Annex 1

METHODS

Methods for deriving UNAIDS HIV estimates

Introduction

Every year, UNAIDS provides revised global, regional and country-specific modelled estimates using the best available epidemiological and programmatic data to track the HIV epidemic and response. Modelled estimates are required because it is not possible to count the exact number of people living with HIV, people who are newly infected with HIV, or people who have died from AIDS-related causes in any country. Doing so would require regularly testing every person for HIV and investigating all deaths, which is logistically unfeasible and ethically problematic. Modelled estimates—and the lower and upper bounds around these estimates—provide a rigorous representation of the HIV pandemic in terms of levels and trends.

Table A1.1. Incidence models used for national HIV estimates collated in the Spectrum software and UNAIDS 2025 estimates round

Incidence model	Countries (*n*)	HIV prevalence (adults aged 15–49 years, median, 2024)	Regions
Estimation and Projection Package (EPP), generalized epidemic	37	1.7%	Caribbean Eastern and southern Africa Western and central Africa
EPP, concentrated epidemic	40	0.29%	Asia and the Pacific Caribbean Eastern Europe and central Asia Latin America Middle East and North Africa Western and central Africa
AIDS Epidemic Model	13	0.33%	Asia and the Pacific
Case Surveillance and Vital Registration (CSAVR) or European Centre for Disease Prevention and Control (ECDC) model, fitting deaths or case reports	72	0.13%	Asia and the Pacific Caribbean Eastern Europe and central Asia Latin America Middle East and North Africa Western and central Europe and North America
Other	10	0.23%	Asia and the Pacific Eastern and southern Africa Western and central Europe and North America
All models	172	0.33%	

Country teams use UNAIDS-supported software to develop estimates annually. The country teams are comprised primarily of national monitoring and evaluation specialists, programme officers, epidemiologists, demographers and other experts from the national ministry of health, national AIDS bodies and technical partners.

The software used to produce HIV estimates is Spectrum (developed by Avenir Health[1]) and its AIDS Impact Model (AIM). Most countries use an incidence model that runs within the AIM module of Spectrum. A few countries use an external model whose incidence estimate is imported into AIM (Table A1.1). The UNAIDS Reference Group on Estimates, Modelling and Projections[2] provides technical guidance on the development of the AIM module in Spectrum.

Methods and models used by UNAIDS and countries to create estimates[3]

Countries where HIV transmission sustains an epidemic in the general population typically use the Estimation and Projection Package (EPP) module of the Spectrum modelling tool, which fits a trend to HIV prevalence data from pregnant women attending antenatal clinics and from nationally representative population-based surveys. Many countries have historically conducted HIV sentinel surveillance among women attending antenatal clinics, which requires collecting data from a selection of clinics for a few months every few years. In recent years, most countries have stopped conducting sentinel surveillance among pregnant women and are now using data from the routine HIV tests conducted when pregnant women attend antenatal clinics and are tested for HIV. These data avoid the need for separate surveillance efforts, and they provide a complete set of data from all clinics across the country instead of samples from selected sites.

The trends from pregnant women at antenatal clinics, whether measured through surveillance or routine data, can be used to inform estimates of national prevalence trends, whereas data from population-based surveys—which are conducted less frequently but include men and ensure coverage of all people, regardless of whether they use health-care services—are representative of national HIV prevalence levels and, if repeated, also inform trends. Data from these surveys also contribute to estimating age- and sex-specific HIV prevalence and incidence levels and trends. A few countries in sub-Saharan Africa that do not have population-based surveys use adjusted HIV prevalence levels from comparisons of antenatal clinic surveillance and population-based survey data from other countries in the region. The resulting HIV prevalence trends, in addition to numbers of people on antiretroviral therapy, are then used to estimate the national HIV incidence trends, while accounting for the effects of antiretroviral therapy on survival.

1 www.avenirhealth.org
2 www.epidem.org
3 The methods are described in detail elsewhere *(1, 2)*.

Countries where HIV transmission occurs largely among people from key populations at higher risk of HIV and the epidemic is low-level or concentrated use the AIDS Epidemic Model—a variant of the EPP model that fits to high-quality surveillance prevalence data and population size estimates for each of several key populations and the lower-risk general population.

To estimate HIV prevalence in the remaining lower-risk general population, these countries generally use surveillance data from pregnant women and account for people who ceased behaviours that had put them at increased risk for HIV acquisition at an earlier time—for example, women who ceased selling sex will be included among the remaining population of people living with HIV. The resulting HIV prevalence curve and the number of people on antiretroviral therapy are then used to derive a national HIV incidence trend.

Most countries in western and central Europe and North America use AIDS-related mortality data from vital registration and HIV case reports and the delay from infection to diagnosis to estimate national HIV prevalence and incidence trends. These countries use the Case Surveillance and Vital Registration (CSAVR) model within Spectrum, or the European Centre for Disease Prevention and Control (ECDC) model or, in a few instances, a country-specific model. The CSAVR model is also used by some countries in the Caribbean, Latin America and the Middle East and North Africa that have robust disease reporting systems but limited HIV surveillance or survey data.

All countries that use UNAIDS-supported methods for their estimates share common assumptions about the effectiveness of HIV treatment and disease progression by sex and age. These assumptions are based on systematic literature reviews and meta-analyses of study data by scientific experts and recommended by the UNAIDS Reference Group on Estimates, Modelling and Projections.

Demographic data, including estimates of fertility, mortality and migration, are derived from the United Nations Population Division World Population Prospects 2024 or recent census data and reflect the de facto population (current residents, regardless of nationality) of each country.

Country teams review assumptions and update the data in their Spectrum files every year with the latest available data on numbers of people (adults and children) receiving antiretroviral therapy, pregnant women receiving antiretroviral therapy, and HIV surveillance data, among other data. The model is then run, and results are reviewed by country teams before sharing with UNAIDS.

Final country-submitted files containing the modelled outputs are reviewed at UNAIDS to ensure results are comparable across regions and countries and over time. Selected inputs into the model—including numbers of people on antiretroviral therapy and numbers of women accessing services to prevent vertical transmission of HIV—are further reviewed and validated in partnership with the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), the United Nations Children's Fund (UNICEF), the United States President's Emergency Plan for AIDS Relief (PEPFAR) and its agencies, the World Health Organization (WHO), and other partners.

In the 2025 round of estimates, subnational estimates were also created and used by 36 countries (35 in sub-Saharan Africa, one in the Caribbean). Methods for creating these subnational estimates are described later in this annex.

Uncertainty bounds around UNAIDS estimates

The estimation software calculates uncertainty bounds around each estimate. These bounds define the range within which the true value lies in 95% of cases (if it could be measured). Narrow bounds indicate that an estimate is precise, and wide bounds indicate greater uncertainty regarding the estimate, given the data and assumptions.

In countries using HIV surveillance data, the quantity and source of the available data partly determine the precision of the estimates. Countries with more HIV surveillance data typically have smaller ranges than countries with less surveillance data or smaller sample sizes. Countries in which one or more national population-based surveys have been conducted generally have smaller ranges around estimates than countries where such surveys have not been conducted. In countries using HIV case reporting and AIDS-related mortality data, the number of years of data and the magnitude of the cases reported or AIDS-related deaths observed will contribute to determining the precision of the estimate.

The assumptions required to arrive at the estimate also contribute to the extent of the ranges around the estimates. In brief, the more assumptions, the wider the uncertainty range, since each assumption introduces additional uncertainties. For example, the ranges around the estimates of adult HIV prevalence are smaller than those around the estimates of HIV incidence among children, which require additional data on prevalence among pregnant women and the probability of vertical transmission of HIV, which have their own additional uncertainty.

UNAIDS is confident that the actual numbers of people living with HIV, people who are newly infected with HIV and people who have died from AIDS-related causes lie within the reported ranges. With more years of good-quality surveillance data over successive estimation rounds, the uncertainty in a country's estimate will typically decrease.

Improvements included in the 2025 UNAIDS estimates model

Country teams create updated HIV estimates using Spectrum annually. The HIV estimates may differ from one year to the next, for two reasons. First, new surveillance and programme data are entered into the model, which can change HIV prevalence and incidence trends over time or antiretroviral therapy coverage rates, including for past years. Second, improvements are incorporated into the model based on new science and statistical methods, which lead to the creation of more accurate trends in HIV incidence.

Occasionally, countries change the incidence modelling option within Spectrum based on improvements in the data available in the country.

Due to these improvements to the model and the addition of new data to create the estimates, the results from previous estimation rounds cannot be compared with the results from the current round. Full historical estimates are created at each round, however, and these enable evaluation of trends over time.

Between the 2024 and 2025 estimates, the following key changes were made to the models, following guidance from the UNAIDS Reference Group on Estimates, Modelling and Projections.

Mortality among people living with HIV

In Asia and the Pacific, the Caribbean, eastern Europe and central Asia, and western and central Europe and North America, the excess mortality among people living with HIV now distinguishes AIDS-attributable from non-AIDS-attributable excess deaths. The refinement was based on a systematic review of mortality studies across high-income countries. Spectrum now estimates slightly fewer AIDS-attributable deaths in these regions, especially for recent years in higher-income settings with high antiretroviral therapy coverage and low background mortality in the overall population *(3)*.

The time trend in AIDS mortality among adults who have been on antiretroviral therapy for longer than 12 months has been updated to remain constant after 2018, instead of an earlier assumed decline ongoing until 2021 *(4)*.

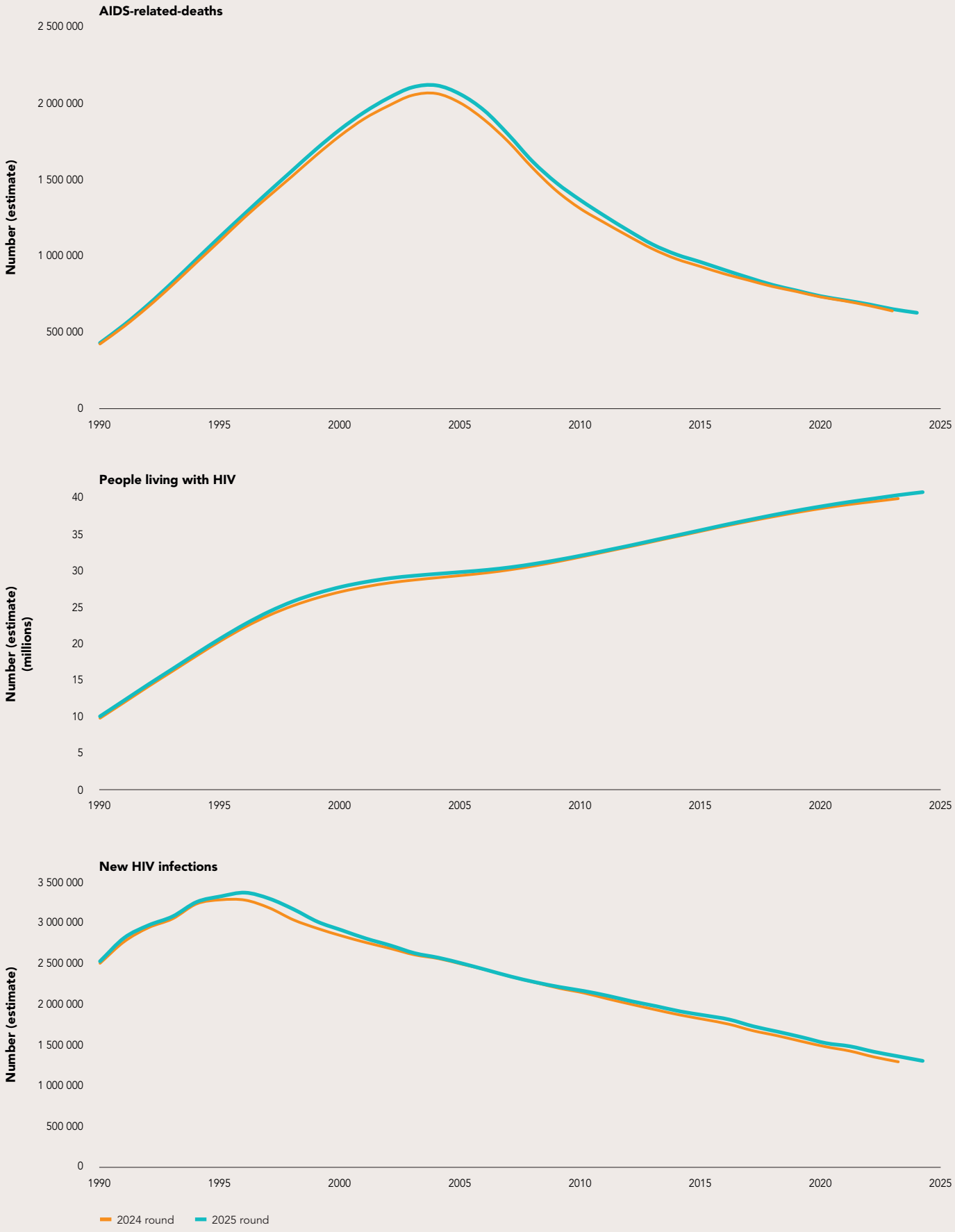
Mortality rates among people on antiretroviral therapy have been updated to reflect the effects of improved antiretroviral regimens, based on multicentre cohort studies in Asia and the Pacific and the Caribbean. This revision was also extrapolated to regional mortality patterns for eastern Europe and central Asia, Latin America, and the Middle East and North Africa.

Vertical transmission of HIV

Risk probabilities of vertical transmission were updated based on a recent systematic literature review. These resulted in more estimated child infections during breastfeeding and fewer perinatal infections for some countries, whereas the effect of this refinement is minimal in recent years when prevention of vertical transmission coverage and retention is high *(5)*.

Figure A1.1 presents the 2025 estimates compared with the 2024 estimates. Shifts in the curves are the combined effect of the updated country data and the changes to model structure and assumptions described above. At the global level, trends in numbers of new HIV infections, AIDS-related deaths and people living with HIV are similar to those estimated in the preceding round, although there are shifts within some regions or countries.

Figure A1.1. Comparison of 2025 and 2024 UNAIDS estimates: new HIV infections, AIDS-related deaths and people living with HIV, global, 1990–2024



Source: UNAIDS epidemiological estimates, 2024 and 2025 rounds.

Publication of country-specific estimates

UNAIDS aims to publish estimates for all countries with populations of 250 000 or more people (according to the United Nations Population Division World Population Prospects 2024, as of 2023). For countries with populations of 250 000 or more people where estimates were not submitted, UNAIDS developed estimates using the Spectrum software, based on published or otherwise available information. These estimates contribute to regional and global totals but are not published as country estimates on AIDSinfo.

For the year 2024, estimates of numbers of people living with HIV were produced for 172 countries (98.6% of the global population) and estimates were published for 140 countries (of which 139 also published estimated numbers of adults living with HIV).

If there are not enough historical data to determine incidence trends, UNAIDS does not publish historical incidence:

- EPP-based incidence trends are published only if there are four or more prevalence data points, including at least one in the past four years for the most important subpopulation.
- For low-level epidemics that rely on case and death surveillance data, incidence trends are published if the input data include at least eight data points on both AIDS-related deaths and new HIV diagnoses within the period 1990–2024.

In the 2025 round, numbers of new infections for the year 2024 were published for 131 countries. Four additional countries published incidence up to 2023, and another three countries up to 2022.

Rankings of the change in new HIV infections are limited to countries with at least 200 new infections in 2024, in view of increased uncertainty in lower-level epidemics.

Beyond these incidence restrictions, UNAIDS does not publish country estimates for any indicator when available data are insufficient to justify them. In the 2025 round, estimates were not published for 26 countries, either because of insufficient data or because of no country submission.

In countries with low-level epidemics, the number of pregnant women living with HIV is often difficult to estimate. Many women living with HIV in these countries are sex workers or use drugs—or they are the sexual partners of people who use drugs, gay men and other men who have sex with men, or sex workers—with possibly different fertility levels than those in the general population. For concentrated epidemic countries, UNAIDS therefore presents country estimates of vertical HIV transmission and children living with HIV only if it had been informed by nationally representative data specific to pregnant women in the general population.

Estimates related to children are not published for countries where the estimated number of pregnant women living with HIV is fewer than 50.

More information on the UNAIDS estimates and the individual Spectrum files for most countries can be found at https://hivtools.unaids.org. Data from the estimates can be found at https://aidsinfo.unaids.org.

Methods for deriving the 95–95–95 testing and treatment targets

Introduction

Since 2015, UNAIDS has reported estimates of global, regional and country-specific progress against the testing and treatment targets. In the United Nations Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030, testing and treatment targets were set to reach 95–95–95 by 2025. These targets refer to three indicators:

- Indicator 1 (first 95): the percentage of people living with HIV who know their HIV status.
- Indicator 2 (second 95): the percentage of people living with HIV who know their HIV-positive status and are accessing treatment.
- Indicator 3 (third 95): the percentage of people living with HIV on treatment who have a suppressed viral load.

Indicators 2 and 3 can also be expressed as a percentage of all people living with HIV. When numbers or coverage of the treatment target are expressed relative to total numbers of people living with HIV, this is called the HIV testing and treatment cascade.

Data sources for constructing country measures

Country-level progress against the 95–95–95 targets was constructed using reported data from Spectrum and Global AIDS Monitoring. Estimates are published for all people and separately for children (aged 0–14 years), men (aged 15+ years) and women (aged 15+ years). Corresponding upper and lower bounds are based on uncertainty ranges around estimated numbers of people living with HIV for each country, population group and year. These target-related indicators and their data sources are described in the UNAIDS Global AIDS Monitoring 2025 guidelines *(6)*.

Table A1.2 summarizes the number of countries that have reported each indicator in each region over the past eight years.

The final set of country measures of progress against the 95–95–95 targets for 2015 through 2024 is available at http://aidsinfo.unaids.org. Not all countries were able to report against all three targets. In the 2025 estimates round, complete treatment cascades for 2024 were published for 85 countries, an increase from 79 countries in both the 2024 and 2023 estimates rounds.

Table A1.2. Data available for constructing UNAIDS measures of progress against the 95–95–95 targets, 2015–2024

Number	Year	Asia and the Pacific	Caribbean	Eastern and southern Africa	Eastern Europe and central Asia	Latin America	Middle East and North Africa	Western and central Africa	Western and central Europe and North America	Global
Countries		39	16	21	16	17	19	25	39	193
Countries in UNAIDS global estimates		30	10	20	16	17	18	25	36	172
Countries with published estimate of adults living with HIV in 2024		23	9	19	10	14	19	23	22	139
Countries with publicly available data on adults living with HIV who know their HIV status	2015	15	8	18	9	10	17	23	13	113
	2016	17	8	18	9	12	17	23	18	122
	2017	18	8	18	10	13	17	23	21	128
	2018	19	8	18	10	13	17	23	22	130
	2019	20	8	18	10	13	17	23	19	128
	2020	20	8	18	10	13	18	23	21	131
	2021	21	8	18	10	13	18	23	22	133
	2022	21	8	18	10	13	18	23	24	135
	2023	21	8	18	10	13	18	23	20	131
	2024	20	8	18	10	11	17	23	11	118
Countries with publicly available data on adults living with HIV who are on treatment	2015	22	9	19	10	14	19	23	25	141
	2016	22	9	19	10	14	19	23	26	142
	2017	22	9	19	10	14	19	23	26	142
	2018	22	9	19	10	14	19	23	25	141
	2019	22	9	19	10	14	19	23	24	140
	2020	22	9	19	10	14	19	23	24	140
	2021	22	9	19	10	14	19	23	24	140
	2022	22	9	19	10	13	19	23	24	139
	2023	22	9	19	10	13	19	23	19	134
	2024	20	9	19	10	13	18	23	11	123
Countries with publicly available data on adults living with HIV who were tested for viral load and found to have a suppressed viral load	2015	4	2	1	4	4	7	-	9	31
	2016	5	4	4	5	7	8	1	14	48
	2017	7	8	5	9	8	9	1	17	64
	2018	8	9	10	9	10	10	4	19	79
	2019	12	8	15	10	9	9	6	17	86
	2020	10	8	15	10	9	9	8	18	87
	2021	12	8	15	9	10	8	12	19	93
	2022	15	8	16	9	11	11	11	19	100
	2023	19	9	15	9	11	11	12	16	102
	2024	14	9	16	9	10	11	11	8	88

Source: UNAIDS epidemiological estimates 2015–2024.

Estimates of people living with HIV

All measures of progress in this report are based on national estimates of people living with HIV that were derived using the Spectrum model. In the 2025 round, people living with HIV were estimated for 172 of 193 countries and territories. These 172 countries represent 99% of the total global population. Estimates of adults living with HIV in 2024 were published for 139 of these 172 countries.

Knowledge of HIV status among people living with HIV

Numbers of people living with HIV who know their status were estimated over time using HIV case surveillance, programme data and nationally representative population-based survey data. Where data were available separately for children (aged 0–14 years) and adults (aged 15+ years, by sex), age- and sex-specific measures were calculated and then aggregated to obtain national measures.

Countries outside sub-Saharan Africa without national household surveys estimated the number of people living with HIV who knew their HIV status from HIV case notification data and programme registers. Some concentrated epidemic countries used notification data directly, if the HIV surveillance system had been functioning since 2015 or longer and they were able to subtract from cumulative diagnosed people those who had died, had emigrated or were otherwise lost to follow-up. If this calculation estimated the number of people with HIV who knew their HIV status as fewer than those on antiretroviral therapy, the reported value was excluded, because it was potentially incorrect due to one or more common biases. For example, a country may underestimate the number of people living with HIV who are aware of their HIV status if not all people diagnosed are reported to the surveillance system in a timely manner. Conversely, the measure is overestimated if people are registered or reported more than once and such duplicates are not detected, or if people die or emigrate but are not removed from the system. Such overestimation of the number of people living with HIV who are aware of their HIV status was common before 2015.

Alternatively, countries with concentrated epidemics could estimate knowledge of HIV status as part of their overall epidemic estimation through the CSAVR model, which produces estimates of HIV incidence, knowledge of status and antiretroviral therapy coverage from case and death notifications.

Most countries in eastern and southern Africa and western and central Africa estimated knowledge of status among adults using the UNAIDS-supported Shiny90 tool, which is part of the Spectrum software. This mathematical model fits data from national population-based surveys on proportions of respondents living with and without HIV who had ever been tested for HIV, in addition to HIV testing services programme data on the annual number of HIV tests conducted and the number of positive tests, and Spectrum model results *(7)*.

Knowledge of HIV status estimates from Shiny90 have strengths over those drawn directly from population surveys or programme records. By constructing the population's HIV incidence and testing history over time, the resulting trend in HIV status awareness is adjusted for known reporting biases in awareness of HIV status in household surveys and accounts for retesting and repeat diagnoses among routine programme data on annual HIV diagnoses *(8, 9)*. The Shiny90 estimates distinguish people living with HIV who had an HIV test after seroconversion and so are aware of their HIV status and people who seroconverted after their last HIV-negative test. The distinction is informed by the national incidence trend calculated in Spectrum. Shiny90 estimates knowledge of status by sex and age, assuming adult male/female testing rate ratios have remained relatively constant since 2010. Results include additional indicators such as the percentage of people diagnosed within a year and the numbers of people (by HIV status) who were retested.

Caution is warranted with knowledge of status estimates if the last population-based survey was conducted more than five years ago, or if there are concerns about the accuracy of self-reported testing history in the survey.

Both Shiny90 and the CSAVR estimate of knowledge of HIV status cover only adults aged 15 years and older. UNAIDS recommends that countries conservatively estimate knowledge of status among children as the proportion of children living with HIV on treatment, unless reliable numbers from case surveillance (cumulative diagnoses and deaths, emigrations and losses to follow-up) are available.

People accessing antiretroviral therapy

Global and regional measures of antiretroviral therapy coverage are calculated from data entered by country teams into the Spectrum software or the Global AIDS Monitoring reporting tool. In the 2025 round, 125 countries reported treatment numbers for 2024 (covering 86% of estimated people on treatment). Between 2015 and 2024, 144 countries had at least one published estimate of the number of people on treatment. For a few countries that did not report numbers of people on treatment for all years—primarily high-income countries in Asia and the Pacific and western and central Europe and North America—people on treatment were estimated either in consultation with the public health agency responsible for monitoring the national treatment programme or from published and online sources.

UNAIDS, in partnership with UNICEF, WHO, PEPFAR and its agencies, the Global Fund, and other partners that support treatment service delivery in countries, annually reviews and validates treatment numbers that countries have reported to UNAIDS. The number of people on treatment may be overestimated if people who transfer from one facility to another are reported by both facilities, or if people who have died, disengaged from care or emigrated are not identified and removed from treatment registries. Conversely, treatment numbers are sometimes underestimated if not all clinics report the numbers of people on treatment completely or if they are not reported in a timely manner.

UNAIDS and other international partners support countries to verify the accuracy of numbers of people currently reported to be on treatment.

People with a suppressed viral load

Progress towards the viral load suppression target among people on treatment and as a percentage of all people living with HIV was estimated from data reported in Spectrum and through the Global AIDS Monitoring reporting tool. For reporting, the threshold for suppression is a viral load below 1000 copies/mL. Some countries set lower thresholds to identify a person as having an undetectable viral load. Where a country uses a lower threshold, Spectrum applies an adjustment to estimate the percentage of people with a suppressed viral load of 1000 copies/mL or lower. The Global AIDS Monitoring guidance describes this adjustment in detail. The guidance also specifies that only routine viral load tests should be reported and only a person's last test result from the reporting year should be submitted—so reported numbers represent people tested and the percentage of those people with a confirmed suppressed viral load rather than tests performed *(6)*.

Countries were asked to report viral load suppression outcomes for all years, regardless of testing coverage. However, UNAIDS publishes viral load testing results only for countries and for each year where at least 50% of people treated are tested for viral load. For countries and years with nationally representative but not universal viral suppression data, the reported proportion of people with a suppressed viral load among people tested for viral load (the third "95") was multiplied by the total number of people on treatment to estimate overall viral suppression numbers.

Table A1.2 shows numbers of countries with a reliable estimate of viral load suppression. This increased from 64 countries in 2017 to 102 in 2023 and 88 by 2024. Data completeness for 2024 is expected to still improve in the next year, with some countries experiencing substantial delay in reporting year-round results.

Some challenges exist in using country-reported data to monitor the viral load suppression target. First, routine viral load testing may not be offered at all treatment facilities. The facilities that do test may not be representative of facilities without viral load testing. Despite this uncertainty, we assume that the percentage of people with a suppressed viral load among people accessing viral load testing is representative of all people on treatment.

Second, UNAIDS requests countries to only report results from routine viral load testing. If countries report test results primarily performed because of suspected treatment failure, then the number of people with a suppressed viral load in these countries will be underestimated. UNAIDS validates country submissions for quality, but it is not always possible to identify cases where both routine and other types of testing have occurred.

Third, UNAIDS guidance recommends reporting viral load test results only for people on antiretroviral therapy. People who are not on treatment and who naturally have a suppressed viral load will not be included in this measure.

Methods for constructing regional and global results towards the 95–95–95 targets

All programme data submitted to UNAIDS were validated by UNAIDS and its partners before publication. Country-submitted data that did not meet quality standards, either at the indicator level or across the treatment cascade, were not included in the calculation of regional or global estimates. These included, for example, viral load suppression results for years when less than 50% of people on treatment were tested for viral load.

To estimate regional and global progress against the 95–95–95 targets for adults, UNAIDS imputed missing country data for the first and third "95" targets using a Bayesian hierarchical model. This uses regional trends—or global trends, when regional trends are sparse—sex differences and patterns over time from countries with good-quality data and coherent cascade estimates. Upper and lower bounds around global and regional estimates of the HIV testing and treatment cascade reflect uncertainty in the number of people living with HIV and uncertainty from missing country data in numbers of people who know their HIV status or who have a suppressed viral load. These ranges do not capture uncertainty in country-reported numbers of people who know their HIV status, who were tested for viral load or who have a suppressed viral load. Details on the model's methods and assumptions are available elsewhere *(10)*.

Table A1.3 shows the proportions of people living with HIV for whom knowledge of HIV status and suppressed viral load were imputed, as opposed to being estimated by or for the country, from 2015 to 2024. Generally, the proportion imputed decreased over time, as more countries reported good-quality data. Some regions (e.g. eastern Europe and central Asia, western and central Europe and North America) have an increased proportion of countries with imputed knowledge of status or viral load suppression in 2024 compared with earlier years, because the latest data were still being reviewed. Regional estimates of knowledge of HIV status and suppressed viral load are published for years with at least 50% of the estimate being from the country Spectrum model based on national programme data (i.e. less than 50% imputed by the Bayesian regional model).

Some countries are still not able to report on the testing and treatment cascade or elements of the cascade. Whereas the percentage of people tested for viral load has increased steadily in many countries, knowledge of status remains difficult to estimate, especially in countries without population-based surveys that measure HIV serostatus alongside respondents' testing history. Although most countries have estimated knowledge of status for some or more recent years, this first "95" indicator remains more challenging to estimate than the second and third "95" indicators (antiretroviral therapy and suppressed viral load).

Table A1.3. Proportion of estimated people living with HIV for whom knowledge of status was imputed, and proportion of estimated people on treatment for whom viral load suppression was imputed, 2015–2024

Indicator	Year	Asia and the Pacific	Caribbean	Eastern and southern Africa	Eastern Europe and central Asia	Latin America	Middle East and North Africa	Western and central Africa	Western and central Europe and North America	Global
Proportion of estimated people living with HIV for whom knowledge of HIV status was imputed	2015	73	0	0	2	9	8	2	35	13
	2016	70	0	0	2	6	8	0	11	11
	2017	23	0	0	1	1	7	2	16	4
	2018	12	0	0	1	2	7	0	19	3
	2019	11	0	0	1	1	7	0	22	3
	2020	11	0	0	1	1	5	2	74	6
	2021	6	0	0	2	1	5	2	7	2
	2022	6	0	0	2	2	5	1	10	2
	2023	6	0	4	4	1	5	0	70	5
	2024	1	0	4	4	2	5	0	95	5
Proportion of estimated people on treatment for whom viral load suppression status was imputed	2015	77	89	58	72	22	42	100	26	60
	2016	97	82	47	73	19	40	100	12	55
	2017	96	1	41	71	14	40	99	16	51
	2018	52	0	33	69	10	41	84	22	39
	2019	52	2	10	4	12	42	42	9	19
	2020	18	11	2	5	10	64	29	62	12
	2021	17	3	8	4	11	62	12	10	10
	2022	15	3	1	1	11	46	24	20	8
	2023	6	0	1	1	11	45	24	79	10
	2024	5	0	2	71	20	44	25	97	14

Source: UNAIDS epidemiological estimates 2016–2024.

Pre-exposure prophylaxis coverage for HIV-negative people

Global and regional pre-exposure prophylaxis (PrEP) targets for gay men and other men who have sex with men, people who inject drugs and transgender people were set by the UNAIDS 2025 Target Setting Group, with support from Avenir Health. Targets were established using available data on the size of key populations and their relative vulnerability for 118 countries. Additional country targets were included to reach a maximum of 166 countries for gay men and other men who have sex with men, 123 countries for people who inject drugs and 132 countries for transgender people *(11)*.

Global and regional PrEP targets for sex workers were calculated for 193 countries based on the population size estimates reported through Global AIDS Monitoring in recent years, from which sex workers living with HIV were subtracted. Each size estimate was categorized regarding recency, geographical location and methods adequacy using the criteria described previously *(12)*. Nationally adequate estimates were used to determine median proportions among adults (aged 15–49 years) for each UNAIDS region. The regional median proportions were used to calculate country-specific values that were summed to regional total size estimates. The number of people living with HIV by country was calculated by multiplying the most recently reported HIV prevalence (2019–2023) through Global AIDS Monitoring to each country's population size estimate. For countries that did not report HIV prevalence among sex workers in recent years, a regional median prevalence was applied. The PrEP target for sex workers was calculated by subtracting regional numbers of sex workers living with HIV from the total estimated number of sex workers in the region.

For all key populations, current PrEP coverage was estimated using nationally reported PrEP use for the specific key population (number of people who received any PrEP product at least once during the reporting period) divided by the estimated target size of the population that would benefit from PrEP use.

Population size estimates

The estimated size of key populations refers to reported values through Global AIDS Monitoring since 2020 only. A comprehensive review of the data was conducted during these reporting rounds, and therefore estimates should not be compared with data presented in previous UNAIDS reports. Submitted estimates are reviewed as they are reported and categorized for appropriate use. The categories are as follows:

- National population size estimate refers to estimates that have been empirically derived using one of the following methods: multiplier, capture–recapture, mapping/enumeration, network scale-up method, population-based survey, or respondent-driven sampling successive sampling. Estimates must be national or from a combination of multiple sites with a clear approach to extrapolating to a national estimate.
- Local population size estimate refers to estimates that have been empirically derived using one of the previously mentioned methods, but only for subnational sites that are insufficient for national extrapolation.
- Insufficient data refers either to estimates derived from expert opinions, Delphi, wisdom of crowds, programmatic results or registry, regional benchmarks or unknown methods. Estimates may or may not be national.

Table A1.4. Reported estimated size of key populations, 2020–2024

Country	National adult population (aged 15–49 years) for 2024 or relevant year	Sex workers	Sex workers as percentage of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as percentage of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as percentage of adult population (aged 15–49 years)	Transgender people	Transgender people as percentage of adult population (aged 15–49 years)	People in prisons and other closed settings	People in prisons and other closed settings as percentage of adult population (aged 15–49 years)
Albania	1 319 000									1700	0.13%
Algeria	23 527 000	11 600		8000		5000					
Antigua and Barbuda	47 000									320	0.67%
Argentina	23 454 000									117 800	0.51%
Armenia	1 445 000	8100	0.59%	22 700	1.66%	14 100	1.03%	1000	0.07%		
Austria	3 895 000			100 000	2.52%					9100	0.23%
Azerbaijan	5 423 000	26 400		21 900		56 500				26 200	
Bahamas	208 000									1500	0.70%
Bangladesh	94 551 000										
Belarus	4 094 000	18 600	0.44%	32 000	0.75%	80 000	1.88%	3700	0.09%		
Belgium	5 091 000									11 000	0.22%
Belize	239 000			3800	1.59%			100	0.04%		
Benin	7 103 000					800	0.01%	2200	0.03%		
Bolivia	6 716 000			35 500							
Botswana	1 503 000										
Brazil	108 760 000									837 400	0.77%
Burkina Faso	11 754 000	50 600	0.46%					1100		5000	0.05%
Cambodia	8 975 000	52 300	0.60%	94 000	1.06%	1300		15 700	0.18%		
Cameroon	14 613 000	32 900		21 600		2600		2500			
Canada	18 297 000			432 300	2.48%	100 300	0.57%	100 800	0.57%	14 100	0.08%
Central African Republic	3 040 000									1500	
Chad	9 513 000	22 400		6200		1700					
Chile	10 068 000			122 600	1.23%			19 600	0.20%	58 800	0.58%
Colombia	27 300 000									103 700	0.38%
Cook Islands	6000										
Costa Rica	2 674 000									16 300	0.61%
Côte d'Ivoire	15 732 000	27 900						660		43 500	0.28%
Cuba	4 716 000			29 100				1400			
Czechia	4 699 000			156 000	3.23%	44 900	0.96%			19 500	0.40%
Democratic Republic of the Congo	57 119 000	525 700	0.99%			168 200	0.32%	56 500	0.11%	36 700	0.07%
Denmark	2 607 000			60 000	2.31%						
Djibouti	643 000										
Dominican Republic	5 915 000										
Ecuador	9 833 000			89 400	0.94%						
Egypt	60 717 000	218 200	0.36%	491 500	0.81%	272 900	0.45%				
El Salvador	3 458 000	23 700	0.69%	61 300	1.78%						
Estonia	591 000									1800	0.31%
Eswatini	670 000	7100		4000	0.64%						
Ethiopia	56 085 000										
Finland	2 415 000									3100	0.13%
France	27 915 000									75 700	0.27%
Gambia	1 372 000	5500	0.41%								
Georgia	1 726 000	6700	0.39%	23 300	1.35%	49 700	2.89%	940		9000	0.52%
Germany	34 056 000									44 200	0.13%
Ghana	16 921 000										
Greece	4 051 000									10 500	0.25%
Guatemala	10 231 000			66 500				5900	0.06%	23 100	0.23%
Guinea	7 292 000	51 600	0.71%			600		740			
Haiti	6 420 000	87 600		48 900				3200		11 900	0.19%
Honduras	6 056 000										
India	798 209 000									2 256 000	0.29%
Indonesia	148 939 000	271 800	0.18%	847 300	0.57%	27 100	0.02%	43 100	0.03%	288 000	0.19%

LEGEND National population size estimate | Local population size estimate | Insufficient data | No data

Country	National adult population (aged 15–49 years) for 2024 or relevant year	Sex workers	Sex workers as percentage of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as percentage of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as percentage of adult population (aged 15–49 years)	Transgender people	Transgender people as percentage of adult population (aged 15–49 years)	People in prisons and other closed settings	People in prisons and other closed settings as percentage of adult population (aged 15–49 years)
Iran (Islamic Republic of)	50 332 000									250 400	0.50%
Ireland	2 492 000									4100	0.17%
Italy	23 468 000									60 900	0.26%
Jamaica	1 615 000			27 000	1.67%					3600	0.22%
Kazakhstan	9 796 000			71 000	0.73%	74 000	0.76%			36 400	0.38%
Kenya	29 412 000			164 700	0.56%	30 600	0.10%	7500	0.03%		
Kiribati	68 000	620	0.94%	360	0.55%			640	0.97%	40	0.06%
Kyrgyzstan	3 592 000	13 000	0.37%								
Lao People's Democratic Republic	4 268 000										
Liechtenstein	17 000			390	2.34%						
Lithuania	1 256 000									4800	0.38%
Luxembourg	328 000									670	
Malawi	11 139 000	39 000	0.38%	49 800	0.48%					17 300	0.15%
Malaysia	20 386 000					60 000	0.30%				
Mali	10 776 000	54 900	0.53%								
Malta	269 000									700	0.26%
Marshall Islands	18 000	240	1.19%	140	0.69%			190	0.94%	50	0.27%
Mauritania	2 356 000	8500		7600							
Mauritius	649 000									2700	0.41%
Monaco	12 000									60	0.47%
Mongolia	1 743 000	7300	0.43%					820			
Montenegro	286 000										
Morocco	19 865 000									105 100	0.53%
Myanmar	29 196 000	76 600	0.26%			117 000	0.40%				
Namibia	1 562 000	8500	0.57%							4700	0.30%
Nepal	15 987 000	115 900	0.72%			44 400	0.28%	32 900	0.21%	27 800	0.17%
New Zealand	2 417 000	3400				2800		10 400	0.44%	10 100	0.42%
Niger	12 307 000	66 100	0.54%								
Nigeria	114 887 000									78 600	0.07%
Oman	3 481 000									4200	
Palau	9000	60	0.68%	40	0.45%			60	0.68%	80	0.96%
Panama	2 307 000	8700		19 800				2100			
Papua New Guinea	5 646 000			102 500	1.82%			5100			
Paraguay	3 694 000			27 800				910			
Peru	18 224 000									94 900	0.53%
Philippines	63 916 000	127 900	0.20%	1 384 400	2.17%	9800		317 000	0.50%	125 000	0.20%
Portugal	4 246 000									21 900	0.51%
Republic of Moldova	1 206 000	11 600	0.96%	13 000	1.08%	21 800	1.81%			5700	0.47%
Rwanda	7 470 000	98 600	1.36%								
Saint Kitts and Nevis	24 000									190	0.77%
Saint Lucia	98 000									590	0.61%
Senegal	9 494 000			52 500	0.63%						
Serbia	2 855 000	15 000	0.52%			15 000	0.52%			10 600	0.36%
Seychelles	72 000									450	0.63%
Sierra Leone	4 562 000	11 500		3200		7600		1100			
Singapore	3 338 000									8300	0.25%
Slovakia	2 511 000									8400	0.33%
South Africa	34 997 000	140 400	0.40%	381 900	1.09%			102 300	0.29%	163 200	0.47%
South Sudan	7 639 000										
Spain	20 530 000									56 700	0.27%
Sweden	4 664 000									2700	0.06%

LEGEND National population size estimate | Local population size estimate | Insufficient data | No data

Country	National adult population (aged 15–49 years) for 2024 or relevant year	Sex workers	Sex workers as percentage of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as percentage of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as percentage of adult population (aged 15–49 years)	Transgender people	Transgender people as percentage of adult population (aged 15–49 years)	People in prisons and other closed settings	People in prisons and other closed settings as percentage of adult population (aged 15–49 years)
Tajikistan	5 359 000	18 400	0.36%			18 200					
Thailand	34 537 000	109 200	0.32%	615 700	1.78%	58 200	0.17%			298 800	0.87%
Timor-Leste	741 000	5600	0.77%	6800	0.94%			3100	0.43%		
Togo	4 284 000	29 400	0.74%							5800	0.14%
Tonga	48 000			430	0.88%			290	0.60%	270	0.56%
Trinidad and Tobago	703 000									3100	0.44%
Türkiye	45 694 000									348 300	0.76%
Tuvalu	4000	10	0.21%	10	0.21%			10	0.21%		
Uganda	22 940 000									157 400	0.71%
Ukraine	16 612 000							12 800	0.07%	39 700	0.24%
United Kingdom of Great Britain	30 570 000			650 300							
United Republic of Tanzania	33 627 000	155 800	0.48%	3300		32 000	0.10%				
Uruguay	1 641 000			28 600	1.75%					16 600	1.01%
Vanuatu	160 000	600	0.39%	440	0.29%			1000	0.66%		
Viet Nam	51 907 000			428 500	0.83%						
Zambia	10 700 000			88 400	0.85%	30 000	0.29%			27 400	0.26%
Zimbabwe	9 087 000	70 400	0.79%							23 500	0.26%

LEGEND National population size estimate | Local population size estimate | Insufficient data | No data

Note: estimates shown are government-provided estimates reported for 2020–2024. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications and institutional documents. The regions covered by the local population size estimates are as follows:

Sex workers	
Algeria	Alger, Annaba, Oran, Tamanrasset, Tiaret
Azerbaijan	3 cities
Cameroon	10 regional capitals and 3 satellite towns (Dschang, Kribi, Limbé)
Chad	17 cities
Côte d'Ivoire	Abidjan, Bouake, Divo, Korhogo, Méagui, Odienné, San Pedro, Yamoussoukro
Eswatini	Manzini, Mbabane, Nhlangano, Pigg's Peak, Siteki
Haiti	Cap-Haitien, Carrefour, Cayes, Gonaives, Hinche, Jacmel, Ouanaminthe, Pétiion-Ville, Saint-Marc
Mauritania	6 cities
New Zealand	Auckland, Christchurch, Tauranga, Wellington
Panama	Bocas del Toro, Chiriquí, Coclé, Comarca Ngäbe-Buglé, Guna Yala, Los Santos, Panamá Centro
Sierra Leone	Bo (South), Bombali (North), Kenema (East), Port Loko (North West), Western Rural, Western Urban

Gay men and other men who have sex with men	
Algeria	Alger, Annaba, Oran, Tamanrasset, Tiaret
Azerbaijan	3 cities
Bolivia	Cochabamba, El Alto, La Paz, Santa Cruz
Cameroon	10 regional capitals and 3 satellite towns (Dschang, Kribi, Limbé)
Chad	9 cities
Cuba	La Habana

Gay men and other men who have sex with men	
Guatemala	Guatemala
Haiti	Cap-Haitien, Carrefour, Cayes, Gonaives, Hinche, Jacmel, Ouanaminthe, Pétiion-Ville, Saint-Marc
Mauritania	6 cities
Panama	Bocas del Toro, Chiriquí, Coclé, Colón, Darién, Herrera, Los Santos, Ngäbe-Buglé, Panamá, Veraguas Comarca Guna Yala
Paraguay	Alto Paraná, Asunción, Caaguazú, Central
Sierra Leone	Bo (South), Bombali (North), Kenema (East), Kono (East), Port Loko (Northwest), Western Rural, Western Urban
United Kingdom of Great Britain and Northern Ireland	England
United Republic of Tanzania	Zanzibar
People who inject drugs	
Algeria	Alger, Annaba, Oran, Tiaret
Azerbaijan	9 cities
Cambodia	Phnom Penh
Cameroon	Douala, Yaoundé
Chad	6 cities
Guinea	Conakry
New Zealand	Northern Region
Philippines	Cebu province
Sierra Leone	Bo (South), Bombali (North), Kenema (East), Port Loko (Northwest), Western Rural, Western Urban
Tajikistan	6 sites
Transgender people	
Burkina Faso	Centre (Ouagadougou), Hauts Bassins (Bobo Diuolasso)
Cameroon	Douala, Yaoundé
Côte d'Ivoire	Abidjan
Cuba	La Habana
Georgia	Batumi, Tbilisi
Guinea	Conakry
Haiti	Cap-Haitien, Carrefour, Cayes, Gonaives, Hinche, Jacmel, Ouanaminthe, Pétiion-Ville, Saint-Marc
Mongolia	Ulaanbaatar
Panama	Azuero, Bocas del Toro and Coclé, Chiriquí, Comarca Ngäbe-Buglé, Panamá Centro, Panamá Este, Panamá Norte, Panamá Oeste, Veraguas
Papua New Guinea	Lae, Mt Hagen, Port Moresby
Paraguay	Alto Paraná, Amambay and Caaguazú, Asunción and Central
Sierra Leone	Bo (South), Bombali (North), Kenema (East), Port Loko (North West), Western Rural, Western Urban
People in prisons and other closed settings	
Azerbaijan	Baku
Central African Republic	Bambari, Bangui, Bossangoa, Bouar
Luxembourg	1 prison
Oman	Central prison

Source: Global AIDS Monitoring 2021–2025 (https://aidsinfo.unaids.org/); Spectrum DemProj module 2025; World Population Prospects: the 2024 revision. New York: United Nations Population Division (https://population.un.org/dataportal/home?df=b97292bf-b220-4cce-9978-f1820bb65792).

Subnational HIV estimates for sub-Saharan Africa

Subnational HIV estimates were generated using the Naomi model for 35 countries in sub-Saharan Africa and one in the Caribbean that had conducted one or more representative population-based serosurveys (see Table A1.5).

The Naomi model uses small-area estimation to jointly model HIV prevalence and people living with HIV, antiretroviral therapy coverage and HIV incidence *(13)*. The model combines subnational-level data about multiple outcomes from several sources in a Bayesian statistical model. It uses national population-based survey data and antiretroviral therapy and antenatal clinic testing data to provide robust indicators of subnational HIV burden. It provides estimates and uncertainty ranges for several indicators (including HIV prevalence, people living with HIV, antiretroviral therapy coverage, HIV incidence and new infections) by sex, five-year age groups and subnational level.

The model produces estimates at three time points: the year of the most recent population-based survey, the year of the last round of HIV national estimates (2024), and short-term projections for HIV programme planning purposes. Subnational population estimates by sex and age group are sourced from consensus sources in each country and adjusted to match the populations used within Spectrum by sex and age group.

Cross-sectional estimates for HIV prevalence, antiretroviral therapy coverage and HIV incidence are produced at the midpoint of the most recent nationally representative household survey. For HIV prevalence, the model is calibrated to survey data on HIV prevalence by subnational level, sex and five-year age group from the most recent population-based survey (Demographic and Health Survey or Population-based HIV Impact Assessment). Since the survey sample size in each subnational area is relatively small, routinely reported data about HIV prevalence among pregnant women attending their first antenatal care visit, extracted from the national health information system, are used to improve estimates of the spatial pattern of HIV.

Antiretroviral therapy coverage by subnational area, age and sex is estimated from population-based survey data about the presence of antiretroviral biomarkers in survey respondents living with HIV. Routinely reported antiretroviral therapy coverage among pregnant women before their first antenatal care visit is used as a covariate for the spatial pattern of antiretroviral therapy coverage. The antiretroviral therapy coverage and HIV prevalence are calibrated so that the total number of people on antiretroviral therapy matches the report in the Spectrum national file.

A challenge for estimating treatment coverage for subnational areas is that people may access antiretroviral therapy services in a different district from their residence (e.g. if facilities are closer or perceived to provide better services). The model allows for a probability that people living with HIV access antiretroviral therapy in a neighbouring subnational area. The prior assumption was that most people living with HIV will access antiretroviral therapy in their area of residence, but this probability can vary based on subnational area data about the number of people receiving antiretroviral therapy compared with HIV prevalence, antiretroviral therapy coverage and population.

Table A1.5. Countries using the Naomi model to generate subnational estimates

Angola	Gabon	Namibia
Botswana	Gambia	Niger
Burkina Faso	Ghana	Nigeria
Burundi	Guinea	Rwanda
Cameroon	Guinea–Bissau	Sierra Leone
Chad	Haiti	South Africa
Congo	Kenya	Togo
Côte d'Ivoire	Lesotho	Uganda
Democratic Republic of the Congo	Liberia	United Republic of Tanzania
Eritrea	Malawi	Zambia
Eswatini	Mali	Zimbabwe
Ethiopia	Mozambique	

Direct estimates of HIV incidence are not available at the subnational level. Although some recent household surveys have measured HIV incidence at the national level based on biomarker measures for recent HIV infections, too few recent infections are observed in any district to make a robust estimate. Therefore, to estimate HIV incidence at the subnational level, the HIV transmission rate from Spectrum estimates is calculated and applied to small-area estimates of HIV prevalence and antiretroviral therapy coverage in each subnational area. The sex and age distribution in each subnational area are based on incidence rate ratios from a country's national Spectrum file, applied to the population structure in each area.

The model projects from the most recent household survey to the current period by creating a one-step projection of the population to 2024.

Population estimates are updated with official population estimates. The number of people living with HIV is projected forward based on survival estimates by province, sex and age group from Spectrum over the same period (which accounts for HIV disease progression and the effects of antiretroviral therapy coverage reducing AIDS-related mortality). Antiretroviral therapy coverage is updated based on the number of people on treatment in 2024 from service provision data.

Laws and policies

The data on laws and policies included in the report are based on validated data reported by countries through the National Commitments and Policy Instrument, a component of Global AIDS Monitoring *(6)*, between 2017 and 2024 and complementary sources, including national legal and policy documents and other global databases.

Data submitted by countries through the National Commitments and Policy Instrument are reviewed by UNAIDS. During this review process, information reported are compared with available primary sources and other related publicly available information. UNAIDS also liaises with national Global AIDS Monitoring focal points to request clarification or revise data submitted through the Global AIDS Monitoring online reporting tool.

Service disruption due to funding cuts in 2025

In early 2025, following the abrupt ending of support to United States-funded activities, UNAIDS established a country reporting portal for affected countries to report on a limited number of key Global AIDS Monitoring indicators monitoring the impact on service delivery on a monthly basis. The tool for data collection was a variant of a similar tool used during the COVID-19 pandemic and the ensuing disruption in services.

Countries have used the tool and reported data, depending on their health information systems and the ability to collect and collate data from service provision sites. The reported data are available through the AIDSinfo website at https://aidsinfo.unaids.org/services.

In using and interpreting these data, we need to account for the following caveats:

- The timing of data compilation varies by countries (and sometimes by indicators within a country).
- There were disruptions in many countries because the United States funding covered data clerks and their managers.
- UNAIDS has done limited validation of these data and has allowed for corrections to these data after they have been published.

UNAIDS regional definitions

All presentations of data, including historic trends, use the following UNAIDS regional definitions:

Asia and the Pacific
Afghanistan
Australia
Bangladesh
Bhutan
Brunei Darussalam
Cambodia
China
Democratic People's Republic of Korea
Fiji
India
Indonesia
Iran (Islamic Republic of)
Japan
Lao People's Democratic Republic
Malaysia
Maldives
Mongolia
Myanmar
Nepal
New Zealand
Pakistan
Papua New Guinea
Philippines
Republic of Korea
Singapore
Sri Lanka
Thailand
Timor-Leste
Viet Nam

Caribbean
Bahamas
Barbados
Belize
Cuba
Dominican Republic
Guyana
Haiti
Jamaica

Suriname
Trinidad and Tobago

Eastern Europe and central Asia

Albania
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Georgia
Kazakhstan
Kyrgyzstan
Montenegro
North Macedonia
Republic of Moldova
Russian Federation
Tajikistan
Turkmenistan
Ukraine
Uzbekistan

Eastern and southern Africa

Angola
Botswana
Comoros
Eritrea
Eswatini
Ethiopia
Kenya
Lesotho
Madagascar
Malawi
Mauritius
Mozambique
Namibia
Rwanda
South Africa
South Sudan
Uganda
United Republic of Tanzania
Zambia
Zimbabwe

Latin America

Argentina
Bolivia (Plurinational State of)
Brazil
Chile
Colombia
Costa Rica
Ecuador
El Salvador
Guatemala
Honduras
Mexico
Nicaragua
Panama
Paraguay
Peru
Uruguay
Venezuela (Bolivarian Republic of)

Middle East and North Africa

Algeria
Bahrain
Djibouti
Egypt
Iraq
Jordan
Kuwait
Lebanon
Libya
Morocco
Oman
Qatar
Saudi Arabia
Somalia
Sudan
Syrian Arab Republic
Tunisia
United Arab Emirates
Yemen

Western and central Africa

Benin
Burkina Faso
Burundi
Cabo Verde
Cameroon
Central African Republic
Chad
Congo
Côte d'Ivoire
Democratic Republic of the Congo
Equatorial Guinea
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Liberia
Mali
Mauritania
Niger
Nigeria
Sao Tome and Principe
Senegal
Sierra Leone
Togo

Western and central Europe and North America

Austria
Belgium
Bulgaria
Canada
Croatia
Cyprus

Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands (Kingdom of the)
Norway
Poland
Portugal
Romania
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Türkiye
United Kingdom of Great Britain and Northern Ireland
United States of America

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