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| 39 | 33 | 1 | Contact point in international agency | Agency: The Joint United Nations Programme on HIV/AIDS (UNAIDS)  Email: aidsinfo@unaids.org  Website: https://www.unaids.org/en |
| 39 | 33 | 2 | International agreed definition | Definition:  The number of new HIV infections per 1,000 uninfected population, by sex, age and key populations as defined as the number of new HIV infections per 1000 person-years among the uninfected population.  Comment and limitations:  The methods and limitations for estimating HIV incidence vary based on the data and surveillance systems available in countries.  - Countries with high HIV prevalence in the general population have relatively strong surveillance systems with household surveys contributing to the information required to estimate incidence. In epidemics concentrated in key populations, the surveillance systems for key hard-to-reach populations are often not comparable over time due to changing survey and sampling methods. The estimated size of key populations, a critical input to the Spectrum model for concentrated epidemics, can also lead to important under or over estimation of HIV epidemics in concentrated epidemics.  - In many countries trends in recent new infections rely on prevalence data from routine antenatal clinic testing. If those data are biased because women with known positive HIV status are not captured when calculating prevalence, or women found to be negative at initial ANC visit are retested later in the pregnancy, the derived incidence trends might be biased. While some limitations of the models are reflected in the uncertainty bounds the measurement biases and the uncertainty caused by these biases are not easily quantified and are thus not included.  - Although HIV prevalence and incidence among children appears to be reasonably robust in generalized epidemics, estimating the pediatric HIV epidemic in concentrated epidemics remains a challenge because no robust measures exist of fertility among key populations living with HIV.  - Currently UNAIDS only supports the HIV estimates development in countries with populations greater than 250,000. This is primarily due to support capacity. |
| 39 | 33 | 3 | Method of computation | Longitudinal data on individuals newly infected with HIV would be the most accurate source of data but are rarely available for representative populations. Special diagnostic tests in surveys or from health facilities can be used to obtain data on HIV incidence but these require very large samples to accurately estimate HIV incidence and the latter are also rarely representative. HIV incidence is thus modelled using the Spectrum software.  Rationale:  The incidence rate provides a measure of progress toward preventing onward transmission of HIV. Although other indicators are also very important to the HIV epidemic, HIV incidence reflects success in prevention programmes and, to some extent, successful treatment programmes, as those will also lead to lower HIV incidence.  Disaggregation:  General population, Age groups (0-14, 15-24, 15-49, 50+ years, All ages), sex (male, female, both) Key population data are currently not available as methods are being developed. |
| 39 | 33 | 4 | Importance of the indicator in addressing gender issues and its limitation | Gender inequalities and harmful gender norms are important drivers of the HIV epidemic and hamper women’s ability to protect themselves from HIV and/or to assert healthy sexual decision making, as well as reduce access to essential HIV and sexual and reproductive health services. |
| 39 | 33 | 5 | Sources of discrepancies between global and national figures | These variations will differ by country. |
| 39 | 33 | 6 | Process of obtaining data | Description:  Spectrum modelling is used for the data presented here. Alternative methods of measures include household or key population surveys with HIV incidence-testing, or routine surveillance among key populations.  Collection process:  Country teams use UNAIDS-supported Spectrum software to develop estimates annually. The country teams are comprised of primarily epidemiologists, demographers, monitoring and evaluation specialists and technical partners.  The UNAIDS Reference Group on Estimates, Modelling and Projections provides technical guidance on the development of the HIV component of the Spectrum software (www.epidem.org). The Spectrum software is developed by Avenir Health (www.avenirhealth.org)—which includes a module, the Estimates and Projections Package, which is developed by the East-West Center (www.eastwestcenter.org). |
| 39 | 33 | 7 | Treatment of missing values | * At country level:   Estimates are not collected from countries with populations < 250,000. In addition, no estimates are available for 10 countries with very small HIV epidemics who do not produce estimates. For some countries the estimates were not finalized at the time of publication. The country specific values are not presented for these countries.   * At regional and global levels:   The countries with populations < 250,000 and the 10 countries that do not produce estimates are not included in regional or global level estimates. For countries in which the estimates were not finalized at the time of publication, the unofficial best estimates are included in the regional and global values. |
| 39 | 33 | 8 | Data availability and assessment of countries’ capacity | Description:  170 countries in 2020. Data are available by age and sex, however there are methodological challenges in estimating incidence among key populations  Time series: 2000-2019 |
| 39 | 33 | 9 | Expected time of release | Data collection:  Data sources are compiled all year long. The spectrum models are created in the first three months of every year and finalized by May.   Data release:  Data are released every year in July. |
| 39 | 33 | 10 | Data source | Data extracted from SDG database, <https://unstats.un.org/sdgs/indicators/database/> (on 28 May 2021)  Metadata extracted from SDG database, https://unstats.un.org/sdgs/metadata/files/Metadata-03-03-01.pdf (on 16 June 2021) |