

# Monitoring universal health coverage within the Sustainable Development Goals: development and baseline data for an index of essential health services



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## Summary

**Background** Achieving universal health coverage, including quality essential service coverage and financial protection for all, is target 3.8 of the Sustainable Development Goals (SDG). As a result, an index of essential health service coverage indicators was selected by the UN as SDG indicator 3.8.1. We have developed an index for measuring SDG 3.8.1, describe methods for compiling the index, and report baseline results for 2015.

**Methods** 16 tracer indicators were selected for the index, which included four from within each of the categories of reproductive, maternal, newborn, and child health; infectious disease; non-communicable diseases; and service capacity and access. Indicator data for 183 countries were taken from UN agency estimates or databases, supplemented with submissions from national focal points during a WHO country consultation. The index was computed using geometric means, and a subset of tracer indicators were used to summarise inequalities.

**Findings** On average, countries had primary data since 2010 for 72% of the final set of indicators. The median national value for the service coverage index was 65 out of 100 (range 22–86). The index was highly correlated with other summary measures of health, and after controlling for gross national income and mean years of adult education, was associated with 21 additional years of life expectancy over the observed range of country values. Across 52 countries with sufficient data, coverage was 1% to 66% lower among the poorest quintile as compared with the national population. Sensitivity analyses suggested ranks implied by the index are fairly stable across alternative calculation methods.

**Interpretation** Service coverage within universal health coverage can be measured with an index of tracer indicators. Our universal health coverage service coverage index is simple to compute by use of available country data and can be refined to incorporate relevant indicators as they become available through SDG monitoring.

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## Introduction

Universal health coverage (UHC) is the goal that all people receive the essential health services that they need, without being exposed to financial hardship, and is central to the health-related targets of the Sustainable Development Goals (SDGs). UHC is both an end in itself, as expressed in SDG target 3.8, as well as the most logical way to ensure progress towards meeting other health-related SDG targets. Two indicators were adopted by the UN Statistical Commission in March, 2017, to monitor progress towards SDG target 3.8 on UHC, namely the coverage of essential health services (SDG indicator 3.8.1) and the proportion of households with large expenditures on health as a share of total household consumption or income (SDG indicator 3.8.2). Measurement of service coverage for SDG 3.8.1 is the focus of this paper, with a companion paper on SDG 3.8.2.<sup>1</sup>

SDG indicator 3.8.1 is: "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)."<sup>2</sup> This definition acknowledges that countries provide a wide range of services for health promotion, prevention, treatment, and care, including rehabilitation and palliation, and that tracer indicators should be selected to represent overall coverage of essential services.<sup>3,4</sup> These tracer indicators can be selected to track progress in UHC service coverage, but they do not define service coverage within UHC or provide a comprehensive measurement of service coverage within UHC. These tracer indicators can be summarised in an index that aims to track the coverage of essential health and health-related services with a single

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### Research in context

#### Evidence before the study

Previous work on summarising national levels of service coverage to monitor progress towards universal health coverage (UHC) has focused on particular regions or has made use of mortality-based indicators that are poorly measured in most developing countries. The Sustainable Development Goals (SDGs) monitoring framework calls for an index of essential service coverage to monitor progress towards SDG target 3.8 on UHC across countries.

#### Added value of the study

For the first time, this study developed a measure of SDG indicator 3.8.1 on the coverage of essential health services, presenting methods and 2015 baseline results for 183 countries. The UHC service coverage index is straightforward to calculate,

and can be computed with available country data, which allows for country-led monitoring of UHC progress. Our results show a wide range of progress towards UHC across and within countries, and the service coverage index is highly correlated with other summary measures of population health even after controlling for countries' level of wealth.

#### Implications of all the available evidence

Global, regional, and national tracking of progress towards UHC needs to start with tracking of coverage of essential services, along with an indicator of financial protection. All countries can monitor the coverage of essential services by use of a simple index based on a small but diverse set of indicators. The index shows that the road to effective coverage with essential services for all is still long for many countries.

numerical value. In this paper, we use the term service coverage index to refer to an index of essential health services.

The use of indices to summarise information about an underlying health construct is becoming increasingly common in the global health literature, often deriving motivation from the Human Development Index. For example, indices have been developed for global assessments such as maternal and child health interventions,<sup>5</sup> health and the SDGs,<sup>6,7</sup> assessments of progress towards UHC,<sup>8,9</sup> and in some countries for subnational health programme performance monitoring.<sup>10</sup> In this Report we describe the use of an index of essential health services for monitoring SDG indicator 3.8.1, and present baseline results for 183 countries with populations larger than 90 000 for 2015. The approach was developed as part of the implementation of the WHO and World Bank joint UHC monitoring framework,<sup>11</sup> was shared with WHO member states for direct feedback, and will inform SDG reporting.

## Methods

### Index component selection

The index was developed over several years, and the process included reviews of global datasets, country case studies, and consultations with ministry of health officials.<sup>3,4,11–16</sup> The development of the index followed four guiding principles. The first principle concerned the preference for effective service coverage indicators as the most relevant and direct result of country efforts to meet people's needs for quality health services. Effective coverage is defined here as the proportion of people in need of services who receive services of sufficient quality to obtain potential health gains.<sup>4</sup> Second, in line with the definition of UHC, the index should include indicators for different types of services, namely prevention, comprising health promotion and illness prevention, and indicators for treatment, comprising curative services, rehabilitation, and palliation.<sup>3</sup> This definition includes public health

services, including interventions that are not implemented by the health sector but for which health improvement is a key motivation.<sup>4</sup> Third, the index should cover the main health areas of reproductive, maternal, newborn, and child health (RMNCH), infectious diseases, non-communicable diseases, and injuries. Following the definition of SDG 3.8.1, four categories of indicators were established: RMNCH, infectious disease, non-communicable diseases, and service capacity and access. Finally, the index should be disaggregated by key inequality dimensions.

In each of the four categories described above, four tracer indicators were selected, on the basis of four criteria<sup>3</sup> and ensuring that within each category, the indicators reflected a range of programme service delivery strategies. First, an indicator should be relevant, reflecting epidemiological burden and the presence of cost-effective interventions. Second, an indicator should be conceptually sound, with a measurable numerator and denominator, a clear target and, ideally, a definition that captures effective coverage.<sup>17</sup> Third, it must also be feasible, with current, comparable data available for most countries, which preferably can be disaggregated for equity analysis. Lastly, an indicator should be usable, in the sense it is easy to communicate; indicators that are already reported across countries, including those in the SDG monitoring framework, are appealing as they reduce reporting burden.

Identifying indicators that fulfil these criteria is challenging, and few of the selected indicators fulfil all criteria. The greatest challenge is lack of available data on indicators of effective service coverage. Measuring service coverage for many conditions of interest is difficult because it requires identifying the number of people requiring a particular health service, including those who have never been diagnosed. When data were not available to do this, we used proxy indicators to track effective service coverage. Proxy indicators are not direct measures of service coverage, effective or otherwise. The use of

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