A BROAD SPECTRUM OF HEALTH CHALLENGES – SELECTED ISSUES
Universal health coverage in the SDGs

Achieving universal health coverage (UHC) means ensuring that all people receive the essential health services they need without being exposed to financial hardship as a result. Such services include public health services to promote health and prevent illness, and to provide treatment, rehabilitation and palliative care of sufficient quality to be effective. SDG Target 3.8 commits all countries to work towards the achieving of UHC by ensuring access by all to quality essential health-care services, and to safe, effective and affordable medicines and vaccines.

In order to monitor the progress of countries towards UHC, two SDG indicators have been established – one on coverage of essential services and one on financial protection.1 Taken together, these two indicators were chosen to capture the two key dimensions of health service coverage and protection against financial hardship, and are intended to be monitored jointly. In addition to the “tracer” indicators used to produce an overall index of essential health services coverage, other SDG indicators to monitor specific services have also been developed for: (a) births attended by skilled health personnel; (b) treatment interventions for substance use disorders; (c) family planning services; (d) implementation of the WHO Framework Convention on Tobacco Control; (e) vaccination coverage; (f) access to essential medicines; and (g) safely managed sanitation services. Achieving the SDG health targets on infant, child and maternal health, HIV, TB, malaria and NCDs will require the scaling-up of these and other essential services as key steps in the journey towards UHC.

One very clear aspiration of the SDGs is to “leave no one behind”. Provided that data are available for all of the tracer indicators used to produce the overall service coverage index then this index could be computed and compared across different dimensions of inequality – such as level of wealth and education, geographical locations within a country, and age and sex. Currently this is not possible for all of the tracer indicators of SDG indicator 3.8.1 due to data limitations (Box 3.1). Nevertheless, a subset of indicators can be used to illustrate variations in health service inequalities across countries (1). Data on inequalities in health service coverage are most readily available in the areas of reproductive, maternal, newborn and child health (RMNCH). As these indicators are measured at the individual level in a single survey it is possible to assess the fraction of needed services that each person receives. This measurement approach is often referred to as “co-coverage” (2).

Box 3.1 Challenges of monitoring effective service coverage

There are three key challenges associated with monitoring effective service coverage, which is defined as service coverage that results in the maximum possible health gains. The first challenge is accurate measurement of the population in need of the service. Administrative records from service providers and self-reported prior diagnosis are often unreliable sources of information, as those who do not have access to health services remain undiagnosed. A full assessment of population need requires alternative sources of data, such as a set of survey questions or biomarkers collected in a household health examination survey. Because few conditions requiring treatment can be diagnosed in this way, this substantially limits the set of effective coverage indicators that may be reliably monitored.

Determining effectiveness of service coverage – that is, the degree to which services result in health improvement – is a second challenge. For some indicators it is possible to directly measure quality of care. For example, monitoring of treatment for hypertension can include measurement of whether hypertension is effectively controlled, and monitoring of cataract surgical coverage can include measurement of current visual acuity (3). However, generally speaking, measuring effectiveness of care is more complicated than measuring service provision.

The third key challenge is to monitor equity in access to quality health services. Making sure that no one is left behind as countries strive for UHC requires access to data disaggregated by inequality dimensions, such as wealth or geographical location. Disaggregated data are commonly available for MNCH interventions and water and sanitation services in LMIC, as described here, as well as for malaria prevention, but may not be available for other health topics and indicators required for UHC monitoring. Therefore, investments are needed in data collection, especially for conducting regular household health examination surveys and developing electronic and harmonized facility reporting systems. In addition, it is crucial to build capacities for analysing and reporting health inequality data. Only then can countries tie this information to the policies they are implementing to improve health equity.

Inequalities in basic maternal, child and environmental health services in low- and lower-middle-income countries

To assess inequalities in the coverage of basic maternal, child and environmental health services, co-coverage data collected in Demographic and Health Surveys (DHS) on seven basic health services in low- and lower-middle-income countries were evaluated (3). The seven services were: (a) four or more antenatal care (ANC) visits; (b) at least one tetanus vaccination during pregnancy; (c) skilled birth attendance; (d) bacille Calmette–Guérin vaccination; (e) receiving the third dose of a vaccine containing diphtheria, tetanus and pertussis; (f) measles vaccination; and (g) access to improved drinking water in the household. All seven indicators were calculated for children aged 12–59 months, using information available from their mothers’ most recent pregnancy where relevant (for example, for ANC visits). The analysis shows the absolute number and proportion of the basic services received by each mother-child pair, and can be summarized across key dimensions of inequality such as wealth.

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1 SDG indicator 3.8.1: 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, noncommunicable diseases and service capacity and access, among the general and the most disadvantaged population); and SDG indicator 3.8.2: Proportion of population with large household expenditures on health as a share of total household expenditure or income.

2 Adapted from reference (3).

3 Although this vaccine is not part of the recommended series in all countries, it is recommended in all of the countries assessed here.
It is clear that in low- and lower-middle-income countries large gaps persist in basic maternal, child and environmental health services coverage. These gaps are not evenly distributed across population groups (Fig. 3.1). Whereas 39% of mother–child pairs in these countries received at least six of the seven basic interventions, 4% of mother–child pairs received no interventions at all. When the data are stratified by wealth quintile, significant inequalities emerge. Overall, only 17% of those in households in the poorest wealth quintile (Q1) in their countries received at least six basic interventions – as opposed to 74% in the richest quintile (Q5). Those in the poorest wealth quintile in each country were also the most likely to receive no interventions at all (9%). The mean number of interventions received ranged from three in the poorest wealth quintile to six in the wealthiest, with an overall average of five out of the seven interventions being received.

### Relationship between average coverage and full coverage

For communicating the sheer magnitude of the task ahead in increasing health service coverage to improve health outcomes and achieve the health-related SDGs, perhaps no single statistic is more in demand than the number of people receiving needed essential health services. Fully answering this question is highly challenging because there is no dataset that contains full information on the health service needs of all people and on whether they received those services (Box 3.1). However, the analysis of co-coverage of basic services in mother–child pairs outlined above offers one way of estimating the relationship between the average coverage of such services (which is more straightforward to monitor) and the proportion of people with full coverage (3). Data obtained from 180 DHS in 63 countries were therefore analysed. To allow for measurement error, coverage with at least six of the seven basic services (85%) was used to approximate full coverage rather than coverage with all seven. This analysis demonstrated that the proportion of mother–child pairs with access to at least six of the seven basic services was far lower than the average coverage of the seven interventions (Fig. 3.2).

One very important implication of this finding is that the proportion of people who have access to a full range of essential services is far lower than the average coverage of such services (as approximated by the SDG index of essential services coverage). Thus, it would not be correct to simply multiply the average coverage of essential services by population in order to obtain the number of people with full access to them.

### Way forward

Gaps in basic maternal, child and environmental health service coverage remain largest among those in the poorest wealth quintile. Unless health interventions are designed to explicitly promote equity, efforts to attain UHC may lead to improvements in the national average of service coverage while at the same time worsening national inequalities (4). Health services must be structured in such a way as to ensure that no one is left behind. It is also likely to be the case that current gaps in the coverage of NCD services and hospital services will be even larger than the gaps in the basic interventions discussed here.

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1 In this paragraph and Fig. 3.1, all analyses were carried out using the most recent survey in each country during the time period 2005–2015. Data were available for 48 countries, covering 96% of all live births in 2010 in low- and lower-middle-income countries; the median survey year was 2012. To create estimates for all low- and lower-middle-income countries, country data were weighted by the number of live births in 2010 in each country.
3.2 CHOLERA – AN UNDERREPORTED THREAT TO PROGRESS

Cholera and the SDGs

Cholera is an acute diarrhoeal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. Cholera is extremely virulent, with a very short incubation period of between 12 hours and 5 days (6), and affects all ages. If left untreated, cholera can kill within hours.

Despite the availability of prevention, control and treatment tools and approaches, cholera remains a serious threat to public health. In addition, cholera is a stark indicator of inequality and lack of social and economic development as it disproportionately affects the world’s poorest and most vulnerable populations (7). Cholera transmission is closely linked to inadequate access to clean water and sanitation facilities. As shown in Fig. 3.3, most of the countries that reported locally transmitted cholera cases to WHO during the period 2011–2015 were those in which only a low proportion of the population had access to basic drinking-water and sanitation services (7).

Estimated and reported burden of cholera

The exact burden of cholera is unknown as many cases and deaths go unreported. Factors contributing to the underreporting of cholera can include weak surveillance systems, inconsistencies in case definitions, lack of laboratory diagnostic capacity, and fear of impact on trade and tourism (9).

It is estimated that during the period 2008–2012, a total of between 1.3 and 4.0 million cases of cholera occurred annually in 69 cholera-endemic countries, resulting in 21,000 to 143,000 deaths each year (10). However, the average annual number of cases and deaths reported to WHO during this same period were only around 313,000 and 5700 respectively (11–15). In 2016, 132,121 cholera cases and 2420 deaths were reported to WHO from 38 countries, including 47 imported cases reported in nine countries (Fig. 3.4) (16).

Cholera outbreaks: the role of surveillance in early detection and response

Cholera outbreaks often hit communities already made vulnerable by tragedies such as conflicts, natural disasters and famines (7). During the 2010–2011 cholera outbreak following an earthquake in Haiti, over 7000 people died from cholera in the country and neighbouring Dominican Republic (13, 14). During the 2016–2017 cholera outbreak in South Sudan, more than 20,000 suspected cases and over 400 deaths were reported (Box 3.2) (17). Since January 2017, more than 1000 people have died of cholera in Somalia (18) and over 1000 in the Democratic Republic of the Congo (17). Currently, Yemen is facing the world’s largest cholera outbreak, with over 1 million suspected cases and more than 2000 deaths reported since April 2017 (19).

In order to contain outbreaks and dramatically reduce the number of cholera deaths, early detection and immediate and effective responses are vital. This requires strong early-warning surveillance system and laboratory capacities, health systems and supply readiness, and the establishment of rapid response teams. Surveillance data is also a key element in helping to prioritize areas for intervention.

1 Adapted from reference (7).
Cholera cases have been confirmed in South Sudan every year since 2013. The 2016–2017 cholera outbreak was the longest and largest in its magnitude and geographical extent, and resulted largely from the humanitarian crisis, associated population displacements and declining investments in water, sanitation and hygiene. The outbreak was declared on 18 June 2016 and affected many parts of the country, including 27 counties and the capital Juba. When the outbreak was declared over on 7 February 2018, a total of 20,438 cases (including 512 laboratory-confirmed cases) and 436 deaths had been reported (Fig. 3.5), implying an apparent case-fatality rate of 2.1%. Based on reported cases, case-fatality rates appeared to be highest in counties with poor access to health care, particularly populations living on islands or in cattle camps.

The response to the South Sudan cholera outbreak was coordinated by a national taskforce led by the Ministry of Health with the participation of WHO and other partners. Collaborative efforts were made to enhance surveillance, deploy rapid-response teams to investigate and respond to cases, provide clean water, promote good hygiene practices and treat cholera patients. Around 2.2 million doses of oral cholera vaccine were secured from the Gavi-funded global stockpile. More than 885,000 people in cholera-affected and high-risk populations received the first round of the vaccine with almost 500,000 people also receiving a second round.

Box 3.21
Responding to the 2016–2017 cholera outbreak in South Sudan

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Roadmap to 2030

In 2017, the Global Task Force on Cholera Control released a global strategy, Ending Cholera – a global roadmap to 2030, that aims to reduce cholera deaths by 90%, and to eliminate cholera in up to 20 countries (7). The strategy focuses on 47 countries and is based on three strategic approaches: (a) early detection and response to contain outbreaks; (b) multisectoral interventions in cholera “hotspots”; and (c) effective coordination of technical support, resource mobilization and partnership at country, regional and global levels.

Achieving universal and equitable access to safe drinking water and adequate sanitation and hygiene – undertakings to which the world is committed by the SDGs – will be the key long-term and multisectoral interventions in controlling cholera and other waterborne diseases. Other required measures include effective surveillance and reporting, enhanced country preparedness for responding to outbreaks, strengthening of health systems, use of vaccination and treatments as necessary, and strong community engagement.

1 Based on references (17, 20, 21).
2 A cholera “hotspot” is a geographically limited area in which environmental, cultural and/or socioeconomic conditions facilitate the transmission of cholera and where the disease persists or reappears regularly.
3.3 TURNING THE RISING TIDE OF OBESITY IN THE YOUNG

Malnutrition in the SDGs

Many parts of the world are facing a “double burden” of malnutrition, where undernutrition coexists with overweight and obesity within the same country, the same community and even the same household. Obesity in childhood and adolescence is associated with a higher risk of adult obesity, and with premature death and disability due to NCDs such as coronary heart disease in adulthood. In addition to such increased future risks, obese children can also experience hypertension, diabetes, asthma and other respiratory problems, sleep disorders, liver disease and psychological problems such as low self-esteem.[22]

SDG Target 2.2 commits the world to ending all forms of malnutrition by 2030, including overweight and obesity, while SDG Target 3.4 is to reduce premature deaths from NCDs by one third by 2030, including through prevention efforts. As a leading risk factor for NCDs later in life, preventing adolescent overweight and obesity is a pivotal global health objective, not only in its own right but also as a crucial element in the prevention of NCDs.

Global monitoring of overweight and obesity among children and adolescents aged 5–19 years

Body mass index (BMI) – defined as a person’s weight in kilograms divided by the square of their height in metres (kg/m²) – is a simple index commonly used to classify overweight and obesity in children, adolescents and adults. Childhood and adolescence is a time of rapid growth, and a healthy BMI depends on both the age and sex of the individual. WHO recommends the use of the WHO Reference 2007[23] for children and adolescents aged 5–19 years, with “overweight” and “obese” defined as follows:

- **overweight**: BMI-for-age greater than 1 standard deviation above the WHO Reference 2007 median; and
- **obese**: BMI-for-age greater than 2 standard deviations above the WHO Reference 2007 median.

WHO estimates of the prevalence of overweight and obesity among children aged 5 years and older, adolescents and adults are generated by the NCD Risk Factor Collaboration (NCD-RisC). In order to make these estimates, NCD-RisC compiles data from population-representative surveys or censuses which included the measurement of height and weight. Data sources that collect self-reported height and weight are excluded because self-reporting is systematically biased. Fewer data are available for children aged 5–9 years compared to younger children, adolescents and adults.

**Trends in overweight and obesity among children and adolescents aged 5–19 years**

The world has seen a more than ten-fold increase in the number of obese children and adolescents aged 5–19 years in the past four decades – from just 11 million in 1975 to 124 million in 2016. An additional 213 million were overweight in 2016 but fell below the threshold for obesity. Taken together this means that in 2016 almost 340 million children and adolescents aged 5–19 years – or almost one in every five (18.4%) – were overweight or obese globally.

Analysis of these trends has shown that although population growth has played a role in the increase in numbers of obese children and adolescents, the primary driver has been an increase in the prevalence of obesity. Globally, the prevalence of obesity among children and adolescents aged 5–19 years increased from 0.8% in 1975 to 6.8% in 2016. Although high-income countries continue to have the highest prevalence, the rate at which obesity among children and adolescents aged 5–19 years is increasing is much faster in LMIC (Fig. 3.6).

![Fig. 3.6 Trends in prevalence of obesity among children and adolescents aged 5–19 years, globally and by country income group, 1975–2016](https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups, accessed 10 April 2018).

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2. Section content and Figures 3.6–3.8 based on reference (24). GNI per capita and income classifications used in Fig. 3.6 are taken from the World Bank’s list of economies (July 2017), based on GNI per capita in 2016 and calculated using the World Bank Atlas method (see: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups, accessed 10 April 2018).
The increases observed in the prevalence of obesity among children and adolescents aged 5–19 years in LMIC have occurred at the same time as issues of undernutrition remain unaddressed. Infants and children in these countries are more vulnerable to inadequate prenatal, infant and young child nutrition than those in other countries. They are then at high risk of being affected simultaneously by stunted growth and overweight due to the consumption of nutrient-poor but energy-dense foods.

At individual country level, the prevalence of obesity among children and adolescents aged 5–19 years in a number of LMIC had reached alarmingly high levels by 2016 (Fig. 3.7). This stands in stark contrast to the situation in several high-income countries with relatively low prevalence, including Japan in which the national prevalence was half the global prevalence.

Fig. 3.8 shows that in most WHO regions, the gap in obesity prevalence rates among boys and girls aged 5–19 years has widened since 1975, resulting in a higher proportion of boys being obese compared to girls in 2016. The exceptions are the WHO African Region – where despite still being among the lowest globally, a higher proportion of girls (3.5%) were obese than boys (2.1%) – and the WHO Eastern Mediterranean Region – where the prevalence rates for girls and boys continued to be very similar (8.1% and 8.3% respectively). The WHO Region of the Americas continued to have the highest prevalence, with around one in six boys (16.0%) and one in eight girls (12.8%) aged 5–19 years being obese in 2016. The WHO Western Pacific Region had among the lowest prevalence in 1975 but has experienced a very sharp increase, and in 2016 the prevalence of obesity among boys was the second highest at 13.1%.

Way forward¹

Being overweight and obese are largely preventable conditions. The extent to which environments and communities are supportive and enabling is fundamental in shaping the behaviours of individuals. Preventing child and adolescent overweight and obesity will rely on helping people to eat healthy foods and to engage in regular physical activity, including by ensuring that these are accessible, available and affordable options.

¹ Section content based on reference (25).
No single intervention can halt the rise in childhood and adolescent obesity on its own. A broad array of large-scale actions is needed if the rising tide of obesity is to be turned. This will require the engagement of multiple sectors, including education, communications, commerce, urban planning, agriculture and health.

Specific policy interventions to address child and adolescent obesity include:

- Implement national regulatory measures on nutrition labelling, including front-of-pack labelling, supported by public education of both adults and children to promote nutritional literacy.
- Adopt effective measures, such as legislation or regulation, to restrict the marketing of foods and beverages to children, and to ensure that schools and sporting events where children gather are free from unhealthy food marketing or promotion (including through sponsorship).
- Implement effective taxes on sugar-sweetened beverages.
- Establish and implement healthy nutritional standards for meals provided in all schools, ensuring that all foods and beverages sold and promoted in schools encourage and enable the adoption of healthy diets.
- Ensure that regular good quality physical education is included in the school curriculum for all children.
- Increase access to adequate and safe facilities in communities, schools and public spaces that allow children to be active through play, recreation and sports.
- Ensure that health services fully support breastfeeding through appropriate lactation counselling for prenatal and postpartum mothers, and through the application of the Ten Steps to Successful Breastfeeding (26) in all maternity facilities.
- Establish and disseminate national guidance for children and their parents on physical activity, regulating the use of screen-based entertainment, sleep and healthy nutrition.
References


