Monitoring progress towards universal health coverage at country and global levels

Framework, measures and targets

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**Introduction**

A movement towards universal health coverage (UHC) – ensuring that everyone who needs health services is able to get them, without undue financial hardship – has been growing across the globe (1). This has led to a sharp increase in the demand for expertise, evidence and measures of progress and a push to make UHC one of the goals of the post-2015 development agenda (2). This paper proposes a framework for tracking country and global progress towards UHC; its aim is to inform and guide these discussions and assessment of both aggregate and equitable coverage of essential health services as well as financial protection. Monitoring progress towards these two components of UHC will be complementary and critical to achieving desirable health outcome goals, such as ending preventable deaths and promoting healthy life expectancy and also reducing poverty and protecting household incomes.

This paper was written jointly by the World Health Organization (WHO) and The World Bank Group on the basis of consultations and discussions with country representatives, technical experts and global health and development partners (3). A draft of this paper was posted online and circulated widely for consultation between December 2013 and February 2014. Nearly 70 submissions were received from countries, development partners, civil society, academics and other interested stakeholders. The feedback was synthesized and reviewed at a meeting of country and global experts in Bellagio, Italy, in March 2014 (4). The paper was modified to reflect the views emerging from these consultations.

**UHC: towards a common framework for monitoring progress**

UHC has been defined as the desired outcome of health system performance whereby all people who need health services (promotion, prevention, treatment, rehabilitation and palliation) receive them, without undue financial hardship (5). UHC has two interrelated components: the full spectrum of good-quality essential health services according to need, and protection from financial hardship, including possible impoverishment, due to out-of-pocket payments for health services. Both components should benefit the entire population.

This paper proposes a framework for monitoring UHC as part of a comprehensive framework for monitoring national health system performance (6). Monitoring UHC should be integral to tracking overall progress in health and performance, which requires regular assessment of inputs (finances, health workforce and medicines), outputs (service provision), coverage of interventions, health impacts and the social determinants of health. Within this overall context and in line with its definition, monitoring of UHC concerns two discrete components of health system performance: levels of coverage with health services and financial protection, with a focus on equity. While progress in achieving UHC through these components is an important goal of health systems, it is not a substitute for other health goals, such as improved survival or healthy life expectancy.
Monitoring progress towards UHC at country and global levels

Country monitoring

The aim of monitoring of UHC by countries is to ensure that progress towards UHC reflects the country’s unique epidemiological and demographic profile, health system and level of economic development and the population’s demands and expectations. These country-specific dimensions are critical for deciding what should be monitored; for example, emerging economies might focus on how best to expand essential services to remote areas, whereas high-income countries might focus on modifying the range of available health services to allow for a growing elderly population. While the country context determines the measures used, the domains to be monitored – coverage with good-quality essential services and with financial protection – are relevant to all countries, regardless of their level of income, their demographic profile or their health needs.

Global monitoring

Given the widespread interest in accelerating progress towards UHC, there is value in standardizing measures so that they are comparable across borders and over time. The aim of the global framework outlined in this paper is to encourage countries to adopt a common approach to monitoring UHC and measuring progress with internationally standardized indicators. Periodic global monitoring permits comparison of progress towards UHC, so that countries can learn from one another. Global monitoring is not, however, a substitute for country monitoring, and countries are encouraged to tailor their measures of UHC by drawing on this framework to best reflect their context. Furthermore, because of the dynamic nature and progressive realization of UHC, the priorities for monitoring will differ among countries.

Guiding principles

The following guiding principles underlie this framework for monitoring progress towards UHC.

- The framework should comprise two interrelated but separate measures: coverage of the population with essential health services and coverage of the population with financial protection. Progress on both measures should be measured simultaneously.
- Measures of coverage should comprise the full spectrum of essential health interventions – promotion, prevention, treatment, rehabilitation and palliation – and their associated costs.
- Measures of coverage with health services and financial protection should benefit the entire population throughout the life-course, including all ages and both genders.
- The measures should capture all levels of the health system. Some interventions, such as tobacco taxes, are society-wide, while others, such as emergency obstetric care, are provided in health facilities. Similarly, financial protection measures should cover all levels of the health system, as costs incurred for services may vary widely.
- The global measures should be relevant to all countries, irrespective of their national income. In contrast to the health-related Millennium Development Goals, which focus primarily on low- and lower-middle-income countries, the development goals and targets of the post-2015 agenda are relevant to all
countries. Even countries that have a broader set of indicators to measure their progress should follow common standards of measurement and include global measures.

- Measures should be disaggregated by socioeconomic and demographic strata in order to allow assessment of the equitable distribution of service and financial protection coverage. In all health systems, there is significant stratification of risks for ill health and access to and payments for services according to household income, place of residence, gender and other factors.

### Methodological considerations

A number of assumptions and methodological considerations must be made in applying these principles to the two measures of UHC: coverage of essential health services and financial protection.

### Coverage of essential health services

Measures for monitoring specific health interventions and reductions in risk factors can be classified differently, depending on the condition, the type of intervention, the characteristics of the target population and the level of delivery of the intervention. In this UHC monitoring framework, the measures are grouped into two broad categories to cover the spectrum of interventions: prevention (which includes services for health promotion and prevention) and treatment (which includes services such as treatment, rehabilitation and palliation). There are many service coverage indicators. The goal is to be parsimonious and use a small set to track progress. We propose adoption of a set of “tracer” indicators to monitor the progress of UHC that are based on the following criteria.

- **Relevance:** Do the indicators measure health conditions that are priorities? Is the intervention cost–effective? Is the service or condition addressed (e.g. health promotion) a potentially major health care expenditure?
- **Quality:** Do the indicators represent effective or quality-adjusted coverage? Or could complementary indicators be used to capture information on the quality of service?
- **Availability:** Are the indicators measured regularly, reliably and comparably (i.e. numerators, denominators, equity stratification) with existing instruments (e.g. household surveys or health facility information systems)?

Very few indicators meet all three criteria. Application of these criteria reveals many relevant, good-quality, available indicators of service coverage with prevention interventions (7). There are already a number of well established indicators of service coverage with interventions for either promoting health or preventing illness. These include Millennium Development Goal-related coverage indicators (such as vaccination coverage) and agreed indicators that can be used to monitor coverage of interventions to prevent noncommunicable diseases (such as non-use of tobacco).

The relative paucity of good indicators of treatment coverage reflects the difficulty in determining needs for conditions that affect only a fraction of the population and often require facility-based care, such as cancer treatment or appendectomy. This is an important concern, as illnesses that require hospitalization or long-term treatment are often associated with higher financial risks, and many people may forego these services because they cannot afford them. Even in high-income countries for
which there are extensive data, very few treatment coverage indicators are in routine use (8). Nevertheless, for conditions such as hypertension or diabetes in which clinical tests are used, household surveys can help determine the size of the population in need and also the number treated.

Thus, drawing on indicators agreed by WHO for monitoring coverage of Millennium Development Goals and noncommunicable diseases, the framework proposes measurement of coverage for a set of prevention and treatment tracer interventions (see illustrative examples below). This core set of interventions can be built upon over time as and when comparable, reliable measures of coverage for other intervention areas, such as rehabilitation and palliation, become available.

Several of these indicators include a quality component, often referred to as “effective coverage”, rather than simply measuring “contact” coverage. For other services, indicators additional to service coverage are required to capture quality.

**Coverage of financial protection**

Two commonly used indicators to track the level of financial protection in health are the incidence of “catastrophic” health expenditures and the incidence of impoverishment due to out-of-pocket health payments. The former indicates the number of households of all income levels that incur health payments that are higher than their resources, while the latter captures the degree to which health spending causes extreme hardship by pushing families below the poverty line.

The impoverishment indicator does not capture families that are pushed even further into poverty by out-of-pocket health spending; a simple way to capture this value is to add to the number of non-poor families impoverished by health spending to the number of already poor families who incur out-of-pocket payments. The total is simply the number of households that are pushed into poverty, or deeper into poverty, because of health spending.

The two financial protection measures actually measure lack of financial protection in health, and both can be re-scaled so that 100% coverage represents full financial protection (9). Thus, the catastrophic spending indicator would capture “protection from catastrophic spending” and would measure the percentage of the population that does not experience catastrophic payments. The impoverishment indicator would capture “protection from impoverishment” and would measure the percentage of the population that is not impoverished through out-of-pocket spending. The additional impoverishment measure suggested would measure the percentage of already poor families that are not driven even further into poverty by out-of-pocket payments.

**Equity in coverage**

At the heart of UHC is a commitment to equity. Yet, in countries on the path to UHC, there is a risk that poorer, less advantaged segments of the population could be left behind (10). So, in addition to measuring levels of coverage of essential health services and financial protection, it is critical to have measures disaggregated by a range of socioeconomic and demographic “stratifiers”. For country monitoring of equity in coverage, the choice of stratifiers should be informed by an assessment of both those that are salient and those that are measureable, given the data available.

The global framework proposes three primary elements for disaggregation that can be measured comparably in all settings: household income, expenditure or wealth (coverage of the poorest segment of the population as compared with richer segments), place of residence (rural or urban) and gender.
**Methodological considerations**

**Targets for assessing country progress towards UHC**

Setting specific, time-bound targets will be critical for progress towards UHC. This will involve identifying from the available data sufficiently ambitious, yet achievable, improvements in equitable coverage of essential health services and financial protection.

The ultimate goal of UHC with respect to service coverage is that everyone can obtain the essential health services they need, that is, 100% coverage. While maintaining this as the goal, it is practical to set targets based on empirical baseline data and past trends in the whole population and among the poorest, taking into account issues in measuring need and effective coverage. For some preventive services, such as vaccination coverage for specific antigens, higher targets are feasible for fully vaccinated children when based on current levels and past trends, but a target short of the ideal may correspond better to the “sufficiently ambitious but nonetheless achievable” criterion. Targets must also include consideration of measurement issues. For some services, such as treatment of hypertension, effective coverage can reach 100% only if the treatment is 100% effective, which is rarely the case. Likewise, treatment indicators (such as for HIV infection) are often based on estimated need, which is rarely sufficiently accurate to set a target of 100%. Thus, this monitoring framework specifies a target of at least 80% coverage of essential health services, regardless of the level of wealth, place of residence or gender.

For financial protection, the available evidence suggests that a target that is both ambitious and achievable is 100% protection from both catastrophic and impoverishing health payments for the population as a whole as well as for the proposed equity strata of the population.

The rates of improvement necessary to achieve these targets in coverage over the next 15 years (to 2030) can be determined from the levels of coverage in 2015, with intermediate targets set for 2020 and 2025.

**Illustrative global measures of monitoring UHC**

This section identifies UHC targets and illustrative indicators for coverage of essential health services and financial protection, based on the framework and methodological approaches to measurement described above, and by regional grouping.

**Measures of essential services coverage**

Below are illustrations of essential service coverage indicators for the monitoring framework. In the first example, data for four countries are used to compare coverage with prevention and treatment services (Fig. 1). For prevention services, six indicators are identified: satisfaction of family planning needs, at least four antenatal care visits, measles vaccination in children, improved water source, adequate sanitation and non-use of tobacco. For treatment services, another six indicators are identified for five areas of intervention: skilled birth attendance, antiretroviral therapy, tuberculosis case detection and treatment success (combined into a single indicator), hypertension treatment and diabetes treatment. The dots in Fig. 1 show coverage with each intervention; the bar is the unweighted mean of the coverage rates for prevention and treatment interventions.
A second illustration shows calculated aggregate and equity measures of service coverage for prevention and treatment interventions by region, with data from the World Health Survey in 2002–2003 (Fig. 2). The shortfalls in coverage relative to the 80% coverage target (the red dotted line) can be seen for both prevention and treatment coverage. For both prevention and treatment measures, coverage is lower among the poorest 20% and 40% of the population than the richest 80% and 60% in all regions. Furthermore, as overall coverage moves closer to the 80% threshold, the gaps in coverage for the poorest 20% and 40% of the population relative to the overall population diminish markedly. While these data suggest that coverage with the treatment interventions is higher than that with prevention interventions in most regions, this is likely to reflect a bias in the way the data were collected rather than actual coverage rates.\(^a\)

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\(^a\) Dots, single intervention coverage values; bars, unweighted means. For computation of means, the water and sanitation indicators and the tuberculosis case detection and treatment success indicators are each combined into a single indicator for an intervention area.

Source: household surveys and facility data for 2010 or later.
Illustrative global measures of monitoring UHC

The same data from the World Health Survey were used to generate two measures of financial protection coverage: the fraction of households not incurring catastrophic payments and the fraction neither impoverished by out-of-pocket payments nor pushed further into poverty by them. In each case, we present results for the entire population as well as for the poorest 20% and 40%.¹

Fig. 3 shows that the rates of financial protection against catastrophic spending are much lower than those of financial protection against impoverishment. Therefore, the shortfalls in coverage relative to the target of 100% coverage in financial protection are much lower for protection against impoverishment expenditure than for protection against catastrophic expenditure. The comparison of the equity dimension of catastrophic and impoverishing expenditures shows that the poorest 20% and 40% have less protection against impoverishing expenditure, whereas for catastrophic expenditure the poor appear to be worse off only in South Asia.

Financial protection measures

Fig. 2. Coverage of prevention and treatment services, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Coverage of prevention services (%)</th>
<th>Coverage of treatment services (%)</th>
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<tbody>
<tr>
<td>East Asia and Pacific</td>
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<td>Europe and Central Asia</td>
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<td>Latin America and the Caribbean</td>
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<td>Middle East and North Africa</td>
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<td>South Asia</td>
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<td>Sub-Saharan Africa</td>
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<table>
<thead>
<tr>
<th>Region</th>
<th>Prevention services</th>
<th>Treatment services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mammogram; Pap smear; antenatal care (more than four visits); measles vaccination; improved water source; adequate sanitation; and non-use of tobacco.</td>
<td>skilled birth attendance; antiretroviral treatment; tuberculosis treatment; diabetes treatment; dental care; and eye surgery.</td>
</tr>
</tbody>
</table>

Monitoring progress towards UHC at country and global levels

**Recommendations**

The monitoring framework outlined in this paper can be used to translate the goal of UHC into measures of progress that are valid and comparable among countries. Together, these measures can provide a snapshot of health system performance with respect to coverage with some essential health services and financial protection, for the population as a whole and for critical equity groups based on household income, expenditure or wealth, place of residence and gender. Using the targets and illustrative indicators provided in this paper, countries can identify their coverage gaps and ascertain how far and fast they should improve the performance of their health systems to achieve progress towards UHC.

This common framework for monitoring UHC is designed to facilitate comparison of progress towards UHC among countries. Each country is expected to add further measures of service coverage and further equity stratifiers in order to tailor UHC monitoring to its context.
Recommendations

UHC monitoring is not a substitute for other measures of health systems performance, such as improved health status or health worker density and distribution. Rather, it should be seen as a core part of a comprehensive monitoring framework in which inputs are linked to outputs and health outcomes. The measures proposed in this paper can thus make a valuable contribution to assessment of health systems performance and to the achievement of desired health outcomes.

The monitoring framework proposes the following goal, targets and illustrative indicators for UHC (see Box 1).

**Box 1. Goal, targets and illustrative indicators of UHC**

**Goal**
Achieve UHC. All people obtain the good-quality essential health services that they need without enduring financial hardship.

**Targets**
- By 2030, all populations, independent of household income, expenditure or wealth, place of residence or gender, have at least 80% essential health services coverage.
- By 2030, everyone has 100% financial protection from out-of-pocket payments for health services.

**Indicators**

1. **Health services coverage**
   1.1 Prevention
      1.1.1 *Aggregate*: coverage with a set of tracer interventions for prevention services.
      1.1.2 *Equity*: a measure of prevention service coverage as described above, stratified by wealth quintile, place of residence and gender.
   1.2 Treatment
      1.2.1 *Aggregate*: coverage with a set of tracer interventions for treatment services.
      1.2.2 *Equity*: a measure of treatment service coverage as described above, stratified by wealth quintile, place of residence and gender.

2. **Financial protection coverage**
   2.1 Impoverishing expenditure
      2.1.1 *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.
      2.1.2 *Equity*: fraction of households protected against impoverishment or further impoverishment by out-of-pocket health expenditures, stratified by wealth quintile, place of residence and gender.
   2.2 Catastrophic expenditure
      2.2.1 *Aggregate*: fraction of households protected from incurring catastrophic out-of-pocket health expenditure.
      2.2.2 *Equity*: fraction of households protected from incurring catastrophic out-of-pocket health expenditure stratified by wealth quintile, place of residence and gender.
Investing in better UHC monitoring

The UHC monitoring framework outlined in this paper is designed as a starting point. Global and national UHC monitoring is currently constrained by the limited number of indicators of service coverage that are relevant, of reasonable quality and feasible to measure with existing instruments, especially for the coverage of treatment services. Tracking of progress in financial protection measures is also hampered by lack of data. Investment is required to develop methods for devising a more comprehensive set of UHC indicators. Moreover, investing in data collection through household surveys with standardized questions and from facilities on services provided for assessing coverage of services and financial protection is an important global public good and good value for money in the pursuit of the goal of UHC.

UHC and the post-2015 development framework

Monitoring progress towards UHC is central to achieving the global goals of The World Bank Group and WHO, the Millennium Development Goals and the emerging post-2015 global development framework (2). The World Bank Group has set a global goal of ending extreme poverty by 2030. UHC is critical to achieving this goal, as it will prevent impoverishment of hundreds of millions of families due to out-of-pocket payments for health services. WHO places the highest priority on securing the right to health and attaining the highest levels of health for all. UHC secures universal entitlement to health services, which are important contributors to improving the health status of the population in all countries. Similarly, The World Bank Group’s global goal to promote shared prosperity for the poorest 40% of the population in every developing country is closely aligned with WHO’s focus on equity and the High-level Panel’s recommendation to “hardwire” equity into all post-2015 measures.

There is emerging consensus that the post-2015 agenda should address the unfinished agenda of the health-related Millennium Development Goals as well as the emerging burden of noncommunicable diseases, including mental health, and injuries. There is already a strong foundation of health indicators to build upon, including the intervention coverage indicators (11) of the health-related Millennium Development Goals, such as vaccination and antiretroviral therapy coverage, the recommended priority interventions related to noncommunicable diseases (12, 13) and indicators of financial protection (14). Further work will be done in consultation with countries and partners to identify and define specific prevention and treatment indicators. The importance of multisectoral influences on health should also be acknowledged, although it is not explicitly addressed in this paper. Further work is needed to firmly link monitoring of progress towards UHC with monitoring of key social and environmental determinants of health and sustainable development.
References


End notes

a In the context of this framework, “essential” is used to describe the services that a country decides should be available immediately to all people who need them. This varies by setting. Global monitoring will focus on a core subset that all countries would expect to cover.

b Although measurement of the indicators differs, there is broad acceptance of the concepts.

c Two other indicators that are sometimes used, although they are less understandable and accessible to policy-makers, are “depth of poverty”, the extent to which out-of-pocket health payments worsen a household’s pre-existing level of poverty, and the “mean catastrophic positive overshoot,” the average amount by which households affected by catastrophic expenditures pay more than the threshold used to define catastrophic health spending.

d The poorest segment of the population is often identified from household wealth index measures that allow analysis of coverage by wealth quintile, the poorest 40% or 20% of households.
Further analyses of time trends in coverage with prevention and treatment interventions and estimates of 2015 baseline and coverage improvement rates through to 2030 are required to further specify the treatment coverage target.

The World Bank Group regions are broadly but not exactly comparable to the WHO regions: East Asia and Pacific (WHO Western Pacific Region), Europe and Central Asia (WHO European Region), Latin America and the Caribbean (WHO Region of the Americas), Middle East and North Africa (WHO Eastern Mediterranean Region), South Asia (WHO South-East Asia Region) and sub-Saharan Africa (WHO African Region).

The World Health Survey, conducted in 70 countries in 2002–2003, was based on a household questionnaire covering the need for and receipt of a large number of interventions for meeting the Millennium Development Goals and reducing the burden of chronic conditions and injuries, as well as health and non-health (including food) expenditure at household level. The poorest 40% of households were identified from the household “wealth index”, which provides the necessary stratification for equity measures of both service and financial protection coverage.

Most of the coverage rates derived from the World Health Survey for treatment services probably result in overestimates of coverage, because the information is self-reported and thereby does not capture people with a condition that has not been diagnosed.

In computing catastrophic spending, ability to pay was measured from non-food consumption. The threshold for catastrophic spending was set at 25%. The international poverty line of US$ 1.25 per day was used to compute impoverishment.