



# Monitoring universal health coverage within the Sustainable Development Goals: assessing the indicators proposed by Daniel Hogan, Gretchen Stevens, Ahmad Reza Hosseinpoor, and Ties Boerma

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The text of the Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly in September 2015, like its predecessor Millennium Development Goals, acknowledges the importance of monitoring to track progress, encourage implementation, mobilize support, and promote accountability. *Transforming our world: the 2030 agenda for sustainable development* commits to engaging in a systematic follow-up and review of implementation over the 15 years' duration of the SDGs through using a set of global indicators. It envisions follow-up and review processes that are rigorous, based on evidence, and informed by high quality, reliable, and timely data disaggregated by income, sex, age, race, ethnicity, migration status, disability, and geographic location, so as to assure that no one is left behind (1). These criteria apply to all of the SDG's 17 goals and 169 targets including the omnibus health goal "to ensure healthy lives and promote well-being at all ages," and its nine targets and four subsidiary targets.

These are as follows:

- 3.1 *By 2030, reduce the global maternal mortality ratio to less than 70 per 1000,000 live births.*
- 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 1,000 live births and under-five mortality to at least as low as 25 per 1,000 live births.*

- 3.3 *By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases.*
- 3.4 *By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.*
- 3.5 *Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.*
- 3.6 *By 2020, half the number of global deaths and injuries from road traffic accidents.*
- 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.*
- 3.8 *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.*
- 3.9 *By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.*

Subsidiary targets:

- (a) *Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.*

- (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 the full provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding the flexibilities to protect public health, and in particular, provide access to medicines for all.*
- (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.*
- (d) *Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks (1).*

The dilemma is that health information systems in many countries, particularly low- and middle-income countries, do not have reliable health data available on a disaggregated basis as the basis for monitoring the health targets in the SDGs. Data availability and quality may be poor. Their health statistics are not built on accurate and evidence-based resources, such as birth and death registries, censuses, public health/disease surveillance, vital statistical systems, health facilities administrative sources, and ongoing surveys. Also, data may be collected at irregular intervals complicating efforts to track changes at regular intervals over time. A recent article commenting on this problem opines that implementing the health SDG will require innovative data acquisition strategies and integrated approaches to improving the availability, quality, timeliness, and disaggregation of data (2).

WHO's proposed monitoring framework for Goal 3, developed after a series of consultations with NGOs and development agencies, sought to produce statistics to highlight health inequalities by major stratifiers, including demographic (age, sex/gender), socioeconomic status (wealth, education), geography (province/district) and other characteristics (migration, minorities, etc.) (3). However, the UN's Inter-Agency and Expert Group on Sustainable Development Indicators composed of representatives of national statistical offices has been resistant to doing so. Their initial post-adoption February 2016 report (4) acknowledges the need for disaggregation but it then goes on to reject the use of major stratifiers for Goal 3,

apparently because the Group assumes that disaggregated data are not widely available, but this is not necessarily the case (5).

There has been a growing interest in recent years with achieving universal health coverage (UHC) so it is not surprising that UHC was selected as a target for Goal 3. SDG target 3.8 directs countries to "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 (5)," but it does not conceptualize what access to quality essential health service and essential medicines and vaccines entails. Significant progress toward UHC could have the potential of enabling the approximately one billion people currently estimated to not have access to the health services they need the opportunity to obtain them and to do so affordably. Although UHC is only one of nine substantive targets in Goal 3, it is considered to be the target that underpins and is key to the achievement of all the others (6). UHC also receives special attention in the declaration endorsed by heads of government that precedes the identification of the SDGs: UHC is linked with the central commitment in the SDGs to leave no one behind: "To promote physical and mental health and well-being, and to extend life expectancy for all, we must achieve universal health coverage and access to quality health care. No one must be left behind (6)."

So, the need to develop a monitoring strategy for UHC is quite important. However, the work of the UN Statistical Commission tasked to do so has been disappointingly slow and inadequate. As of its July 2017 report its proposal for measuring access to quality essential health-care services merely identifies "coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population) (7)." It does not propose specific indicators. Nor does it recommend any form of disaggregation.

Recently a group of health researchers led by Daniel Hogan proposed an index of 16 tracer indicators for measuring coverage of essential health services (8). Their indicators include four from within each of the categories of reproductive, maternal, newborn and child health; infectious disease; non-communicable diseases; and service capacity and access. In addition, they used their indicators to summarize information and present baseline results

for 183 countries with populations larger than 90,000 for 2015 using data from UN agency databases, supplemented with submissions from national focal points. An index was then computed using geometric means and a subset of tracer indicators were used to summarize inequalities. The approach was developed as part of the implementation of the WHO and World Bank joint UHC framework and was shared with WHO member states for feedback. It will apparently be used to inform future SDG reporting. The work was sponsored by the Ministry of Health, Japan and the Rockefeller Foundation, but the funders had no role in any aspect of the study or the writing of the report (8).

In identifying the added value of the study, the study team points out that it provides a measure of indicator 3.8.1 on the coverage of essential health services for the first-time presenting methods and 2015 baseline results for 183 countries. According to the authors, the UHC service coverage index is straightforward to calculate and can be computed with available country data for country-led monitoring of UHC progress. Additionally, their analysis showed that their service coverage index is highly correlated with other summary measures of population health even after controlling for countries' level of wealth (8). These are indeed significant accomplishments, and as further sign of the importance of the project, the indicators proposed have already been adopted by WHO and the World Bank as the basis of tracking UHC (9).

The whole project and more broadly the conceptualization and monitoring of UHC in the SDGs rests on the appropriateness of the indicators selected to assess progress toward achieving UHC and it is therefore important to critically evaluate them. As has been noted with reference to indicators, "what gets measured gets managed (10)." Alicia Ely Yamin and Vanessa Boulanger document how the narrow focus of the MDG goal on maternal health care and on maternal mortality rather than women's rights or right to health and the targets and indicators adopted were converted into national planning tools and priorities for international aid, and in the process sidelined broader dimensions of gender equality and women's sexual, reproductive and health rights (11). I am concerned that the indicators proposed for monitoring UHC within the SDGs by Daniel Hogan and his team will have a similar distorting effect on the conceptualization of UHC as well as its assessment of a country's progress.

According to the team, its methodology for the selection of the indicators followed four guiding principles: (I) the preference for effective service coverage indicators with

effective coverage conceptualized as the proportion of people in need of services who receive services of sufficient quality to obtain potential health gains; (II) the inclusion of indicators for different types of services, namely curative services, rehabilitation, and palliation; (III) the coverage of the main health areas of reproductive, maternal, newborn, and child health; infectious diseases; non-communicable diseases; and service capacity and access; (IV) the ability to disaggregate the index by key inequality dimensions (8). In each of the four categories listed above four tracer indicators were selected reflecting a range of program service delivery strategies. In choosing their indicators, the team applied the following criteria: (I) an indicator should be relevant in terms of reflecting epidemiological burden and the presence of cost-effective interventions; (II) an indicator should be conceptually sound with a clear target; (III) the indicator should be feasible with current comparable data available for most countries, preferably data that can be disaggregated; and (IV) an indicator should be easy to communicate (8).

The proposed tracer indicators selected for Hogan *et al.*'s index is the following:

- ❖ *Family planning: demand satisfied with modern methods in women aged 15–49 years who are married or in a union (%)*;
- ❖ *Pregnancy and delivery care: four or more visits to antenatal care (%)*;
- ❖ *Child immunization: children aged 1 year who have received three doses of diphtheria, tetanus, and pertussis vaccine (%)*;
- ❖ *Child treatment: care-seeking behavior for children with suspected pneumonia (%)*;
- ❖ *Tuberculosis treatment: tuberculosis effective treatment coverage (%)*;
- ❖ *HIV treatment: people with HIV receiving antiretroviral therapy (%)*;
- ❖ *Malaria prevention: population at risk who sleep under insecticide-treated bed nets (%)*;
- ❖ *Water and sanitation: households with access to at least basic sanitation (%)*;
- ❖ *Prevention of cardio-vascular disease: prevalence of non-raised blood pressure regardless of treatment status (%)*;
- ❖ *Management of diabetes: mean fasting plasma glucose*;
- ❖ *Cancer detection and treatment: cervical cancer screening in women aged 30–49 years (%)*;
- ❖ *Tobacco control: adults aged at least 15 years who had not smoked tobacco in the previous 30 days (%)*;
- ❖ *Hospital access: number of hospital beds per person*;

- ❖ *Health-care worker density: number of health professionals per person—compromising physicians, psychiatrists, and surgeons;*
- ❖ *Access to essential medicines: proportion of health facilities with availability of WHO-recommended core lists of essential medicines;*
- ❖ *Health security: International Health Regulations core capacity index (8).*

But are these the essential health services that should constitute UHC? This question is particularly important because of the influence these indicators are likely to have in shaping thinking about UHC and setting policies. Many of the proposed indicators parallel the targets for Goal 3. However, the Goal 3 targets were not chosen because they were considered the constituent services for UHC.

Researchers and analysts developing health indicators have to choose between two strategies: identifying what is really important to know and then attempting to shape information systems to collect relevant data or alternatively identifying what kinds of data are already available as the basis for the indicators. The Hogan team decided on the second of these paths. The dilemma is that there may not be a good match between the health data currently available and the importance and relevance of an indicator for essential health services based on these data, especially because of the weakness of the statistical systems in many countries. Moreover, as it turns out data were not always available to assess the indicators selected.

Moreover, the team relied on data already in UN databases to make its assessment. Because of weaknesses in data collection and countries' reluctance to share some kinds of data with UN agencies, global databases often depend on modelling and estimates to fill data gaps and obtain comparable statistics. However, no matter how advanced the modelling tools and the predictions made for monitoring purposes these data are far from ideal (11). Therefore, it is relevant to note that the data sources designated for many of the Hogan's team's indicators are based on estimates: child immunization, tuberculosis treatment, HIV treatment, malaria prevention, water and sanitation, prevention of cardio-vascular disease, management of diabetes, and tobacco control (8). Using data based on estimates also precluded disaggregation for these indicators. Moreover, 2 of the 16 proposed tracer indicators turned out not to have sufficient data available in the databases consulted, coverage of cervical cancer screening and access to essential medicines, and were therefore excluded from the index calculations (8).

The distribution of the indicators is also problematic because it is skewed toward disease monitoring. SDG Goal 3 has two targets related to women's reproductive health and one for children. There is one target each for communicable and non-communicable diseases. However, the proposed indicators list has only two proposed indicators for women's reproductive health and two for children while there are four for infectious diseases and four for noncommunicable diseases. Given the inadequacies with the MDG indicators relating to women's health, the disease orientation and relative neglect of indicators for women's health here are particularly problematic. Also, disaggregated data are far more often available for reproductive, maternal, newborn, and child health in most countries than for other areas of health (8). In contrast with the approach here, the indicators for women's, children's, and adolescents' health for the Global Strategy for Women's Children's and Adolescents' Health for the coverage of essential health services include the following: family planning need met for all women (and not just those married or in a permanent union as in Hogan *et al.*'s list), antenatal care, skilled birth attendance, breastfeeding, immunization, and childhood illness treatment and service capacity as well as current country health expenditures per capita. There are additional indicators to measure the status of women's children's, and adolescents' health (11). Hogan and his colleagues rightly conclude that more work is needed to develop methods for tracking progress on the coverage of health-care services (8). More efforts are also needed to improve indicators for identifying relevant essential health services to assess UHC.

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