percentage of the population with effective financial protection for health care.

Measuring progress towards the overall health goal

In the *Report of the Open Working Group of the General Assembly on Sustainable Development Goals*[7] the overall goal for health (goal 3) is stated as:

Health goal   **"Ensure healthy lives and promote wellbeing for all at all ages".**

At present, there is no documentation that refers to single or few indicators monitoring of the goals for the SDG, individually or combined. Much of the discussion focuses on a 100-120 indicators for all targets combined. There are however already 169 targets (or subgoals, as many do not have a target, or it may be very difficult to develop a target) and many targets consist of multiple elements and sub-targets. A SDG set of about 100 indicators is also still likely to be a challenge for data collection, reporting, communication and reviews of progress.

WHO has organized two technical meetings to assess different options for high-level outcome measures of health.[8] If it can be measured reliably, healthy life expectancy would be a useful indicator that captures both mortality and years of life lived in less than good health (i.e., disability). There is increasing interest in the accurate measurement of health, disability and wellbeing, especially in the context of declining mortality due to acute infectious diseases, ageing populations and greater prominence of chronic diseases. More countries are aiming to measure the health of their populations and track changes over time. For example, the EU set a target of gaining two healthy life years by 2020 in its member states.[9][10] While many attempts have been made to measure population health status, in addition to the underlying cause of decrements to health, through a set of functioning questions and performance measurements,

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[7] UN General Assembly, 12 August 2014, A/68/970

[8] Reference to meetings. Post-2015 health outcome measures. Technical meeting, WHO, Geneva, 11-12 December 2014. Measurement of Healthy Life Expectancy and Wellbeing. Geneva, 10-11 December 2012. (http://www.who.int/healthinfo/sage/meeting_reports/en/).

[9] http://ec.europa.eu/health/europe_2020_en.htm

[10] http://www.eurohex.eu/. Includes Joint Action: European Health & Life Expectancy Information System (JA:EHLEIS).

challenges remain with regard to comparable data on functioning of the population collected through comparable measurements over time and across populations in regular household surveys. A detailed discussion of the advantages and disadvantages of the measures is provided in a separate technical paper.[11]

Healthy life expectancy

There are two main approaches at present. The European Union is using a single global activities limitation question with a dichotomous threshold. The summary indicator thus involves a level of arbitrariness in the choice of threshold and is not sensitive to changes in the severity distribution of disability. Research is ongoing to improve the standardization and comparability of the survey questions and results across EU countries.

There are also a number of multi-domain survey modules under development. The WHO World Health Surveys and SAGE survey programs are using a module derived from the WHODAS instrument.[12] The Budapest and Washington Groups under the auspices of the UN Statistical Commission have developed a four question module for use in national censuses.[13] A number of countries such as Canada have implemented national survey programs using other multi-domain instruments. Research and development on survey methods for comparable measurement of health and functioning should continue, with an aim to develop and widely implement a common survey instrument in the next few years.

Another approach is to rely on extensive modelling of disease and injury sequelae prevalence and distributions, as in the Global Burden of Disease (GBD) Study, and to aggregate these to population levels in order to calculate health-adjusted life expectancy (HALE). The most recent HALE estimates from the GBD 2010 study have also drawn on a comprehensive revision of disability weights involving nationally representative interview surveys in six countries, supplemented by an internet survey.[14] The HALE requires statistically modelled estimates of the prevalence of over 1000 health states. Since these data are not regularly collected for most countries, it can only be calculated by imputing prevalences based on relatively sparse population-representative studies. Because it heavily relies on modelling of disease incidence and prevalence data with disability weights, for a large number of disease and injury sequelae, it is less suitable for monitoring progress. HALE also cannot be calculated for a range of equity stratifiers beyond age, sex and country.

Mortality measures

Despite the large gaps in coverage of global mortality information systems, mortality is perhaps more amenable to accurate measurement than morbidity and functioning. Multiple cause-specific mortality targets are proposed for the post-2015 agenda, many focusing on reducing or ending "preventable" deaths. Life expectancy is an attractive summary measure of mortality rates at all ages, and all health and health-related programmes contribute to it. It can be measured accurately, based on complete death registration systems, with an equity dimension. There has also been a proposal to situate these in the context of an overarching goal to reduce the number of deaths before age 70 by 40% by 2030.[15]

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[11] WHO. An overarching health indicator for the Post-2015 Development Agenda: Brief summary of some proposed candidate indicators. December 2014.

[12] http://www.who.int/healthinfo/sage/en/

[13] http://unstats.un.org/unsd/methods/citygroup/washington.htm

[14] Salomon J et al. Healthy life expectancy for 187 countries, 1990–2010: a systematic analysis for the Global Burden Disease Study 2010 *Lancet* 2012; 380: 2144–62.

[15] Norheim OF, 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. The Lancet, published online 19 November 2014, doi:10.1016/S0140-6736(14)61591-9

The life expectancy indicator is well understood and widely used. Regular national data are available for almost half of countries. There is also global momentum to improve civil registration and vital statistics systems, including death registration data, in countries without reasonable national coverage at present. There are commonly used methods to estimate child mortality and adult mortality from other sources, though regularity of data availability and time delays remain a problem, as does the problems of assessing levels of under-reporting. However, it does not directly address non-fatal health outcomes except through the proxy of mortality risks.

An indicator based on premature deaths under age 70, as proposed by Norheim et al., would allow countries at different stages of development to focus their efforts on the relevant priorities for their situation, whether that be HIV, malaria, TB or child mortality or NCD deaths between ages 30 and 70. However, the indicator appears to exclude older people, and as for life expectancy measures, does not include non-fatal health/disability. In reality, concerted action to reduce non-communicable disease deaths before age 70 will also help to reduce NCD death rates for people aged 70 years and over. Communication around this issue would require special attention and it may be preferable to frame the overarching indicator in terms of life expectancy at birth, with a focus on premature mortality as well as on older age mortality and functioning in countries with high life expectancies.

Wellbeing

There is increasing interest in measuring the wellbeing of the population. Reflecting the increasing interest in subjective well-being from both researchers and policy-makers, the Report of the Commission on the Measurement of Economic Performance and Social Progress recommended that national statistical agencies collect and publish measures of subjective well-being. While health and self-reported wellbeing are intricately related they are not synonymous. Health is a critical determinant of subjective wellbeing. Measurement of self-reported wellbeing, both the evaluative as well as the affective component, shares many of the same problems as the measurement of non-fatal health outcomes. The Secretary General's synthesis report from the OWG, nonetheless, states 'New measures of subjective wellbeing are potentially important new tools for policy-making.'

The field of measuring subjective wellbeing is rapidly expanding and distinguishes different aspects including: evaluative life satisfaction: a reflective assessment on a person's life or some specific aspect of it; affective or hedonic: a person's feelings or emotional states, typically measured with reference to a particular point in time, and; eudemonic: a sense of meaning and purpose in life, autonomy, self-realization. A detailed discussion of the different issues related to measurement and monitoring of subjective wellbeing is beyond the scope of this paper.[16]

Equity

Equity has both between- and within-countries dimensions. There are different ways in which attention can be given to the equity dimension in post-2015 health monitoring:
- The 17 goals include an equity goal (number 10) which may include a health indicator.
- Stressing the need to disaggregate the selected indicators by key stratifiers including demographic characteristics (sex/gender, age), place of residence (urban/rural, subnational), socioeconomic status (wealth, education), other characteristics (migrants, minorities, disability etc.)
- Equity should be included as part of the overall health goal. For instance:
  - Reduce premature mortality by 50% among the poorest 20%/40% of the population (compared to 40% overall);

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[16] See for instance OECD Guidelines on measuring subjective wellbeing. Paris. 2013. http://www.oecd.org/statistics/guidelines-on-measuring-subjective-well-being.htm

     o   Increase life expectancy for the poorest 20%/40% of the population by an additional two years over the national average increase.
- Include disaggregation in UHC coverage and financial protection measures, which is one of the nine subgoals.

Measuring progress towards the specific health targets and subgoals

Nine subgoals and targets were proposed. This section describes the nine subgoals and the current targets and indicators, including the process of development and endorsement. The nine health subgoals are part of 169 subgoals for the 17 goals. Several subgoals include targets which could easily make up for more than 20 specific targets under health goal 3. The OWG document also includes four sub-points (3a-3d) which are discussed at the end of this section.

Targets are set for advocacy related to action and funding and also to monitor progress towards results at global, regional or country levels. Part of target setting is a global process that aims to provide inspiration to countries to set ambitious targets. In general, target setting is based on past rates of improvement as a starting point and on high or very high efficacy rates for current and new interventions. Both technical peer review, through expert groups or peer reviewed publications, and political endorsement in governing bodies such as the World Health Assembly are critical. The sub-targets should be consistent with an overall health outcome target.

For most current targets the baseline year is either 2010 or 2015. The year 2010 is better from the measurement perspective as there are more data available on the actual situation. The year 2015 makes more sense from the future achievement perspective as countries would get punished for poor performance during 2010-2014. It is likely that 2015 is the preferred baseline year, but this would mean that baseline values will have to be adjusted as more data become available for the year 2015.

Target/Subgoal 1
By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

The MDG goal was a three quarter reduction from 1990 levels (MDG 5A). Most countries will not meet the target by 2015. By 2013 the global maternal mortality ratio was estimated at 210 per 100,000 live births, corresponding with 295,000 maternal deaths.

Two technical and one country face-to-face consultations and one electronic consultation have been held to develop targets for Ending Preventable Maternal Mortality.[17] Progress towards ending preventable maternal deaths is proposed to be measured by monitoring the maternal mortality ratio (MMR, maternal deaths per 100,000 live births), achieving a global average maternal mortality ratio (MMR): of 70 by 2030, and no country to have an MMR greater than 140 by 2030. This implies are global MMR reduction of more than two-thirds.

In addition, two coverage indicators are proposed which were also part of MDG 5B: skilled birth attendance and at least four antenatal care visits.

Target/Subgoal 2
By 2030, end preventable deaths of newborns and children under 5 years of age

The MDG goal was two-thirds reduction in under-five child mortality between 1990 and 2015. Many countries observed major reductions in child mortality, although most countries did not achieve the target. By 2013 the UN estimates of under-five and neonatal child mortality were 46 and 20 per 1,000 live births respectively, down from 90 and 33 in 1990.[18]

New child mortality targets were proposed in the context of an initiative by the governments of Ethiopia, India and the United States: the Child Survival Call to Action made in June 2012. Since then, 170 governments, as well as hundreds of civil society and faith based organizations, have signed a pledge, vowing to do everything possible to stop women and children from dying of causes that are avoidable. The commitment is now called A Promise Renewed.[19] The under-five mortality target was based on UNICEF modeling work and a project by Johns Hopkins University using the LiST model to scale up interventions and was initially set for 2035: all countries to reduce under-five mortality to 20 or fewer deaths per 1,000 live births by 2035 (or if the country is already at or below that level, to sustain progress, with a focus on reducing inequalities at the subnational level). Greater equity between and within countries is specifically mentioned but no specific target is added. The post-2015 target was based on and compatible with this target and set at 25 per 1,000 live births by 2030.

In addition, targets were set for neonatal mortality as part of the Every Newborn Action Plan, which received special impetus with a Lancet series on every newborn released in May 2014.[20] The proposed target is no more than 12 neonatal deaths per 1,000 live births by 2030 (10 per 1,000 by 2035). Stillbirth rates were proposed by some, but are not included here.

Three child intervention coverage indicators are proposed. Full immunization coverage is a key indicator in the Global Vaccine Action Plan 2011-2012. It means coverage with all recommended vaccines. The recommendations may differ between countries and change as new vaccines are introduced over time.. Therefore, international monitoring focuses on the recommended immunization with the lowest coverage. One of the key goals is that, by 2020, coverage of target populations should reach at least 90% national

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[17] http://who.int/reproductivehealth/topics/maternal_perinatal/epmm/en/
[18] http://www.childmortality.org/
[19] Annual *Committing to Child Survival: A Promise Renewed* progress reports have been published for 2012, 2013 and 2014. http://www.apromiserenewed.org/
[20] http://www.everynewborn.org/

vaccination coverage and at least 80% vaccination coverage in every district or equivalent administrative unit for all vaccines in national immunization programmes.[21] In addition, monitoring with three doses of diphtheria-tetanus-pertussis (DTP3) containing vaccine is used as an indicator to monitor long term progress.

Treatment of pneumonia and diarrhoea, two leading causes of death in childhood, is assessed through household surveys. In case of pneumonia the focus on simply taking the child with suspected pneumonia to a health facility, while for diarrhoea the respondent is asked about use of oral rehydration solution and zinc treatment.

Target/Subgoal 3
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

The third subgoal includes and expands the set of leading infectious diseases which were part of the sixth MDG goal.

HIV/AIDS

WHO and UNAIDS have proposed several targets related to disease impact and transmission, as well as coverage of interventions and risk behaviours. Proposed targets for HIV for 2030 (baseline year is 2010) include[22] [23]:
- 90% reduction in new adult HIV infections, including among key populations
- Zero new infections among children
- 90% reduction in AIDS-related deaths
- Zero discrimination: 90% reduction in stigma and discrimination faced by people living with HIV and key populations
- 95% of people living with HIV should know their status
- 95% of people who know their status should be receiving treatment; and
- 95% of people on HIV treatment should be virally suppressed.
- New infections among adults should be reduced to 200,000

The three indicators on awareness of HIV status, receiving treatment and achieving viral suppression constitute together one effective coverage indicator.[24] Note that there is a 90% (awareness), 90% (treatment), 90% (viral load suppression) target for 2020. The 2030 targets are an extension of a set of 2020 targets (90-90-90 for treatment, 500,000 new infections among adults, zero discrimination), which were agreed upon by the UNAIDS governing body (PCB). Ending the epidemic is defined as 90% reduction in new infections and AIDS-related mortality from 2010 levels.

Tuberculosis

In May 2012, Member States called on WHO at the 65th World Health Assembly, to develop a post-2015 tuberculosis (TB) strategy and targets, and present these to the 67th World Health Assembly in 2014. With the goal of ending the global tuberculosis epidemic specific targets were set for the new WHO TB Strategy with milestones for 2020 and 2025, and targets for 2030 and 2035. The baseline year is 2015.[25]

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[21] World Health Organization. Global Vaccine Action Plan 2011-2020. Geneva. 2013.
http://www.who.int/immunization/global_vaccine_action_plan/GVAP_doc_2011_2020/en/
[22] http://apps.who.int/iris/bitstream/10665/128120/1/9789241507530_eng.pdf?ua=1
[23] http://www.unaids.org/en/resources/documents/2014/fast_track
[24] The target for 2030 is thus .95 * .95 * .95 = .86
[25] http://www.who.int/tb/post2015_tbstrategy.pdf

Targets for 2030:
• 90% reduction in tuberculosis deaths;
• 80% reduction in tuberculosis incidence rate (less than 20 tuberculosis cases per 100,000 population)
• No affected families facing catastrophic costs due to tuberculosis
Targets for 2035:
• 95% reduction in tuberculosis deaths
• 90% reduction in tuberculosis incidence rate (less than 10 tuberculosis cases per 100 000 population)
• No affected families facing catastrophic costs due to tuberculosis

The target was defined as number of TB deaths because in the two-year consultations on the End TB strategy and targets, it was frequently argued that a) targets for reductions in absolute numbers are much better from an advocacy and communications perspective, and b) the target for reductions in numbers is more ambitious and the strategy vision is to get to "zero deaths".

On coverage the consensus is to recommend two indicators (among a priority set of 5-10) that could then be used in combination to estimate the indicator of "effective treatment coverage" for TB that could serve as a UHC tracer indicator within the SDG framework. These are treatment coverage, with a target of ≥90% and treatment success rate, with a target of ≥90%.

Malaria

The new malaria goals and targets are proposed as part of the process of developing a global technical strategy which was initiated in 2013 at the request of the World Health Assembly. The final version will be on the agenda of the World Health Assembly in May 2015.[26] The proposed targets for malaria for 2030, with 2015 as the baseline year, are:
• 90% reduction in global malaria mortality rate
• 90% reduction in global malaria case incidence
• Eliminate malaria from at least 35 countries in which transmission occurred in 2015
• Prevent re-establishment in all countries that are malaria-free.

Milestones for 20120 and 2025 are also included. The global technical strategy also includes nine outcome (intervention coverage and service output indicators) and five impact indicators. The impact indicators include parasite prevalence (proportion of the population with evidence of malaria infection), number of confirmed malaria cases per 1000 persons per year, number of malaria deaths per 100,000 persons per year and the number of countries that have newly eliminated malaria since 2015.

The use of insecticide treated bednets among children is proposed as an indicator of prevention for countries affected by malaria transmission.

Neglected tropical diseases

The most recent World Health Assembly resolution on neglected tropical diseases (NTD) was adopted in 2013.[27] The resolution refers to targets agreed in the Global Plan to Combat Neglected Tropical Diseases 2008–2015, as set out in WHO's road map for accelerating work to overcome the global impact of neglected tropical diseases. This also includes 2020 targets for dengue, Buruli ulcer, taeniasis/ cysteriosis, echinococcosis/ hydatidosis , foodborne trematode infections. In addition, there are several previous WHA resolutions on elimination and eradication of specific NTDs, although most do not specify the year

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[26] http://www.who.int/malaria/mpac/mpac-sept2014-gts-update-presentation.pdf
[27] WHA 66.12, 2013.

by which elimination/eradication should be achieved or the year has already passed).[28] 2030 targets are still to be set for most NTDs.

WHO monitors on an annual basis the coverage of preventive chemotherapy for leading NTDs, based on country reports. These include lymphatic filariasis, soil-transmitted helminthiasis, schistosomiasis, onchocerciasis and trachoma. There are an estimated 1.5 billion people who need preventive chemotherapy because they are exposed to the risk of NTDs. The target is to bring this down to less than 200 million by 2030.

Hepatitis

Recently, technical work is ongoing on goals and targets for the elimination of hepatitis B and C as a public health issue: "towards a hepatitis free generation, zero deaths and zero infections. "

The following targets have been proposed for 2030:

o 90% reduction in incidence of hepatitis B and C infection
o Zero babies infected
o 60-70% reduction in mortality by 2030 (tens of millions of people treated and cancers averted).

Additional targets than have been proposed are zero catastrophic expenses for households affected by 2030 and zero discrimination in access to services.

The monitoring may focus on estimation of the incidence from seroprevalence studies in children under 5 years when most new cases of chronic infections will take place. It is noted that four of WHO's six regions have set hepatitis B control goals through their governing bodies.

Water-borne and other communicable diseases

This is a general target which includes water-borne infections such as diarrhoea and skin infections and "other communicable diseases". The latter may be used as an opportunity to set targets for outbreak diseases such as influenza or viral haemorrhagic fevers.

This target however should also be used to address the urgent need for effective disease surveillance and response systems. The most suitable indicator relates to the monitoring of the implementation of the International Health Regulations (IHR).[29] This also links to subpoint 3d of the health goal. While the number of new confirmed cases of IHR notifiable diseases(immediately notifiable diseases) and other notifiable diseases (diseases that could cause serious public health impact and to spread rapidly internationally) per year is an important indicator, the IHR core capacities indicator is more meaningful. The WHO indicator is Percentage of attributes of 13 core capacities that have been attained at a specific point in time. The 13 core capacities are: (1) National legislation, policy and financing, (2) Coordination and National Focal Point communications; (3) Surveillance; (4) Response; (5) Preparedness; (6) Risk communication; (7) Human resources; (8) Laboratory; (9) Points of entry; (10) Zoonosis; (11) Food safety; (12) Chemical; (13) Radionuclear. The target is that all countries should have these 13 core capacities.

The support for IHR core capacities may get a major push following the Ebola outbreak and progress will be assessed in the World Health Assembly in 2018. Even if all countries have obtained all 13 core

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[28] These include for instance WHA57.2 (2004): Control of human African trypanosomiasis; WHA63.20 (2010) Chagas disease: control and elimination; WHA60.13 (2007) Control of leishmaniasis; WHA64.16 (2011) Eradication of dracunculiasis; WHA62.1 (2009) Prevention of avoidable blindness and visual impairment.
[29] IHR notifiable diseases currently include smallpox, poliomyelitis due to wild type poliovirus, human influenza caused by a new subtype, severe acute respiratory syndrome (SARS), but good other notifiable diseases such as cholera, pneumonic plague, yellow fever, viral haemorrhagic fevers, West Nile fever, and other diseases that are of special national or regional concern (dengue fever, Rift Valley fever and meningococcal disease).

capacities by then, the target will remain relevant as all countries should maintain these core capacities over time.

Target/Subgoal 4
By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

Non-communicable diseases

Following the Political Declaration on Noncommunicable Diseases (NCDs) adopted by the UN General Assembly in 2011, WHO developed a global monitoring framework to enable global tracking of progress in preventing and controlling major noncommunicable diseases - cardiovascular disease, cancer, chronic lung diseases and diabetes - and their key risk factors.

The framework comprises nine global targets and 25 indicators and was adopted by Member States during the World Health Assembly in May 2013. The mortality target - a 25% reduction in premature mortality from noncommunicable diseases by 2025 - has already been adopted by the World Health Assembly in May 2012. Member States are encouraged to consider the development of national NCD targets and indicators building on the global framework. The 2030 targets were set by extending the 25 by 25 target (30% reduction).

The nine voluntary global targets are aimed at combatting global mortality from the four main NCDs, accelerating action against the leading risk factors for NCDs and strengthening national health system responses. A technical paper has been published to show how the improvements in six risk factors can lead to the targeted mortality reduction.[30] The NCD global targets for 2025, with a 2010 baseline are[31]:

- A 25% relative reduction in the risk of dying between ages 30 and 70 from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases
- At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context
- A 10% relative reduction in prevalence of insufficient physical activity
- A 30% relative reduction in mean population intake of salt/sodium
- A 30% relative reduction in prevalence of current tobacco use in persons aged 15+.
- A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances
- Halt the rise in diabetes and obesity
- At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
- An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities

Mental health and well-being

The subgoal does not have a target but merely indicates promote mental health and well-being. The most recent WHA resolution was adopted in 2013 and proposed a set of indicators and targets for 2020.[32] These include four indicators to monitor the state of country policies and programmes:

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[30] http://www.thelancet.com/pdfs/journals/lancet/PIIS0140673614606164.pdf
[31] http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_8-en.pdf?ua=1
[32] WHA66.8 (2013) & WHA66 Annex 3 (A66/10 Rev.1)

- 80 % of countries with national policy/plan for mental health in line with international human rights instruments
- 50% countries with national law for mental health in line with international human rights instruments
- 80% countries with at least two functioning national, multisectoral mental health promotion and prevention programmes
- 80% countries routinely collecting and reporting at least a core set of mental health indicators every two years through their national health and social information systems

In addition, the resolution includes one service coverage and one mortality indicator:
- 20% increase of persons with a severe mental disorder (psychosis; bipolar affective disorder; moderate-severe depression) who are using services
- 10% reduction in suicide death rate.

The challenge for the coverage indicator is to determine the proportion of population in need, i.e. with severe mental disorders. The suicide mortality indicator has greater potential for measurement, similar to all other indicators that need cause of death information.

Target/Subgoal 5
Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

With regard to strengthening the prevention and treatment of narcotic drug abuse, the General Assembly adopted the "Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem" in 2009.[33] To monitor the implementation of the Declaration, UNODC routinely collects from Member States quantitative data on the coverage of treatment services and qualitative data on the coverage of prevention interventions and publishes those yearly in the World Drug Report. The Plan of action on international cooperation towards an integrated and balanced strategy to counter the World Drug Problem (as adopted by para 1 of General Assembly Resolution A/RES/64/182), section on Strengthen drug demand reduction policies and programmes (para. 4(a)), includes an indicator on the coverage of treatment among problem drug users and people using alcohol harmfully. The data need to be disaggregated by gender, age, and type of treatment (this could include: length, i.e. more than 90 days, residential/ outpatient, voluntary/ compulsory, pharmacological/ psychosocial, etc.).

The proposed targets and indicators on prevention and treatment build on this commitment taken by Member States and on this ongoing data collection both for prevention of drug use and treatment and care of drug disorders. However, the formulation attempts to cover not only prevention and treatment with regard to drug use and dependence, but also to alcohol. It should be noted that with regard to prevention, effective interventions and policies aim at preventing the use of all psychoactive substances regardless of legal status in a developmental context (see the International Standards on Drug Use Prevention published by the United Nations Office on Drugs and Crime in 2013.[34]

It is proposed that, besides age and gender, data are collected by type of services/ interventions. For example, with regard to treatment, categories for type of services could include length (e.g. more than 90 days), residential/ outpatient, voluntary/ compulsory, pharmacological/ psychosocial, etc. With regard to prevention, it would be important that age is disaggregated by age in brackets of five years each up to 25 years of age, as well as getting an indication of whether the impact of the intervention is being evaluated or not, as an indicator of quality. A mortality indicator – 10% reduction in the number of deaths due to drug use is also considered.

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[33] A/RES/64/182

[34] , http://www.unodc.org/unodc/en/prevention/prevention-standards.html).

In addition, a prevention coverage indicator is proposed as follows: % of youth (people under 25 years of age) reached by substance abuse prevention interventions by gender, age (brackets of five years each up to 25 years of age), type of intervention, whether evidence-based or not (with regard to the standards) and whether the impact evaluated or not (as indicator of quality).

The UNAIDS Programme Coordination Board recommended two coverage indicators with targets for injecting drug users: 90% coverage of needle and syringe programmes and 40% coverage of opioid substitution therapy. It is however also proposed by UNODC to replace this indicator with rate of access to drug dependence treatment .

From the monitoring perspective, the monitoring of the harmful use of alcohol is most advanced. It is included in the nine voluntary targets for NCD (see subgoal 4): "At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context". In the Global Action Plan for the prevention and treatment of NCD 2013-2020 three indicators have been proposed to measure progress towards this target[35]:
- Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context
- Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context
- Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context.

The first indicator is the most commonly used indicator, but WHO also reports on the second and third.

Target/Subgoal 6
By 2020, halve the number of global deaths and injuries from road traffic accidents

There is discussion on the target year, which appeared as 2020 in the OWG document, but is recommended to be 2030. The Decade of Action target is to reduce by half from the projected increase of road traffic deaths which for 2020 were 1.9 million. This means a Decade goal around 900,000. The SDG proposed target is to reduce by 50% from the current estimated road traffic deaths, meaning reducing deaths from around 1.2 million to 600,000. Between 2010 and 2013 the numbers of deaths appear to have stayed at the same level.

A reduction in deaths to 600,000 is realistic over a period of 15 years (e.g. a target date of 2030), but not over five years (as currently framed). WHO is working closely with the Partnership on Sustainable, Low Carbon Transport (SLoCaT) on the targets and indicators. A UN Resolution on road safety calls upon WHO for regular monitoring[36] for road traffic mortality. Injuries will be much more difficult to monitor.

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[35] http://www.who.int/nmh/publications/ncd-action-plan/en/ and WHA resolution 64.1.
[36] http://www.un.org/ga/search/view_doc.asp?symbol=A/68/L.40 UN General Assembly Resolution on global road safety crisis (A/68/L.40; April 2014).

Target/Subgoal 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

The MDG target 5b is to achieve, by 2015, universal access to reproductive health. Four indicators were proposed and added to the MDG list: contraceptive prevalence, adolescent birth rate, antenatal care coverage (at least one and at least four visits), and unmet need for family planning. Target 5A also included proportion of births attended by skilled health personnel.

The MDG target 5b is to achieve, by 2015, universal access to reproductive health. One indicator is proposed from the MDG 5b target, adolescent birth rate. In addition, UNFPA and others have proposed several indicators: family planning demand met with modern contraceptives (75%) (modification of MDG 5 b indicator)[37], proportion of abortions that are unsafe (less than 10%, currently 49%) and proportion of abortions that are treated in medical facilities (80%), pregnant women screened for syphilis or pregnant women with positive syphilis test who receive treatment (90%), integration of a tracer set of sexual and reproductive health services at primary health care level and comprehensive knowledge among young people 10-24 years (sexuality education).

Considering these indicators it is proposed to include met need for modern family planning methods, syphilis treatment among pregnant women, incidence of unsafe abortion, and knowledge among young people about SRH measured. Measurement challenges are greatest for the abortion indicator.

The indicator on knowledge among young people is based on the proportion of young people 10-24 years who demonstrate desired levels of knowledge and reject major misconceptions about sexual and reproductive health (Benchmark 95%). It is measured in household surveys as a composite indicator with three components of equal weight: 1. correct knowledge of the fertile period, 2. knowledge of at least one modern method of contraception and 3. comprehensive correct knowledge about HIV (2 ways to prevent AIDS and reject 3 misconceptions).

In addition, an indicator on access to emergency obstetric care is being considered, either under this subgoal.

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[37] PMNCH partners'' forum communique.
http://www.who.int/pmnch/about/governance/partnersforum/communique/en/. July 2014.

Target/Subgoal 8

Achieve universal health coverage, 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 development of a global monitoring framework for universal health coverage was coordinated by WHO and the World Bank Group and involved broad consultation with many stakeholders through the web and multiple multi-stakeholder meetings, including Member State briefings.[38] The goal of Universal Health Coverage (UHC) has been endorsed in World Health Assembly and UN General Assembly resolutions.

The targets are:
- By 2030, all populations, independent of socioeconomic status, place of residence or sex, have at a minimum 80% essential health services coverage.
- By 2030, everyone has 100% financial protection from out-of-pocket payments for health services

The proposed indicators are:
Health services coverage
- *Prevention:* coverage with a set of tracer interventions for prevention services.
  - *Equity:* a measure of prevention service coverage as described above, stratified by socioeconomic status, place of residence and sex
  - Possible tracer indicators include coverage of family planning, antenatal care (4 or more visits), immunization coverage (all country-recommended vaccines, including DTP3 containing vaccine), improved drinking water source and sanitary facilities, insecticide treated bednets and non-tobacco use. Some of these indicators are also covered under other subtargets of health, some in other goals.
- *Treatment:* coverage with a set of tracer interventions for treatment services.
  - *Equity:* a measure of treatment service coverage as described above, stratified by wealth quintile, place of residence and sex
  - The proposed tracer indicators include treatment of sick children (pneumonia care seeking, ORS for diarrhoea), skilled birth attendance, coverage of TB treatment, ARV therapy, diabetes treatment and hypertension treatment.

Financial protection coverage
- *Impoverishing expenditure*
  - *Aggregate:* fraction of the population protected against impoverishment by out-of-pocket health expenditures, comprising two types of household: families already below the poverty line on the basis of their consumption and who incur out-of-pocket health expenditures that push them deeper into poverty; and families for which out-of-pocket spending pushes them below the poverty line.
  - *Equity:* fraction of households protected against impoverishment or further impoverishment by out-of-pocket health expenditures, stratified by wealth quintile, place of residence and sex.
- *Catastrophic expenditure*
  - *Aggregate*: fraction of households protected from incurring catastrophic out-of-pocket health expenditure.
  - *Equity:* fraction of households protected from incurring catastrophic out-of-pocket health expenditure stratified by wealth quintile, place of residence and sex.

The first global monitoring report will appear in 2015, prepared by WHO and the World Bank.

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[38] World Health Organization and World Bank Group (2014). Monitoring progress towards universal health coverage at country and global levels: framework, measures and targets. Geneva. (http://www.who.int/healthinfo/universal_health_coverage/en/ , accessed 7/7/2014).

Target/Subgoal 9
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

The measurement of mortality due to these risk factors is difficult and would entirely be based on modelling, with relatively limited data. It may be considered to use proxy indicators for mortality Indoor air pollution indicator and outdoor air pollution indicator.

The proposed indicator is population in urban areas exposed to outdoor air pollution levels above WHO Guideline values for particulate matter (PM 2.5). The measurement of this indicator would be done through the assessment of man air pollution level in cities (population-weighted annual mean PM2.5, or PM10 when not available) and Mean concentration of particulate matter (PM2.5 or PM10) in the air of cities (annual mean, weighted by city population), μg/m3. The population-weighted annual mean PM2.5 (or PM10) is how EURO already report air pollution at regional level in their ENHIS indicators. [39]

This allows for a choice for political target by member states either in terms of a percentage reduction over the following 15 years would be, (say 50% reduction) or absolute values of mean PM2,5 to be achieved (WHO Air Quality Guideline PM2,5 values = 10 micrograms per cubic meter, or WHO AQ Guidelines interim targets= 35).

Other indicators that have been proposed include mean population blood lead levels (and other heavy metals/chemicals) in children; concentration of hazardous organic compounds in human breast milk; levels of persistent toxic substances and heavy metals present in subsistence food supplies such as fish and game; use of a water source at the household or plot that reliably delivers enough water to meet domestic needs, complies with WHO guideline values for Escherichia coli, arsenic and fluoride, and is subject to a verified risk management plan, number of acute pesticide poisonings and fatalities; level of ambient particulate matter (PM 10 and PM 2.5), emissions of black carbon, volatile organic compounds, polycyclic aromatic hydrocarbons, methane, carbon dioxide, carbon monoxide, mercury, sulphur dioxide, nitrogen oxides (UNEP).

Additional points under SDG health goal 3

In addition to the nine subgoals there are four additional points under SDG health goal 3 in the report of the OWG.

3.a Strengthen the implementation of the World Health Organization Framework Convention on **Tobacco Control** in all countries, as appropriate
The monitoring of the WHO Framework Convention on Tobacco Control[40] is done through an annual WHO report on the global tobacco epidemic. [41] It provides the status of a range of measures to implement the framework in all countries, and also summarizes the data on tobacco use. The tobacco use indicator is proposed as a tracer indicator under health subgoal 8 (UHC monitoring).

3.b Support the **research and development of vaccines and medicines** for the communicable and non-communicable 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 a**ccess to medicines for all**

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[39] (http://data.euro.who.int/eceh-enhis/Default2.aspx?indicator_id=10).
[40] http://www.who.int/fctc/en/
[41] http://www.who.int/tobacco/global_report/2013/en/

This point builds upon MDG Target 8.E: in cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries. Access to affordable medicines is best monitored through health facility surveys and routine reports, focusing on a set of tracer indicators that are associated with a high burden of disease.

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

WHO annually publishes country statistics on health financing including total health expenditure, government, external and private expenditures, and out of pocket payments. Health workforce statistics currently focus on national density of core health professionals (updated annually by WHO), but increasingly the focus is shifting towards distribution of health workers within countries (e.g. urban rural), stock flows (including migration), and performance of the health workforce. To strengthen the collection and reporting of health workforce information there is consensus amongst WHO, World Bank and partners for the measurement and accountability framework to adopt and implement a National Health Workforce Account (NHWA) at country level. The workforce account will support the cross-cutting nature of goal 3.c and promote accountability and transparency across all countries.

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**

The international health regulations (IHR), an international legal instrument that is binding on countries across the globe, aims is to help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide. WHO monitors its implementation including the capacities of member states concerning legislation, coordination, surveillance, response, preparedness etc.[42] The IHR capacity indicator is included under 3.3.

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[42] http://apps.who.int/gho/data/node.main.IHR?lang=en

Health-related targets and indicators in other goals

Almost every single goal has a linkage with health. Many are important determinants of health, and therefore, people's health is such a good measure of progress of the whole set of SDG. There are a few goals that deserve specific mentioning:

Goal 6: Ensure availability and sustainable management of water and sanitation for all

Since 2011, the WHO/UNICEF Joint Monitoring Programme on Water Supply and Sanitation (JMP) has held consultations to develop targets for post-2015. The process has not been concluded yet, but a 2030 target comprising of four elements has been proposed:[43]
- to eliminate open defecation;
- to achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities;
- to halve the proportion of the population without access at home to safely managed drinking water and sanitation services; and
- to progressively eliminate inequalities in access

For each target element indicators have been proposed. There are seven indicators and 20 subindicators, excluding the fourth target on inequalities. The indicators are:
- Percentage of population practicing open defecation
- Percentage of population using 'basic' drinking-water
- Percentage of population with 'basic' handwashing facilities with soap and water at home
- Percentage of pupils enrolled in primary and secondary schools providing basic drinking water, basic sanitation, handwashing facilities with soap and water, and menstrual hygiene management facilities
- Percentage of beneficiaries using health facilities providing basic drinking-water, basic sanitation, and washing facilities with soap and water, and menstrual hygiene management facilities
- Percentage of population using a 'safely managed' drinking water service
- Percentage of population using a 'safely managed' sanitation service

Goal 2 End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

Global nutrition targets (2025, baseline is 2012)[44]:
- 40% reduction in the number of children under-5 who are stunted
- 50% reduction of anaemia in women of reproductive age
- 30% reduction in low birth weight
- no increase in childhood overweight
- increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%
- reduce and maintain childhood wasting to less than 5%

In 2012, 194 Member States of the World Health Organization already agreed upon six targets to improve maternal, infant and child nutrition, which were endorsed by the 65th World Health Assembly. The selected indicators are smart, not only because they are specific, measurable, achievable, realistic and time-bound, but because these represent markers to track the smartest investment to improve global welfare.

It is vital that the SDG Framework includes the complete set of these six indicators that together comprehensively address maternal, infant and child nutrition. These indicators are already a priority

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[43] http://www.wssinfo.org/fileadmin/user_upload/resources/post-2015-WASH-targets-factsheet-12pp.pdf
[44] http://www.who.int/nutrition/topics/nutrition_globaltargets2025/en/. EB document A136/9 (November 2014).

selection from a broader range of indicators. Countries endorsed and committed to report on them. Including them into the SDG Framework would be the logical step to follow and not create additional reporting burdens. WHO is already providing methodological support including reporting on progress. http://apps.who.int/gb/ebwha/pdf_files/WHA65/A65_11-en.pdf?ua=1&ua=1

Potentially the nutrition indicators could be included under the Goal 3 on 'Ensuring healthy lives and promote well-being', notably under 3.1, 3.2 and 3.4:

'Percentage of women of reproductive age (15-49 years of age) with anaemia' (under 3.1)
This measures iron deficiency, iron being one of the essential micronutrients. Iron deficiency, particularly among women of reproductive age, is an important and most prevalent micronutrient deficiency. It increases the risk of maternal death and compromises healthy birth. Furthermore, anaemia in women reduces their physical performance and work capacity, and thus has negative impacts on national economies and development. In 2011, 29% (496 million) of non-pregnant women and 38% (32.4 million) of pregnant women were anaemic, with highest prevalence in south Asia and central and West Africa. http://www.who.int/nutrition/publications/globaltargets2025_policybrief_anaemia/en/

Percentage of infants less than 6 months of age who are exclusively breast fed (under 3.2)
The World Health Assembly target is to increase the rate of exclusive breastfeeding for children under 6 months of age to at least 50 percent by 2025. Breastfeeding is a cornerstone of child survival, nutrition and early childhood development, so it is imperative that breastfeeding is reflected in the SDGs. Breast milk provides all the energy and nutrients that infants need during the first six months of life. Exclusive breastfeeding during the first six month is highly protective of childhood mortality from common childhood illnesses like diarrhoea and pneumonia, and it contributes to quicker recovery from illness. Breastfeeding reduces the risk of childhood obesity and non-communicable diseases in later life. Globally, only 38% of infants 0 to 6 months old are exclusively breastfed. http://www.who.int/nutrition/publications/globaltargets2025_policybrief_breastfeeding/en/

'Prevalence of overweight (high weight-for-height) in children under 5 years of age' (under 3.4) This
indicator measures overweight and obesity in children under 5, a condition that is becoming more and more prevalent in all regions of the world. It increases the risk of diet-related noncommunicable diseases (NCDs), disability in adulthood and premature death. http://www.who.int/nutrition/publications/globaltargets2025_policybrief_overweight/en/

'Percentage of infants born with low birth weight (<2500g)' (under 3.2)
This is the most commonly used indicator of fetal growth. Low birth weight contributes to prenatal and neonatal mortality and morbidity, to childhood stunting, impaired cognitive development, and chronic diseases in later life. It is estimated that 15 to 20% of all births worldwide are low birth weight, representing more than 20 million births a year, with the great majority occurring in developing countries**.** http://www.who.int/nutrition/publications/globaltargets2025_policybrief_lbw/en/

Goal 5: Achieve gender equality and empower all women and girls
Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goals 5 and 16 are directly relevant to WHO and other work on violence prevention, and particularly pertinent given WHA Resolution 67.15 which calls for WHO to develop a Global Plan of Action to strengthen the role of the health system to address interpersonal violence, in particular against women and girls, and against children).
- 5.2 Eliminate all forms of violence against women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.

WHO leads efforts to establish global, regional and national prevalence rates for several of these types of violence and is a key player in the development implementation of nationally representative surveys of such violence.

- **16.1 Significantly reduce all forms of violence and related deaths everywhere**
  WHO leads within the UN system on efforts to measure and estimate global, regional and national causes of death, including due to suicide, homicide and war.
- **16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children**
  WHO plays a leading role in efforts to develop child maltreatment indicators and to estimate global, regional and national prevalence rate of child maltreatment.

Indicators and data sources

The indicators mapped on to the goal and subgoals for health can be divided into four groups:

- Mortality levels (life expectancy, child and neonatal mortality) and causes (maternal, HIV, TB, malaria, leading NCD, suicide, road traffic injuries)
- Morbidity: HIV, TB, malaria
- Coverage of interventions and financial protection
- Other indicators such as IHR capacities, knowledge and access to services.

These require different data sources which in turn require comprehensive strong country health information systems (Figure).

Monitoring and review

Accountability has been defined as a cyclical process of monitoring, review and remedial action. The monitoring of the health-related SDG requires well-established mechanisms for accountability at country, regional and global levels. Such mechanisms need to be inclusive, independent, evidence-based and transparent, and lead to remedial actions.

As with health information systems, the foundation of accountability lies at the country level. Accountability at the country level starts with reliable, accurate, timely, transparent and comprehensive data on progress and performance that is communicated effectively to all relevant constituencies in countries. Regular mechanisms of review of progress and performance should be based on technical synthesis of all data involving the Ministry of Health, national statistics office, institutes of public health and others. The reviews are transparent and inclusive involving government (national and subnational), civil society organizations and development partners. The reviews should be followed by planning and implementation of remedial actions.

At the global level, health should be part of the overall SDG monitoring and accountability framework. Building upon the experience with the Interagency and Expert Review Group for the MDGs, this may imply that an overall group for the SDG monitoring is established. Since the SDG contain a much larger set of goals a subgroup on health of the UN Interagency group for SDG monitoring may be established, again based on interagency collaboration and involvement of technical experts. In addition, informal collaborations between academics, UN agencies, government and private sector should also be considered for technical synthesis and analysis of data, based on the model developed by Countdown to 2015 for Maternal, Newborn and Child Survival initiative. The aim is to ensure independence and objectivity in the analysis of progress.

Health feeds into the overarching accountability framework for the SDGs. This should include multiple mechanisms including regular reviews of progress by Member States through the World Health Assembly, independent expert review groups that report to governing bodies and social accountability mechanisms that provide a direct avenue for people's voices. These mechanisms bring together the technical synthesis with a strategic analysis of improvement efforts required on the part of countries and international partners, and a powerful advocacy component

Conclusions

The table below summarizes the target specifics for the goals and subgoals, and proposed indicators. There are 38 indicators, many have been endorsed by governing bodies, others are in advanced stages of development. If we count

The majority of indicators require all-cause or cause-specific mortality information. This implies the strengthening of mortality statistics systems that rely on multiple sources including death registration with reliable cause of death. In addition, the measurement of incidence rates (or proxies for incidence) and (effective) coverage of interventions, as well as financial protection will be critical. Household surveys with biological and clinical data collection will be critical, also to effectively measure inequalities in the population. Timely, reliable and accurate health facility data can complement household survey data.

If the overarching indicator for monitoring the health goal in the SDGs is healthy life expectancy to capture both mortality and decrements in health status of the population, an agenda will need to be developed to ensure comparability of measures of functioning in national population health surveys. A core set of these items that would allow for comparability within countries over time and sub-groups as well as across countries that can be incorporated within national data generation exercises would be essential. This would then enable the combining of this information with mortality data to monitor healthy life

expectancy. This would then enable the measurement of the impact of chronic conditions such as NCDs, mental health conditions such as dementia and musculoskeletal conditions (in addition to infectious and maternal and child health conditions) as these conditions become increasingly prevalent with an ageing population worldwide.

The health sector will need to engage with the overall process of development of the outcome statement and the Statistical Commission to provide technical inputs on the validity of the health goal, targets and indicators, also those targets of relevance in other goals.

Annex A. Targets, indicators, endorsement status, data sources and availability, disaggregation, global estimates and type of indicator.

Overall goal	Indicator	Target specifics	Endorsement status	Data sources	Data availability	Disaggregation	Global estimates	Type
Ensure healthy lives and promote wellbeing for all at all ages	(Healthy) life expectancy at birth Mortality before age 70	40% reduction in every country	WHO / other technical consultations premature death article	CRVS, surveys	Fair	Poor	UNPD biannual	Mortality
Subgoal / target	**Indicator**	**Target specifics**	**Endorsement status**	**Data sources**	**Data availability**	**Disaggregation**	**Global estimates**	**Type**
3.1 Reduce the global MMR to less than 70 per 100,000 live births	Maternal deaths per 100,000 live births (MMR)	Reduce the global MMR to less than 70 and no country to have MMR above 140	International meetings and country consultations	CRVS; surveys; facility data	Poor (high mortality countries)	Poor	UN / WHO Interagency group, biannual	Mortality
	Skilled birth attendance		MDG 5B	Surveys, facility	Good	Good		Coverage
	Antenatal care attendance (4+)		MDG 5B	Surveys, facility	Good	Good		Coverage
3.2 End preventable newborn & under-5 deaths	Under-five mortality per 1,000 live births	All countries to reduce under-5 mortality to no more than 25	Child survival call to action; "A Promise Renewed"	CRVS, surveys	Fair	Fair	UNICEF Interagency group, annual	Mortality
	Neonatal mortality per 1,000 live births	All countries reduce neonatal mortality to no more than 12	Every Newborn Action Plan: WHA	CRVS, surveys	Fair	Fair	UNICEF Interagency group	Mortality
	Full immunization coverage / DTP3 containing vaccine	At least 90% coverage, 80% in all districts	Global Vaccine Action Plan 2011-2020	Surveys, facility data	Good	Good	WHO/UNICEF annual	Coverage
	Care seeking for suspected pneumonia			Surveys	Good	Good		Coverage
	ORS treatment and zinc treatment in under-5			Surveys	Good	Good		Coverage
3.3 End the epidemics of AIDS, TB, malaria and NTD and	HIV incidence per 100 susceptible person years	90% reduction (adults, key pops, children, adolescents)	UNAIDS PCB	Surveys, facility data	Fair	Fair	UNAIDS annual	Morbidity
	HIV/AIDS deaths per 100,000	90% reduction	UNAIDS PCB	CRVS	Poor	Poor	UNAIDS annual	Mortality
	Antiretroviral therapy coverage	95% awareness, 95% ART, 95% viral load suppression	UNAIDS PCB	Facility data	Fair	Poor	WHO & UNAIDS annual	Coverage
	TB incidence per 1,000 person years	80% reduction	Global TB Strategy 2016-35, WHA	Facility data, surveys	Fair	Fair	WHO, annual	Morbidity
	Number of TB deaths	90% reduction	ditto	CRVS	Poor	Poor	WHO, annual	Mortality
	TB treatment coverage	90% case detection, 90% treatment success	ditto	Facility data	Fair	Poor	WHO, annual	Coverage
	Malaria incident cases per 1,000 person years	90% reduction	Malaria Global technical strategy	Facility data, surveys	Fair	Fair	WHO, annual	Morbidity
	Malaria deaths per 100,000	90% reduction	ditto	CRVS	Poor	Poor	WHO, annual	Mortality

Subgoal / target	Indicator	Target specifics	Endorsement status	Data sources	Data availa-bility	Disaggrega tion	Global estimates	Type
	People at risk of NTD (Number)	90% reduction	Resolutions/ targets for elimination	Surveys, other	Fair	Fair	WHO, biannual	Morbidity
	ITN use for malaria in under-fives			Surveys	Good	Good		Coverage
3.3 .. and combat hepatitis, water-borne diseases and other communicable diseases	Prevalence of hepatitis B surface antigen in under 5s	90% reduction	WHO Technical meeting	Surveys	Poor	Poor		Morbidity
	Presence of 13 IHR core capacities for surveillance and response	All countries	IHR WHA	Other	Good	NA	NA	Other
3.4 Reduce premature mortality from NCDs through prevention and treatment and promote mental health and wellbeing	Probability of dying of CVD, cancer,diabetes, or chronic resp. disease between ages 30 and 70	30% reduction	WHA resolution 2013	CRVS	Poor	Poor	WHO, biannual	Mortality
	Current tobacco use among persons 15+	30% reduction	WHA Resolution 2013	Surveys	Good	Good	WHO	Coverage (risk factor)
	Suicide-related mortality per 100,000 pop	10% reduction	WHA Resolution	CRVS	Poor	Poor	WHO, biannual	Mortality
	Severe mental illness treat-ment coverage		WHA Resolution	Surveys, facility data	Poor	Poor	WHO	Coverage
3.5 Strengthen prevention and treatment of substance abuse, including narcotic drug use and harmful use of alcohol	Coverage of treatment and care services for people who suffer from substance use disorder	>=80%			Poor	Poor	UNODC	Coverage (by substance and type)
	Coverage of needle and syringe programs among IDU	90%		Special surveys, other	Poor	Poor	UNODC	Coverage
	Coverage of OST among opioid dependent drug users	40%	UN GA resolution, PCB	Special surveys, other	Poor	Poor	UNODC	Coverage
	Prevention coverage for substance abuse interventions among <25	90%		Special surveys, other	Poor	Poor	UNODC	Coverage
	Prevalence of heavy episodic drinking)	Alcohol consumption per capita	WHA resolution	Surveys, other	Fair	Poor	WHO	Coverage (risk factor)
	Prevalence of drug use disorders				Poor	Poor	UNODC	Coverage (risk factor)
3.6 Reduce deaths and injuries due to road traffic accidents	Number of deaths due to road traffic accidents	50% reduction (to 600,000)	Decade of Action for Road Safety	CRVS, other	Fair	Poor	WHO	Mortality

Subgoal / target	Indicator	Target specifics	Endorsement status	Data sources	Data availability	Disaggregation	Global estimates	Type
3.7 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	Adolescent birth rate (10-14, 15-19)		Part of MDG 5B	CRVS, surveys	Good (15-19)	Good	UNFPA, UNPD	Fertility
	Demand satisfied with modern contraceptives	At least 75%	Part of MDG 5B; Global PMNCH Partners Forum Communique 2014	Surveys, facility data	Good	Good	UNFPA, UNPD	Coverage
	Syphilis treatment in pregnant women			Facility data	Fair	Poor		Coverage
	Proportion of abortions that are unsafe				Poor	Poor	WHO, UNFPA: 5 yearly	Coverage
	Knowledge among young people about SRH	At least 95%		Surveys	Fair	Fair	UNFPA	Other
	% of PHC facilities providing the basic SRH package***							Other
3.8 Achieve 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	% of population protected against impoverishment by out-of-pocket (OOP) health expenditures % of households protected from incurring catastrophic OOP health expenditure	100%	WHO/World Bank Monitoring Framework consultation	Surveys	Fair	Good	World Bank and WHO	Other
	Coverage with a set of tracer interventions	Minimum 80% essential health services coverage among all populations	WHO/World Bank Monitoring Framework consultation	Surveys, facility data				Coverage
3.9 Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Population in urban areas exposed to outdoor air pollution levels above WHO guideline values	Reduce air pollution to below WHO guidelines values for particulate matter (PM) 2.5	WHO standard, resolution on reducing air pollution in WHA	Surveys, other				Coverage