



STATISTICS INDONESIA

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Infectious diseases

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Infectious diseases

- For infectious diseases, indicators were selected for **treatment of TB and HIV**, use of **insecticide treated bed nets** (ITN) among populations at risk of malaria, and **household access to improved water and sanitation**.
- National estimates of TB and HIV treatment coverage are derived from a mixture of facility data, for the numerator, and model-based estimates of the need for treatment, for the denominator.



Infectious diseases

- More work is required to improve the accuracy of ART (Antiretroviral therapy) coverage estimates in high income countries and other countries with low HIV burden.
- ITN coverage is estimated by combining household survey data with information on purchasing and distribution of bed nets for countries with a high burden of malaria, and data on coverage of improved water and sanitation sources are collected during **household surveys**.



Infectious Diseases indicators

- a. Tuberculosis treatment : TB cases detected and cured (%)
- b. HIV treatment : People living with HIV receiving ART (%)
- c. Malaria prevention : Population at risk sleeping under insecticide treated bed nets (%)
- d. Improved water and sanitation : Average coverage of households with access to improved water and sanitation (%)
- e. Hepatitis B incidence : Hepatitis B incidence per 100.000 population



a. Tuberculosis detection and treatment

- Indicator definition : Percentage of incidence TB cases that are detected and **successfully treated** in a given year
- Numerator : Number of new and relapse cases detected in a given year and successfully treated
- Denominator : Number of new and relapse cases in the same year
- Main data sources : Facility information systems, surveillance systems, population-based health surveys with TB diagnostic testing, **TB register** and related quarterly reporting system (or electronic TB registers)



Method of measurement

This indicator requires three main inputs:

- The number of new and relapse TB cases diagnosed and treated in national TB control programmes and notified to WHO in a given year.
- The number of incident TB cases for the same year, typically estimated by WHO.
- Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities.



Method of estimation

Estimates of TB incidence are produced through a consultative and analytical process led by WHO and are published annually.

These estimates are based on :

1. annual case notifications
2. assessments of the quality and coverage of TB notification data,
3. national surveys of the prevalence of TB disease and
4. information from death (vital) registration systems.



Method of estimation

Estimates of incidence for each country are derived, using one or more of the following approaches depending on available data:

1. $\text{incidence} = \text{case notifications} / \text{estimated proportion of cases detected}$;
2. $\text{incidence} = \text{prevalence} / \text{duration of condition}$;
3. $\text{incidence} = \text{deaths} / \text{proportion of incident cases that die}$.

These estimates of TB incidence are combined with country-reported data on the number of cases detected



b. HIV treatment

- **Indicator definition** : Percentage of people living with HIV currently receiving antiretroviral therapy (ART)
- **Numerator** : Number of adults and children who are currently receiving ART at the end of the reporting period
- **Denominator** : Number of adults and children living with HIV during the same period
- **Main data sources** : Facility reporting systems, sentinel surveillance sites, population-based surveys



Method of measurement

Numerator:

- The numerator can be generated by counting the number of adults and children who received antiretroviral combination therapy at the end of the reporting period.
- Data can be collected from facility-based ART registers or drug supply management systems.
- These are then tallied and transferred to cross sectional monthly or quarterly reports which can then be aggregated for national totals.
- Patients receiving ART in the private sector and public sector should be included in the numerator.



Method of measurement

Denominator:

- Data on the number of people with HIV infection may come from population-based surveys or, as is common in sub-Saharan Africa, surveillance systems based on antenatal care clinics.



Method of estimation

- The numerator is calculated using the above methods by WHO/UNAIDS.
- To estimate the number of people living with HIV across time, UNAIDS in collaboration with countries uses an epidemic model (Spectrum) that combines surveillance data on prevalence with the current number of patients receiving ART and assumptions about the natural history of HIV disease progression.
- Since ART is now recommended for all individuals living with HIV, monitoring ART coverage is less complicated than before, when only those with a certain level of disease severity were eligible to receive ART.



Noted

There are currently no comparable estimates of ART coverage in high income countries, but estimates are expected within the next year.



c. ITN (Insecticide Treated bed Nets) coverage for malaria prevention

- **Indicator definition** : Percentage of population in malaria-endemic areas who slept under an ITN the previous night.
- **Numerator** : Number of people in malaria-endemic areas who slept under an ITN.
- **Denominator** : Total number of people in malaria endemic areas.



ITN coverage for malaria prevention

Main data sources :

- Data on household access and use of ITNs come from nationally representative household surveys such as Demographic and Health Surveys, Multiple Indicator Cluster Surveys, and Malaria Indicator Surveys.
- Data on the number of ITNs delivered by manufacturers to countries are compiled by Milliner Global Associates, and data on the number of ITNs distributed within countries are reported by National Malaria Control Programs.



Method of measurement

Many recent national surveys report the number of ITNs observed in each respondent household.

Ownership rates can be converted to the proportion of people sleeping under an ITN using a linear relationship between access and use that has been derived from 62 surveys that collect information on both indicators



Method of estimation

- Mathematical models can be used to combine data from household surveys on access and use with information on ITN deliveries from manufacturers and ITN distribution by national malaria programmes to produce annual estimates of ITN coverage.
- WHO uses this approach in collaboration with the Malaria Atlas Project.



Noted

WHO produces comparable ITN coverage estimates for 40 high burden countries.

For other countries, ITN coverage is not included in the UHC service coverage index.

d. Improved water and adequate sanitation source

- Indicator definition :

Percentage of households using improved water and improved sanitation facilities

- Numerator :

Population living in a household with drinking water from: piped water into dwelling, plot or yard; public tap/stand pipe; tube well/borehole; protected dug well; protected spring; or rainwater collection AND living in a household with: flush or pour-flush to piped sewer system, septic tank or pit latrine; ventilated improved pit latrine; pit latrine with slab; or composting toilet.



d. Improved water and adequate sanitation source

Denominator :

Total population

Main data sources :

Population-based household surveys and censuses



Method of measurement

- Household-level responses, weighted by household size, are used to compute population coverage.

Method of estimation

The WHO/UNICEF Joint Monitoring Programme has produced regular estimates of coverage of improved water and improved sanitation for SDGs monitoring.



Noted

This indicator is intended to provide a more comprehensive measure of water and sanitation coverage than estimating use of improved water and sanitation separately as two indicators.

To calculate it, original survey data must be re-analyzed to determine the joint distribution of improved water and sanitation coverage across households.

To date, this exercise has not been completed; as a proxy, the geometric mean of national estimates of improved water and improved sanitation coverage is computed, which is an overestimate.



Noted

The SDG indicators for drinking water and sanitation are expanded versions of the MDG indicators, incorporating the safety/quality of drinking water and sanitation facilities.

Once country data and estimates are available for these new indicators, they could be used for UHC



Thank you

Terima Kasih



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Practicing*