The main text of the SDG declaration endorsed by heads of government in February 2015 puts UHC at the centre of the overall health goal, and makes progress towards the UHC target a prerequisite for the achievement of all the others.\footnote{Transforming our world: the 2030 Agenda for Sustainable Development. Resolution adopted by the General Assembly on 25 September 2015, A/RES/70/1. United Nations General Assembly, Seventieth session, agenda items 15 and 116; paragraph 26 (http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E, accessed 10 April 2016).} Under SDG 3, UHC is also assigned the specific Target 3.8: “Achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all”. The goal of UHC (all people and communities receiving the needed health services, including health protection, promotion, treatment, rehabilitation and palliation without financial hardship) is relevant to all countries and offers an unprecedented opportunity to increase coherence in health-related actions and initiatives.

Accountability – defined as a cyclical process of monitoring, review and remedial action\footnote{As per the framework of the Commission on Information and Accountability for Women’s and Children’s Health (http://www.who.int/woman_child_accountability/about/coia/en/index5.html, accessed 10 April 2016).} – will be critically important in ensuring progress towards UHC. WHO and the World Bank have developed a UHC monitoring framework based on a series of country case studies and technical reviews, and on consultations and discussions with country representatives, technical experts and global health and development partners.\footnote{World Health Organization and World Bank Group. Monitoring progress towards universal health coverage at country and global levels. Framework measures and targets. Geneva: World Health Organization and International Bank for Reconstruction and Development/World Bank; 2014 (http://apps.who.int/iris/bitstream/10665/112824/1/WHO_HIS_HIA_14.1_eng.pdf?ua=1, accessed 10 April 2016).} The framework focuses on the two core components of UHC: coverage of the population with quality, essential health services; and coverage of the population with financial protection, the key to which is reducing dependence on payment for health services out-of-pocket (OOP) at the time of use. The proposed indicators are a “coverage index” of essential services, disaggregated by key stratifiers where possible, and a measure of the lack of financial protection against the costs of health services. These two indicators need to be interpreted together to assess the state of UHC, both nationally and globally.

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

The proposed SDG indicator for services is a UHC coverage index of essential health services. While recognizing that countries may have different health priorities, and will develop their own indicators accordingly, it is possible to
identify a set of tracer indicators that can be combined into an index suitable for the purposes of regional and global UHC monitoring. The set of tracer indicators for service coverage was selected following extensive review and discussion of potential indicators. These are grouped into four main categories, each with four indicators (Table 4.1): (1) reproductive, maternal, newborn and child health; (2) infectious diseases; (3) NCDs; and (4) service capacity and access, and health security. Statistics for the tracer indicators are then combined into a UHC service coverage index.2

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

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

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

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

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

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

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a W = household wealth quintile; E = educational attainment; R = place of residence (typically urban vs. rural); S = sex; and A = age. Letters in parentheses indicate that data sources exist to estimate coverage by the indicated dimension but that more analytical work is needed to prepare disaggregated estimates.
b Information to estimate coverage across key inequality dimensions typically comes from population-based surveys. Standardized population-based surveys are typically only conducted in developing countries, and therefore there is currently a lack consistent data sources to characterize equity for service coverage in many high-income countries.
c Only pertains to countries with highly endemic malaria.
The dashboard (Fig. 4.2) shows the coverage levels for each of the indicators used in the computation of the index in this report. The range of country values varies by indicator and between regions. Such a dashboard will also be useful when presented for a single country with the UHC coverage index.

### 4.2 Inequalities in coverage – towards an integrated assessment

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

This approach is currently not feasible for many countries due to data limitations. For most indicators, disaggregated data are only partially available or present comparability issues. The most extensive standardized disaggregated data are available for indicators in the first category (reproductive, maternal, newborn and child health). This is especially the case for developing countries. These data are used to compute a relative inequality score based on the ratio of the mean coverage among the poorest quintile and that among the second poorest quintile ((2*Q1+Q2)/3).

A summary of these scores is presented in Fig. 4.3 for countries that have conducted an international household health survey (Demographic and Health Survey – DHS or Multiple Indicator Cluster Survey – MICS) since 2005. It is apparent that large differences exist in the relative inequality score of reproductive, maternal, newborn and child health intervention coverage across countries, with many countries having relative differences of less than 10% in coverage between the poor and the national average, while several countries have relative differences of more than 40%.

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

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

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

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

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1 Computed as the average of twice the coverage among the poorest quintile and that among the second poorest quintile (2*Q1+Q2)/3.
2 In the context of the SDG indicator framework a very different indicator has initially been proposed: coverage by health insurance or a public health system. Because health insurance means very different things in different countries, no global data are currently compiled and the indicator is not presented in this report.
3 Not all countries maintain or update NHAs. In such cases, data are obtained through technical contacts in the country or from publicly available documents and reports. Missing values are estimated using various accounting techniques depending upon the data available for each country.
4 To avoid bias towards countries at either end of the population scale, and to avoid bias towards countries which represent a large share of global health spending, regional and income-group aggregates are estimated using unweighted averages and excluding countries with a population of less than 150 000.
Figure 4.2
Dashboard of indicators for the UHC coverage index, WHO, 2015

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

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1 Capacity to pay is defined as household’s expenditure net of subsistence spending (for example on food).
population with large household expenditures on health as a share of their budget (for example, >25%).

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

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

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

- **Catastrophic**
- **Impoverishing health**

- Malawi
- Panama
- Russia and Herzegovina
- Ukraine
- Niger
- Pakistan
- Zambia

- Low People’s Democratic Republic
- Rwanda
- Senegal
- Turkey
- Jordan
- Philippines
- Kyrgyzstan
- Ghana
- France

- United Republic of Tanzania
- Latvia
- Bulgaria
- Russian Federation
- Tunisia
- Viet Nam
- Nicaragua
- Uganda
- Estonia
- Cambodia
- Kenya

- Iran (Islamic Republic of)
- Mongolia
- Bolivia (Plurinational State of)

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- Defined as 25% of total expenditure.
4.4 Data gaps – regular UHC monitoring is possible

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

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

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

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

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