Goal 3: Ensure healthy lives and promote well-being for all at all ages

Target 3.a: Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

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

Institutional information

Organizations:

World Health Organization;

Secretariat of the WHO Framework Convention on Tobacco Control (co-custodians)

Concepts and definitions

Definition:

The indicator is defined as the percentage of the population aged 15 years and over who currently use any tobacco product (smoked and/or smokeless tobacco) on a daily or non-daily basis.

Concepts:

Tobacco use means use of smoked and/or smokeless tobacco products. “Current use” means use within the previous 30 days at the time of the survey, whether daily or non-daily use.

Tobacco products means products entirely or partly made of the leaf tobacco as raw material intended for human consumption through smoking, sucking, chewing or sniffing.

“Smoked tobacco products” include cigarettes, cigarillos, cigars, cheroots, bidis, pipes, shisha (water pipes), roll-your-own tobacco, kretek and any other form of tobacco that is consumed by smoking.

"Smokeless tobacco product" includes moist snuff, creamy snuff, dry snuff, plug, dissolvables, gul, loose leaf, red tooth powder, snus, chimo, gutkha, khaini, gudakhu, zarda, quiwam, dohra, tuibur, nasway, naas, naswar, shammah, toombak, paan (betel quid with tobacco), iq’mik, mishri, tapkeer, tombol and any other tobacco product that consumed by sniffing, holding in the mouth or chewing.

Prevalence estimates have been “age-standardized” to make them comparable across all countries no matter the demographic profile of the country. This is done by applying each country’s age-and-sex specific prevalence rates to the WHO Standard Population. The resulting rates are hypothetical numbers which are only meaningful when comparing rates obtained for one country with those obtained for another country.

Rationale:

Tobacco use is a major contributor to illness and death from non-communicable diseases (NCDs). There is no proven safe level of tobacco use or of second-hand smoke exposure. All daily and non-daily users of tobacco are at risk of a variety of poor health outcomes across the life-course, including NCDs. Reducing the prevalence of current tobacco use will make a large contribution to reducing premature mortality from NCDs (Target 3.4). Routine and regular monitoring of this indicator is necessary to enable accurate monitoring and evaluation of the impact of implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC), or tobacco control policies in the countries that are not yet Parties to the WHO FCTC, over time. Tobacco use prevalence levels are an appropriate indicator of implementation of SDG Target 3.a “Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate”.

Comments and limitations:

Raw data collected through nationally representative population-based surveys in the countries are used to calculate comparable estimates for this indicator. Information from subnational surveys are not used.

In some countries, all tobacco use and tobacco smoking may be equivalent, but for many countries where other forms of tobacco are also being consumed, smoking rates will be lower than tobacco use rates to some degree.

The comparability, quality and frequency of household surveys affects the accuracy and quality of the estimates. Non-comparability of data can arise from the use of different survey instruments, sampling and analysis methods, and indicator definitions across Member States. Surveys may cover a variety of age ranges (not always 15+) and be repeated at irregular intervals. Surveys may include a variety of different tobacco products, or sometimes only one product such as cigarettes, based on the country’s perception of which products are important to monitor. Unless both smoked and smokeless products are monitored simultaneously, tobacco use prevalence will be underreported. Countries have begun to monitor use of e-cigarettes and other emerging products, which may confound countries’ definitions of tobacco use. The definition of current use may not always be restricted to the 30 days prior to the survey. In addition, surveys ask people to self-report their tobacco use, which can lead to under-reporting of tobacco use.

There is no standard protocol used across Member States to ask people about their tobacco use. WHO’s Tobacco Questions for Surveys (TQS) have been adopted in many surveys, which helps improve comparability of indicators across countries.

Methodology

Computation method:

A statistical model based on a Bayesian negative binomial meta-regression is used to model prevalence of current tobacco use for each country, separately for men and women. A full description of the method is available as a peer-reviewed article in The Lancet, volume 385, No. 9972, p966–976 (2015). Once the age-and-sex-specific prevalence rates from national surveys were compiled into a dataset, the model was fit to calculate trend estimates from the year 2000 to 2030. The model has two main components: (a) adjusting for missing indicators and age groups, and (b) generating an estimate of trends over time as well as the 95% credible interval around the estimate. Depending on the completeness/comprehensiveness of survey data from a particular country, the model at times makes use of data from other countries to fill information gaps. To fill data gaps, information is “borrowed” from countries in the same UN sub-region. The resulting trend lines are used to derive estimates for single years, so that a number can be reported even if the country did not run a survey in that year. In

order to make the results comparable between countries, the prevalence rates are age-standardized to the WHO Standard Population.

Estimates for countries with irregular surveys or many data gaps will have large uncertainty ranges, and such results should be interpreted with caution.

Treatment of missing values:

- ***At country level:***

For countries with less than two surveys completed in different years since 1990, no estimate is calculated, since no trend can be determined. For countries with data from two or more national surveys, data gaps, if any, are filled as described in the Computation Method.

- ***At regional and global levels:***

Countries where no estimate can be calculated are included in regional and global averages by assuming their prevalence rates for men and women are equal to the average rates for men and women seen in the UN subregion[1] in which they are located. Where fewer than 50% of a UN sub-region's population was surveyed, UN subregions are grouped with neighbouring sub-regions until at least 50% of the grouped population has contributed data to the region's average rates.

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1 For a listing of countries by UN region, please refer to pages ix to xiii of World Population Prospects: The 2017 Revision, published by the UN Department of Economic and Social Affairs in 2017 at https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_Volume-I_Comprehensive-Tables.pdf (accessed May 25, 2017). For the purposes of smoking analysis, the following adjustments were made: (i) Eastern Africa sub-region was divided into two regions: Eastern Africa Islands and Remainder of Eastern Africa; (ii) Armenia, Azerbaijan, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Tajikistan, Uzbekistan and Turkmenistan were classified with Eastern Europe, (iii); Cyprus, Israel and Turkey were classified with Southern Europe, and (iv) Melanesia, Micronesia and Polynesia sub-regions were combined into one sub-region. ↑

Regional aggregates:

Average prevalence rates for regions are calculated by population-weighting the age-specific prevalence rates in countries, then age-standardizing the age-specific average rates of the region.

Sources of discrepancies:

WHO estimates differ from national estimates in that they are

i) age-standardised to improve international comparability and

ii) calculated using one standard method for all countries. Infrequent surveys or unavailability of recent surveys lead to more reliance on modelling. As the data set for each country improves over time with addition of new surveys, recent estimates may seem inconsistent with earlier estimates. WHO estimates undergo country consultation prior to release.

Methods and guidance available to countries for the compilation of the data at the national level:

Information not available.

Quality assurance

Information not available

Data sources

Description:

Prevalence rates by age-by-sex from national representative population surveys conducted since 1990:

- officially recognized by the national health authority;
- of randomly selected participants representative of the general population; and
- reporting at least one indicator measuring current tobacco use, daily tobacco use, current tobacco smoking, daily tobacco smoking, current cigarette smoking or daily cigarette smoking.

Official survey reports are gathered from Member States by one or more of the following methods:

- reporting system of the WHO FCTC;
- review of surveys conducted under the aegis of the Global Tobacco Surveillance System;
- review of other surveys conducted in collaboration with WHO such as STEPwise surveys and World Health Surveys;
- scanning of international surveillance databases such as those of the Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS) and the World Bank Living Standards Measurement Survey (LSMS); and
- identification and review of country-specific surveys that are not part of international surveillance systems.

Collection process:

Reports either downloaded from websites or emailed by national counterparts. WHO shares and makes public the methodologies for its estimates through the WHO global report on trends in tobacco use 2000-2025 and the WHO Report on the Global Tobacco Epidemic. The WHO estimates undergo country consultation prior to publication.

Data availability

Description:

The indicator is available for all countries from 2000 to the current year, depending on availability of empirical data for each country.

Disaggregation:

Sex.

Calendar

Data collection:

Continual data collection.

Data release:

Biennial release via the WHO Global Report on Trends in Tobacco Smoking 2000-2025, the WHO Global Health Observatory and the Implementation Database of the WHO FCTC.

Data providers

WHO Member States, Parties to the WHO FCTC.

Data compilers

WHOTobacco Free Initiative; Secretariat of the WHO Framework Convention on Tobacco Control and the Protocol to Eliminiate Illicit Trade in Tobacco Products.

References

URL:

http://www.who.int/tobacco/surveillance/tqs/en/

http://www.who.int/gho/en/

http://apps.who.int/fctc/implementation/database/

Related indicators as of February 2020

Indicator 3.4.1: Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease