

## Annex to chapter 3

### 1. Data for SDG 3

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SDG 3 comprises 13 targets and a total of 27 indicators (10 of which contain multiple subindicators). Of these indicators, 20 are tier I, five are tier II, and two are tier III for which data are not available, as the indicators are still in the process of methodological definition.

The United Nations Statistics Division provides data sets for a total of 25 indicators: 3.1.1 - Maternal mortality ratio; 3.1.2 - Proportion of births attended by skilled health personnel; 3.2.1 - Under-5 mortality rate; 3.2.2 - Neonatal mortality rate; 3.3.1 - Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations; 3.3.2 - Tuberculosis incidence per 100,000 population; 3.3.3 - Malaria incidence per 1,000 population; 3.3.4 - Hepatitis B incidence per 100,000 population; 3.3.5 - Number of people requiring interventions against neglected tropical diseases; 3.4.1 - Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease; 3.4.2 - Suicide mortality rate; 3.5.2 - Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol; 3.6.1 - Death rate due to road traffic injuries; 3.7.1 - Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods; 3.7.2 - Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group; 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, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population); 3.8.2 - Proportion of population with large household expenditures on health as a share of total household expenditure or income; 3.9.1 - Mortality rate attributed to household and ambient air pollution; 3.9.2 - Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services); 3.9.3 - Mortality rate attributed to unintentional poisoning; 3.a.1 - Age-standardized prevalence of current tobacco use among persons aged 15 years and older; 3.b.1 - Proportion of the target population covered by all vaccines included in their national programme; 3.b.2 - Total net official development assistance to medical research and basic health sectors; 3.c.1 - Health worker density and distribution; and 3.d.1 - International Health Regulations (IHR) capacity and health emergency preparedness.

The data used in the analysis of SDG 3 was downloaded on 21 October 2018. After a country level data check following a major update of the Global SDG Indicators Database of the United Nations Statistics Division on 8 July 2019, the data series of 3.3.1 (Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations), 3.3.3 (Malaria incidence per 1,000 population), and 3.3.5 (Number of people requiring interventions against neglected tropical diseases) are replaced with amended data.

We examine data availability in the Arab region and implement data substitution, when needed, based on the criteria of having to cover half or more of the total population of the Arab region and at least one third of the Arab countries for an indicator/subindicator to be kept in the analysis. This leads us to omit indicator 3.8.2. When there are many subindicators that mean the same but are expressed differently (like in the case of the two pairs of series under 3.2.1, the two series under 3.2.2, the two subindicators under 3.4.1, the two series under 3.4.2, the three pairs of series under 3.9.1, the two series under 3.b.2, and the two subindicators under 3.d.1), we choose the subindicators that are more representative and easier to interpret, and that have greater data availability. This leads us to keep two of the four series of 3.2.1, “Infant mortality rate (deaths per 1,000 live births)” and “Under-5 mortality rate, by sex (deaths per 1,000 live births)”; one series of 3.2.2, “Neonatal mortality rate (deaths per 1,000 live births)”; one subindicators of 3.4.1, “Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease (probability, in percentage)”; one series of 3.4.2, “Suicide mortality rate, by sex (deaths per 100,000 population)”; five series of 3.9.1, “Age-standardized mortality rate attributed to household and ambient air pollution (deaths per 100,000 population)”; one series of 3.b.2, “Total official development assistance to medical research and basic health sectors (net disbursement), by recipient countries (millions of constant 2016 United States dollars)”; and one series of 3.d.1, “Average of 13 International Health Regulations (IHR) core capacities”.

The rest of the indicators/subindicators are subject to our data substitution scheme for the year 2017, considering data spanning 2009–2017. Table 3.1 shows the number of substituted data points for each year, including those from Arab countries.

**Table 3.1 Data substitution scheme for selected indicators and subindicators**

Indicator or subindicator	Number of substituted data points (Arab)	Year
3.1.1 (Maternal mortality ratio)	183 (22)	2015
	46 (0)	2016
	46 (5)	2015
	40 (4)	2014
	14 (3)	2013
3.1.2 (Proportion of births attended by skilled health personnel (percentage))	14 (6)	2012
	6 (1)	2011
	4 (0)	2010
	6 (1)	2009
	3.3.1 (Number of new HIV infections per 1,000 uninfected population, by sex and age)	1 (0)
3.3.2 (Tuberculosis incidence (per 100,000 population))	217 (22)	2015
3.3.4 (Prevalence of Hepatitis B surface antigen (HBsAg) (percentage))	194 (21)	2015
3.4.1 (Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease (probability))	183 (21)	2016
3.4.2 (Suicide mortality rate, by sex (deaths per 100,000 population))		
3.5.2 (Alcohol consumption per capita (aged 15 years and older) within a calendar year)	189 (21)	2016
3.6.1 (Death rate due to road traffic injuries (per 100,000 population))	196 (22)	2013
	20 (0)	2016
	11 (1)	2015
	24 (4)	2014
	13 (2)	2013
3.7.1 (Proportion of women married or in a union of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods (percentage))	18 (4)	2012
	10 (2)	2011
	5 (0)	2010
	6 (1)	2009

	27 (1)	2016
	58 (2)	2015
	34 (2)	2014
	19 (3)	2013
3.7.2 (Adolescent birth rate (per 1,000 women aged 15–19 years))	15 (2)	2012
	22 (5)	2011
	11 (1)	2010
	7 (3)	2009
3.8.1 (Universal health coverage (UHC) service coverage index)	183 (21)	2015
3.9.1 (Age-standardized mortality rate attributed to household and ambient air pollution (deaths per 100,000 population))	183 (21)	2016
3.9.2 (Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (deaths per 100,000 population))	183 (21)	2016
3.9.3 (Mortality rate attributed to unintentional poisonings, by sex (deaths per 100,000 population))		
3.a.1 (Age-standardized prevalence of current tobacco use among persons aged 15 years and older, by sex (percentage))	146 (14)	2015
3.b.1 (Proportion of the target population with access to 3 doses of diphtheria-tetanus-pertussis (DTP3) (percentage))	195 (22)	2016
3.b.1 (Proportion of the target population with access to measles-containing-vaccine second-dose (MCV2) (percentage))	161 (19)	2016
3.b.1 (Proportion of the target population with access to pneumococcal conjugate third dose (PCV3) (percentage))	130 (14)	2016
	141 (16)	2016
	2 (0)	2015
3.b.2 (Total official development assistance to medical research and basic health sectors (net disbursement), by recipient countries (millions of constant 2016 United States dollars))	1 (0)	2014
	1 (0)	2013
	4 (0)	2010

	17 (1)	2017
	42 (3)	2015
	42 (11)	2014
	7 (0)	2013
3.c.1 (Health worker density per 1,000 population, for Dentists)	8 (0)	2012
	8 (0)	2011
	10 (1)	2010
	13 (1)	2009
	20 (2)	2016
	47 (3)	2015
	46 (13)	2014
	11 (0)	2013
3.c.1 (Health worker density per 1,000 population, for Nurses)	9 (0)	2012
	8 (0)	2011
	8 (0)	2010
	13 (1)	2009
	20 (1)	2016
	43 (2)	2015
	37 (11)	2014
	9 (0)	2013
3.c.1 (Health worker density per 1,000 population, for pharmacists)	8 (0)	2012
	10 (0)	2011
	7 (1)	2010
	13 (2)	2009

	21 (1)	2016
	42 (4)	2015
	48 (12)	2014
	12 (0)	2013
3.c.1 (Health worker density per 1,000 population, for physicians)	10 (0)	2012
	7 (0)	2011
	9 (0)	2010
	16 (1)	2009
	11 (0)	2016
	5 (0)	2015
	10 (0)	2014
3.d.1 (Average of 13 International Health Regulations (IHR) core capacities (percentage))	1 (0)	2013
	1 (0)	2012
	1 (0)	2011
	1 (0)	2010

For each of the two preserved series under 3.2.1 and the only preserved series under 3.2.2 (Infant mortality rate, Under-5 mortality rate and Neonatal mortality rate, deaths per 1,000 live births), as well as for 3.3.3 and 3.3.5, no substitution was made as data are complete or nearly complete for our base year (2017) and thus it is not possible to substitute data for any observation within the considered time interval (2009–2017).

Each of 3.1.1, 3.3.2 and 3.3.4 is disaggregated by “value type” based on the uncertainty bounds of the estimates and, thus, we only use their “mid-point” values which make the averages of the upper and lower boundaries. For 3.1.2, we note that all “NA” values are replaced by missing points. As indicated by their titles, 3.7.1 (Proportion of women married or in a union of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods (percentage)) only covers females aged 15–49 while 3.7.2 (Adolescent birth rate (per 1,000 women aged 15–19 years)) only covers females aged 15–19. Indicator 3.3.1 is disaggregated by age group into three categories (above 15 years, between 15 and 49 years, and below 15 years) and the fourth category (ALLAGE) is the aggregate of the other three and is the only category that we preserve. We also note that 3.3.4 only covers individuals who are below 5 years of age.

For 3.4.1, we keep and evaluate one subindicator (Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease (probability)) because it is expressed as a rate (percentage) and is thus more representative and indicative than the other subindicator which is expressed as an absolute number, and also because the other subindicator is disaggregated by the type of non-communicable disease whereby there are four disaggregation categories (cardiovascular disease, cancer, diabetes, and chronic respiratory disease) and there is no series that aggregates them. We do not prefer to create our own aggregate of the four series as we preserve the aggregated subindicator expressed as a rate (percentage). The age group covered by 3.4.1 is 30–70 years old.

Indicator 3.c.1, representing the health worker density per 1,000 population, is disaggregated by type of occupation (Dentists, Nurses, Pharmacists and Physicians), and there is no series that aggregates them all. Therefore, we visualize and analyse the four series of this indicator separately but in the same chart. There

are six series of 3.9.1 or three pairs of subindicators presenting age-standardized mortality rates and crude mortality rates. We choose to keep and evaluate the former subindicator as it is a more accurate measure of the mortality rates in question since “age-adjusted rates ensure that differences in incidence or deaths from one year to another, or between one geographic area and another, are not due to differences in the age distribution of the populations being compared”, according to the Center for Disease Control and Prevention. Then, among the three series that present age-standardized mortality rates, we only preserve the age-standardized mortality rate attributed to household and ambient air pollution (deaths per 100,000 population) since it combines the two factors that are featured by the other two remaining series separately: household air pollution and ambient air pollution. However, we note that 3.9.2 and 3.9.3 are formed of a single series each, representing mortality rates that are not age-standardized. For 3.9.1, we replace all “NA” values by missing points.

Indicator 3.2.1 includes two subindicators (Infant mortality rate, deaths per 1,000 live births and Under-5 mortality rate, deaths per 1,000 live births). The infant mortality rate addresses children that are under 1 year of age while the under-5 mortality rate addresses children that are under 5 years of age. Since the under-5 mortality rate includes the infant mortality rate, we visualize and analyse these two series using a stacked bar chart where one includes the other since they measure different faces and intensities of the preventable child mortality problem which are worth evaluating separately, knowing that they are also on the same scale, range and unit. The stacked bar chart is constructed accordingly, where the full bars eventually correspond to the weighted averages of the under-5 mortality rate as it is the broadest measure.

Concerning indicator 3.b.2, we choose to keep and analyse the series on “total official development assistance to medical research and basic health sectors” that represents net disbursements and not gross disbursements since net ODA fits more with the official definition of target 3.b and since, according to OECD, “when calculating net ODA, loan repayments are recorded as negative and deducted from ODA and loans”. We note that, also according to the OECD, “in some cases, loan repayments are higher than new ODA and net ODA will show as a negative number”. We also note that the data set provided by the United Nations Statistics Division for the preserved series of this indicator only includes recipient countries/territories and omits the donor countries/territories that then take missing values which are considered as zeros when the regional and global aggregates of the series are calculated using a total sum. Hence, we consider that 22 instead of 16 Arab countries become covered by data for this indicator, knowing that the six GCC countries are donor countries whose missing data values in the original data set are equivalent to zeros.

Indicator 3.b.1 includes three series: Proportion of the target population with access to three doses of diphtheria-tetanus-pertussis (DTP3) (percentage), Proportion of the target population with access to measles-containing-vaccine second-dose (MCV2) (percentage), and Proportion of the target population with access to pneumococcal conjugate third dose (PCV3) (percentage), which are at the same range, scale, and unit. Therefore, we visualize and analyse these series separately but in the same bar chart since they also measure the proportion of the targeted population with access to three different types of vaccines.

Finally, we note the following:

- The age group covered by each of the series of 3.5.2 and the series of 3.a.1 is above 15 years of age.
- For 3.8.1, all values that are provided as “>=80” in the original data set are replaced by “80”, meaning that the data series for this indicator is capped to 80.
- For 3.d.1, we choose the subindicator representing the “Average of 13 International Health Regulations (IHR) core capacities (percentage)” and omit the other subindicator which is disaggregated by the type of IHR, whereby there are 13 categories and no category that aggregates them all, since we do not prefer to create our own aggregate of the 13 series when there is an already aggregated subindicator.

This leaves us with 25 integral indicators/subindicators with which we can assess the position of the region by 2030, as noted in box 3.1.

Box 3.1	Summary list of preserved and examined indicators/subindicators
	<ul style="list-style-type: none"> <li>• Indicator 3.1.1 – Maternal mortality ratio</li> <li>• Indicator 3.1.2 – Proportion of births attended by skilled health personnel</li> <li>• Indicator 3.2.1 – 2 series out of 4 – Under-5 mortality rate</li> <li>• Indicator 3.2.2 – 1 series out of 2 – Neonatal mortality rate</li> <li>• Indicator 3.3.1 – Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations</li> <li>• Indicator 3.3.2 – Tuberculosis incidence per 100,000 population</li> <li>• Indicator 3.3.3 – Malaria incidence per 1,000 population</li> <li>• Indicator 3.3.4 – Hepatitis B incidence per 100,000 population</li> <li>• Indicator 3.3.5 – Number of people requiring interventions against neglected tropical diseases</li> <li>• Indicator 3.4.1 – 1 series out of 5 – Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease</li> <li>• Indicator 3.4.2 – 1 series out of 2 – Suicide mortality rate</li> <li>• Indicator 3.5.2 – Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol</li> <li>• Indicator 3.6.1 – Death rate due to road traffic injuries</li> <li>• Indicator 3.7.1 – Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods</li> <li>• Indicator 3.7.2 – Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group</li> <li>• 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, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)</li> <li>• Indicator 3.9.1 – 1 series out of 6 – Mortality rate attributed to household and ambient air pollution</li> <li>• Indicator 3.9.2 – Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)</li> <li>• Indicator 3.9.3 – Mortality rate attributed to unintentional poisoning</li> <li>• Indicator 3.a.1 – Age-standardized prevalence of current tobacco use among persons aged 15 years and older</li> <li>• Indicator 3.b.1 – Proportion of the target population covered by all vaccines included in their national programme</li> <li>• Indicator 3.b.2 – 1 series out of 2 – Total net official development assistance to medical research and basic health sectors</li> <li>• Indicator 3.c.1 – Health worker density and distribution</li> <li>• Indicator 3.d.1 – 1 series out of 14 – International Health Regulations (IHR) capacity and health emergency preparedness</li> </ul>

However, we lose the ability to determine the region's position on the rest of the indicators and subindicators, which are included in table 3.3, but that do not have sufficient data. Nevertheless, there are no omitted targets under SDG 3.

Annex 3.2 for a graph for each of the evaluated series/indicators, showing the country level data values of the series/ indicator for the years whose data points were used for every included country.

The global, regional, and subregional aggregates of 3.3.5 and the preserved series of 3.b.2 are calculated using a total sum, whereas the aggregates of the preserved series of 3.d.1 are calculated using a simple arithmetic mean. The aggregates of all the other series and indicators are calculated using a weighted average. The method of aggregation, in general, as well as the weighting variables to be used for the weighted averages and the weighting variables' properties are all chosen based on what is advised by the corresponding SDG Indicators Metadata Repository of the United Nations Statistics Division or by the original source of the corresponding data that is referred to by this metadata. If none of these two references advise on the aggregation methods or weights, the decisions are made based on the most common scientific logic fitting the case and its feasibility (e.g. the availability of the needed data for the weighting variables). The year of the weighting variable data is the most commonly used year for the data of the respective series/indicator. The following weights were actually used for the indicators/series whose global, regional, and subregional aggregates are weighted averages: Total number of births in 2011 (from the United Nations data), Total population in 2015 (from the World Population Prospects (WPP)), Total population in 2014 (from WPP), Total population in 2013 (from WPP), Total population aged 15 years and above in 2015 (from WPP), Total population of women aged between 15 and 49 years in 2014 (from WPP), Total population of women aged between 15 and 19 years in 2015 (from WPP), and Total population of children aged between 0 and 2 years in 2015 (from WPP). The chapter includes more details about the weighting variables, including which weight was used for which series or indicator.

We note that, when a certain series or indicator (namely 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.4.1, 3.4.2, 3.5.2, 3.8.1, 3.9.1, 3.9.2, 3.9.3, 3.a.1 and 3.b.1) needs a population-related weighting variable in 2016 or 2017, we use the latest available data for this variable, i.e. data for 2015 provided by WPP. For 3.1.2, what we actually need as a weighting variable is the total number of births in 2015. WPP provides data on total number of births only for every five years together and not for any single year. The last year range provided by WPP data is 2010–2015. However, the United Nations database (<http://data.un.org/Data.aspx?d=SOWC&f=inID%3A75>) includes data on the total number of births only for 2011, which is the latest available single year that has this data and which is compatible with the beginning of last WPP range. Therefore, we use United Nations data for 2011. We are also sometimes obliged to compromise the weighting variable itself with a proxy one such as in 3.1.1 and 3.2.2 and the two series of 3.2.1. For these series, we ideally need to weight by the “total number of live births” (according to the metadata) in 2015 for 3.1.1, and in 2017 for 3.2.2 and the two series of 3.2.1; knowing that, however, 2016 is the latest year for which complete/nearly complete data are available for this weighting variable. Nevertheless, since data availability for this weighting variable is poor for recent years, respectively, which could reduce our final data coverage significantly when computing the global, regional and subregional aggregates of these series (from 22 Arab countries to six Arab countries only for 3.1.1, and five Arab countries for 3.2.2 and the two series of 3.2.1), we choose to weight by the latest data available for the “total number of births” (in 2011) that can serve as a proxy for the ideal weighting variable. The case of 3.3.1 is similar since we ideally weight by the total number of uninfected population being the denominator (according to the official definition of the data series). However, we need to use WHO data on total number of people living with HIV and subtract this from the data on total population. In addition to the fact that this is considerable data manipulation, more than one fourth of the world's countries are not covered by WHO data. Therefore, we decide to weight by total population in 2016 (knowing that 2015 is the latest available year to be used), which can serve as a proxy.

For 3.b.1, the weighting variable we use is total population of children aged 0–2 (in 2015) since this is the target population that the metadata advises should be used as the weighting variable (“The target population for given vaccine is defined based on recommended age for administration. The primary vaccination series of most vaccines are administered in the first two years of life”). For 3.5.2 and 3.a.1, we use the total population aged 15 years and above in 2015 as a weighting variable, and we note that the weighting variable was constructed using the data set provided by the source (WPP) by summing up the values corresponding to all the ages from 15 to 100. Finally, we note that the weighting variables sometimes prevent us from evaluating the series/indicator using the full data that are available or provided to us. As such, our final data coverage for the series/indicators is sometimes slightly undermined by the data availability of the weighting variable. This applies for 3.1.1, 3.2.2 and the two series of 3.2.1 where 21 Arab countries out of a potential of 22 are covered after weighting. The same applies for 3.1.2 where 19 Arab countries out of a potential of 20 are covered after weighting. While this affects the global, regional and/or subregional aggregates, the country-year graphs include all the Arab countries that have data for the evaluated series/indicator, regardless of the weighting variable's data availability.



We calculate the world, regional and subregional aggregates for each indicator and include the target value – when available – to facilitate comparability. For 3.1.1 (Maternal mortality ratio), we set the target value at 70 per 100,000 per live births as advised by target 3.1 (By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births). In this case, if the maternal mortality ratio is less than 70, then the target is achieved. For the indicators of target 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-5 mortality to at least as low as 25 per 1,000 live births), we set the target value as 25 deaths per 1,000 live births for the under-5 mortality rate indicator and as 12 deaths per 1,000 live births for the neonatal mortality rate indicator. For target 3.3 (By 2030 end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases) we set the target value as zero for indicators 3.3.1, 3.3.2, 3.3.3 and 3.3.4. For target 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, by 2030), we set the target value as 6 per cent for indicator 3.4.1. The target value for target 3.6 (By 2030 halve the number of global deaths and injuries from road traffic accidents) is set as half of the computed world mean (17.48 deaths per 100,000 population), or 9 deaths per 100,000 population. Finally, under 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), we consider the target value for 3.8.1 (Universal health coverage (UHC) service coverage index) as 100. However, we remain unable to determine the desired target values for the rest of the targets and for 3.3.5 and 3.4.2 since it is not possible to infer them from the official titles of the corresponding targets, and thus they are not shown.

Of the indicators that we can use, six have sex disaggregated data with sufficient data availability: 3.2.1 (both series), 3.3.1, 3.4.1, 3.4.2, 3.9.3 and 3.a.1. We construct the female-to-male ratios for indicators 3.3.1, 3.4.1, 3.4.2, 3.9.3 and 3.a.1, and the two series of indicator 3.2.1, and again check for data availability. We then undertake the same data substitution process on these ratios in order to get the optimal data availability in 2017 that is parallel/almost parallel to what we could get for the respective indicators in their aggregated forms (table 3.2).

**Table 3.2 Data substitution scheme for female-to-male ratios of selected indicators and subindicators**

Indicator or subindicator	Number of substituted data points (Arab)	Year
3.4.1 (Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease)	183 (21)	2016
3.4.2 (Suicide mortality rate)	182 (21)	2016
3.9.3 (Mortality rate attributed to unintentional poisoning)	1 (0)	2010
3.a.1 (Age-standardized prevalence of current tobacco use among persons aged 15 years and older)	146 (14)	2015

Concerning the ratio of the two series of 3.2.1 and that of 3.3.1, no substitution was made as data are complete or nearly complete for our base year (2017) and thus it is not possible to substitute data for any observation within the considered time interval (2009–2017).

For each of Mongolia, Pakistan and Slovakia, the value of the female data and that of the male data are both equal to zero for 3.3.1 in 2017. Therefore, we consider the ratio of this indicator for these three countries in 2017 as 100 per cent (i.e. representing perfect gender equality) instead of a missing value. In addition, the value of the ratio of 3.3.1 for Gabon is higher than 200 and is thus capped to 200 in order to avoid any bias in the computed global and regional aggregates. Similarly, the values of the ratio of 3.9.3 for Afghanistan, Cuba, Myanmar and Pakistan are higher than 200 and are thus capped to 200 in order to avoid any bias in the computed global and regional aggregates.

We calculate the global, regional and subregional aggregates for each of the above-mentioned six ratios, following the same calculation methods used for the respective series/indicators in their aggregated forms (i.e. total sum, simple arithmetic mean, or weighted average). When a weighted average is used and the data availability of the weighting variable undermines the data coverage of the of series/indicator in its aggregated form, the data coverage of sex disaggregated ratio of this series/indicator is undermined in the exact same way by the data availability of the weighting variable.

**Table 3.3 Targets, indicators, tiers and data availability for Arab countries – SDG 3 (Ensure healthy lives and promote well-being for all at all ages)**

Target	Indicator	Number of subindicators	Tier	Data availability*
3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1 Maternal mortality ratio	1 chosen out of 1	Tier I	22
	3.1.2 Proportion of births attended by skilled health personnel	1 chosen out of 1	Tier I	20
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-5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-5 mortality rate	2 chosen out of 4	Tier I	22
	3.2.2 Neonatal mortality rate	1 chosen out of 2	Tier I	22
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations	1 chosen out of 1	Tier I	13
	3.3.2 Tuberculosis incidence per 100,000 population	1 chosen out of 1	Tier I	22
	3.3.3 Malaria incidence per 1,000 population	1 chosen out of 1	Tier I	14
	3.3.4 Hepatitis B incidence per 100,000 population	1 chosen out of 1	Tier II	21
	3.3.5 Number of people requiring interventions against neglected tropical diseases	1 chosen out of 1	Tier I	21
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment, and promote mental health and wellbeing	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	1 chosen out of 5	Tier I	21
	3.4.2 Suicide mortality rate	1 chosen out of 2	Tier I	21
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders	(No data)	Tier III	x
	3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	1 chosen out of 1	Tier I	21

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1 Death rate due to road traffic injuries	1 chosen out of 1	Tier I	22
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	3.7.1 Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods	1 chosen out of 1	Tier I	14
	3.7.2 Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group	1 chosen out of 1	Tier II	19
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	3.8.1 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, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)	1 chosen out of 1	Tier II	21
	3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income	(Dropped) 2	Tier II	x
3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1 Mortality rate attributed to household and ambient air pollution	1 chosen out of 6	Tier I	21
	3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	1 chosen out of 1	Tier I	21
	3.9.3 Mortality rate attributed to unintentional poisoning	1 chosen out of 1	Tier I	21
3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate	3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older	1 chosen out of 1	Tier I	14

3.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 to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all	3.b.1 Proportion of the target population covered by all vaccines included in their national programme	3 chosen out of 3	Tier II	22, 19, 14
	3.b.2 Total net official development assistance to medical research and basic health sectors	1 chosen out of 2	Tier I	22
	3.b.3 Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis	(No data)	Tier III	x
3.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	3.c.1 Health worker density and distribution	4 chosen out of 4	Tier I	17, 19, 17, 18
	3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks	3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness	1 chosen out of 14	Tier I

Notes: \* Figures refer to the number of Arab countries with data for the indicator, while x means there are no data or the indicator was dropped.

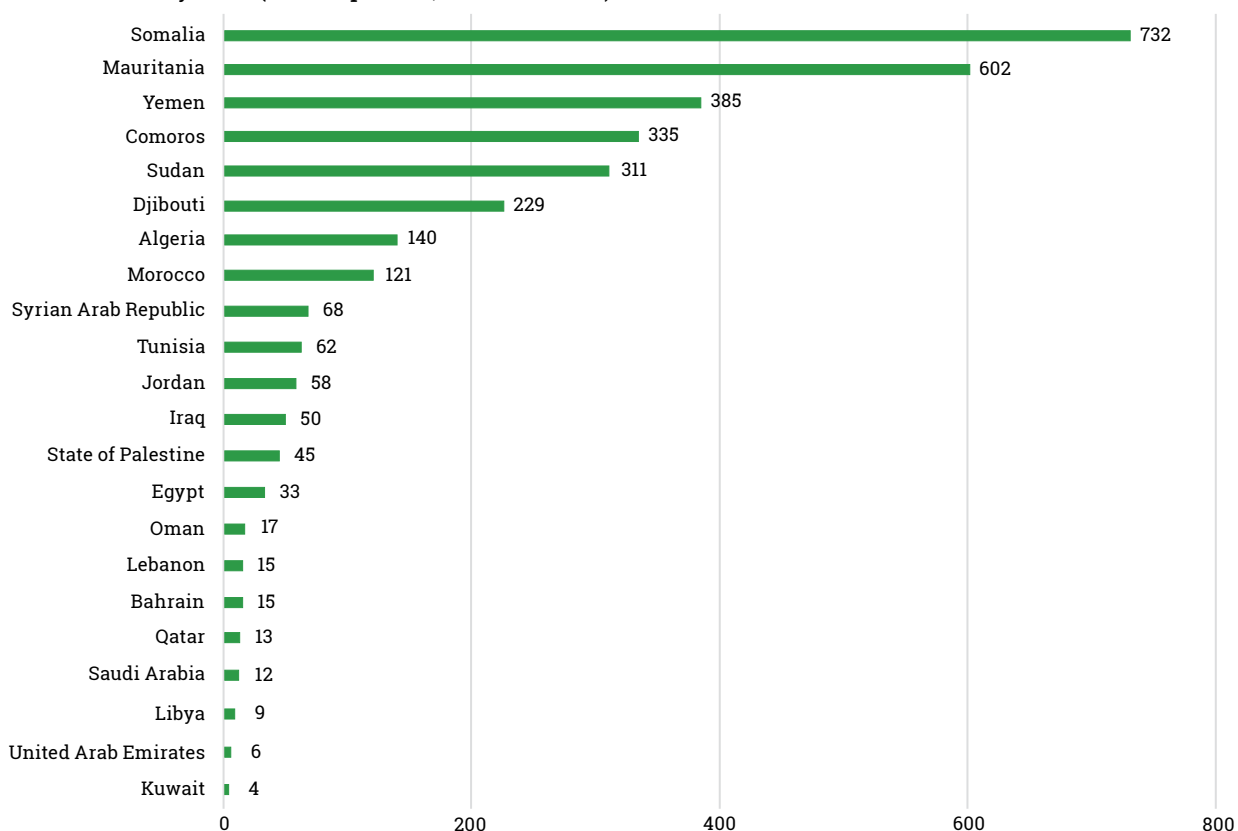
We note that the weighting variables sometimes prevent us from evaluating the series/indicator using the full data that are available or provided to us. As such, our final data coverage for the series/indicators is sometimes slightly undermined by the data availability of the weighting variable. While this affects the global, regional and/or subregional aggregates, the country-year graphs include all the Arab countries for the evaluated series/indicator that have data, regardless of the data availability of the weighting variable.

Source: <https://unstats.un.org/sdgs/indicators/indicators-list/> and author's calculations.

## 2. Country graphs

**Figure 3.1 Indicator 3.1.1 - Maternal mortality ratio**

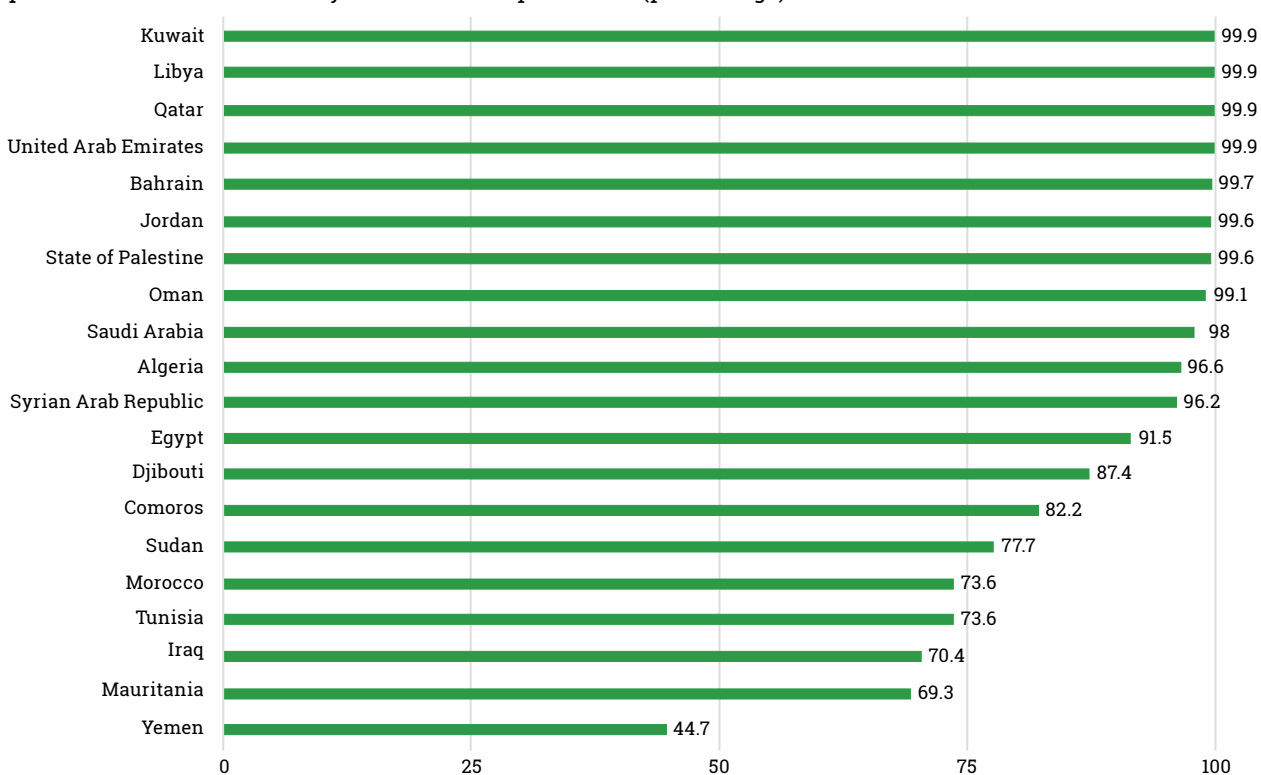
Maternal mortality ratio (deaths per 100,000 live births)



Note: All data are from 2015.

**Figure 3.2 Indicator 3.1.2 - Proportion of births attended by skilled health personnel**

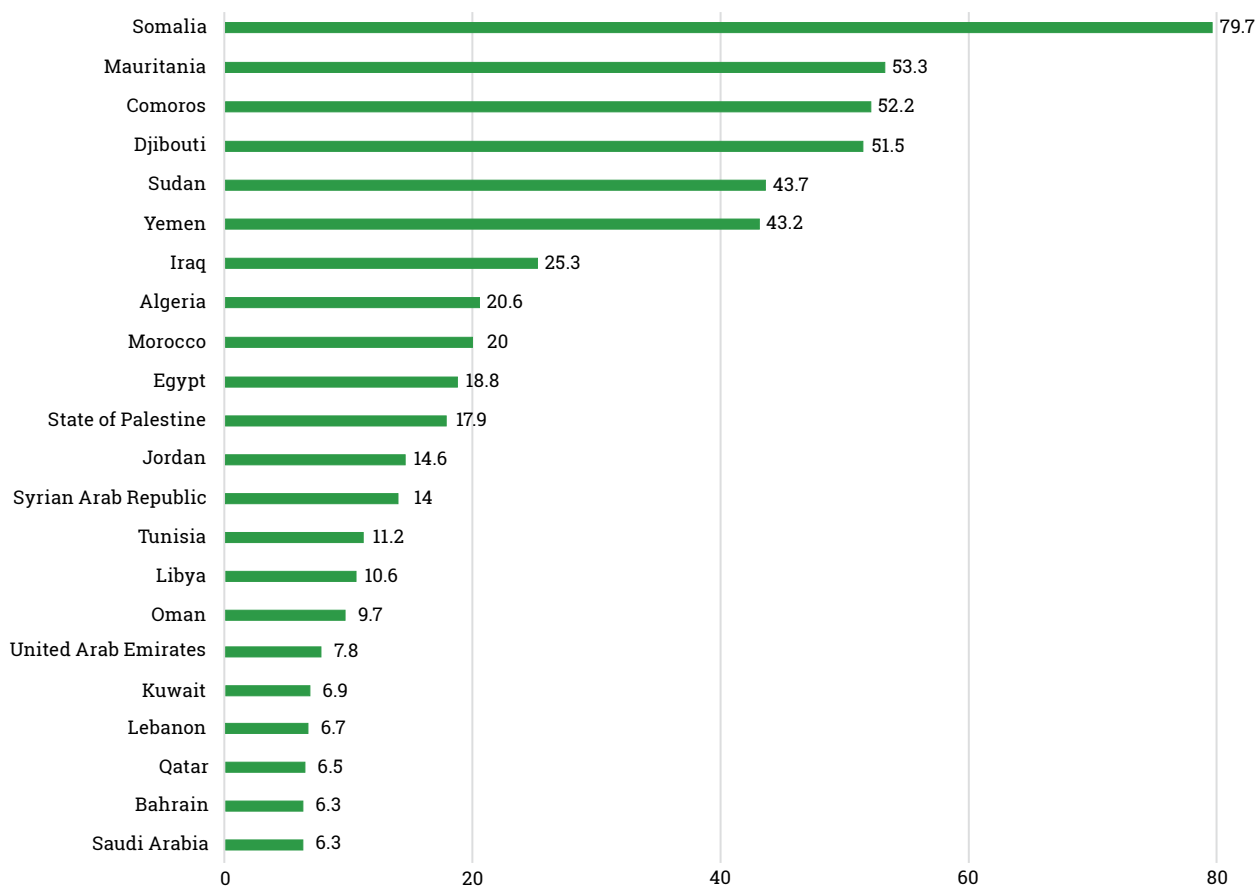
Proportion of births attended by skilled health personnel (percentage)



Note: Data are from various years as follows: Syrian Arab Republic (2009); Morocco (2011); Algeria, Comoros, Djibouti, Iraq, Jordan, Tunisia (2012); Libya, Saudi Arabia, Yemen (2013); Egypt, Oman, State of Palestine (2014); Bahrain, Kuwait, Mauritania, Qatar, United Arab Emirates (2015).

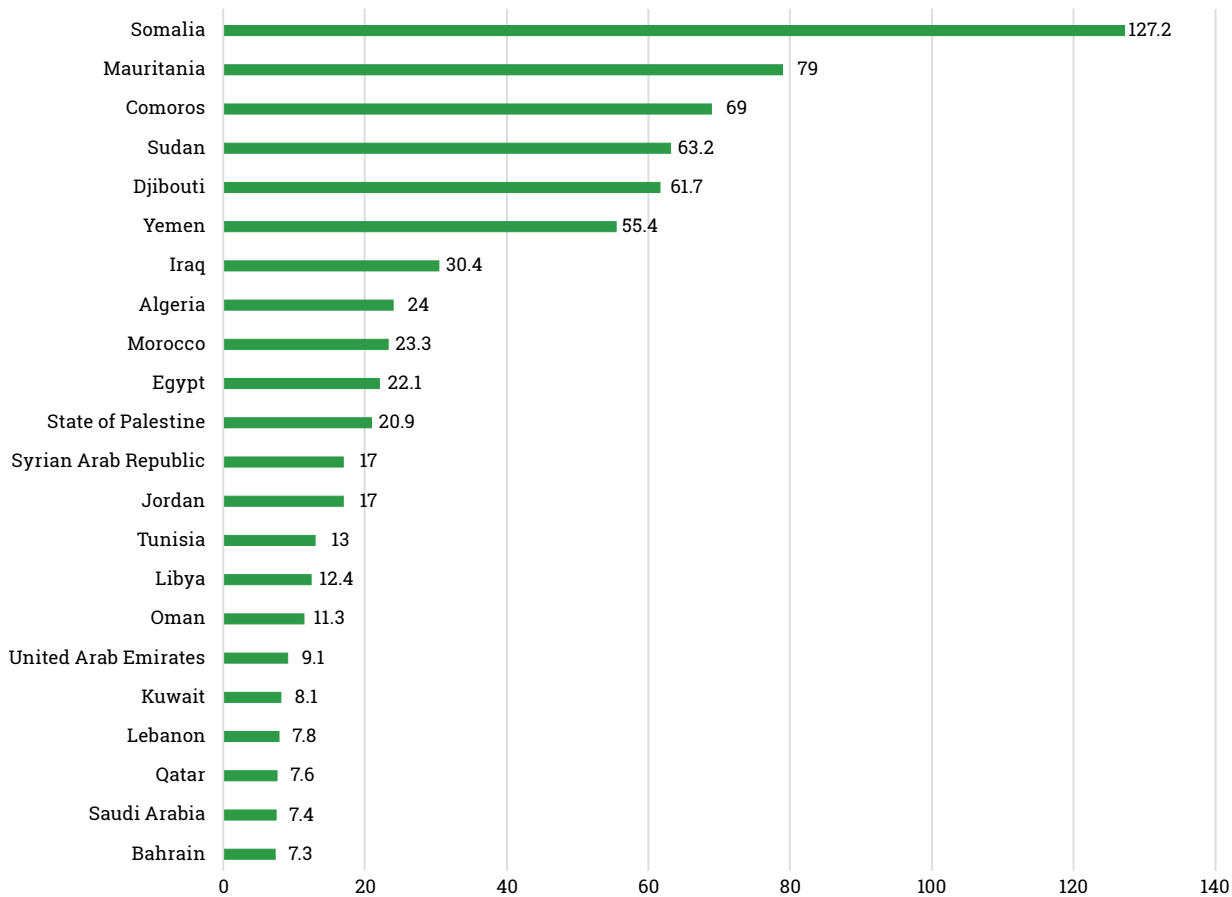
**Figure 3.3 Two series of indicator 3.2.1 - Under-5 mortality rate**

Under-5 mortality rate (deaths per 1,000 live births)



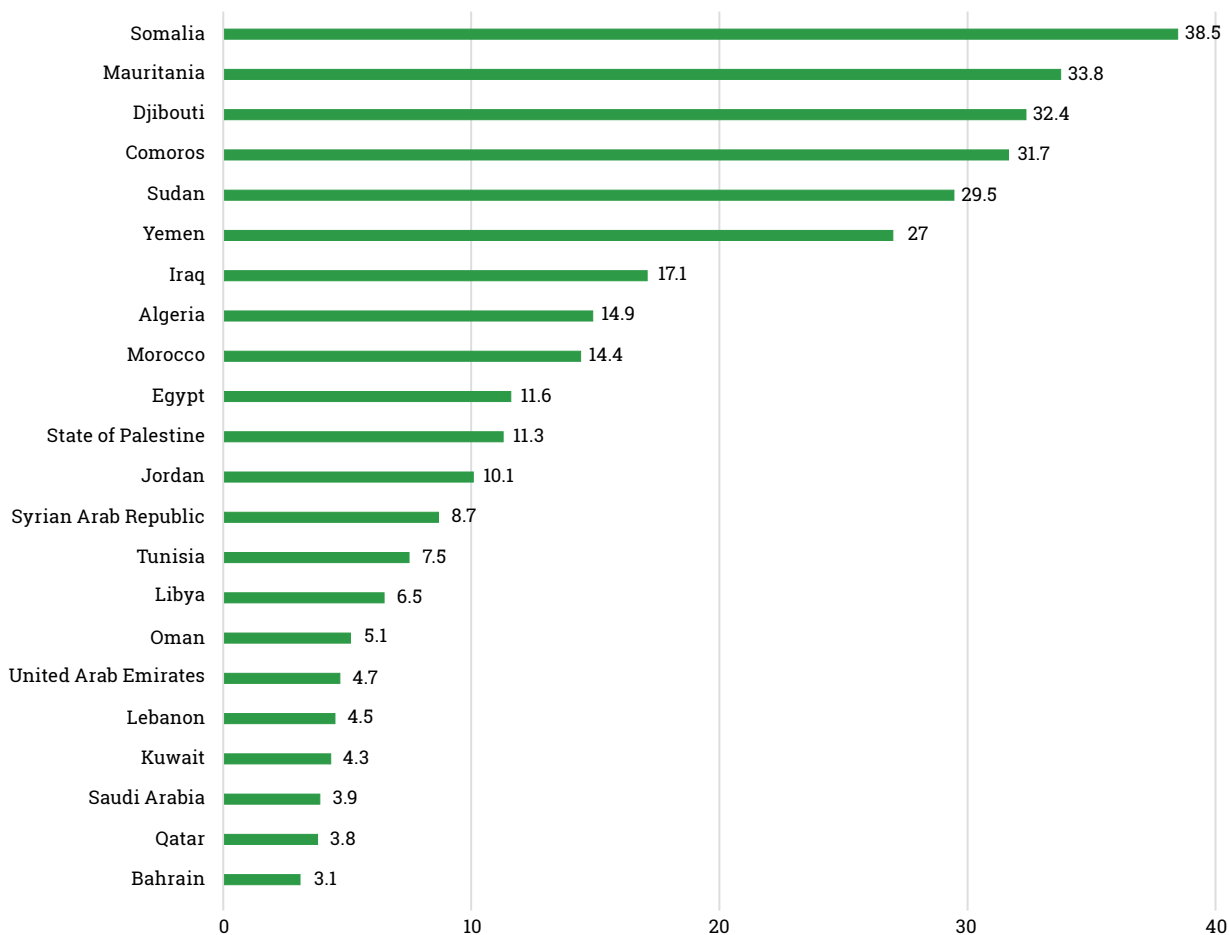
Note: All data are from 2017.

Infant mortality rate (deaths per 1,000 live births)



Note: All data are from 2017.

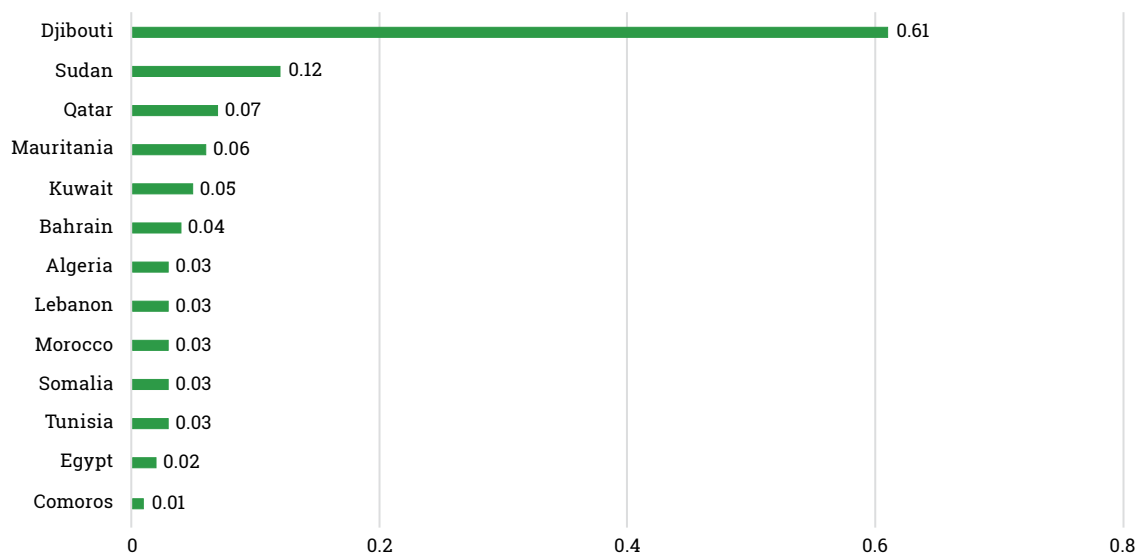
**Figure 3.4 Indicator 3.2.2 - Neonatal mortality rate**  
 Neonatal mortality rate (deaths per 1,000 live births)



Note: All data are from 2017.

**Figure 3.5 Indicator 3.3.1 - Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations**

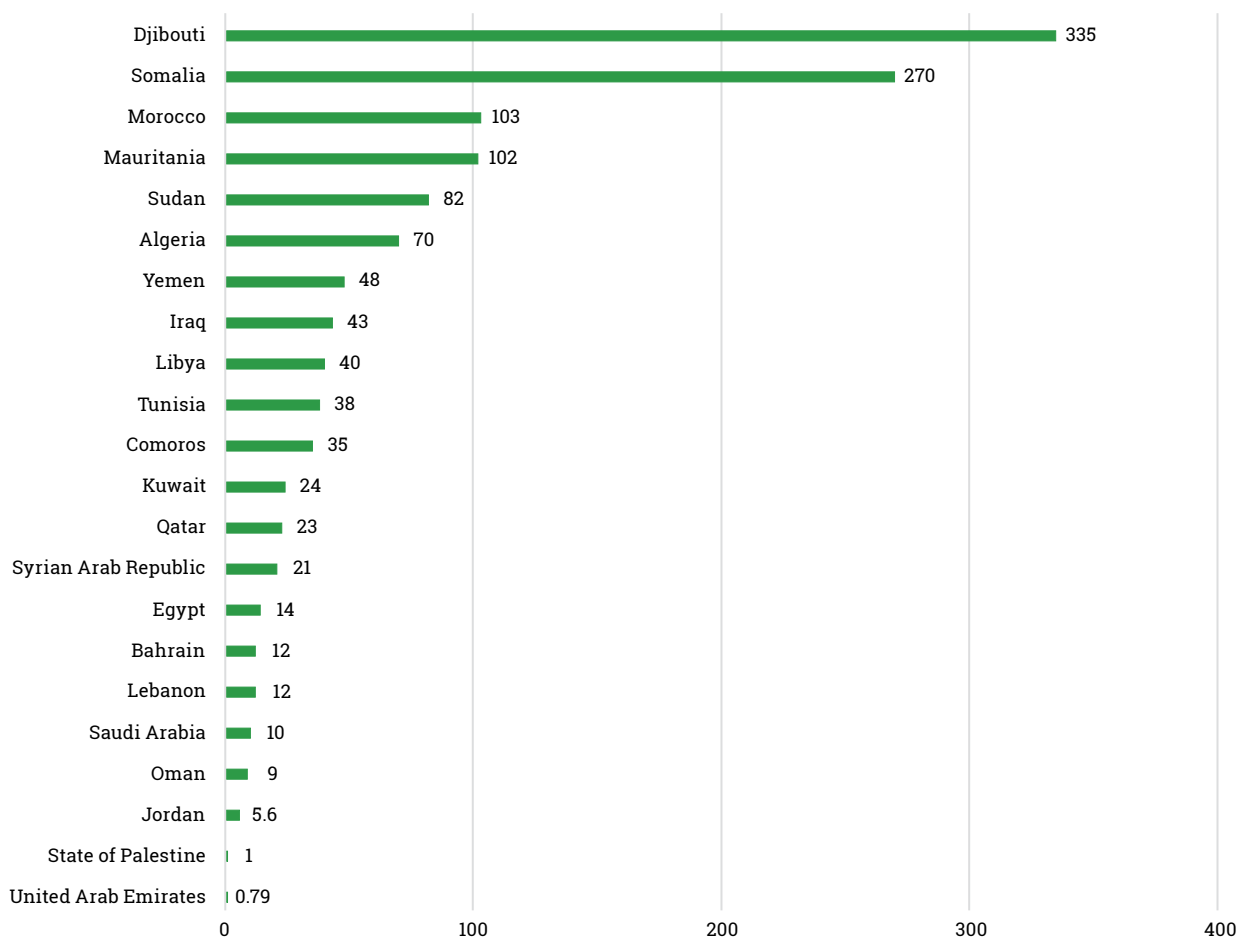
Number of new HIV infections per 1,000 uninfected population



Note: All data are from 2017.

**Figure 3.6 Indicator 3.3.2 - Tuberculosis incidence per 100,000 population**

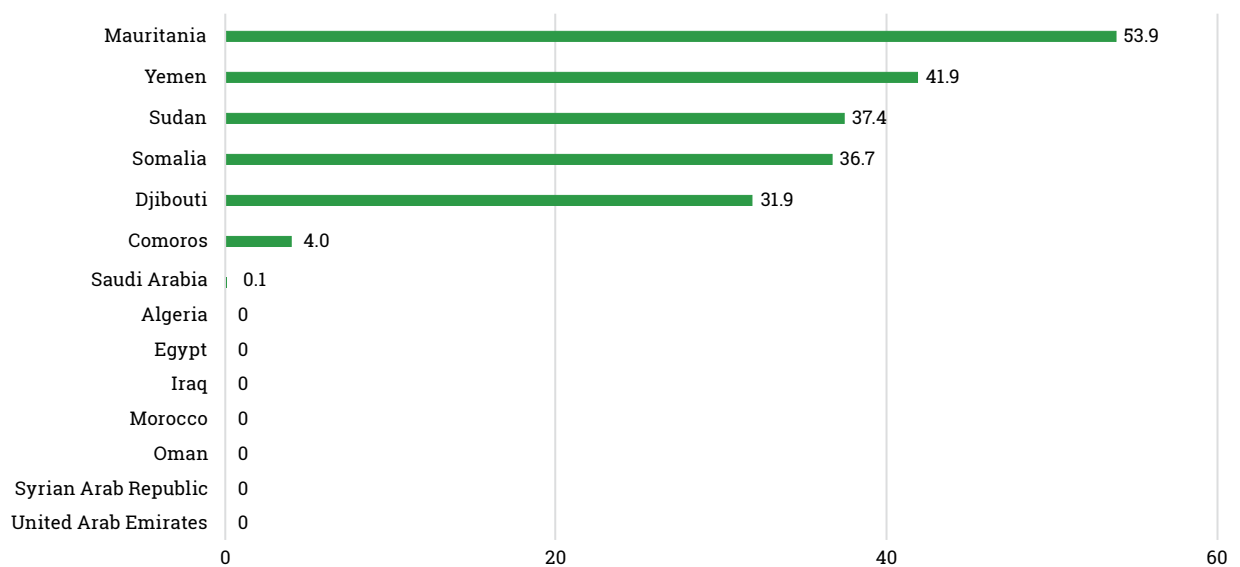
Tuberculosis incidence per 100,000 population



Note: All data are from 2016.

**Figure 3.7 Indicator 3.3.3 - Malaria incidence per 1,000 population**

Malaria incidence per 1,000 population at risk

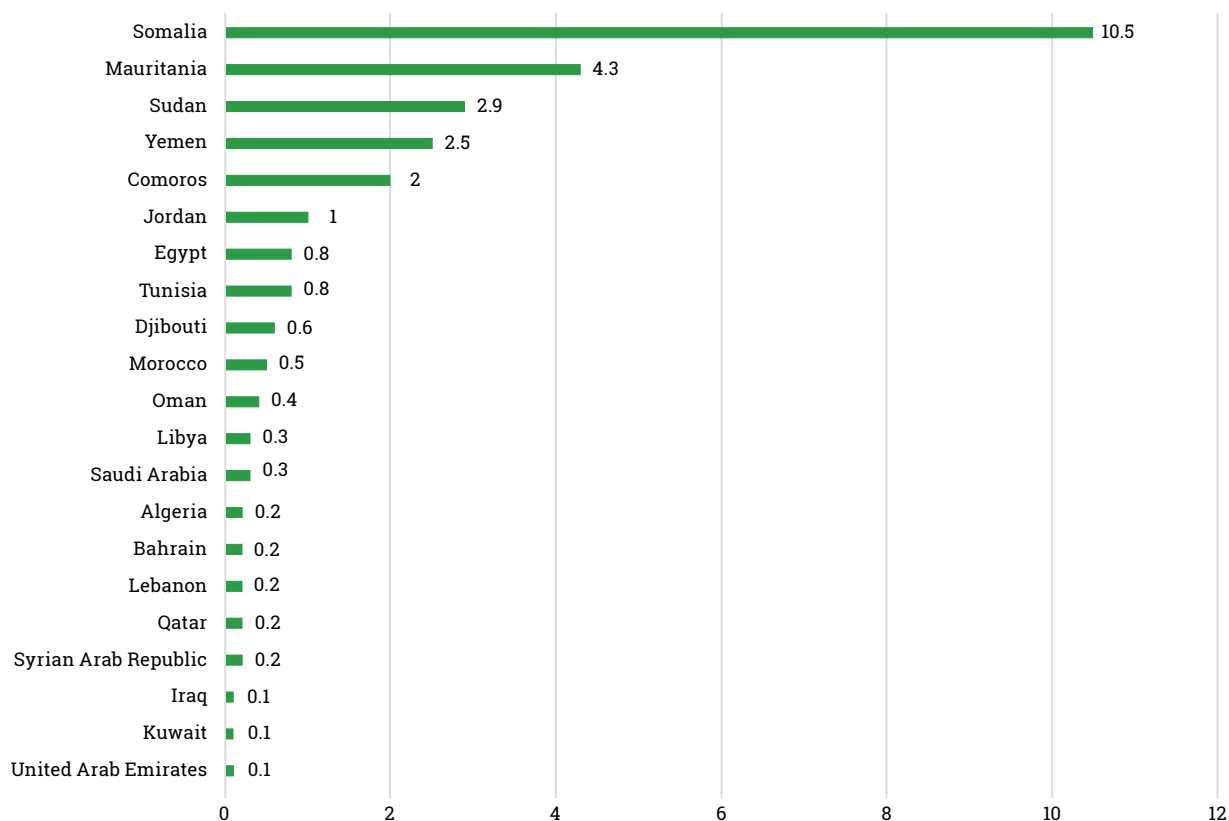


Note: All data are from 2017.



**Figure 3.8 Indicator 3.3.4 - Hepatitis B incidence per 100,000 population**

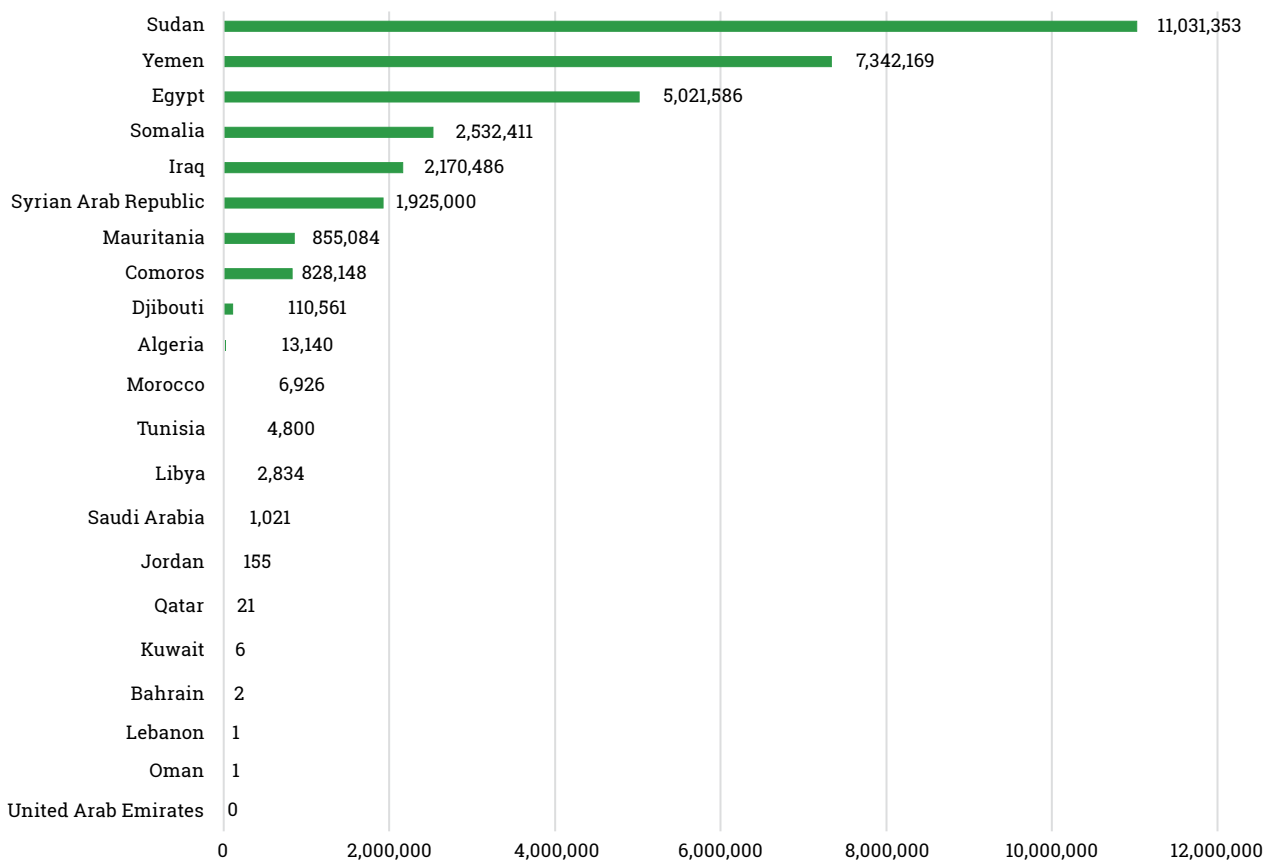
Prevalence of Hepatitis B surface antigen (HBsAg) (percentage)



Note: All data are from 2015.

**Figure 3.9 Indicator 3.3.5 - Number of people requiring interventions against neglected tropical diseases**

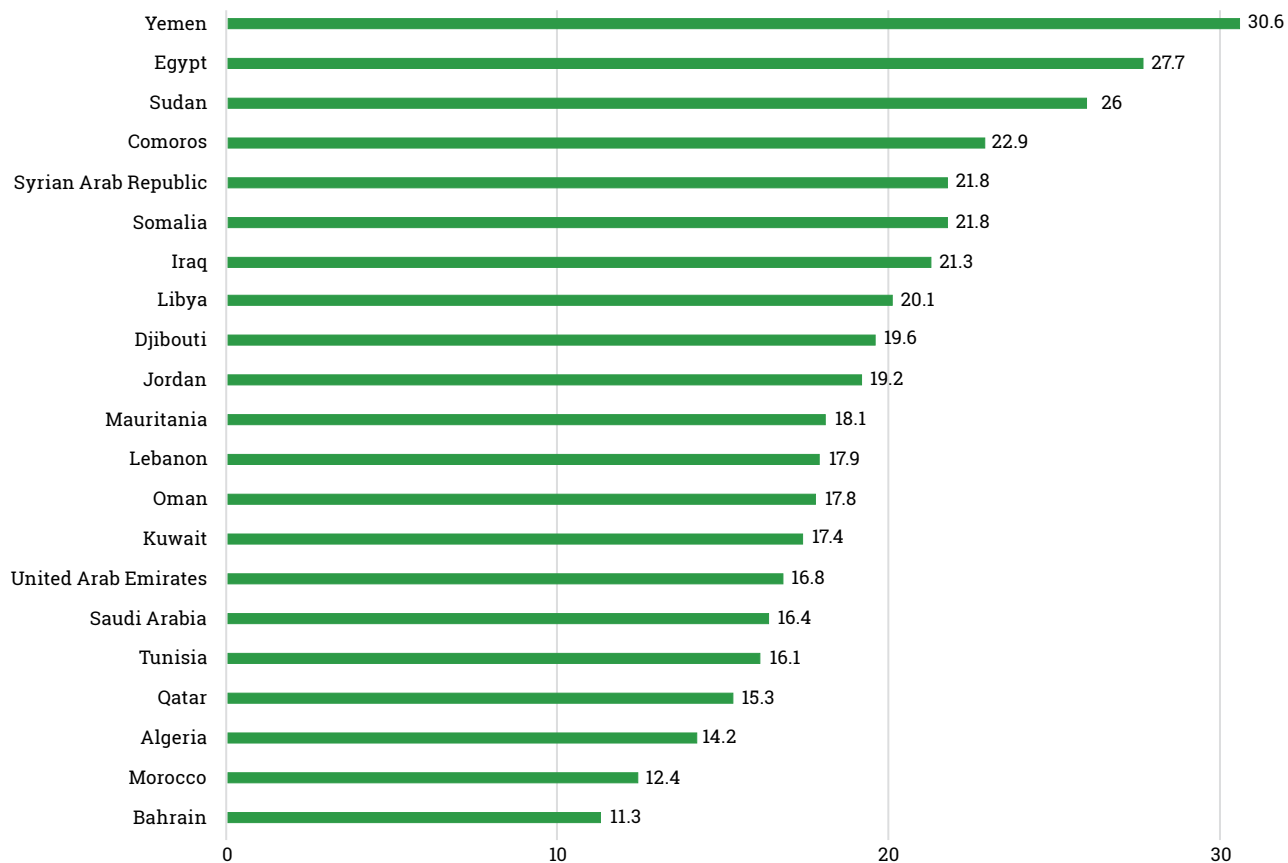
Number of people requiring interventions against neglected tropical diseases



Note: All data are from 2017.

**Figure 3.10 Indicator 3.4.1 - Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease**

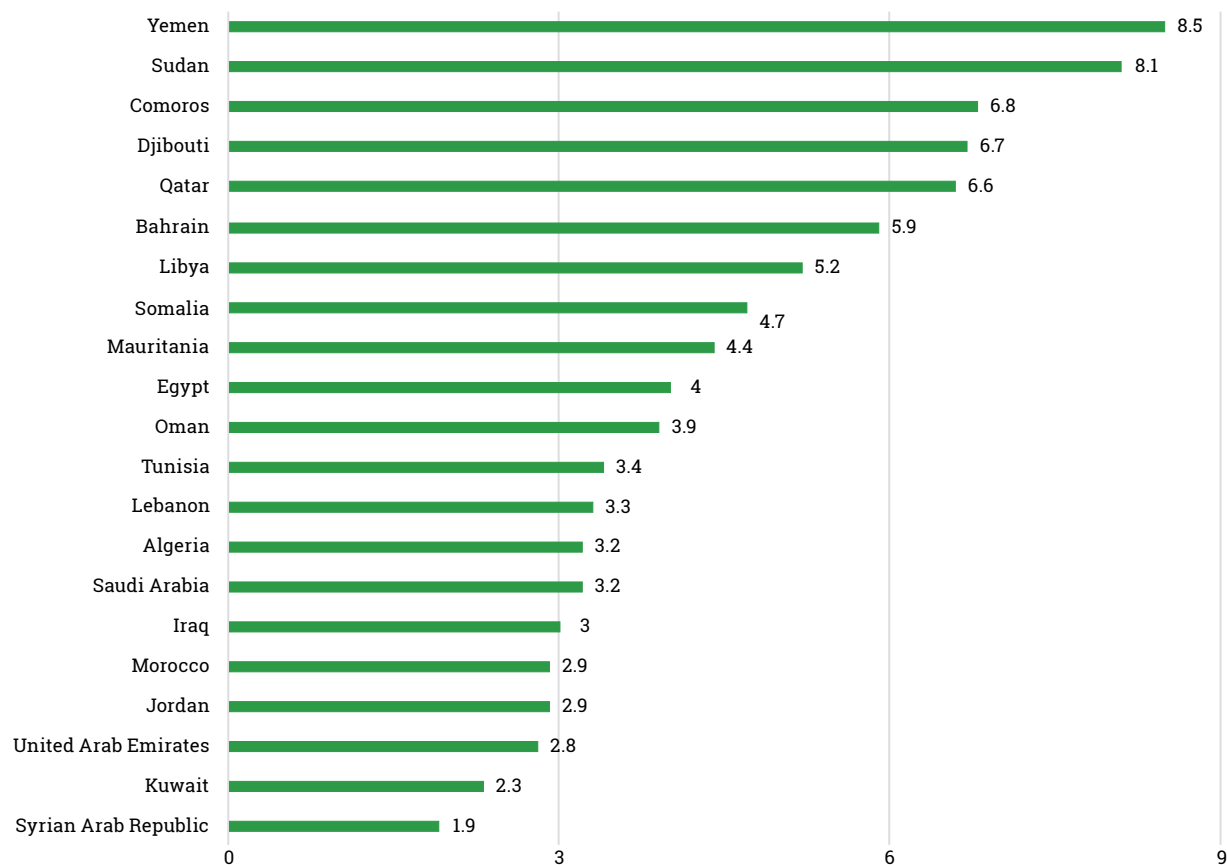
Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease (probability, percentage)



Note: All data are from 2016.

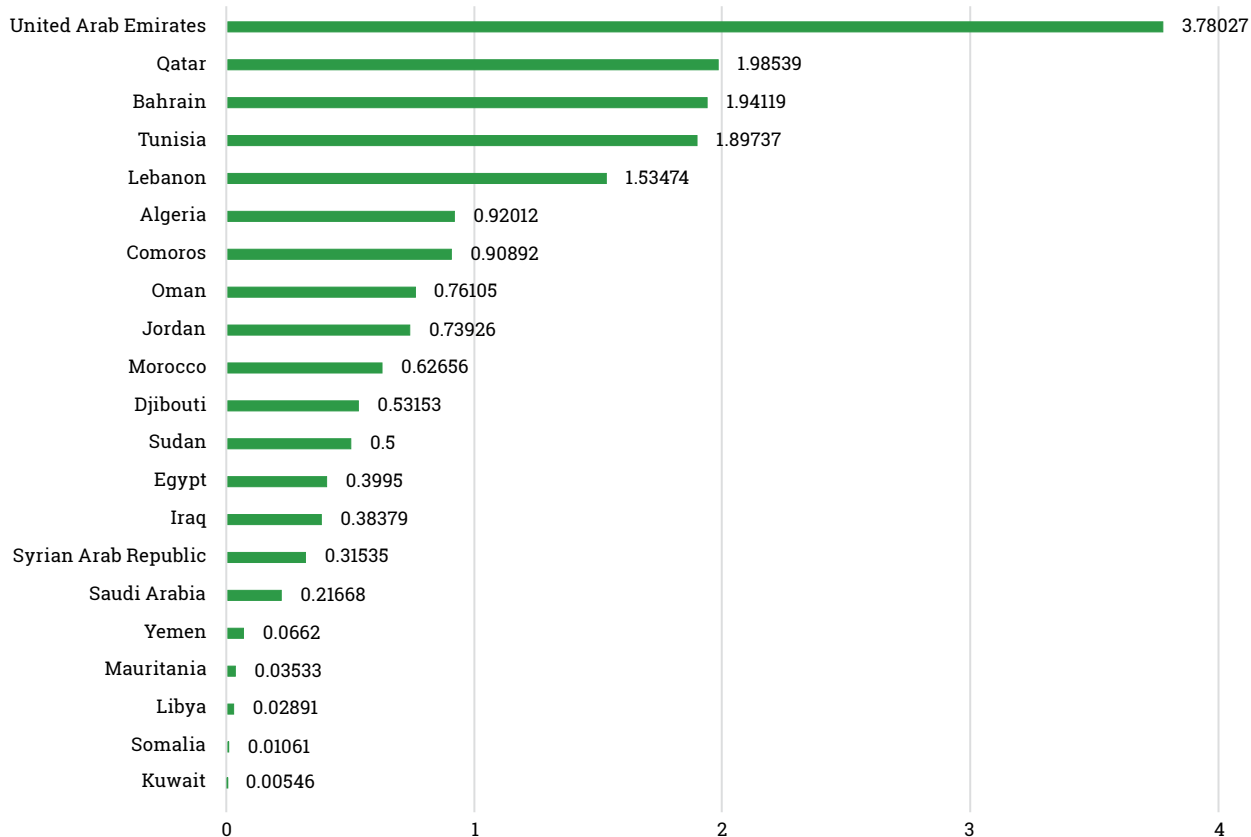
**Figure 3.11 Indicator 3.4.2 - Suicide mortality rate**

Suicide mortality rate (number of suicides per 100,000 population)



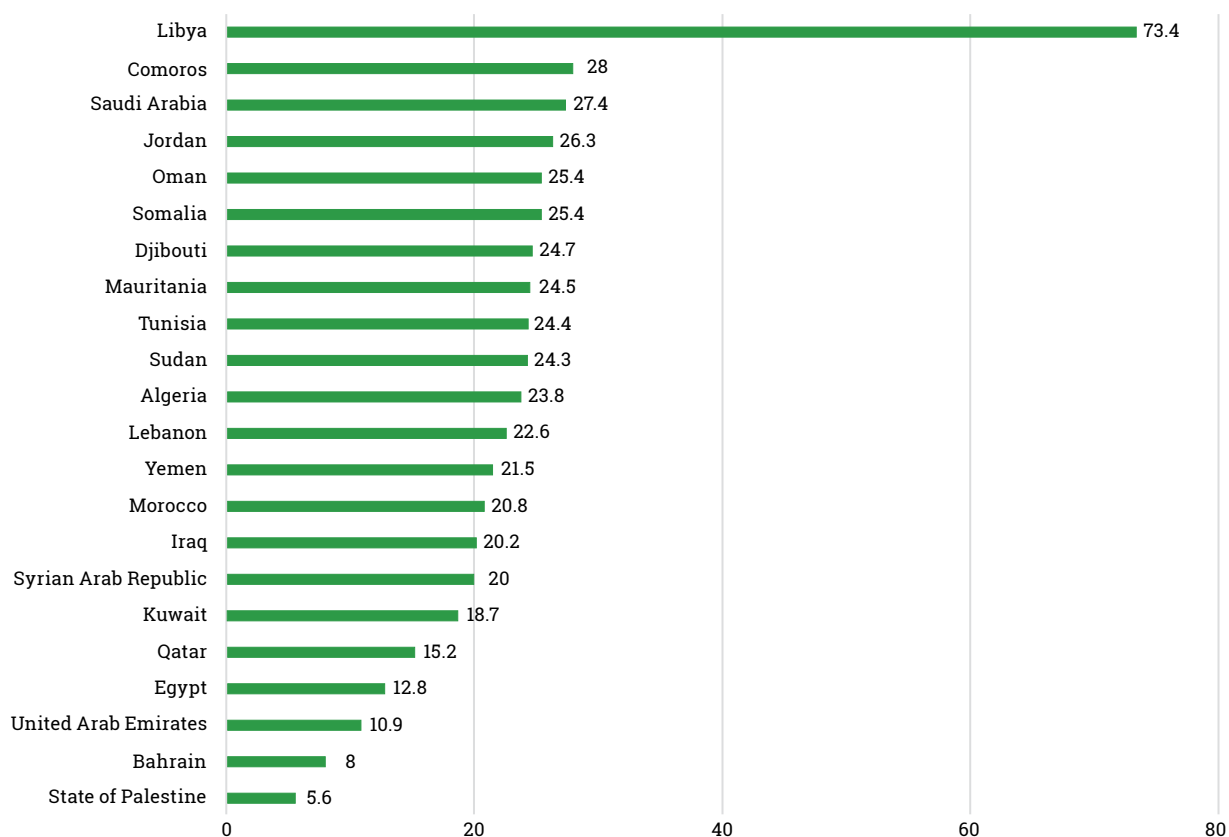
Note: All data are from 2016.

**Figure 3.12 Indicator 3.5.2 - Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol**  
Alcohol consumption per capita (aged 15 years and older) within a calendar year (litres of pure alcohol)



Note: All data are from 2016.

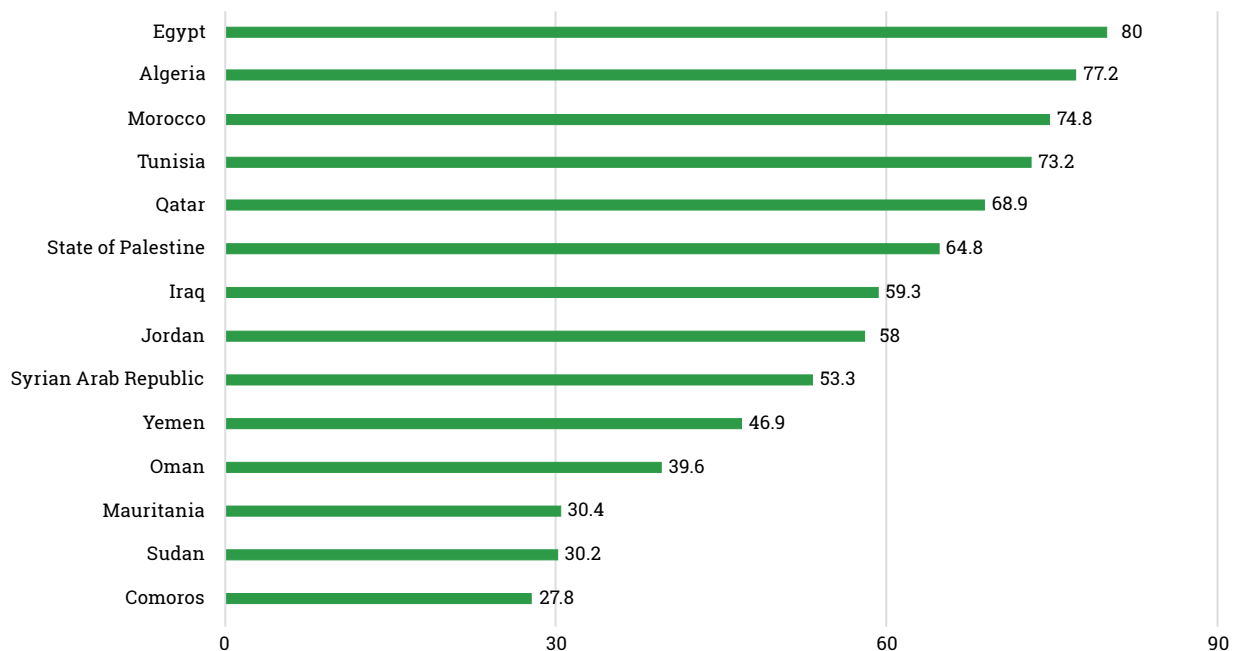
**Figure 3.13 Indicator 3.6.1 - Death rate due to road traffic injuries**  
Death rate due to road traffic injuries (number of deaths per 100,000 population)



Note: All data are from 2013.

**Figure 3.14 Indicator 3.7.1 - Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods**

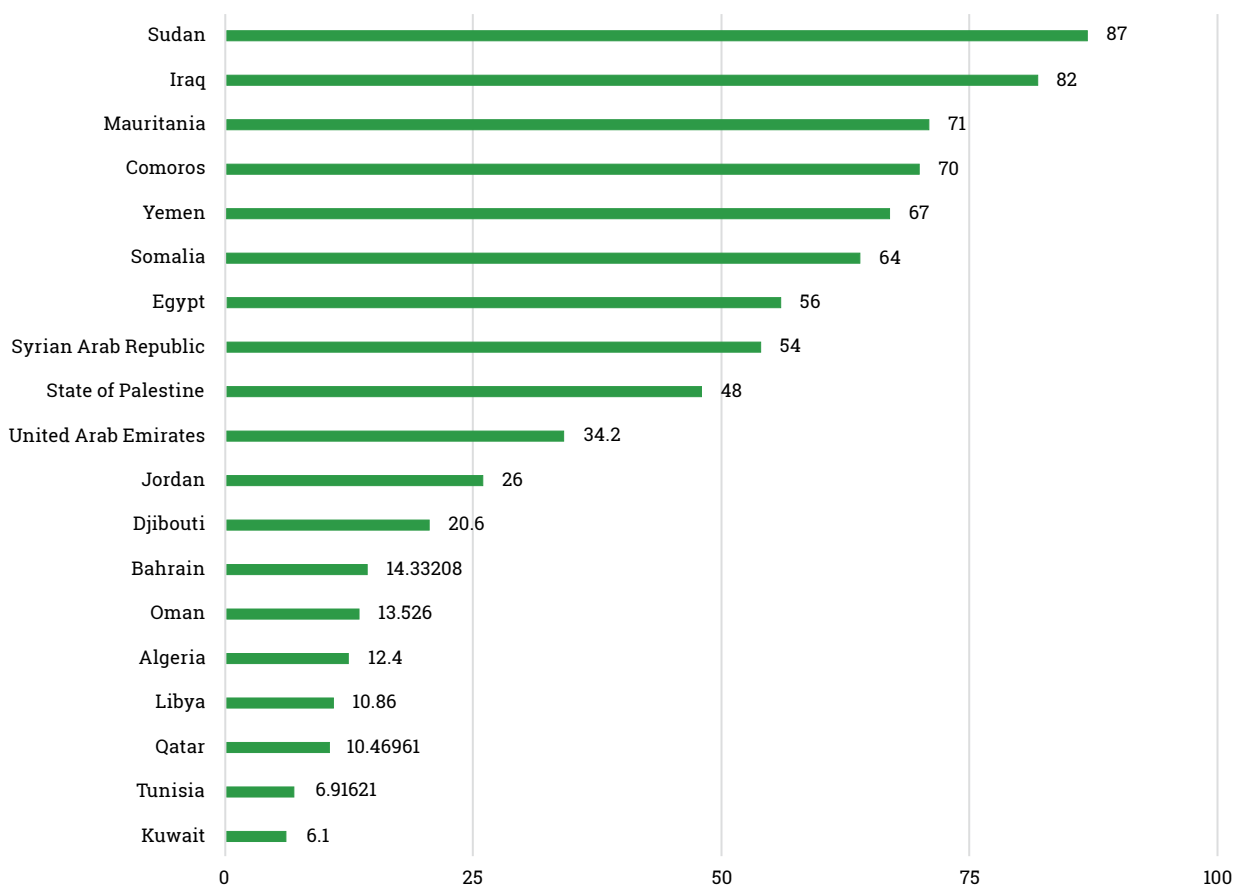
Proportion of women married or in a union of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods (percentage)



Note: Syrian Arab Republic (2009); Iraq, Morocco (2011); Comoros, Jordan, Qatar, Tunisia (2012); Algeria, Yemen (2013); Egypt, Oman, State of Palestine, Sudan (2014); Mauritania (2015).

**Figure 3.15 Indicator 3.7.2 - Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group**

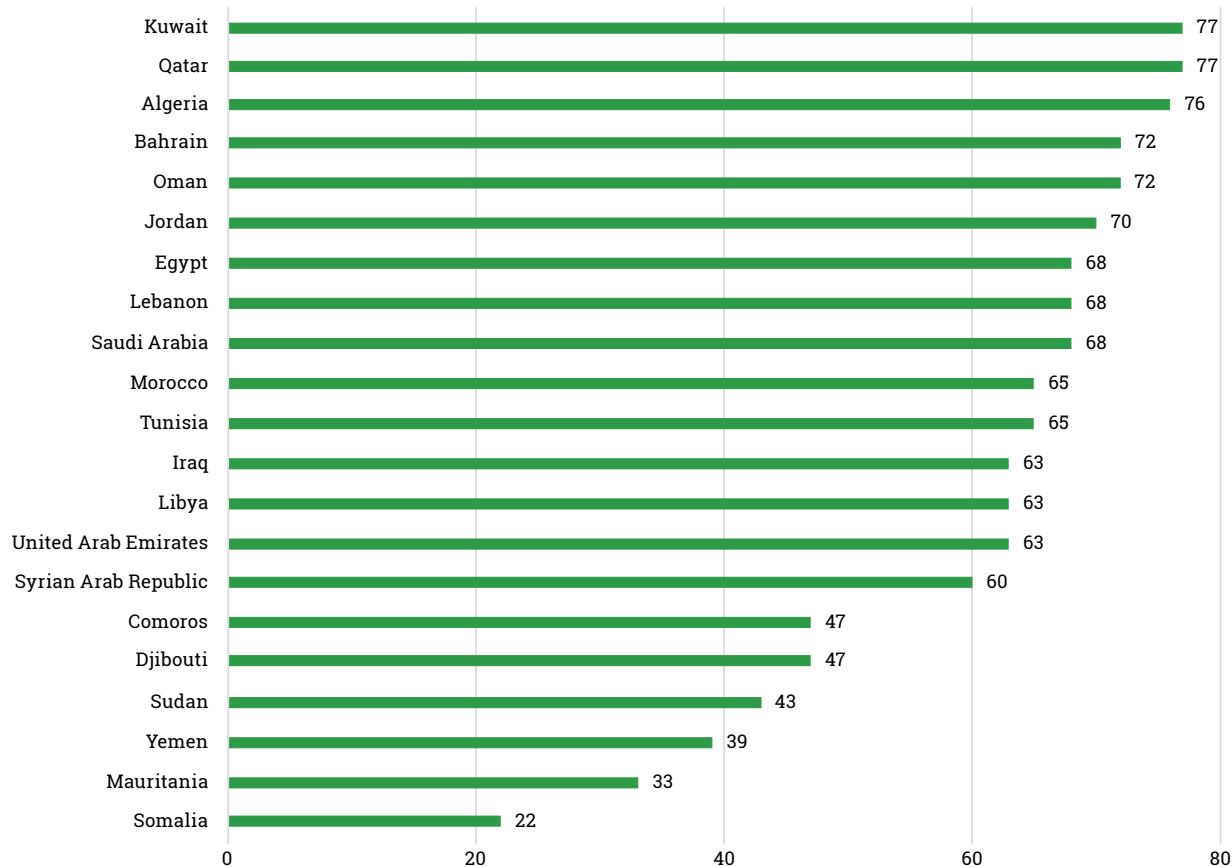
Adolescent birth rate (per 1,000 women aged 15–19 years)



Note: Data are from various years as follows: Iraq, Syrian Arab Republic, United Arab Emirates (2009); Djibouti (2010); Comoros, Jordan, Mauritania, Somalia, Tunisia (2011); Egypt, Yemen (2012); Algeria, Libya, Sudan (2013); Bahrain, State of Palestine (2014); Kuwait, Qatar (2015); Oman (2016).

**Figure 3.16 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, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)**

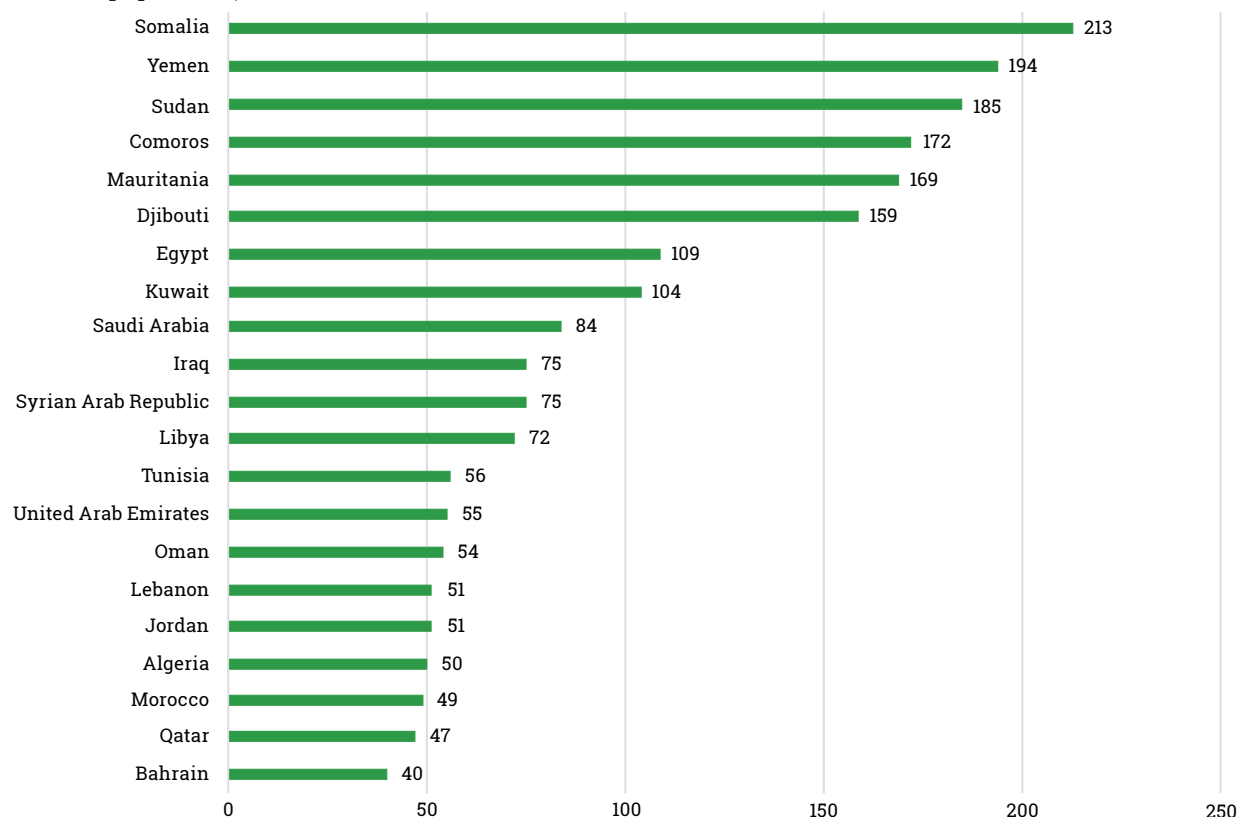
Universal health coverage (UHC) service coverage index (index from 0 to 100)



Note: All data are from 2015.

**Figure 3.17 Indicator 3.9.1 - Mortality rate attributed to household and ambient air pollution**

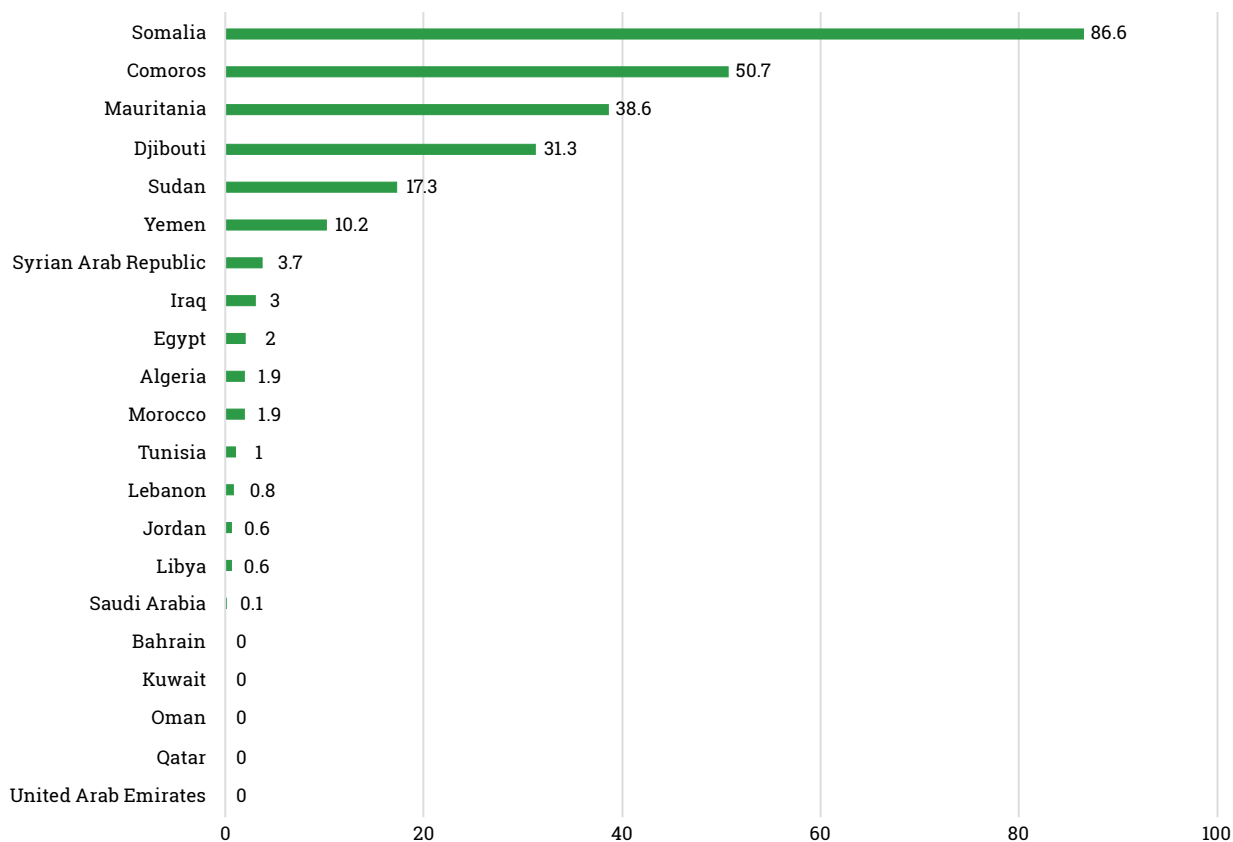
Age-standardized mortality rate attributed to household and ambient air pollution (number of deaths per 100,000 population)



Note: All data are from 2016.

**Figure 3.18 Indicator 3.9.2 - Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)**

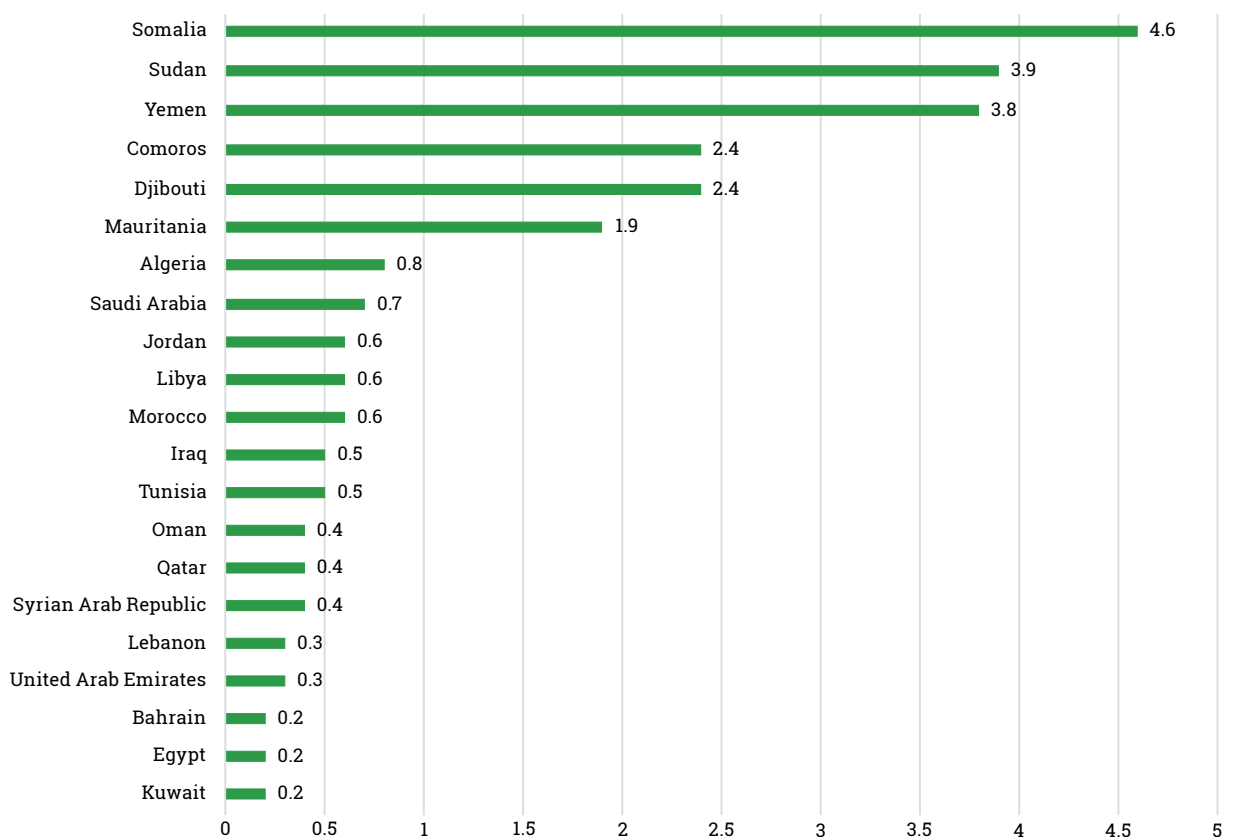
Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (number of deaths per 100,000 population)



Note: All data are from 2016.

**Figure 3.19 Indicator 3.9.3 - Mortality rate attributed to unintentional poisoning**

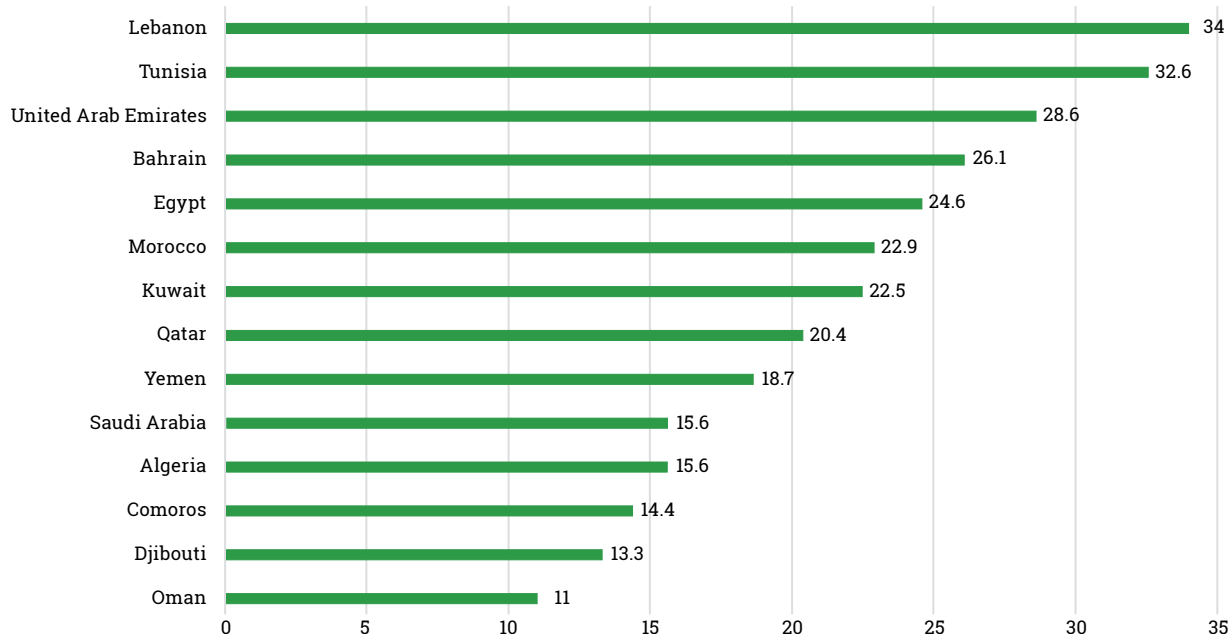
Mortality rate attributed to unintentional poisonings (index, number of deaths per 100,000 population)



Note: All data are from 2016.

**Figure 3.20 Indicator 3.a.1 - Age-standardized prevalence of current tobacco use among persons aged 15 years and older**

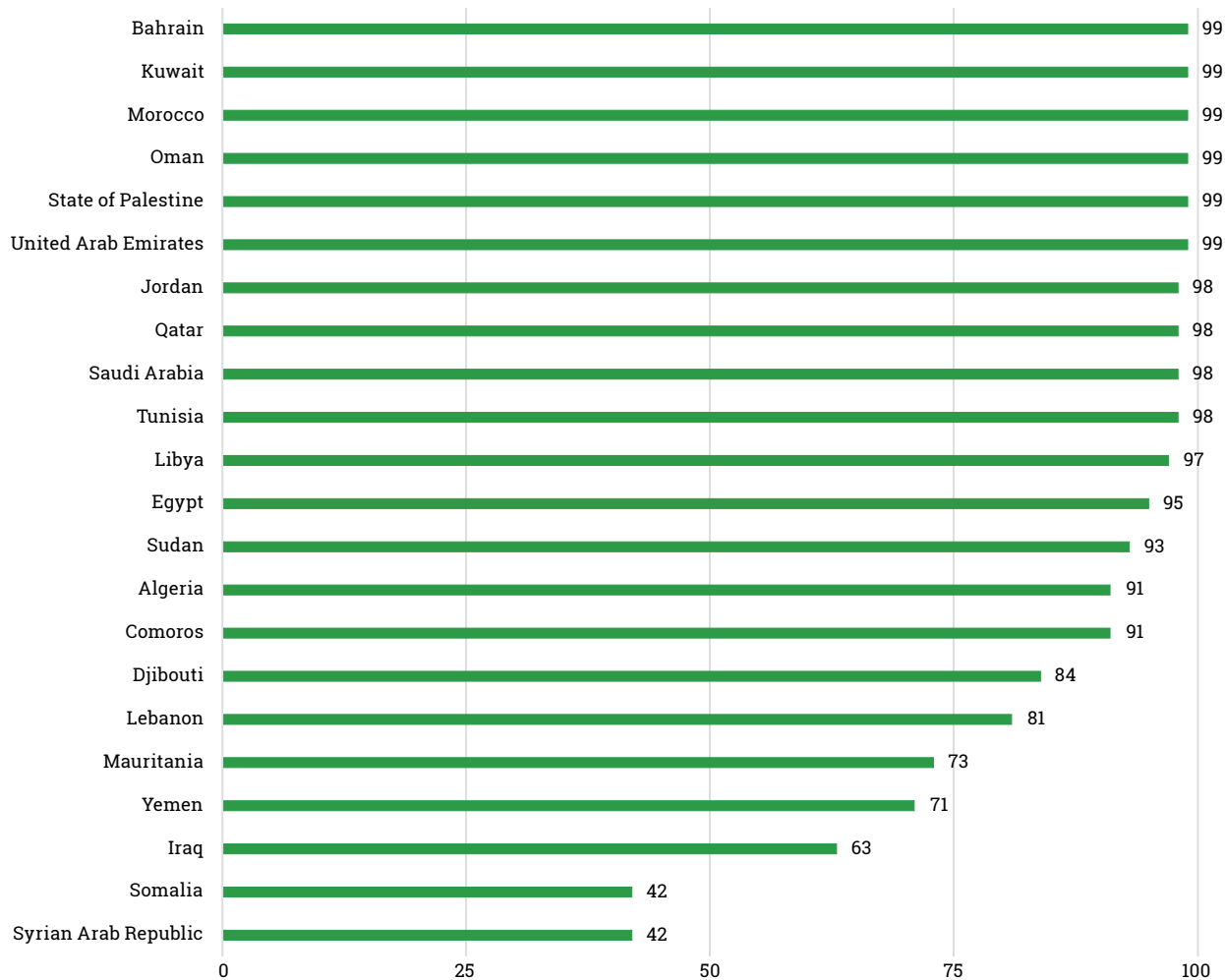
Age-standardized prevalence of current tobacco use among persons aged 15 years and older (percentage)



Note: All data are from 2015.

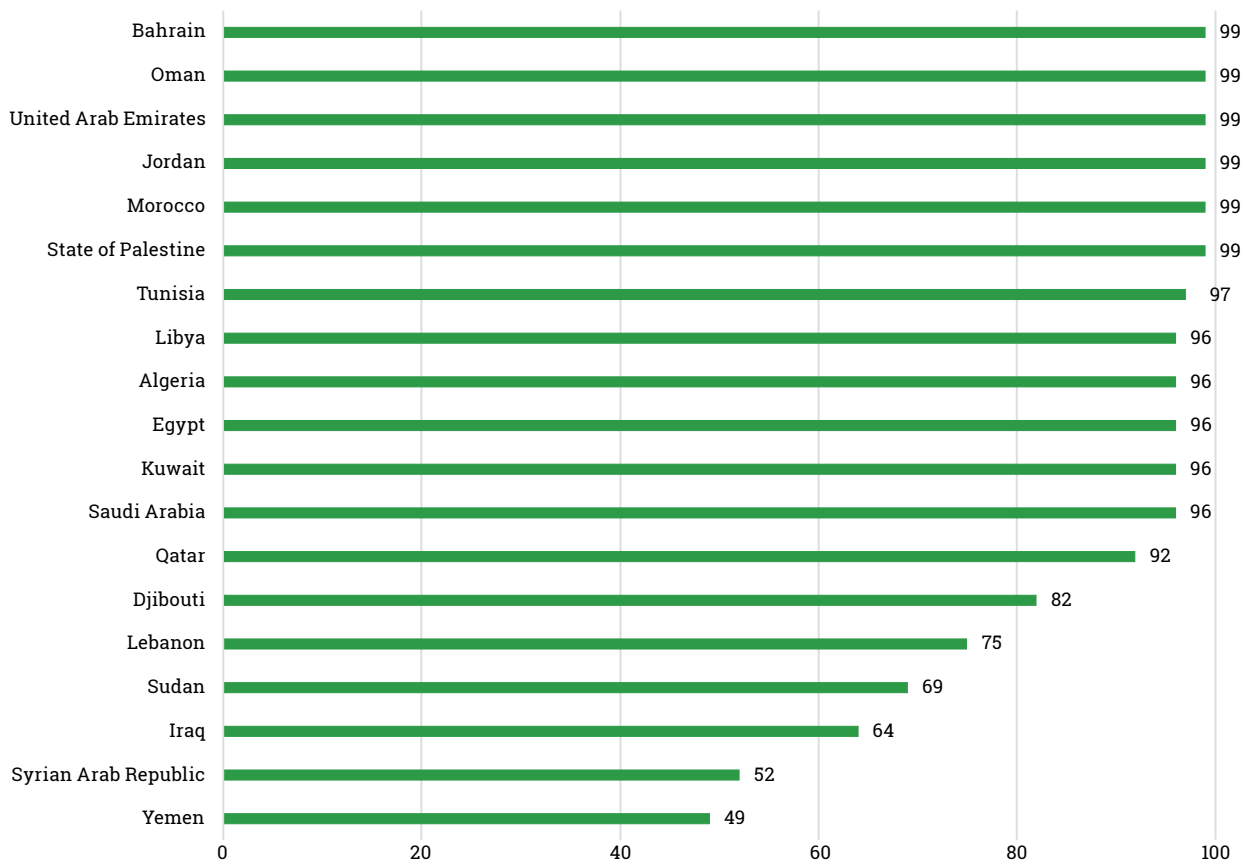
**Figure 3.21 Three series of indicator 3.b.1 - Proportion of the target population covered by all vaccines included in their national programme**

Proportion of the target population with access to three doses of diphtheria-tetanus-pertussis (DTP3) (percentage)



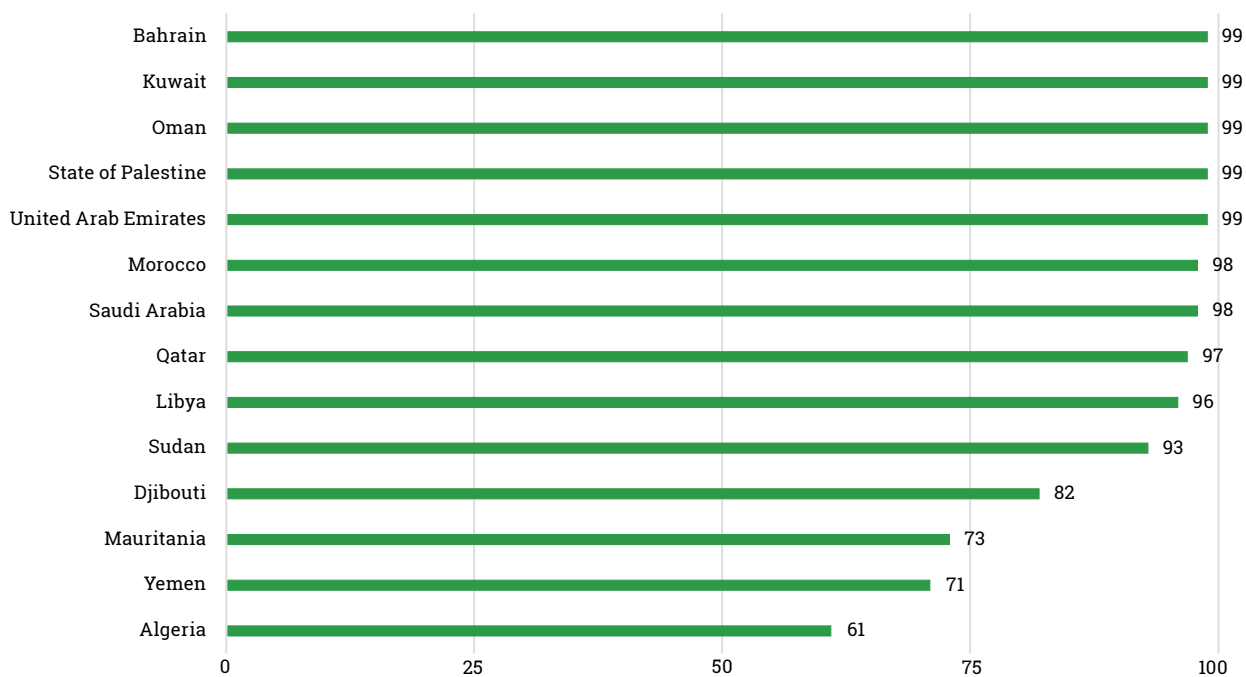
Note: All data are from 2016.

Proportion of the target population with access to measles-containing-vaccine second-dose (MCV2) (percentage)



Note: All data are from 2016.

Proportion of the target population with access to pneumococcal conjugate third dose (PCV3) (percentage)

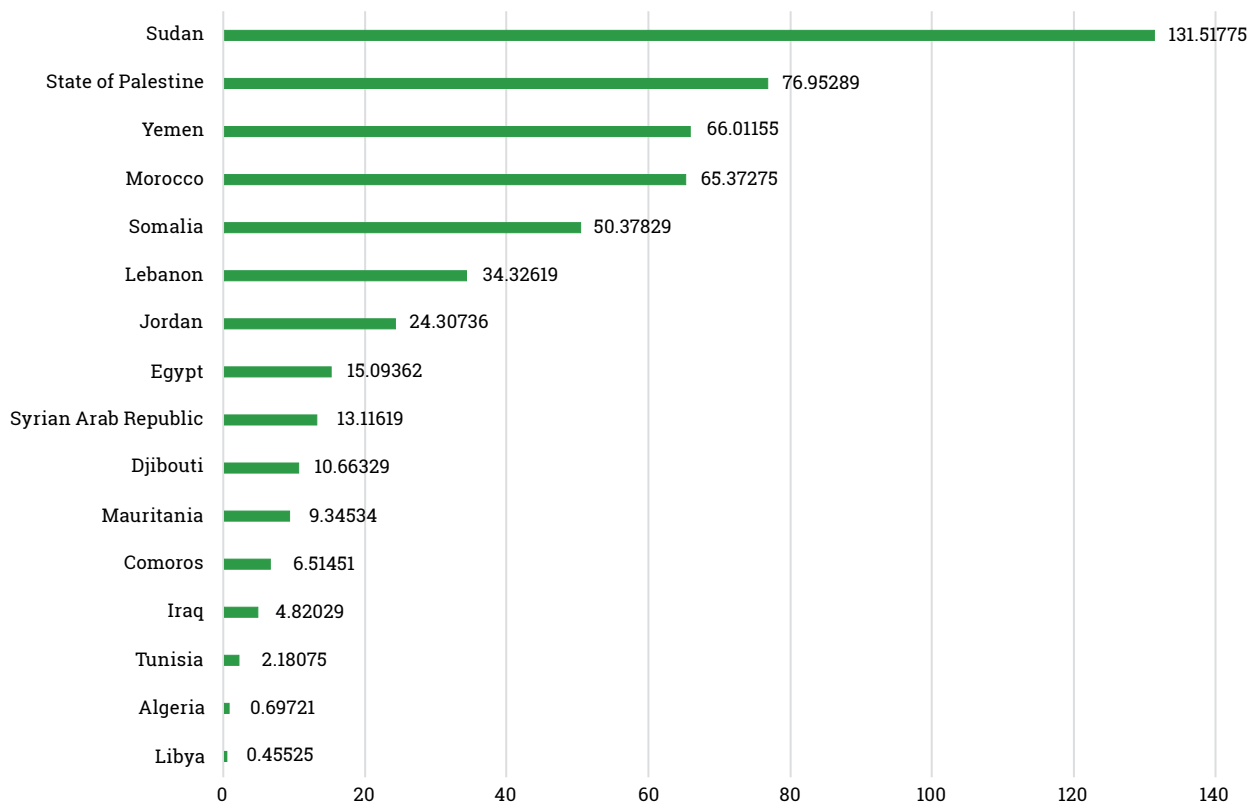


Note: All data are from 2016.



**Figure 3.22 Indicator 3.b.2 - Total net official development assistance to medical research and basic health sectors**

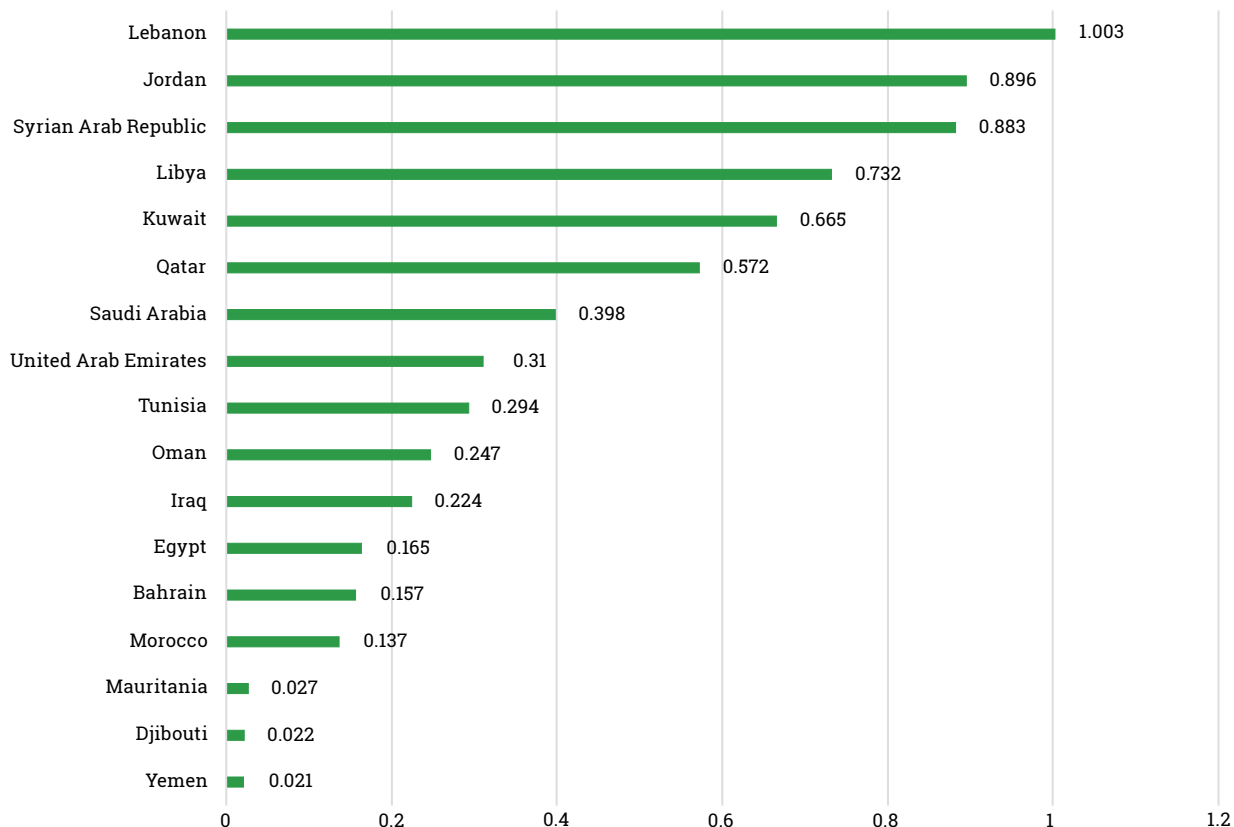
Total official development assistance to medical research and basic health sectors (net disbursements, in millions of constant 2016 United States dollars)



Note: All data are from 2016.

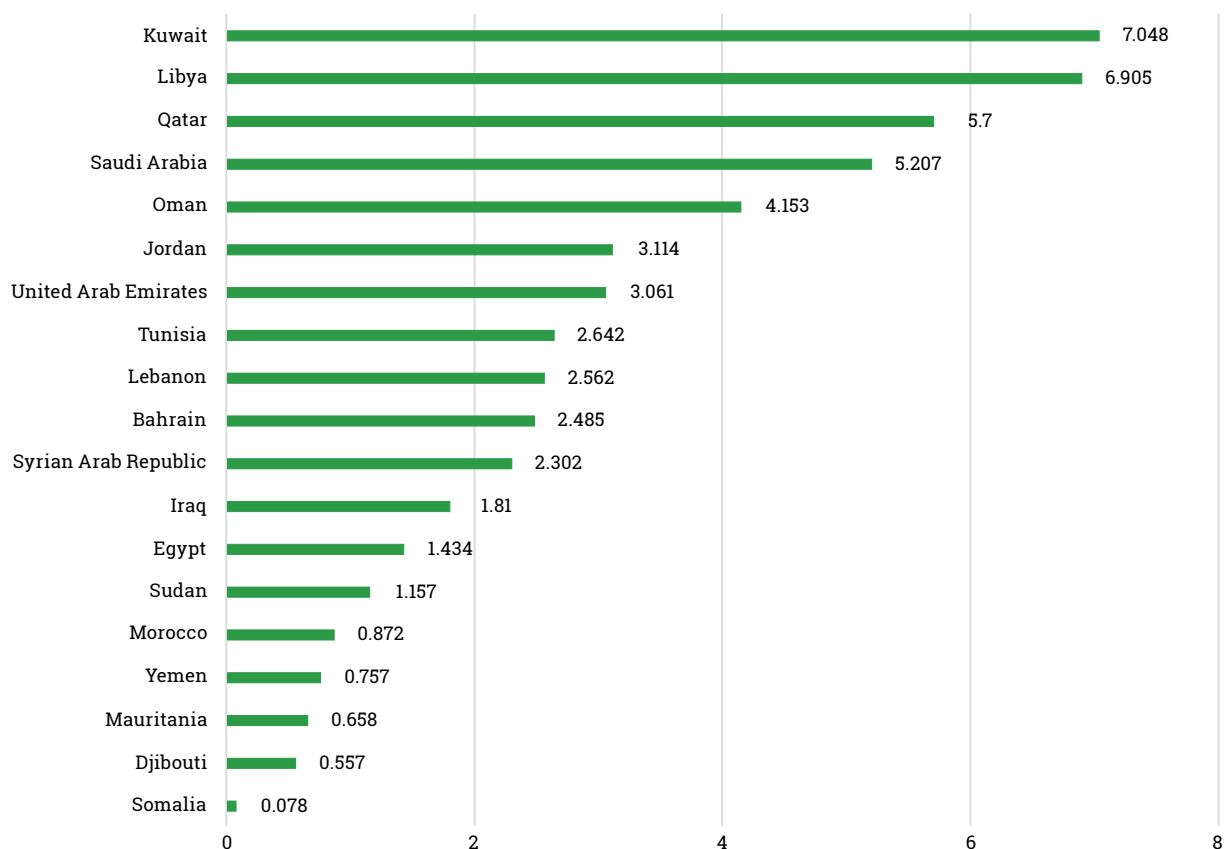
**Figure 3.23 Four series of indicator 3.c.1 - Health worker density and distribution**

Health worker density of dentists (per 1,000 population)



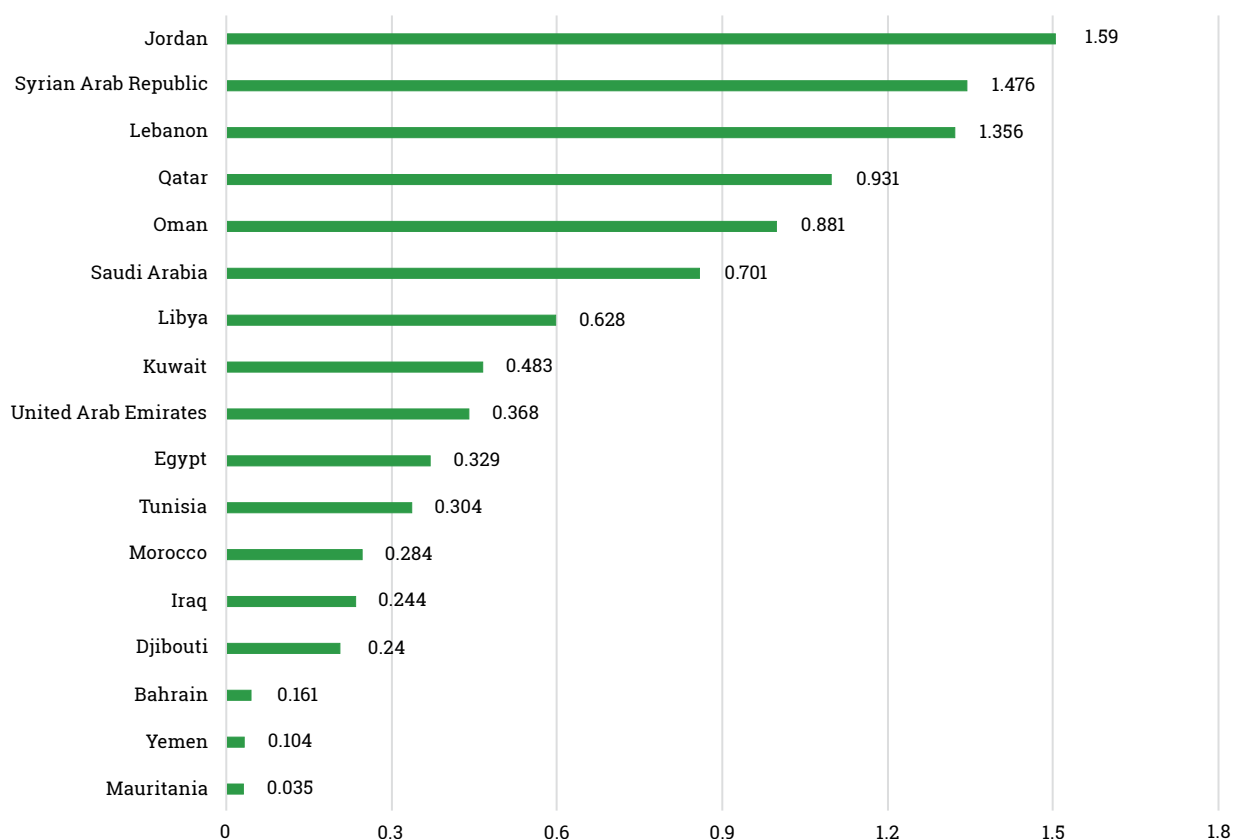
Note: Data are from various years as follows: Mauritania (2009); Tunisia (2010); Djibouti, Egypt, Iraq, Lebanon, Libya, Morocco, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen (2014); Bahrain, Jordan, Kuwait (2015); Oman (2016).

### Health worker density of Nurses (per 1,000 population)



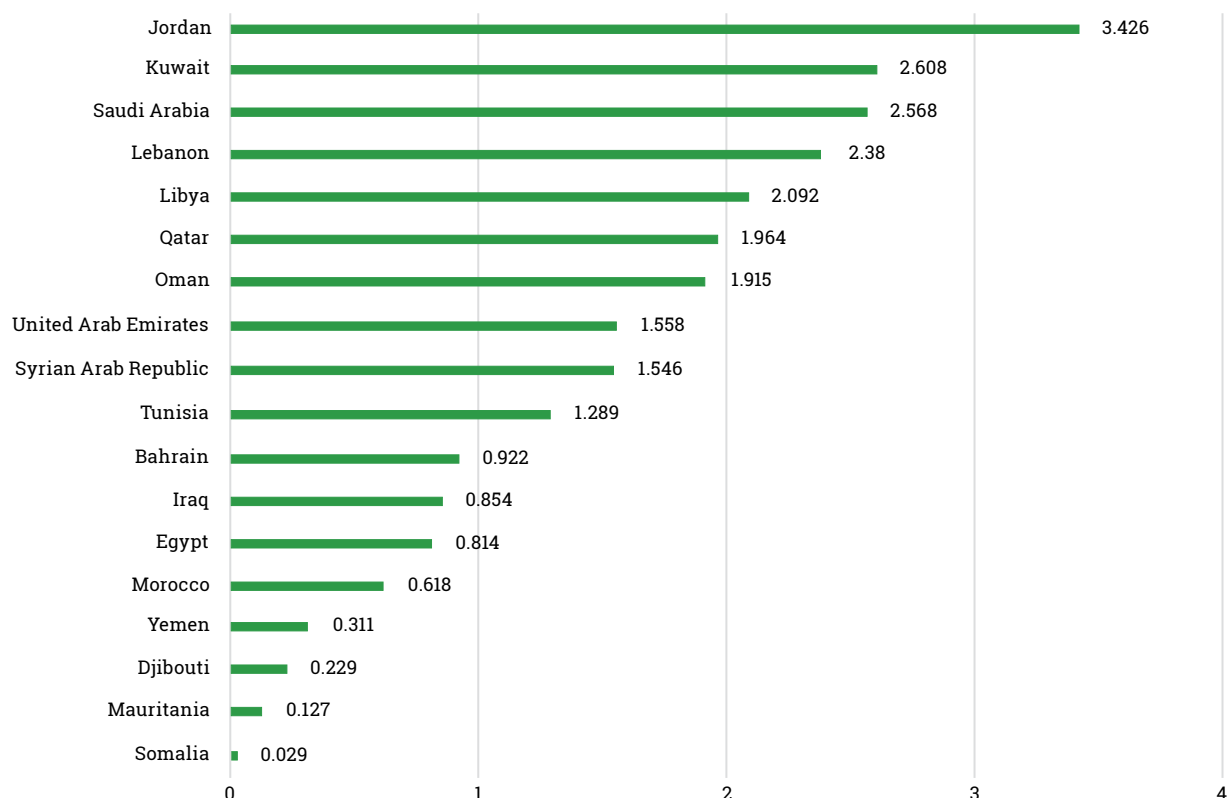
Note: Data are from various years as follows: Mauritania (2009); Djibouti, Egypt, Iraq, Lebanon, Libya, Morocco, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, the United Arab Emirates, Yemen (2014); Bahrain, Jordan, Kuwait (2015); Oman, Tunisia (2016).

### Health worker density of Pharmacists (per 1,000 population)



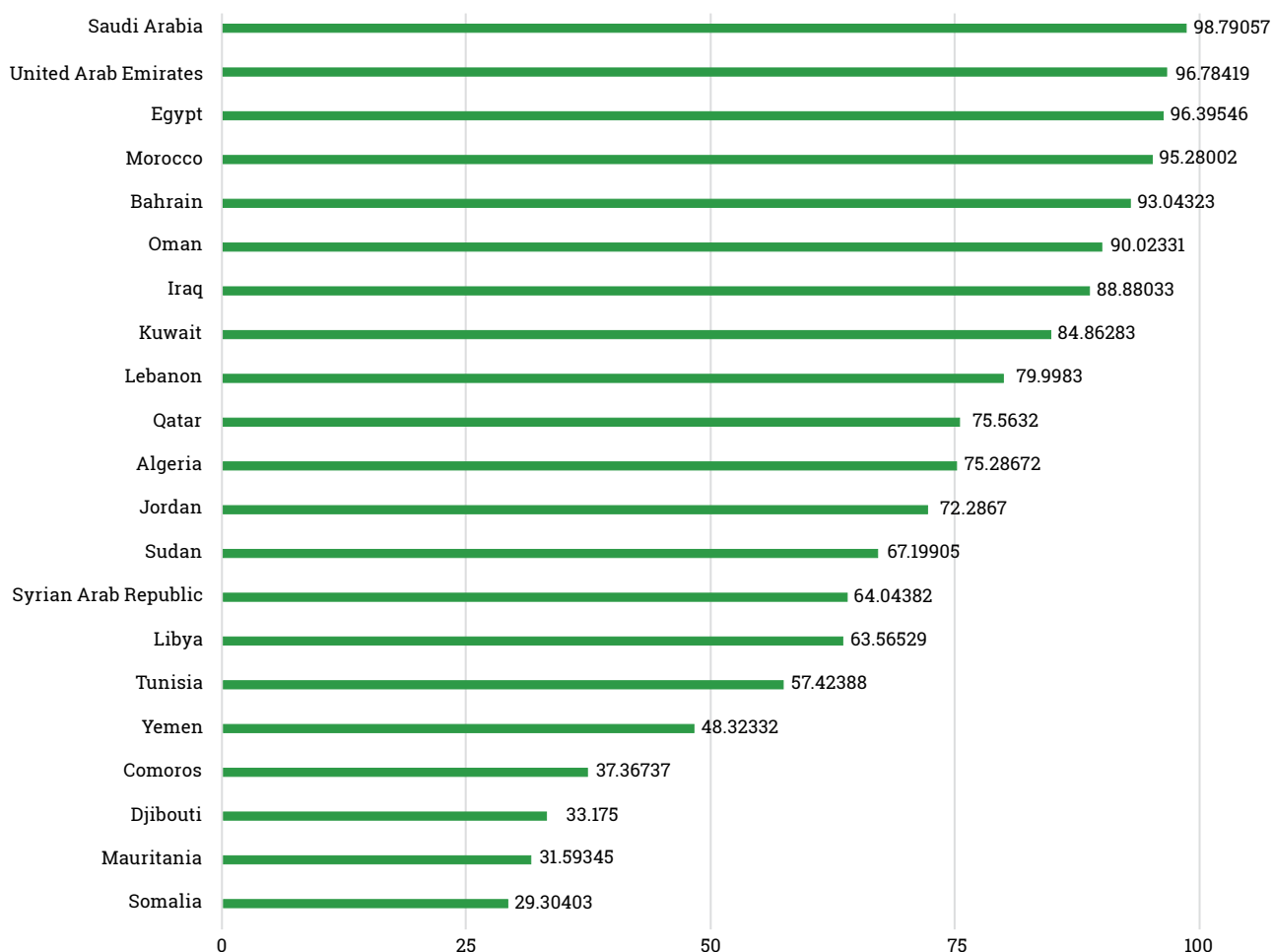
Note: Data are from various years as follows: Mauritania, Morocco (2009); Tunisia (2010); Djibouti, Egypt, Iraq, Kuwait, Lebanon, Libya, Qatar, Saudi Arabia, Syrian Arab Republic, the United Arab Emirates, Yemen (2014); Bahrain, Jordan (2015); Oman (2016).

### Health worker density of Physicians (per 1,000 population)



Note: Data are from various years as follows: Mauritania (2009); Djibouti, Egypt, Iraq, Lebanon, Libya, Morocco, Qatar, Saudi Arabia, Somalia, Syrian Arab Republic, United Arab Emirates, Yemen (2014); Bahrain, Jordan, Kuwait, Tunisia (2015); Oman (2016).

**Figure 3.24 Indicator 3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness**  
Average of 13 International Health Regulations (IHR) core capacities (percentage)



Note: All data are from 2017.