PEPFAR
U.S. President's Emergency Plan for AIDS Relief

Monitoring, Evaluation, and Reporting Indicator Reference Guide

FY25 Q1 &Q2 MER Guidance

MER 2.0 (Version 2.8.1)

March 2025

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Tables & Figures

Abbreviations

ART	antiretroviral therapy
ARV	antiretroviral
BF	breastfeeding
CBS	case-based surveillance
COD	cause of death
COP	PEPFAR Country Operational Plan
CQI	continuous quality improvement
CRVS	civil registration and vital statistics
CXCA	cervical cancer
DATIM	Data for Accountability, Transparency, and Impact
DQA	data quality assessment
DREAMS	Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe
DSD	direct service delivery
EID	early infant diagnosis
EMR	electronic medical record
FBO	faith-based organization
FY	fiscal year
GAM	UNAIDS Global AIDS Monitoring
HCW	health care worker
HEI	HIV-exposed infant
HIVST	HIV self-testing
HRH	human resources for health
HTS	HIV testing services
IIT	interruption in treatment
IM	implementing mechanism
IP	implementing partner
L&D	labor and delivery
LTFU	lost to follow-up
MER	monitoring, evaluation, and reporting indicators
MMD	multi-month dispensing
MOH	Ministry of Health
OVC	orphans and vulnerable children
PEP	post-exposure prophylaxis
PEPFAR	United States President's Emergency Plan for AIDS Relief
PHIA	Population-Based HIV Impact Assessment
PITC	provider-initiated testing and counseling
PLHIV	people living with HIV

PMTCT	prevention of mother-to-child transmission
POART	PEPFAR Oversight and Accountability Response Team
POCT	point-of-care testing
PP	priority populations
PrEP	pre-exposure prophylaxis
PT	proficiency testing
PVLS	patient viral load suppression
SID	sustainability index
SI	strategic information
SIMS	site improvement through monitoring systems
STI	sexually transmitted infection
TA-SDI	technical assistance for service delivery improvement
TB	tuberculosis
TX	treatment
UNAIDS	Joint United Nations Programme on HIV/AIDS
USG	United States Government
VL	viral load
VLS	viral load suppression
VMMC	voluntary medical male circumcision
WHO	World Health Organization

Acknowledgments

Thank you to the countless individuals who contributed their valued perspectives and feedback for MER 2.8 during June 2025:

COP25 Executive Data Working Group: Aliyah Abdul-Wakil, Shazad Ahmed, Sisay Alemayehu, Jacob Buehler, Mark DeZalia, Laura Porter, Jasmine Buttolph, Anne Thomas, Ray Ransom, Sri Perera, Sanny Chen, Nellie Wadonda, Derek Sedlacek, Mavis Boateng, Davies Kimanga, Joe Lara, Michelle Selim, Sara Herbst, Jamie Houston, Linda Mattocks, and Hamfrey Sanhokwe.

Subject Matter Experts: Thank you to the **many** SMEs that contributed their time and expertise into developing and refining the MER indicators.

Overview

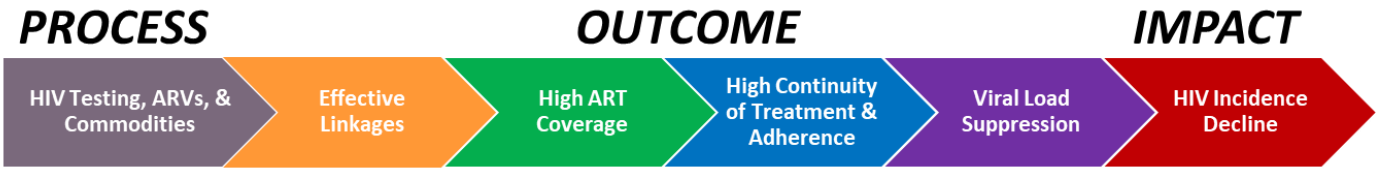
This Monitoring, Evaluation and Reporting (MER) Guidance version 2.8.1 applies to FY25Q1 and Q2. Additional guidance will be released for Q3. Supportive supervision and clinical mentorship are not included and these activities should not occur or be reported for agencies subject to an abridged scope.

PEPFAR makes Americans safer, stronger and more prosperous by controlling the global HIV epidemic and preventing health-driven instability that fuels conflict, mass migration, and terrorism, while ensuring that America is the diplomatic and economic partner of choice in key regions. Ultimately, this will secure competent national disease control infrastructure to sustain HIV gains and respond to emerging health threats that pose a risk to Americans, and transition financing & management to countries to lead a sustained response.

PEPFAR's focus on optimizing impact is a driving force behind global efforts to end HIV/AIDS as a public health threat. PEPFAR supports communities and partner governments to reach the UNAIDS 95-95-95 global goals: 95 percent of people living with HIV know their HIV status, 95 percent of people who know their HIV status are accessing treatment, and 95 percent of people on treatment have suppressed viral loads. One key epidemiological parameter of programmatic success is driving the total number of new HIV infections below the total number of deaths from all causes among individuals living with HIV, while also reducing the impact of HIV/AIDS on morbidity and mortality. Progress towards global 95-95-95 targets will be successfully measured, in part, through an effective strategic information framework that not only monitors program outputs, but also key outcomes and programmatic impact.

UNAIDS data shows that many PEPFAR countries have successfully reduced HIV incidence and are at or near global 95-95-95 targets. As countries reach their 95-95-95 status, the program monitoring approach will shift to focus on maintaining the treatment cohort, retaining patients in care, and reducing priority population gaps not yet at 95-95-95 to ensure population level viral load suppression.

Figure 1: PEPFAR Monitoring: Going from Process to Impact



Given the global HIV progress over the past decade, planning, monitoring, and resource allocation must occur at the subnational, community, and site levels in order to achieve the greatest impact. Collection and use of disaggregated data that characterizes the populations (e.g., age, sex, high-risk or priority populations, etc.) served in the lowest geographic areas where HIV services are being provided, and bringing individual level data together across service delivery sites, is critical in understanding where patients are being served and quality outcomes. These data are also important for accountability, commodity planning, and performance management. Overlaying that data with the partners that are supporting the implementation of HIV services can also help us to understand the fidelity with which programmatic interventions are being taken to scale within specific populations and geographic regions.

Globally and within PEPFAR, critical discussions are ongoing around sustainability and the development of a data roadmap that will guide the development and institutionalization of digitized health information systems. GHSD-PEPFAR recognizes that the outcomes of these discussions will provide new opportunities for strengthening and using host country systems for program and patient monitoring. Because discussions are ongoing, MER 2.8.1 does not explicitly address these topics, but GHSD-PEPFAR anticipates that future iterations will include refined guidance about how to sustainably collect and use data for patient, program monitoring, and accountability.

The objectives of the MER guidance document are to streamline and prioritize indicators for PEPFAR programs; however, MER indicators are not an exhaustive list of all metrics that should be monitored and of analyses that should be conducted by PEPFAR programs and host country governments. PEPFAR programs should continually monitor and assess any acute programmatic issues and collect relevant information for program improvement.

PEPFAR conducts an annual review of MER indicator to ensure:

- indicators align with the programs planned for implementation and the expectations for both program monitoring and partner management practices;
- indicators reflect any new PEPFAR initiatives and/or emerging programmatic areas;
- indicators align with multilaterals and partner governments to avoid duplication of data collection, where possible;
- continuous alignment within PEPFAR data streams (e.g., HRH, expenditure reporting, SID etc.);
- redundancies are reduced between indicators; and
- the MER guidance and training materials reinforce the relationships within and between indicators.

Granular data by age/sex/population and geography has been a powerful tool to monitor and manage the progress of programs in ending AIDS as a public health threat. As countries continue to reach and maintain progress towards the 95-95-95 targets, there is a need for individual level data systems to address the remaining gaps among specific populations (e.g., clients 15-24 years of age, pregnant and breastfeeding women, etc). Discussions with PEPFAR staff and external stakeholders, as well as feedback submitted through the PEPFAR Data Executive Working Group for COP25, highlight a need for information based on digitized individual level data systems. Individual level data brought together across service delivery sites can track patients across the clinical cascade and are nimble to assess evolving programmatic questions. Country programs and governments should continue to work to develop individual level EMR, laboratory, surveillance, and other data systems that can monitor patient outcomes in conjunction with other disease areas, especially as the HIV cohort continues to age.

The following indicator requests submitted through prior MER Refresh surveys are examples of critical information needs that could be answered using individual level data. This information will not be collected through MER this year, but countries should prepare to understand it in the future by utilizing individual level data systems:

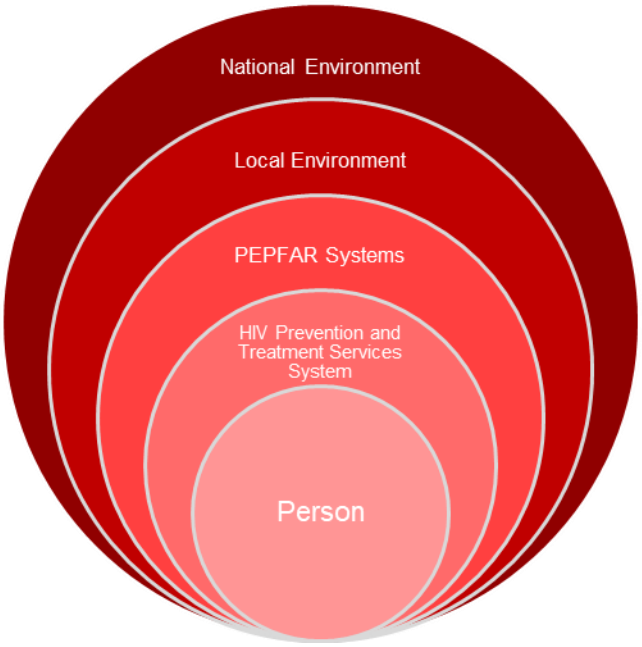
- Number of clients with a reactive HIV self-test who received a confirmatory test
- Number of ART patients on specific TPT regimens, including 1HP and 3HP
- ARV patients receiving multi-month dispensation by fine age
- Viral load coverage and suppression among pregnant and breastfeeding women by age
- Individuals with repeated interruptions in treatment, with an understanding of whether these are silent transfers or actual interruptions
- Continuity of treatment for highly mobile clients

Strong surveillance systems are a critical component of a sustainable health systems infrastructure. This has been further illustrated by the COVID-19 pandemic. Health infrastructure, laboratory systems, and surveillance systems developed for HIV have been utilized in the COVID-19 response, with HIV and COVID-19 data reviewed together. Additionally, individual level data from systems across service delivery sites will be integral in determining gaps across the clinical cascade that developed during the COVID-19 pandemic. With countries at or nearing global 95-95-95 targets, it is important that other pandemics or crises do not negatively impact patient outcomes and the health of people living with HIV. Therefore, drilling down to the individual level and tailoring programs to specific populations will be necessary to maintain people on life-long ART and continue to close these final gaps.

PERSON-CENTERED MONITORING

The MER indicators strive to drive program monitoring to a more patient-centered approach. Per the 2022 WHO Consolidated Guidelines on Person-Centred Strategic Information, person-centered monitoring refers to a shift from measuring services (e.g., the number of HIV tests or people on treatment) to monitoring people at the center of their access to linked HIV and health services. In essence, this marks a shift to better support the clients accessing services by focusing more on their individual health outcomes. Figure 2 illustrates this approach within PEPFAR. Data systems for prevention and treatment must be adapted to support the differentiated service delivery models.

Figure 2: Patient-Centered Monitoring in PEPFAR



Person-centered monitoring and care is a best practice in serving both the needs of the patient and the goals of reaching the UNAIDS 95-95-95 targets more broadly. To reach global targets, all people living with HIV (PLHIV) must be identified, linked immediately to treatment, and have continuity of treatment to achieve viral suppression. If PLHIV do not have easy access to their medication, they are at risk of poor clinical outcomes, ongoing transmission and costly interventions are needed to track them. Focusing on individual-level data enables a focus on person-centered care, by enabling programs to understand gaps and challenges regardless of where clients seek care depending on their changing needs. Further information on the use of individual level data can be found in Appendix K.

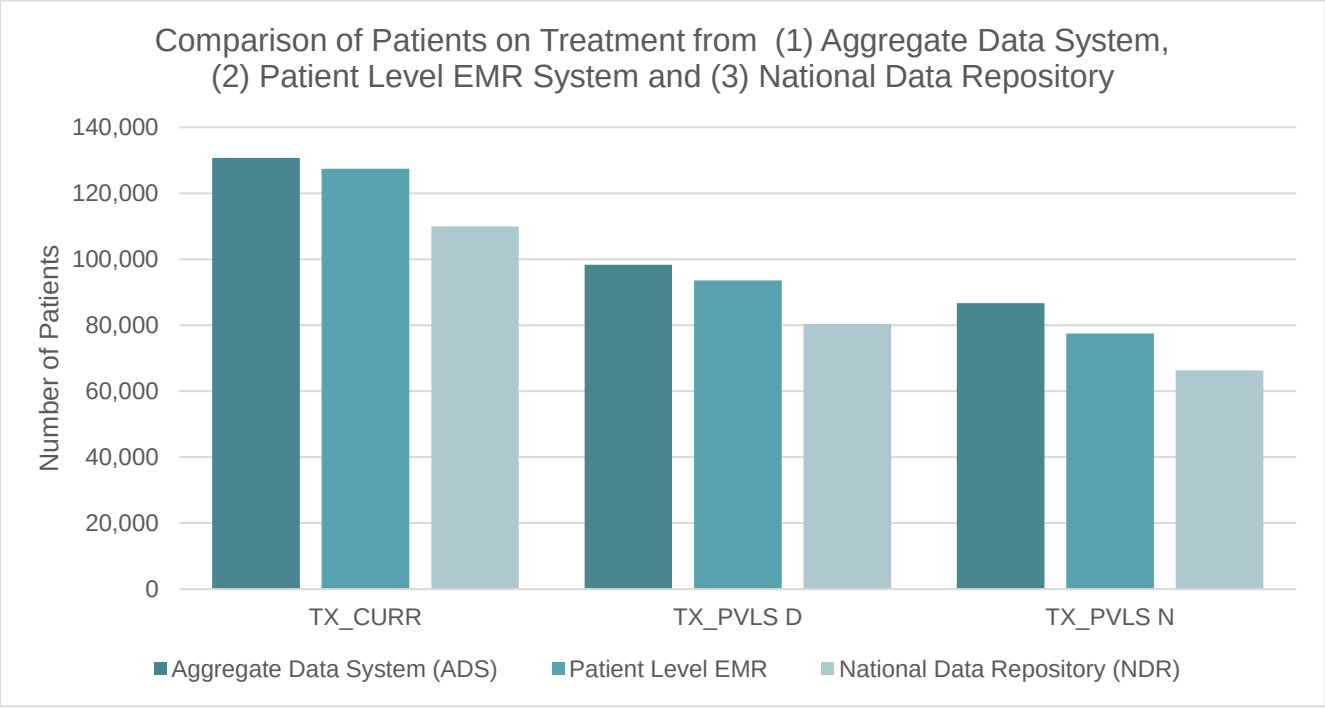
Both the MER Guidance and the 2022 WHO Consolidated Guidelines on Person-Centred Strategic Information underscore the importance of tracing patients whose treatment has been interrupted. PEPFAR defines interruption in treatment (IIT) as no clinical contact for 28 days after the last scheduled appointment or expected clinical contact. This is equivalent to the WHO concept of loss to follow up (LTFU). The use of the 28-day standard for IIT and LTFU is critical to promote timely identification of patient outcomes among patients known to have missed clinical visits or drug pickups. Patients should be traced in an active, safe, and confidential way that assures sustained adherence to treatment moving forward. Health care workers should leverage best practices to reach patients experiencing IIT, while protecting confidentiality. Interruptions in antiretroviral treatment can cause viral load to rebound in as little as 1 to 2 weeks in PLHIV that were previously suppressed on ART. The longer a patient remains off treatment, the greater the likelihood that their viral load will rebound to a point of no longer being undetectable.

Because undetectable viral load means that patients cannot transmit HIV (U=U), it is important to maintain viral suppression among patients on ART. As patients will live full healthy lives taking lifelong ART, it is critical to have differentiated models of services delivery and to ensure patient level data systems include the functionality and provide the information necessary to maintain clients across differentiated service delivery models.

Site level aggregate reporting systems were useful 10 years ago when HIV treatment services were only available to the sickest, patient movement was limited, and ART coverage was 50%. Now, with lifelong ART, test and start, differentiated service delivery models, and over 80% of PLHIV on ART, many countries have digitized service delivery data and are moving to digitized individual level data reporting/surveillance/analytic systems. Using individual level data systems for patient management and program management, at a minimum, requires uniquely identifying individuals and deduplicating their records across sites. One of the PEPFAR-supported countries has done this by scaling EMR implementation, bringing all the EMR data into a data repository, and deduplicating these patient records across all treatment sites. Figure 3 shows the difference between the number of patients on treatment from the **(1)** aggregate data system, **(2)** patient level EMR, and **(3)** de-duplicated patient level data repository. The de-duplicated patient data enabled the country to distinguish true patients with interrupted ART from ones who silently transferred.

Additionally, using the de-duplicated individual level data rather than the aggregate site level data resulted in a more accurate count at 16% fewer patients on treatment, describing the actual patient gaps.

Figure 3: Comparison of Patients on Treatment from Different Data Systems in PEPFAR OU

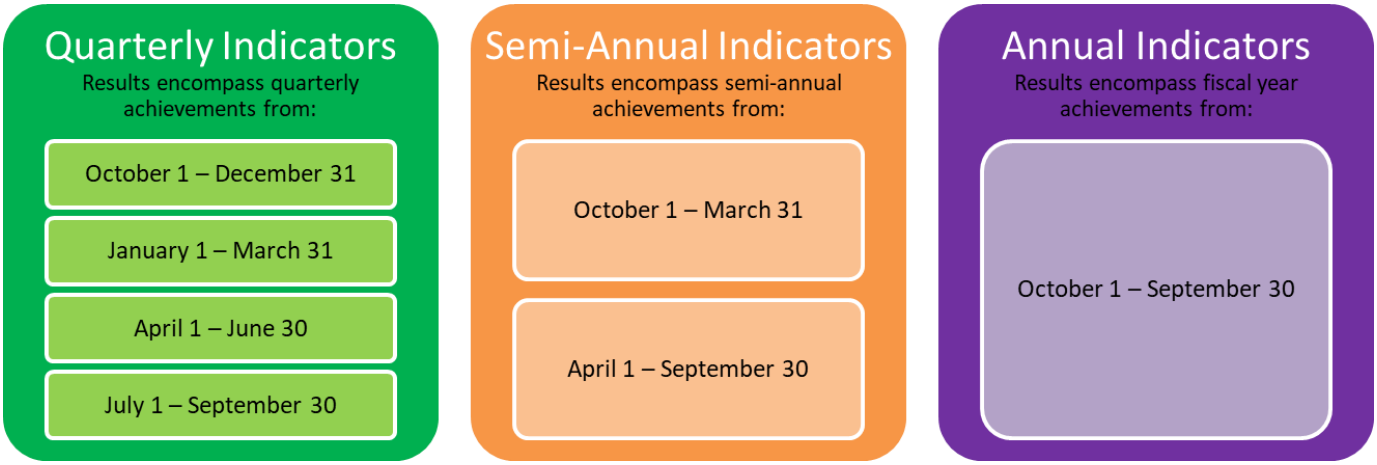


MER REPORTING REQUIREMENTS

Quarterly program results document site-level achievements realized in each quarter of the U.S. government fiscal year (October 1 – September 30). MER data are due on a standard cycle approximately 45 days after each reporting period ends. Refer to the PEPFAR Data Calendar for key deadlines and data cleaning dates.

PEPFAR MER indicators vary in periodicity of reporting. Different indicators reflect different time periods for services being provided. Quarterly indicators are those indicators focused primarily on the clinical cascade: HIV case finding, diagnosis, linkage, treatment, continuity of treatment, and viral load suppression. Semi-annual indicators are those focused primarily on HIV prevention and supply chain monitoring. Annual indicators are those focused primarily on health systems and host country reporting.

Figure 4: Indicator Reporting Frequency and the PEPFAR Fiscal Year



Based on programmatic gaps in case finding, linkages, index testing scale-up, and continuity of treatment, some indicators such as HTS_TST, HTS_TST_POS, HTS_INDEX, TX_ML, TX_RTT, TX_NEW, and linkages should be monitored by PEPFAR programs more frequently (e.g., weekly) than what is required in the MER. Moving to real-time (or near real-time) monitoring of key indicators helps to ensure that rapid actions are taken to course correct areas of underperformance well before the next POART.

Please contact GHSD_SI@state.gov with any additional questions about the MER-related reporting requirements.

DISAGGREGATED MONITORING

Disaggregation of data is key to understanding if PEPFAR-supported services are reaching the intended beneficiaries and locations. Triangulation of routine program data with underlying geographic, demographic, and epidemiologic data is fundamental to PEPFAR planning, monitoring, and reporting processes. To ensure that no one in need of services is being left behind, PEPFAR requires the routine disaggregation of data by the following categories, where applicable:

Location: PEPFAR clinical indicators are disaggregated to the facility-level. Where services are provided in the community, data are reported at an intermediate community level (e.g., ward, sub-district, or district). PEPFAR analyses for planning and support focus on the subnational level (e.g., district).

Age: To advance the standardization of patient monitoring and routine health information systems, PEPFAR requires standardized reporting by five-year age bands. PEPFAR programs are required to report on the following standard age groups: <1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, and 50+. Starting in FY23, the age bands for all treatment and viral suppression indicators were expanded to 50-54, 55-59, 60-64, and 65+. It is recommended that country teams review data on life expectancy and new infections and prepare to extend in-country and/or national reporting systems beyond the 50+ age band threshold as appropriate.

Sex: PEPFAR Indicators are disaggregated by biological sex (male or female), where applicable.

Types of PEPFAR Support: To understand the level of support and the type of investments being provided, data are disaggregated by either direct service delivery (DSD) or technical assistance for service delivery improvement (TA-SDI). More information on these categories is provided in the section below.

DISAGGREGATION TYPES:

There are three categories of MER indicator disaggregations, which can be seen in the indicator reference sheets and the DATIM data entry screens.

Required Disaggregations: Required indicates that this indicator disaggregate is required for all countries that have programming for this area. This means that if the country supports a program area, defined by budget and targets set during the COP process, then it is required to report results.

Conditional Disaggregations: Conditional disaggregates include those for which some additional condition must be fulfilled. There is one main type of conditional indicator disaggregation:

a. Disaggregations for which field teams have received permission or a waiver from their PEPFAR Program Manager to report on, such as reporting on the coarse age disaggregations instead of the finer age disaggregations. In this case reporting is considered conditional based on written approval from GHSD-PEPFAR.

Optional Disaggregations: Optional disaggregates should be completed by those for which the indicator is useful to determine the success of their program.

PEPFAR SUPPORT TO COMMUNITIES AND SITES

Quarterly site-level monitoring by all PEPFAR implementing agencies and partners has provided granular data that demonstrate important differences in patient outcomes and site performance. These results should be used to prioritize resources, staff, and interventions among sites to determine the appropriate extent of support and monitoring needed based on site-level outputs and quality outcomes.

There are three categories of PEPFAR support that correspond to attained, scale-up, sustained and centrally supported areas. In areas where PEPFAR is supporting attained, scale-up, and sustained services the type of support should be categorized as Direct Service Delivery (DSD) or Technical Assistance-Service Delivery Improvement (TA-SDI).

In areas where PEPFAR is not providing support at the site level but is providing financial support at the national or subnational levels, then this support should be characterized as Central Support (CS). DSD and TA-SDI include all sites receiving one or more PEPFAR-supported visits during the year. Importantly, site-level quarterly results, SIMS or other QA/QI data, and CLM data should be analyzed and used to determine the number of program support visits needed each year to optimize the quality of HIV/AIDS services and impact. PEPFAR teams should work with implementing partners to ensure that programmatic data (including MER and SIMS results) are being used in this way. The key is to ensure that PEPFAR-supported sites receive the appropriate number of technical assistance visits based on their performance. Refer to the "PEPFAR-support definition" section within each indicator reference sheet for indicator-specific DSD and TA-SDI descriptions.

DSD: Individuals will be counted as receiving direct service delivery support from PEPFAR when BOTH of the conditions below are met: **Provision of key staff or commodities AND support to improve the quality of services through site visits** as often as deemed necessary by the partner and country team.

TA-SDI: Individuals will be counted as supported through TA-SDI when the point of service delivery receives support from PEPFAR that meets **the second criterion ONLY: support to improve the quality of services through site visits** as often as deemed necessary by the partner and country team.

1. PEPFAR is directly interacting with the patient or beneficiary in response to their health (physical, psychological, etc.) care needs by providing key staff and/or essential commodities for routine service delivery. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. Each indicator reference sheet includes a list of key staff and/or essential commodities that meet this condition.

AND/OR

2. PEPFAR provides an established presence at and/or routinized support for those services at the point of service delivery. Each indicator reference sheet includes a list of activities that count toward support for service delivery improvement.

SUPPORT IN CENTRALLY SUPPORTED AREAS

In areas where PEPFAR is solely providing financial support at the national, regional, or district level, site level support will be through annual visits. However, to support the host country government with quality monitoring, it is recommended that results reported through national health information systems should be jointly monitored with the government on a quarterly basis.

Due to the financial investments PEPFAR provides at the above-service delivery area in centrally supported sites and SNUs, it is important that results be provided to ensure that quality assurance initiatives are having the intended impact. PEPFAR programs should be focused on supporting the national program in their respective countries to achieve 90% ART coverage (i.e., 95-95-95) for PLHIV; therefore, it is extremely important to understand the services provided to PLHIV across the entire country.

While patient and beneficiary-support activities have transitioned to government or other support, PEPFAR continues to provide support for overarching activities, such as quality assurance and quality improvement (QA/QI) to ensure that patients continue to receive quality services. As such, PEPFAR will continue monitoring activities in centrally supported sites annually via the following indicators: HTS_TST, TX_CURR, TX_NEW, TX_PVLS, PMTCT_STAT, and PMTCT_ART.

Results in centrally supported areas should be reported once annually at Q4 each year. Site-level data in centrally supported areas should be reported on the Central Support (CS) tab of the DATIM data entry screen for each of the 6 indicators required for centrally supported reporting: HTS_TST, TX_CURR, TX_NEW, TX_PVLS, PMTCT_STAT, and PMTCT_ART. For additional information, please refer to Appendix G: Central Support.

AGE DISAGGREGATIONS:

Required reporting on the five-year age bands was introduced in Q1 of FY 2019. Reporting on these age bands will continue in FY 2025. **Methods of extrapolating or estimating age disaggregated results data are not permitted.** If you have questions, contact your PEPFAR Program Manager and GHSD_SI@state.gov. The table below describes the evolution of the standard, required age bands for PEPFAR reporting from FY 2015 through FY 2025. Note that there are some indicator-specific variations to these requirements.

As of FY 2023 Q3, 24% of PLHIV reported in five-year age bands in TX_CURR are above the age of 50. Collection of expanded age data is needed for planning appropriate HIV services for older adults as well as integrated service needs. As the treatment cohort continues to age, the ability to monitor lifelong patient outcomes is critical. In FY 2022, the TX_CURR 50+ age band was expanded to 50-54, 55-59, 60-64, 65+. In FY 2023, these age bands were expanded for all treatment and viral suppression indicators. There will be a 50+ age band option for circumstances where reporting on 50-54, 55-59, 60-64, 65+ is not feasible.

Please note, while age-bands and HTS modalities were collapsed for target setting in COP25 (FY26), five-year age bands will still be required for reporting results. GHSD-PEPFAR will continue to monitor implementation and trends by the five-year age bands and expects others within PEPFAR to do the same.

Table 1: Evolution of PEPFAR Finer Age Bands for Results Reporting

Evolution of PEPFAR Finer Age Bands for Results Reporting									
FY 2015 – FY 2016		FY 2017		FY 2018		FY 2019 – FY 2022		FY 2023 – FY 2025 TX & VLS indicators only	
Age	*Sex*	*Age*	*Sex*	*Age*	*Sex*	*Age*	*Sex*	*Age*	*Sex*
<1	M / F	<1	None	<1	None	<1	M / F	<1	M / F
1-4	M / F	1-9	None	1-9	None	1-4	M / F	1-4	M / F
5-9	M / F					5-9	M / F	5-9	M / F
10-14	M / F	10-14	M / F	10-14	M / F	10-14	M / F	10-14	M / F
15-19	M / F	15-19	M / F	15-19	M / F	15-19	M / F	15-19	M / F
20-24	M / F	20-24	M / F	20-24	M / F	20-24	M / F	20-24	M / F
25-49	M / F	25-49	M / F	25-29	M / F	25-29	M / F	25-29	M / F
				30-34	M / F	30-34	M / F	30-34	M / F
				35-39	M / F	35-39	M / F	35-39	M / F
				40-49	M / F	40-44	M / F	40-44	M / F
						45-49	M / F	45-49	M / F
50+	M / F	50+	M / F	50+	M / F	50+	M / F	50-54	M / F
								55-59	M / F
								60-64	M / F
								65+	M / F

HOST COUNTRY NATIONAL PROGRAM

PEPFAR works closely with host countries, particularly with Ministries of Health, to jointly monitor the HIV response. Monitoring the host country HIV response is critical to understanding both the achievements and the gaps at the subnational level and within specific populations. Host country data are used to inform PEPFAR programs and guide how PEPFAR resources are allocated. The key program areas for monitoring host country targets and results are: prevention of mother to child transmission programs; and HIV diagnosis and treatment, including viral suppression. Increasingly, individual level surveillance data are critical to implement and used in conjunction with the MOH to capture data from recent infections to deaths.

Host country data are needed from both the national and subnational level. The subnational level is considered the organizational level in which the country team has prioritized their program (PSNU). Data on the host country national program are reported to PEPFAR for all subnational units, regardless of PEPFAR funding supporting these geographical areas; so that the total of the subnational results or targets should equal the total number of national results and targets.

At the host country national level, to sufficiently monitor its national response, the host country government's national set of indicators should include the minimum set of harmonized global indicators (UNAIDS Global AIDS Monitoring) and additional indicators that represent the needs of the country's program. The PEPFAR Country team should collaborate with the host country government and other stakeholders to make sure that PEPFAR reporting requirements are taken into consideration in the host country's national set. In constructing its own comprehensive set of requirements for monitoring the USG response in support of the host country national program, each PEPFAR country team will review all PEPFAR essential host country national indicators for applicability to the PEPFAR activities being conducted in the host country.

PEPFAR host country national and subnational level indicators represent results obtained within the entire host country regardless of PEPFAR support. All PEPFAR countries should report host country results at Q4 each fiscal year. Host country results are also reported at the site-level for a subset of indicators. The majority of these facility-level indicators will be reported through the PEPFAR-MOH data alignment process. In FY24, all PEPFAR bilateral programs are expected to report through the PEPFAR-MOH data alignment on an annual basis for the following indicators: HTS_TST, TX_CURR, TX_NEW, TX_PVLS, PMTCT_STAT, PMTCT_ART, and TB_PREV.

HOST COUNTRY TARGETS

Targets for the host country national and subnational indicators should be reported into DATIM during COP. Developing targets for the next year at the national and subnational levels is an important step in understanding the national program and determining geographic investments (including host country, The Global Fund, and other donors). When PEPFAR better understands the target setting process of the national program, then it is better placed to support the program and to fill necessary impactful programmatic gaps. Please describe the target setting process that the host country employs in the narratives and partnering donors. The national targets should cover the next calendar or fiscal year; the timeframe should be indicated in the narratives.

HOST COUNTRY RESULTS

At Q4 of the USG fiscal year, results from the host country systems should be reported up until the most recent month of collection and include 12 months of data. These may not align with the USG fiscal year end results. These data should be collected continuously at the subnational level. Data should be in line with GARPR and UNAIDS reported data, where available, although they may differ due to different reporting periods. In the narratives, please indicate what months the data include (e.g., October 2024-September 2025; or July 2024 to June 2025). Results should be consistently reported on the same time period to be able to monitor trends over time.

Table 2: Host Country Indicators by Reporting Level, Targets, and Results

HOST COUNTRY INDICATORS BY REPORTING LEVEL, TARGETS, AND RESULTS					
Host Country Indicator	Reporting Level			Results vs. Targets Requirements	
Indicator Name	*National*	*Subnational*	*Facility*	*Targets*	*Results*
DIAGNOSED	X	X			X
HTS_TST			X		
TX_NEW			X		
TX_CURR	X	X	X	X	X
TB_PREV			X		
VL_SUPPRESSION	X	X		X	X
PMTCT_STAT	X	X	X	X	X
PMTCT_ART	X	X	X	X	X

Red X: Designates those indicators collected through the annual MOH data alignment process.

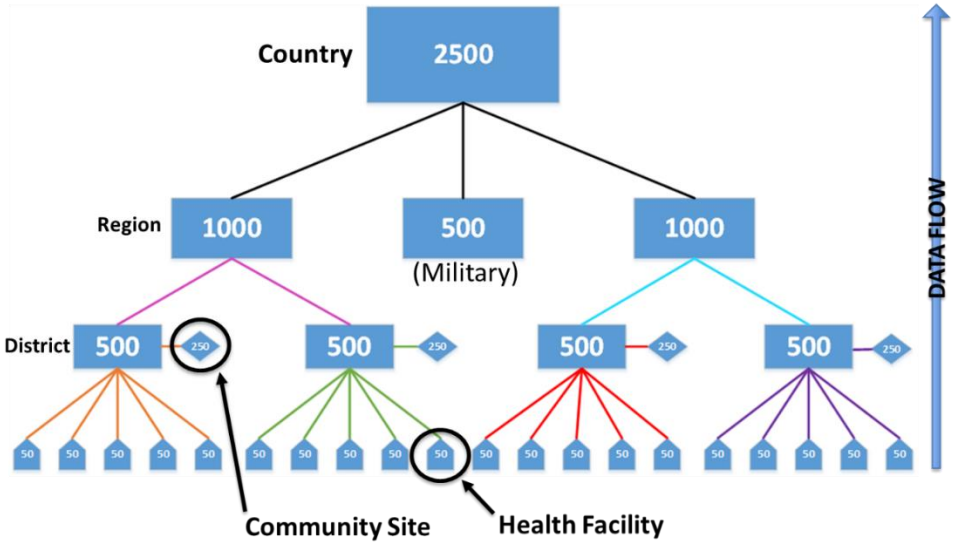
REPORTING MER RESULTS IN DATIM

MER program results are reported in DATIM (Data for Accountability, Transparency, and Impact). Data are reported into DATIM by both implementing partners (IP) and USG staff in country depending on the type of indicator. Please refer to the indicator-specific requirements in the MER for more details.

If you are an implementing partner or USG agency or HQ staff member that needs to access DATIM, visit the following link to request an account: https://register.datim.org/.

Results in DATIM are entered at the facility and community-levels in DATIM and aggregate up to the district, regional and national levels as shown in the data flow diagram below.

Figure 5. MER Data Flow from the Site to Country Level



ROUTINE DATA CLEANING & COMPLETENESS CHECKS

PEPFAR programs are expected to have reviewed, cleaned, analyzed, and interpreted their program results data prior to submission of their results to headquarters. Country teams are expected to conduct routine data cleaning and completeness checks using the Data Review Tool before submitting results in DATIM. For a list of data quality checks used across PEPFAR systems, please refer to the MER Validation Guide on DATIM Support.

There are several levels for data quality checks to be initiated by the responsible person at the site, implementing partner, PEPFAR country agency and interagency, and the headquarters levels. The data quality checks and review include both completeness and logic checks. Completeness checks begin at the site level with routine review of patient level data at the source of collection such as registers, EMRs or patient charts. These patient monitoring tools should be reviewed for entry completeness at each reporting period.

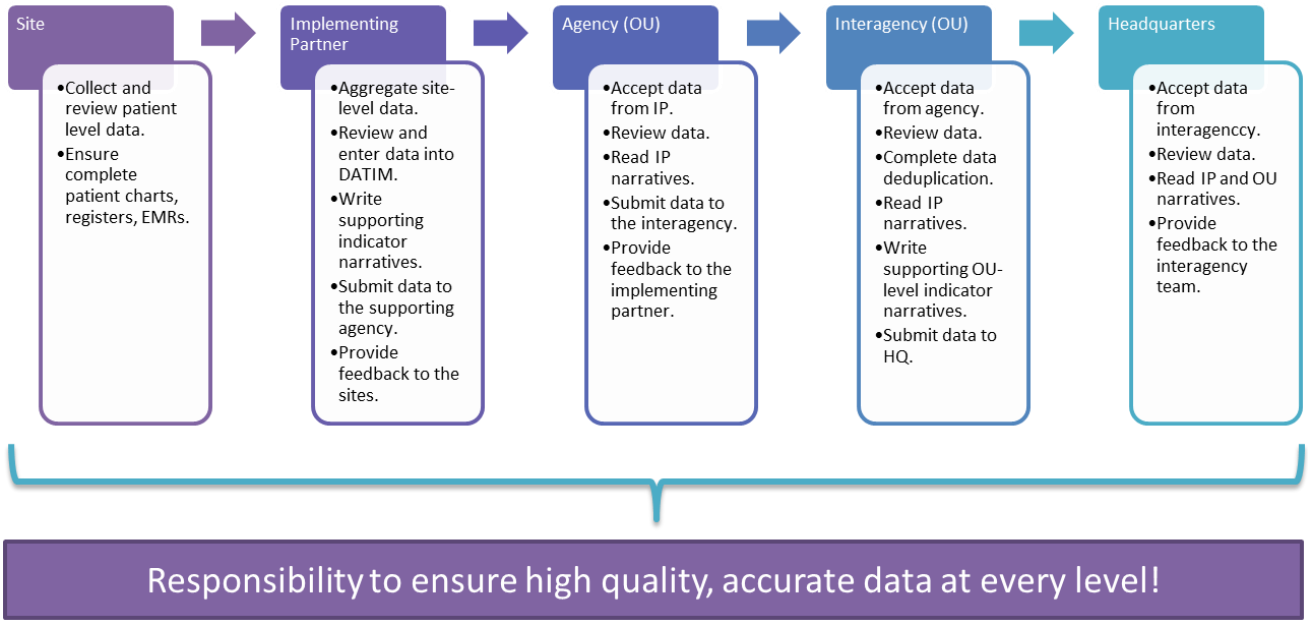
Once implementing partner staff have completed data entry for the reporting period, the IP should confirm the overall completeness of data by reviewing a set of DATIM "Favorites" that display MER indicators' "numerator" value and "denominator" values by disaggregation totals (e.g., total by age/sex, total by service delivery point/test result, total by age/sex/service type, etc.). An overview of DATIM completeness favorites and instructions on how to use them can be found below.

When USG agency staff "Accept" MER results data from IPs within DATIM, these same DATIM Favorites should be reviewed to verify data completeness; if any issues are identified, these should be flagged by the AOR/COR, Activity Manager, or SI point of contact and returned to the IP for corrections or revisions. A set of data validation and logic checks should also be carried out between indicators before data is submitted to Interagency.

DATA ENTRY AND REVIEW PROCESS OVERVIEW

The in-country review of data completeness is a shared responsibility across all stakeholders, including data entry and review by implementing partners, review by agency, and further review and de-duplication data at the Interagency level.

Figure 6. MER Data Entry and Review Process



Implementing Partner Review Process

1. Enter results data.
2. Review data for completeness and accuracy.
3. If data are complete and accurate, "Submit" data to agency via Data Approvals App.
4. If data are incomplete, but can be justified, "Submit" data to agency via Data Approvals App and explain any data completeness issues in indicator narrative.
5. If data are incomplete and not justified, return to Step 1.

Once implementing partner staff have completed data entry for the reporting period, they should confirm the overall completeness of data by reviewing the DATIM favorites provided by the "MER Result & Target Review" DATIM dashboard that display MER indicators' "Numerator" value and "Denominator" value by disaggregation totals (e.g., total by age/sex, total by service delivery point/test result, total by age/sex/service type, etc.). If there are data completeness issues, the IP should work to address these problems or acknowledge data completeness limitations within the implementing mechanism indicator performance narrative.

Agency Review Process

1. "Accept" data from implementing partner via Data Approvals App.
2. Review data for completeness and accuracy.
3. If data are complete and accurate, "Submit" data to Interagency via Data Approvals App.
4. If data are incomplete but can be justified, "Submit" data to Interagency via Data Approvals App and refer to any data completeness issues identified by partners in the OU-level indicator narrative.
5. If data are incomplete and not justified, "Return" data to IP via Data Approvals App and email IP point of contact explaining any issues identified.

Interagency Review Process

1. "Accept" data from implementing agency via Data Approvals App.
2. Review data for completeness and accuracy.

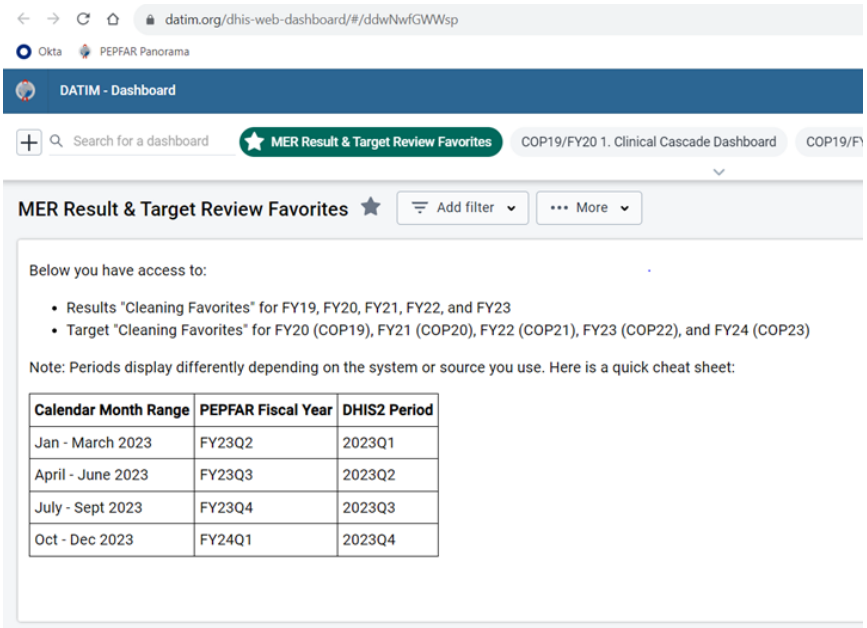
3. Conduct data de-duplication as required across all IMs via the Data De-Duplication App.
4. If data are complete, "Submit" data to Global via Data Approvals App.
5. If data are incomplete but can be justified, "Submit" data to Global via Data Approvals App and refer to any data completeness issues in indicator narrative.
6. If data are incomplete and not justified, "Return" data to agency via Data Approvals App and email agency point of contact explaining any issues identified.

USG Interagency staff should review all submitted data using the DATIM Data Completeness Favorites prior to submission to headquarters; with 3 levels of accountability (IP, agency, interagency), it is expected that data completeness challenges should be identified, addressed, and/or explained as part of the USG technical area indicator narratives. If any data inconsistencies are identified and have not already been documented in the narrative, data must be sent back down to the agency and then to the IP level for the inconsistency to be either reconciled or, if irreconcilable, documented in the narrative.

DATA REVIEW COMPLETENESS TOOLS

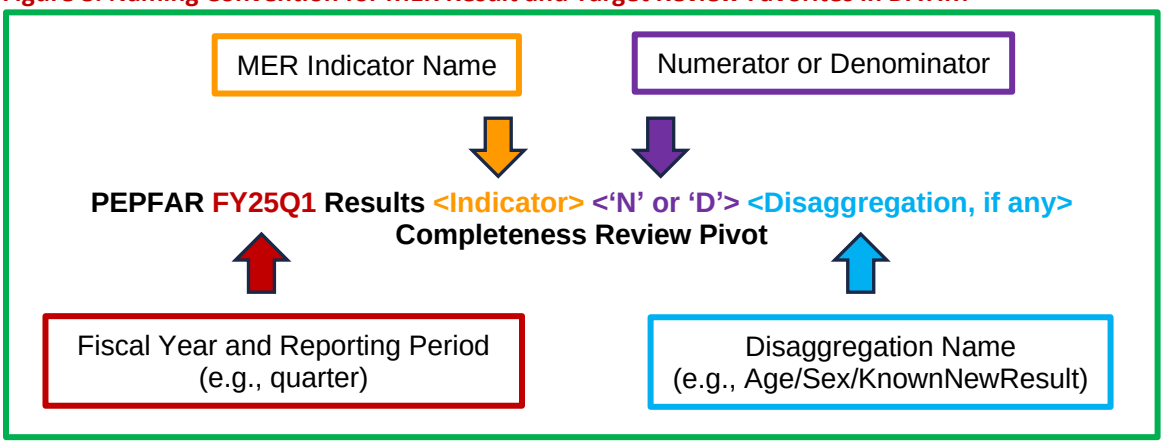
MER Data Cleaning and Completeness Review Favorites (or "Favorites") are saved data query outputs generated from live data within DATIM as submitted by implementing partners. GHSD-PEPFAR has created and shared a list of standard "favorites" globally to help DATIM users validate data for completeness and consistency of entry across their program. These reports emulate the MER data entry screens and allow all DATIM users to review the totals of MER indicators. If the totals are not equal to the users' expected result, users can look at the disaggregated data to see where a data error is present. These favorites are tagged to the "MER Result & Target Review Favorites" dashboard that is accessible to all DATIM users on the main landing page when a user logs into the system as seen in the screenshot below.

Figure 7. MER Result and Target Review Favorites in DATIM



In addition to their availability on the dashboard, the data cleaning favorites can also be found in DATIM's pivot table app. Each canned cleaning favorite uses the following naming convention:

Figure 8. Naming Convention for MER Result and Target Review Favorites in DATIM



If an indicator is calculated by auto-summing other indicators and/or disaggregates, AUTO-SUM" will be present in the favorite's name (as seen underlined in the example for HTS_SELF found below). Also, for testing indicators, "Facility" or "Community" will appear after the fiscal year and reporting section of the favorite name to easily discern testing modalities.

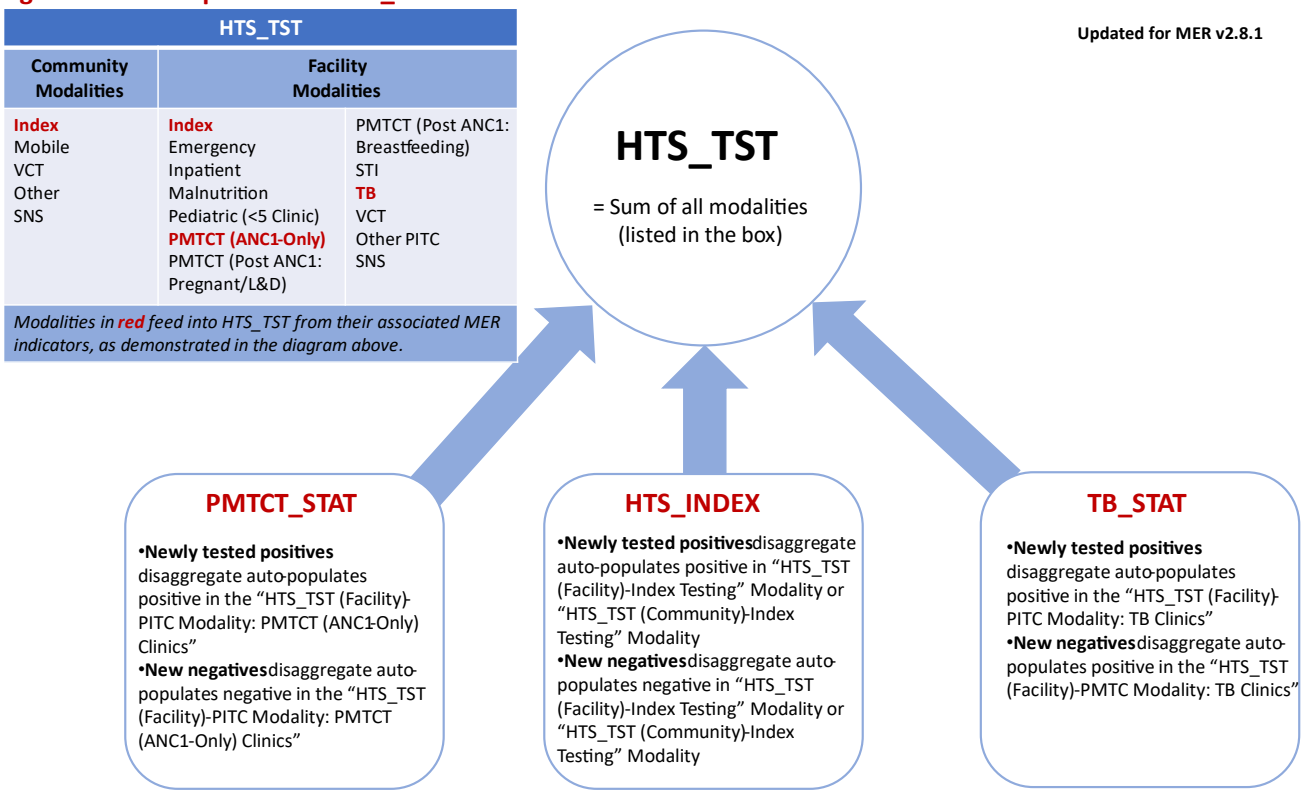
For example, the DATIM favorite to review the results for the distribution of HIV self-test kits (i.e., HTS_SELF) by age, sex, and test kit distribution method is named:

PEPFAR FY25Q1 Results HTS_SELF N AUTO-SUM Age/Sex/HIVSelfTest Directly Assisted/Unassisted Completeness Review Pivot

AUTO-POPULATION OF HTS_TST MODALITIES:

The definitions for the PMTCT (ANC1), TB, and index HIV testing services modalities have been aligned with their respective parent status indicators (i.e., PMTCT_STAT, TB_STAT, , and HTS_INDEX). Results are no longer entered for these modalities through the HTS_TST indicator directly but are instead entered into the parent indicator and then auto-populated into HTS_TST in an effort to reduce data entry redundancy and reinforce the relationships between indicators. For example, results entered for TB_STAT newly tested positives will auto-populate into the TB modality for HTS_TST within DATIM. DATIM users will still see these modalities on the data entry screen but will no longer be able to enter data directly into the modalities. Once data are entered for the parent indicator, they will be copied into the relevant data entry form for the corresponding HTS modality. For further details, see the diagram below and review the HTS_TST reference sheet.

Figure 9: Auto-Population of HTS_TST From Associated Indicators



AUTO-SUM NUMERATORS AND DENOMINATORS:

To reinforce data quality and reduce data entry, PEPFAR began auto-summing the top-level numerators and denominators for most indicators in FY 2019. For example, the age/sex disaggregations for TX_CURR is summed to obtain the total numerator for TX_CURR. Implementing partners do not need to enter both a numerator and the age/sex disaggregations into DATIM as entering the age/sex disaggregations will auto-sum the numerator. To ensure completeness of reporting where age-related data are not collected fully, an option of 'unknown age' is included in all indicators. Note that an 'unknown sex' option is not available. Data must be collected by sex, at a minimum, to be reported in DATIM. If you have questions about this requirement, contact GHSD_SI@state.gov.

In each indicator reference sheet, within the disaggregations section, the disaggregate group that will be used to auto-sum the numerator or denominator is highlighted in **BOLD** text. Not all indicators will auto-sum.

CALCULATED INDICATORS

A calculated indicator is a MER indicator that is generated using values that were entered manually via DATIM. Calculated indicators facilitate analysis of MER data and reduce the chance for error introduced by manual calculations. Three types of calculated indicators are shown below. Please refer to Zendesk Article: MER Calculated Indicators Reference Table for a detailed list of calculated indicators and their corresponding calculations. We have also added additional calculated indicators to help understand indicators that involve calculations across time, for these please refer to this Zendesk Article.

Type 1: Sum of disaggregates to Total Numerator

The "Total Numerator" value for each indicator is calculated from the sum of specific disaggregates within the indicator. This prevents discrepancies resulting from entering the total numerator and disaggregates separately.

Example:

TB_STAT Total Numerator =

TB_STAT Known Positives by age/sex
+ TB_STAT Newly Tested Positives by age/sex
+ TB_STAT New Negatives by age/sex
+ TB_STAT Recently Tested Negatives by age/sex

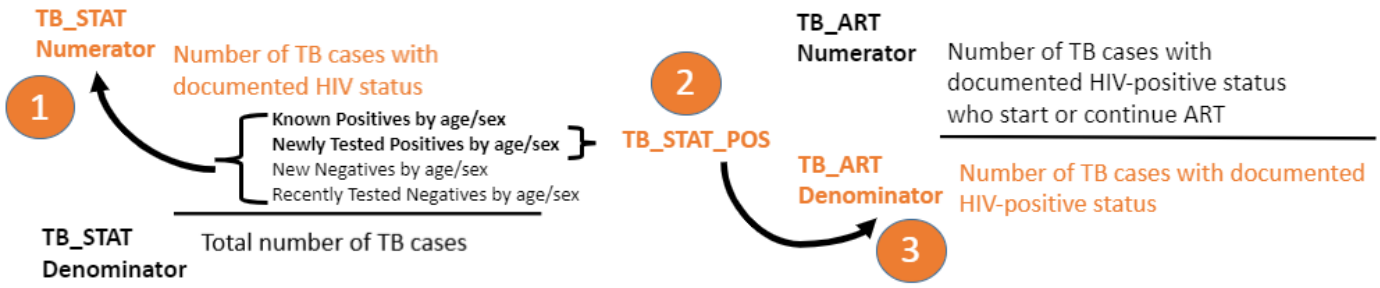
Type 2: Sum of disaggregates to new disaggregate
Often, there are specific groups of disaggregates that are reviewed on a routine basis. Rather than summing the disaggregates during each analysis, a calculated disaggregate is generated to facilitate the review. In this example, TB_STAT_POS is calculated to generate the total number of individuals living with HIV documented as part of TB_STAT.

Example:
TB_STAT_POS =
TB_STAT Known Positives by age/sex
+ TB_STAT Newly Tested Positives by age/sex

Type 3: Copying of data to new indicator
In many cases, data that are collected as part of one indicator are useful for analysis in another indicator. Rather than require that the same data be entered in multiple places, the data can be entered once and copied to other system-generated indicators. In this example, the number of TB cases living with HIV is collected as part of TB_STAT, and used as the denominator for TB_ART. TB_ART (D) is not entered directly – it is generated automatically using values that were originally entered under TB_STAT.

Example:
TB_ART Denominator = TB_STAT_POS =
TB_STAT Known Positives by age/sex
+ TB_STAT Newly Tested Positives by age/sex

Figure 10: Calculated Indicator Examples
Calculated indicators are shown in orange.



DATA QUALITY

Reliable data are key to reaching the 95-95-95 goals. Measuring the success of PEPFAR's initiatives requires strong monitoring and evaluation (M&E) systems that can routinely produce high quality data. Efforts to ensure data quality, therefore, are not singular events occurring randomly. Rather, these processes need to become institutionalized as part of the entire data management cycle. Once achieved, data quality helps to ensure that limited resources are used effectively; progress toward established goals is accurately monitored, measured, and reported; and decisions are based on strong evidence.

Over the past 5 years, efforts to ensure a data-driven approach to decision making has allowed global HIV programs to dramatically expand their results and impact in a budget-neutral environment. The combination of strengthened monitoring indicators, information regarding site and service delivery quality, site-specific program results, and a more

detailed understanding of the geographic distribution of the burden of disease, has allowed HIV programs to identify exactly where the HIV epidemic is occurring and where programs can maximize their impact in response.

Data quality has always been a focus of global HIV monitoring and reporting efforts. Specifically, all countries conducting programming supported by PEPFAR are expected to have a data quality strategy in place. For example, data quality assessments (DQAs) should be routinely conducted, and action should be taken because of these DQAs. If errors are identified in data, these should be remediated at the point of service delivery as well as in the PEPFAR and host-country reporting systems as soon as possible.

More specifically, as many countries are approaching the UNAIDS 95-95-95 goals, it is more important than ever to understand exactly how many people living with HIV are receiving treatment. Furthermore, it is imperative that countries understand the treatment gaps remaining by location and population to ensure that all PLHIV have equitable access to treatment and are virally suppressed, and that scarce resources are allocated appropriately to areas with the greatest unmet need. As such, we are at a very important moment in the HIV response where accuracy of the data is essential in ensuring that programmatic decisions are made effectively. PEPFAR is committed to ensuring that the data collected through the MER are accurate and timely. **It is essential to not only capture high-quality data, but also to continuously use and analyze the data to achieve maximum program impact. The only way to improve the data is to use the data.**

Understanding the treatment gaps by location and populations means conducting DQAs by age and sex to correct discrepancies by population that exist in the TX_CURR numbers. Significant shifts in age and sex coverage levels can be observed when TX_CURR numbers are reset based on DQAs.

For more information on data quality, please refer to "Data Quality Assessment of National and Partner HIV Treatment and Patient Monitoring Systems." The approved DQA protocol from this guidance can also be found in Appendix C.

STANDARDIZED HEALTH DATA EXCHANGES & SURVEILLANCE SYSTEMS

At present, the majority of PEPFAR countries are limited to programmatic aggregate data and periodic surveys to describe the HIV care continuum. With greater emphasis on patient-centered monitoring comes a need to understand patient-level data beyond the aggregate indicators.

HIV programmatic aggregate data are not fully de-duplicated (though within antiretroviral treatment programs many are) and do not provide data on the number of people living with HIV or accurate data for total persons diagnosed. Periodic surveys offer individual de-duplicated data, denominators, and the 95-95-95 cascade, but are cross-sectional (one point in time) and are expensive to conduct.

Standardized health data surveillance systems offer countries a mechanism to complement aggregate reporting systems and surveys with quality HIV data that emphasizes individual de-duplicated data to more accurately report the 95-95-95 cascade.

These surveillance systems, when comprehensive, emphasize case finding and case reporting of new diagnoses (including recent infections), identify if the newly diagnosed are linked to treatment, and provide disaggregation by age, sex, geography, and risk. This in turn can trigger a public health response to effectively intervene and make the necessary adjustments from a surveillance and programmatic perspective to prevent new cases as countries strive to achieve and sustain progress towards global targets. There are several paths countries can take to obtain standardized health data exchanges and surveillance systems that track individual patients with the removal of duplicates by key HIV sentinel events [first HIV-positive diagnoses (by new and chronic infection), first CD4 count (after diagnosis), ART initiation, first viral load test, viral suppression (follow up viral load tests), and death].

COMMITMENT TO DATA TRANSPARENCY

For more in-depth analyses, partners and stakeholders external to PEPFAR may request access to data for additional PEPFAR data elements. For more specific information around data sharing in PEPFAR, please consult the PEPFAR Data Governance policy.

INDICATOR TRAININGS:

Indicator training videos and content have been created by PEPFAR HQ technical area experts and uploaded on the MER DATIM support page. There is a training available for each technical area (e.g., TB, Treatment, HTS, etc.). Please note that the MER training videos are available to **both USG and implementing partner staff with access to DATIM**.

Data entry screens reflecting the changes outlined in this guidance document are under development. Once finalized, screenshots will be captured on the DATIM support site at the following link: https://datim.zendesk.com/hc/en-us/articles/360001143166-DATIM-Data-Entry-Form-Screen-Shot-Repository.

Key Updates and Changes: MER v2.8 to MER v2.8.1

Through the past several years of quarterly, site-level monitoring, PEPFAR programs have used data to improve patient outcomes and impact. Changes to the MER guidance highlight key program areas (e.g., index testing services) that should be taken to scale. Tables 3 and 4 and Figure 11 on the following pages highlight the key details for the MER indicators.

This guidance goes into effect with FY 2025 reporting with the first reporting on these indicators taking place in Q1 and Q2 of FY 2025 for results that occurred from October 1, 2024 – March 31, 2025.

For changes prior to version 2.8.1, refer to the MER guidance from previous years.

FY25 Q1 & Q2 INDICATORS:

Required Vs. Optional: Countries with limited bandwidth should make a special effort to prioritize ensuring the required indicators are fully reported and high-quality. Optional indicators are truly optional. Countries can opt to report or not report on these indicators, depending on their utility for country planning and on country bandwidth.

Required Countries with limited bandwidth should make a special effort to prioritize ensuring these data are fully reported and high quality	**Optional** Countries can opt to report or not report on these indicators, depending on their utility for country planning and on country bandwidth. These indicators are optional
1. HTS_TST; HTS_TST_POS a. Modalities will be optional 2. PMTCT_EID 3. PMTCT_HEI 4. PMTCT_STAT 5. PMTCT_ART 6. PrEP_NEW for Pregnant and Breastfeeding women only 7. TX_CURR 8. TX_ML 9. TX_NEW 10. TX_PVLS	11. HTS_INDEX (optional index cascade steps, however **new pos, new neg are required unless reporting HTS_TST and HTS_TST_POS total numerator**) 12. HTS_SELF 13. CXCA_SCRN 14. CXCA_TX 15. PrEP_CT for Pregnant and Breastfeeding women only 16. TB_STAT 17. TB_ART 18. TB_PREV 19. TX_TB 20. TX_RTT 21. PMTCT_FO (reported at Q4) *22.* LAB_PTCQI (reported at Q4)

Removed Indicators for MER 2.8 to MER 2.8.1 FY2025 Q1 and Q2 reporting:

AGYW_PREV

POST_RESP

KP_PREV

OVC_SERV

OVC_HIVSTAT

VMMC_CIRC

SC_ARVDISP

Narratives will not be collected for Q1 and Q2 reporting.

Removed Indicators from MER 2.7 to MER 2.8:

KP_MAT

PP_PREV

HTS_RECENT

SC_CURR

HRH_PRE

HRH_STAFF_NAT

KP_MAT_NAT

Indicator Flexibility for FY2025 Q1 and Q2 Reporting: Our focus remains how to minimize reporting burden for country teams and IPs with limited staffing footprint and who are focused on implementing activities. Our approach is to simplify the reporting requirements during this period.

- **HTS_TST; HTS_TST_POS** (Required): Two options will be provided to countries:
  1. Path 1 - Flexible reporting with no testing modalities reported, but age/sex still required. PMTCT_STAT will remain required.
  2. Path 2 - Standard reporting of testing modality/age/sex (under this option, the IP would still report HTS_INDEX and TB_STAT)

- **TX_NEW** (Required): Two options:
  1. Flexible reporting – IP would include all results under Unknown CD4 result)
  2. Standard reporting by CD4 count (<200, 200+, Unknown CD4 result)

- **DSD/TA Reporting**: Two options:
  1. Flexible reporting: all indicators reported at TA level to reduce reporting burden
  2. Standard Reporting: Continue reporting DSD vs. TA sites as previously done

Table 3: Indicator Summary Table

Indicator Code	Indicator Group	Indicator Description	Reporting Frequency
CXCA_SCRN	Testing	Number of women living with HIV on ART screened for cervical cancer	Semi-Annual
CXCA_TX	Treatment	Percentage of cervical cancer screen-positive women who are living with HIV and on ART eligible for cryotherapy, thermocoagulation or LEEP who received cryotherapy, thermocoagulation or LEEP	Semi-Annual
HTS_INDEX	Testing	Number of individuals who were identified and tested using Index testing services and received their results	Quarterly
HTS_SELF	Testing	Number of individual HIV self-test kits distributed	Quarterly
HTS_TST	Testing	Number of individuals who received HIV Testing Services (HTS) and received their test results	Quarterly
LAB_PTCQI	Health Systems	Number of PEPFAR-supported laboratory-based testing and/or Point-of-Care Testing (POCT) sites engaged in continuous quality Improvement (CQI) and proficiency testing (PT) activities.	Annual
PMTCT_ART	Treatment	Percentage of pregnant women living with HIV who received ART to reduce the risk of mother-to-child-transmission (MTCT) during pregnancy	Quarterly
PMTCT_EID	Testing	Percentage of infants born to women living with HIV who received a virologic HIV test (sample collected) by 12 months of age	Quarterly
PMTCT_FO	Testing	Percentage of final outcomes among HIV-exposed infants registered in a birth cohort	Annual
PMTCT_HEI	Testing	Number of HIV-exposed infants with a virologic HIV test result returned in the reporting period, whose diagnostic sample was collected by 12 months of age	Quarterly
PMTCT_STAT	Testing	Percentage of pregnant women with known HIV status at antenatal care (includes those who already knew their HIV status prior to ANC)	Quarterly
PrEP_CT	Prevention	Number of individuals, excluding those newly enrolled, that return for a follow-up visit or re-initiation visit to receive pre-exposure prophylaxis (PrEP) to prevent HIV during the reporting period	Quarterly
PrEP_NEW	Prevention	Number of individuals who were newly enrolled on pre-exposure prophylaxis (PrEP) to prevent HIV infection in the reporting period	Quarterly
TB_ART	Treatment	Proportion of new and relapsed TB cases living with HIV on ART during TB treatment	Annual
TB_PREV	Prevention	Proportion of ART patients who started on a standard course of TB Preventive Treatment (TPT) in the previous reporting period who completed therapy	Semi-Annual
TB_STAT	Testing	Percentage of new and relapse TB cases with documented HIV status	Quarterly

TX_CURR	Treatment	Number of adults and children currently receiving antiretroviral therapy (ART)	Quarterly
TX_ML	Treatment	Number of ART patients (who were on ART at the beginning of the quarterly reporting period or initiated treatment during the reporting period) and then had no clinical contact since their last expected contact	Quarterly
TX_NEW	Treatment	Number of adults and children newly enrolled on antiretroviral therapy (ART)	Quarterly
TX_PVLS	Viral Suppression	Percentage of ART patients with a suppressed viral load (VL) result (<1000 copies/ml) documented in the medical or laboratory records/laboratory information systems (LIS) within the past 12 months	Quarterly
TX_RTT	Treatment	Number of ART patients who experienced IIT during any previous reporting period, who successfully restarted ARVs within the reporting period and remained on treatment until the end of the reporting period.	Quarterly
TX_TB	Treatment	Proportion of ART patients screened for TB in the semiannual reporting period who start TB treatment.	Semi-Annual

Table 4: Frequency of Reporting Table

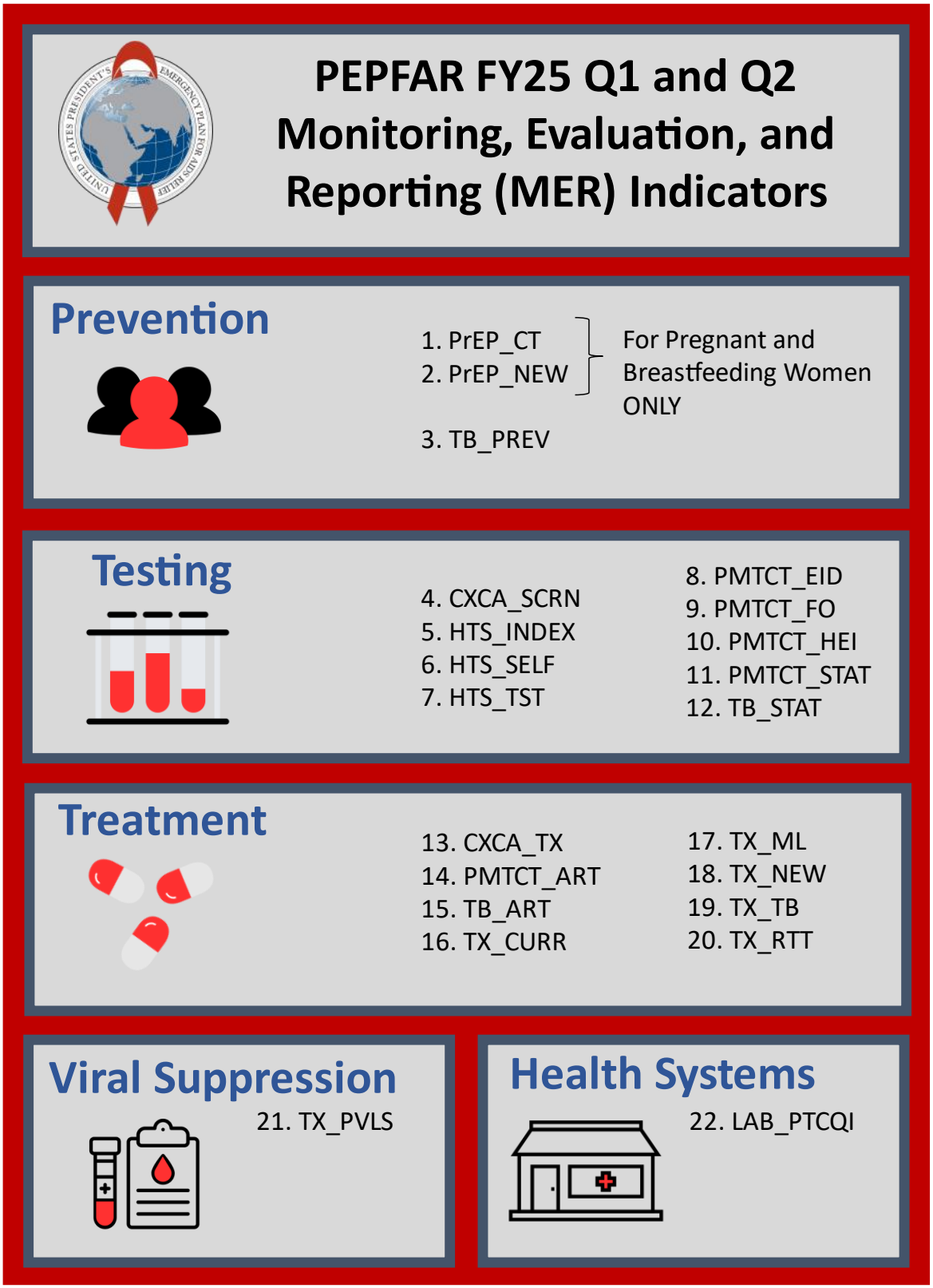
PEPFAR MER v2.8
FY25 Q1 and Q2 Reporting Frequency Table

QUARTERLY	SEMI-ANNUAL	ANNUAL	HOST COUNTRY
HTS_TST Ⓕ Ⓒ	CXCA_SCRN Ⓕ	LAB_PTCQI Ⓕ	DIAGNOSED Ⓝ Ⓢ
HTS_INDEX Ⓕ Ⓒ	CXCA_TX Ⓕ	PMTCT_FO Ⓕ	PMTCT_ART Ⓝ Ⓢ
HTS_SELF Ⓕ Ⓒ	TB_PREV Ⓕ	TB_ART Ⓕ	PMTCT_STAT Ⓝ Ⓢ
PMTCT_ART Ⓕ	TX_TB Ⓕ		TX_CURR Ⓝ Ⓢ
PMTCT_EID Ⓕ			VL_SUPPRESSION Ⓝ Ⓢ
PMTCT_HEI_POS Ⓕ			
PMTCT_STAT Ⓕ			
PrEP_CT Ⓕ			
PrEP_NEW Ⓕ			
TB_STAT Ⓕ			
TX_CURR Ⓕ			
TX_ML Ⓕ			
TX_NEW Ⓕ			
TX_PVLS Ⓕ			
TX_RTT Ⓕ			

Indicator Frequency & Type	
Quarterly	Report 3 months of results for these indicators, as instructed in the indicator reference sheet, at each quarterly reporting cycle.
Semi-Annual	Report 6 months of results for these indicators, as instructed in the indicator reference sheet, at the Q2 and Q4 reporting cycles.
Annual	Report 12 months of results for these indicators, as instructed in the indicator reference sheet, at the Q4 reporting cycle.
Host Country	Host country indicators (both targets and results) are reported annually. Host country targets are provided during COP and host country results are provided during Q4 reporting. Data for host country indicators should reflect both PEPFAR and other stakeholder achievements.

MER Reporting Levels			
Standard MER Indicator Reporting Levels		*Host Country Indicator Reporting Levels*	
Ⓐ	**Above-site-level**. Indicators collected at this level are reported at the OU (country) -level by implementing mechanism.	Ⓝ	**National-level.** Host Country indicators collected at this level are reported at the at the OU (country) -level in DATIM by USG staff. These data should encompass results for the entire host country, both PEPFAR and non -PEPFAR support.
Ⓒ	**Community-level**. Indicators collected at this level are reported at a larger geographic location, not a single structure. Each PEPFAR country team has defined its own community site area. These areas overlap with districts or other geographic entities (e.g., ward, county).	Ⓢ	**Subnational-level.** Host Country indicators collected at this level are reported at the PEPFAR priority subnational unit -level by USG staff. These data should encompass results for the entire host country, both PEPFAR and non -PEPFAR support.
Ⓕ	**Facility-level.** Indicators collected at this level are reported at fixed geographic points (sites) providing HIV -related services.	Ⓕ	**Facility-level.** Host Country indicators collected at this level are reported at fixed geographic locations (sites) providing HIV -related services. These data should be reported at PEPFAR -supported sites, but should encompass both PEPFAR and non -PEPFAR support at PEPFAR -supported sites.
Ⓟ	**Point of service delivery-level.** Indicators collected at this level are still reported at facilities, but focus even more granularly on service delivery points within a site where specific services are being provided (e.g., testing, treatment, PMTCT, VMMC, etc.).		

Figure 11: PEPFAR MER Indicators Infographic



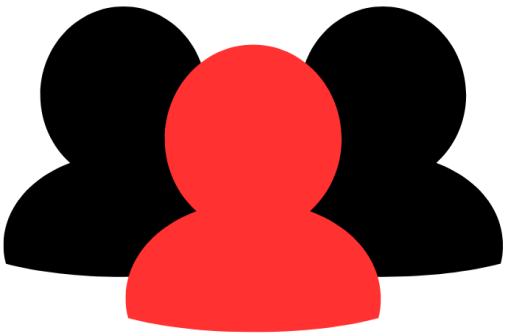
How to Read a PEPFAR Indicator Reference Sheet

All indicators in this guidance are provided in a specific format to allow the reader to easily understand the specific requirements of each indicator. Please use this layout as a guide to understand how to read the reference sheets.

Indicator Code

Description:	*Name of the indicator*	
Numerator:	*Name of the numerator*	*Descriptive information about the numerator*
Denominator:	*Name of the denominator*	*Descriptive information about the denominator*
Indicator changes (MER v2.7 to v2.8):	*Highlights any changes that have occurred between MER 2.0 (versions 2.7 and 2.8). For changes prior to version 2.8, refer to the guidance from previous years.*	
Reporting level:	*Defines the level at which the indicator is reported: facility, community, and/or above-site*	
Reporting frequency:	*Defines the period at which the indicator is reported: quarterly, semi-annually, or annually*	
How to use:	*Defines how the data are used to monitor PEPFAR program activities*	
How to collect:	*Defines how the data are collected (highlighting data source, issues with double counting/deduplication, and important components of data collection that ensure data quality)*	
How to review for data quality:	*Outlines specific data quality considerations for the indicator*	
How to calculate annual total:	*Defines how annual totals are calculated for the indicator at the end of the fiscal year*	
Disaggregations: *In each indicator reference sheet, within the disaggregations section, the disaggregate group that will be used to auto-sum to the numerator or denominator total is highlighted in **BOLD** text. Not all indicators will auto-calculate.*	**Numerator Disaggregations:**	
	Disaggregate Groups	**Disaggregates**
	Name of Numerator Disaggregate Group(s) [Disaggregate Requirements: (e.g., Required, Optional]	• *Disaggregations*
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	Name of Denominator Disaggregate Group(s) [Disaggregate Requirements: (e.g., Required, Optional]	• *Disaggregations*
Disaggregate descriptions & definitions:	*Describes and defines the disaggregates relevant to the indicator in greater detail*	
PEPFAR-support definition:	*Lists the indicator-specific definition for DSD vs. TA-SDI support that differ from the standard definitions outlined in the introduction section of the guidance*	
Guiding narrative questions:	*Lists the indicator-specific questions that implementing partners and USG country teams should address in the implementing mechanism and technical area summary narratives*	
Data visualization & use examples:	*This section is included on the reference sheet for a highlighted subset of indicators and depicts example analyses or visualizations of the indicator's data. Examples are **not exhaustive** but are intended to be illustrative and informative. PEPFAR field teams and implementing partners are encouraged to continually innovate and improve upon any data visualizations provided here.*	

PREVENTION INDICATORS



PREP_CT

Description:	Number of individuals, excluding those newly enrolled, that return for a follow-up visit or re-initiation visit to receive pre-exposure prophylaxis (PrEP) to prevent HIV during the reporting period	
Numerator:	Number of individuals that returned for a follow-up or re-initiation visit to receive PrEP during the reporting period	N/A
Denominator:	N/A	N/A
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional and should only be reported for pregnant and breastfeeding women on PrEP.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	Tenofovir-containing oral PrEP reduces the risk of HIV acquisition among numerous populations when taken effectively. WHO guidelines recommend offering oral PrEP, as well as other long-acting injectable products to those at higher risk of HIV infection. This level of elevated risk has been seen in many parts of sub-Saharan Africa, including among serodiscordant couples with inconsistent condom use, when the partner living with HIV is not virally suppressed, or when there are partners outside of the main relationship. PEPFAR supports WHO guidelines on the use of oral and long-acting injectable PrEP as part of a package of comprehensive structural, biomedical and behavioral prevention services. In most settings, oral PrEP and new PrEP products will be integrated into existing prevention or treatment services for the target population. As PEPFAR continues to scale up PrEP service delivery, monitoring ongoing PrEP service utilization will be important to understand which populations are using this prevention intervention. Understanding engagement in PrEP services by population will help improve implementation strategies for those in highest incidence communities initiating PrEP and the strategies for supporting continuity of services.	
How to collect:	The numerator can be generated by counting the number of established PrEP users on any approved PrEP regimen or type that returned for a follow-up visit during the reporting period. **Newly initiating PrEP during the reporting period should be counted only under PrEP_NEW.** PrEP_CT counts re-initiations and follow-up visits for established PrEP clients and intends to measure continuity of PrEP use. Unlike HIV treatment, PrEP use does not have to be lifelong. Effective PrEP tracks periods of risk of HIV acquisition and may cease once an individual is no longer at risk for HIV. This indicator intends to measure continued use of PrEP at any point within the reporting period. • At Q1: report the number of returning PrEP users that had at least one PrEP follow-up or re-initiation visit that took place during Q1. • At Q2: report the number of returning PrEP users that had at least one PrEP follow-up or re-initiation visit that took place during Q2. • At Q3: report the number of returning PrEP users that had at least one PrEP follow-up or re-initiation visit that took place during Q3. • At Q4: report the number of returning PrEP users that had at least one PrEP follow-up or re-initiation visit that took place during Q4. • PrEP users should not be counted in PrEP_NEW and PrEP_CT in the same reporting period. If an individual initiates PrEP during the reporting period and returns for a follow-up visit during the same reporting period, that individual should only be counted in PrEP_NEW in that reporting period. • If an individual transitions from one PrEP method to a new PrEP method (e.g., from oral PrEP to	

<table>
<tr><td></td><td>injectable PrEP) they should be counted under PrEP_CT as a re-initiation or continuing PrEP user, NOT under PrEP_NEW. If a current PrEP user changes to a new PrEP type during the reporting period, only the PrEP type at their most recent visit in the reporting period should be recorded under the ‘PrEP Type’ disaggregate.
• If an established user has multiple follow-up visits within the same reporting period, they should only be counted once, in accordance with their most recent visit in the reporting period. This applies to individuals on any PrEP method.
○ If an individual is on a long-acting injectable PrEP method in which the injection schedule requires more than one injection administration visit in a single reporting period (e.g., CAB LA injections administered every 8 weeks and 2 injection visits fall within the same reporting period), that user can only be counted under PrEP_CT once in the given reporting period.
• If an individual tests positive at his or her PrEP follow-up appointment and is then initiated on PEPFAR-supported treatment in the same reporting period, that individual could be counted as PREP_CT in addition to TX_NEW and TX_CURR (given successful transfer into the ART program) within that reporting period. They would notbe counted under PREP_CT in subsequent reporting periods.</td></tr>
<tr><td>How to review for data quality:</td><td>Numerator ≥ subtotal of test result disaggregate group.</td></tr>
<tr><td>How to calculate annual total:</td><td>There should be no annual total. PrEP users who continue on PrEP across reporting periods will be counted in multiple reporting periods; therefore, to avoid double-counting, the numerator should not be summed across reporting periods.</td></tr>
<tr><td>Disaggregations:</td><td>
<table>
<tr><th colspan="2">Numerator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>Age/Sex
[Optional]

This is only applicable to Females during FY25 Q1 & Q2</td><td>• 15-19 F, 20-24 F, 25-29 F, 30-34 F, 35-39 F, 40-44 F, 45-49 F, 50+ F, Unknown Age F</td></tr>
<tr><td>Test Result
[Optional]</td><td>• Positive
• Negative
• Other</td></tr>
<tr><td>Pregnancy/breastfeeding status [Optional]</td><td>• Pregnant
• Breastfeeding</td></tr>
<tr><td>PrEP Distribution [Optional]</td><td>• Facility
• Community (associated with a facility)</td></tr>
<tr><td>PrEP Type [Optional]</td><td>• Oral
• Injectable
• Other</td></tr>
<tr><th colspan="2">Denominator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>N/A</td><td>N/A</td></tr>
</table>
</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td>Age: Age is defined as the age at the time of the most recent PrEP re-initiation or continuation visit during the reporting period.
Test result: Test result is defined as the HIV testing result received by returning PrEP users. A person on PrEP should be receiving an HIV test according to national guidelines or at least once a quarter. In the unlikely event that an HIV test is not administered, or the result is not known, this test result should be counted as “Test result: Other.” There should be limited use of “Other” and every attempt made to report accurate test results for the visit reported under PrEP_CT in the given quarter.</td></tr>
</table>

	Pregnancy/breastfeeding status: Should be confirmed at each visit. **PrEP Type**: Refers to the number of individuals re-initiating or returning for a PrEP follow-up visit for any PrEP type during the reporting period. PrEP types include any indication or regimen for oral PrEP, long-acting injectable products, or other new products as they are approved for use. An individual should be counted under 'Injectable' for PrEP Type when they have received any long-acting PrEP injection at a follow-up or re-initiation visit, including the initial first or second injection for individuals new to a long-acting injectable PrEP regimen. **PrEP Distribution:** The reporting level for this indicator is at the facility level. This disaggregate tracks if PrEP is delivered at a traditional fixed facility, or in a community or other non-traditional setting (still associated with a facility) such as through differentiated service delivery modalities. If PrEP is being provided at community-based locations, these locations should be connected to or have a relationship to a clinical facility. The community locations providing PrEP programming should count the number of individuals currently on PrEP being served through the community service delivery point, and then those data should be reported through the facility connected to that community location.
PEPFAR-support definition:	Standard definition of DSD and TA used. Provision of key staff or commodities for PrEP services includes: ongoing procurement ofcritical commodities (excluding HTS commodities) such as "tenofovir-containing PrEP" which could be TDF/FTC or TDF/3TC, as well as other PrEP products as they come online, or funding for salaries of personnel providing any of the prevention package components (i.e., clinicians, outreach workers, program managers). Staff responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. Ongoing support for HIV prevention among PrEP services includes: mentoring and supportive supervision; training; organizational strengthening; QA/QI; program design like development of training curricula, PrEP guidance development, or standard operating procedures (SOPs) and follow-up to ensure quality of care; regular assistance with monitoring and evaluation functions and data quality assessments; or supply chain management.

PrEP_NEW

Description:	Number of individuals who were newly enrolled on pre-exposure prophylaxis (PrEP) to prevent HIV infection in the reporting period	
Numerator:	Number of individuals who were newly enrolled on pre-exposure prophylaxis (PrEP) to prevent HIV infection in the reporting period	The numerator is generated by counting the number of people newly enrolled on PrEP (including WHO specified regimens "tenofovir-containing PrEP" during the reporting period, in accordance with the demonstration project guidance or the nationally approved protocol (or WHO/UNAIDS standards).
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	The indicator measures the ongoing growth of PrEP initiations. This measure is critical to assess progress in the program's response to the epidemic in specific geographic areas, and the uptake of PrEP among persons at higher risk of HIV infection. This indicator permits monitoring trends in PrEP use and now includes different PrEP product options. The indicator does not attempt to measure the cost, quality, or effectiveness of PrEP provided. These elements will each vary within and between countries and are liable to change over time. PrEP has been shown to reduce incident infections among several populations, including pregnant and breastfeeding women, serodiscordant couples, and other high-risk populations. The WHO recommends that oral PrEP as well as other long-acting injectable products should be offered as an additional prevention choice for people at higher risk.	
How to collect:	The numerator can be generated by counting the number of people who are newly enrolled on PrEP in the reporting period, in accordance with national guidelines (or WHO/UNAIDS standards). NEW is a state defined by an individual's starting PrEP for the first time (outside of any clinical trial participation). It is expected that the characteristics of new users are recorded at the time they newly initiate into a program. Individuals are "new" on PrEP only if they are naive to antiretroviral therapy for prevention of HIV infection in a program implementation setting and have not received oral or topical PrEP previously in any program at any other time. An individual should NOT be counted as NEW if they have previously taken any type of PrEP, even if they are changing to a new PrEP type (e.g., from oral to injectable PrEP). If an individual is PrEP-naïve and is starting a long-acting injectable PrEP method, they should be counted under PrEP_NEW after they have received the first initiation injection dose. Any process to determine PrEP suitability should include questions about a person's exposure to or risk of violence against women and girls, with appropriate interventions or referrals provided as needed.	
How to review for data quality:	Numerator ≥ subtotal of the age/sex disaggregation: The total number people newly enrolled on PrEP (numerator) should be greater or equal to the subtotal of the age/sex disaggregate group.	
How to calculate annual total:	Sum results across quarters.	
Disaggregations:	**Numerator Disaggregations:**	
	Disaggregate Groups	**Disaggregates**

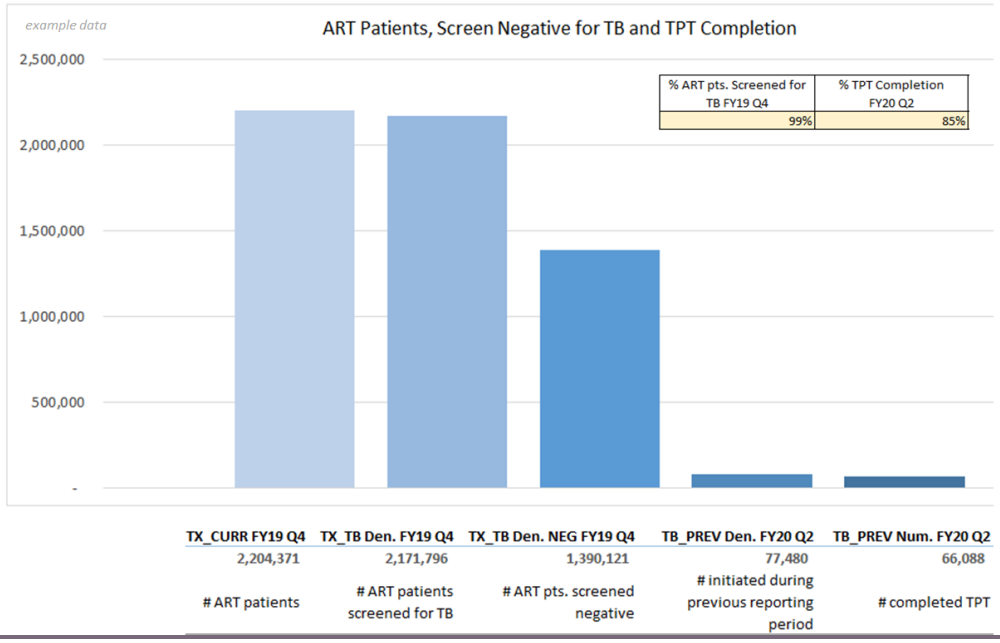
	Age/Sex [Required] This is only applicable to Females during FY25 Q1 & Q2	• 15-19 F, 20-24 F, 25-29 F, 30-34 F, 35-39 F, 40-44 F, 45-49 F, 50+ F, Unknown Age F
	Pregnancy/breastfeeding status [Optional]	• Pregnant • Breastfeeding
	PrEP Distribution [Optional]	• Facility • Community (associated with a facility)
	PrEP Type [Required]	• Oral • Injectable • Other
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	N/A	N/A
Disaggregate descriptions & definitions:	**Age Description:** Age is defined as the age at the time of initiation of PrEP. For example, if a woman 19 years of age begins PrEP and then shortly after turns 20 years of age, she will still be counted under NEW in the 15-19 F age/sex category. **Pregnancy/Breastfeeding Status:** Should be confirmed at initiation. **PrEP Type:** Refers to the number of individuals starting PrEP for the first time (outside of any clinical trial participation) who newly initiated one of the PrEP types during the reporting period. PrEP types include any indication or regimen for oral PrEP, long-acting injectable products, or other new products as they are approved for use. An individual should be counted under 'Injectable' for PrEP Type after they have received the first initiation injection dose for PrEP_NEW only if they have never been on any other PrEP regimen prior to initiating injectable PrEP. **PrEP Distribution:** The reporting level for this indicator is at the facility level. This disaggregate tracks if PrEP is delivered at a traditional fixed facility, or in a community or other non-traditional setting (still associated with a facility) such as through differentiated service delivery modalities. If PrEP is being provided at community-based locations, these locations should be connected to or have a relationship to a clinical facility. The community locations providing PrEP programming should count the number of individuals newly on PrEP being served through the community service delivery point, and then those data should be reported through the facility connected to those community locations.	
PEPFAR-support definition:	Standard definition of DSD and TA used. Provision of key staff or commodities for PrEP services includes: ongoing procurement of critical commodities such as "tenofovir-containing PrEP" which could be, TDF/FTC or TDF/3TC, other long-acting PrEP options, or funding for salaries of personnel providing any of the prevention package components (i.e., clinicians, outreach workers, program managers). Staff responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. Ongoing support for HIV prevention among PrEP services includes: mentoring and supportive supervision; training; organizational strengthening; QA/QI; program design like development of training curricula, PrEP guidance development, or standard operating procedures (SOPs) and follow-up to ensure quality of care; regular assistance with monitoring and evaluation functions and data quality assessments; or supply chain management.	

TB_PREV

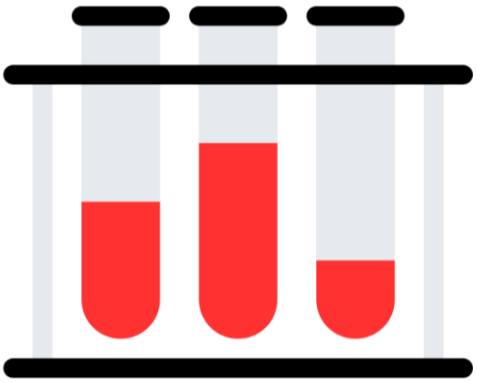
Description:	Proportion of ART patients who started on a standard course of TB Preventive Treatment (TPT) in the **previous** reporting period who completed therapy	
Numerator:	Among those who started a course of TPT in the **previous** reporting period, the number that completed a full course of therapy (for continuous IPT programs, this includes the patients who have completed the first 6 months of isoniazid preventive therapy (IPT), or any other standard course of TPT such as 3 months of weekly isoniazid and rifapentine, or 3-HP)	The numerator is generated by counting the number of PLHIV on ART from the **previous** reporting period who were documented as having received at least 6 months of IPT or having completed any other standard course of TPT (such as 3-HP).
Denominator:	Number of ART patients who were initiated on any course of TPT during the **previous** reporting period	The denominator is generated by counting the total number of patients on ART who were started on any course of TPT during the reporting period **prior to** the one being reported.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional.**	
Reporting level:	Facility	
Reporting frequency:	Semi-Annually	
How to use:	This indicator measures the performance of HIV programs in scaling up TPT, with the goal of preventing progression to active TB disease among persons living with HIV (PLHIV). As part of a cascade from TX_CURR to TB screening (captured in TX_TB), this indicator will inform programs on the pace of scale-up, and the proportion will allow for monitoring of cohorts through completion of therapy. Disaggregates on the timing of ART and age/sex breakdowns will allow programs to monitor those who are newly starting ART, an important focal population in all countries and in particular in countries that have already provided TPT for many of their PLHIV in care.	
How to collect:	The denominator can be generated by counting the total number of patients who initiated any regimen of TPT in the semi-annual reporting period that is **prior to** the one being reported on. For example, if reporting is for Q1 and Q2 of a fiscal year (e.g., October 2019 to March 2020), then the denominator would include those that were started on TPT in Q3 and Q4 of the previous fiscal year (e.g., April to September 2019). If a TPT register is being used, then this would require simply framing out the dates that define the previous reporting period and counting all those who started TPT. **Importantly, programs should ensure that patients on continuous isoniazid therapy are counted only once, when they initiate therapy (denominator) and after they complete the first 6 months (numerator); care should be taken to ensure they are not included in future calculations.** If a patient is initiated on TPT and dies before TPT completion, this patient should be recorded in the denominator, but not in the numerator. If a patient initiates TPT at one site, completes at another, and is a documented transfer, that patient should be recorded in the denominator at the site where they initiated TPT, and they should be recorded as completed TPT (numerator) at the new site. The numerator can be generated by counting the subset of patients from the denominator who received at least 6 months of IPT or have completed another standard course of TPT. If a TPT register is being used, this would require framing out the dates that define the previous reporting period, identifying those that initiated TPT during the reporting period (the denominator) and then documenting the number of those patients who completed the course of TPT that they started during that reporting period. This should include the patients who completed a shorter alternative course,	

<table>
<tr><td></td><td>such as 3-HP, as well as those who are on prolonged or continuous IPT who have completed their first 6 months of therapy.
Note: If a patient was started on IPT in the previous reporting period (e.g., Q3 or Q4 FY2019), she/he/they would have completed during the current reporting period (e.g., Q1 or Q2 FY2020)
For IPT:
All patients who started any form of IPT, including prolonged or continuous IPT, at any time in the previous 6-month reporting period (i.e., at any time in the 6 months before the start of the period being reported) should be included in the denominator. Among the denominator, those that completed at least 6 months of isoniazid therapy would have done so in the period currently being reported (the numerator). The few patients who started and completed IPT in the previous reporting should be included and counted in the numerator and the denominator.
For 3-HP:
Patients who are taking 3-HP may have initiated and completed therapy in the previous reporting period, or they may have initiated TPT in the previous reporting period and completed TPT in the period currently being reported.
Any patient who started 3-HP at any point in the previous reporting period would be included in the denominator.
Any patient from that denominator who completed the course would be included in the numerator; this would include those who completed 3-HP in the first 3 months of the period being reported on.
For alternative regimens:
Patients who are taking other regimens (such as 1-HP) may also have initiated and completed therapy in the previous reporting period or they may have initiated TPT in the previous reporting period and completed TPT in the period currently being reported. Include and count patients under both scenarios (start and completion in the same reporting period AND start in the previous reporting period but completion in the one currently being reported).
These data elements can be collected from the ART register or from separate TPT registers. In some countries, TB presumptive registers might contain this information as well, but the information will need to be cross referenced for ART status.</td></tr>
<tr><td>How to review for data quality:</td><td>Data Element ≥ subtotal of each of the disaggregations.</td></tr>
<tr><td>How to calculate annual total:</td><td>The TB_PREV denominator and numerator should be analyzed independently of other data and the results reported in Q2 and Q4 should be summed to calculate the total number of ART patients who initiated and completed a course of TPT.

When analyzing this data in conjunction with data on TB screening for ART patients (TX_TB), it is important to align the correct reporting periods. For example, TB_PREV captures those who were initiated on TPT during the previous reporting period, so it should be compared to TB screening (TX_TB Denominator) and TX_CURR data from the previous reporting period.</td></tr>
<tr><td>Disaggregations:</td><td><table>
<tr><th colspan="2">Numerator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>Age/Sex by ART Start: [Optional]</td><td>Newly enrolled on ART: <15 F/M, 15+ F/M, Unknown Age F/M
Previously enrolled on ART: <15 F/M, 15+ F/M, Unknown Age F/M</td></tr>
<tr><th colspan="2">Denominator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
</table></td></tr>
</table>

	Age/Sex by ART Start: [Optional]	• Newly enrolled on ART: <15 F/M, 15+ F/M, Unknown Age F/M • Previously enrolled on ART: <15 F/M, 15+ F/M, Unknown Age F/M
Disaggregate descriptions & definitions:	**Age/Sex by ART Start Descriptions:** • Newly enrolled on ART: These individuals initiated TPT within 6 months of being enrolled on ART; data to be submitted by the following disaggregates: <15 F/M, 15+ F/M Unknown Age F/M • Previously enrolled on ART: These individuals initiated TPT at least 6 months (or longer) after being enrolled on ART; data to be submitted by the following disaggregates: <15 F/M, 15+ F/M, Unknown Age F/M	
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for routine HIV-related services includes: ongoing provision of critical re-occurring costs or commodities (such as ARVs, TB preventive therapy and diagnostic/screening tests) or funding of salaries or provision of Health Care Workers for HIV clinic services. Staff responsible for maintaining patient records in both HIV and TB clinics are included in this category; however, staff responsible for fulfilling reporting and routine M&E requirements are not included. Ongoing support for patients receiving routine HIV-related services includes: training of HIV service providers, clinical mentoring and supportive supervision of staff at HIV sites, infrastructure/renovation of facilities, support of HIV service data collection, reporting, data quality, QI/QA of HIV services support, ARV and TPT consumption forecasting and supply management, support of lab clinical.	
Data visualization & use examples:	**Example Visual of ART Patients Screen Negative for TB and TPT Completion**  	

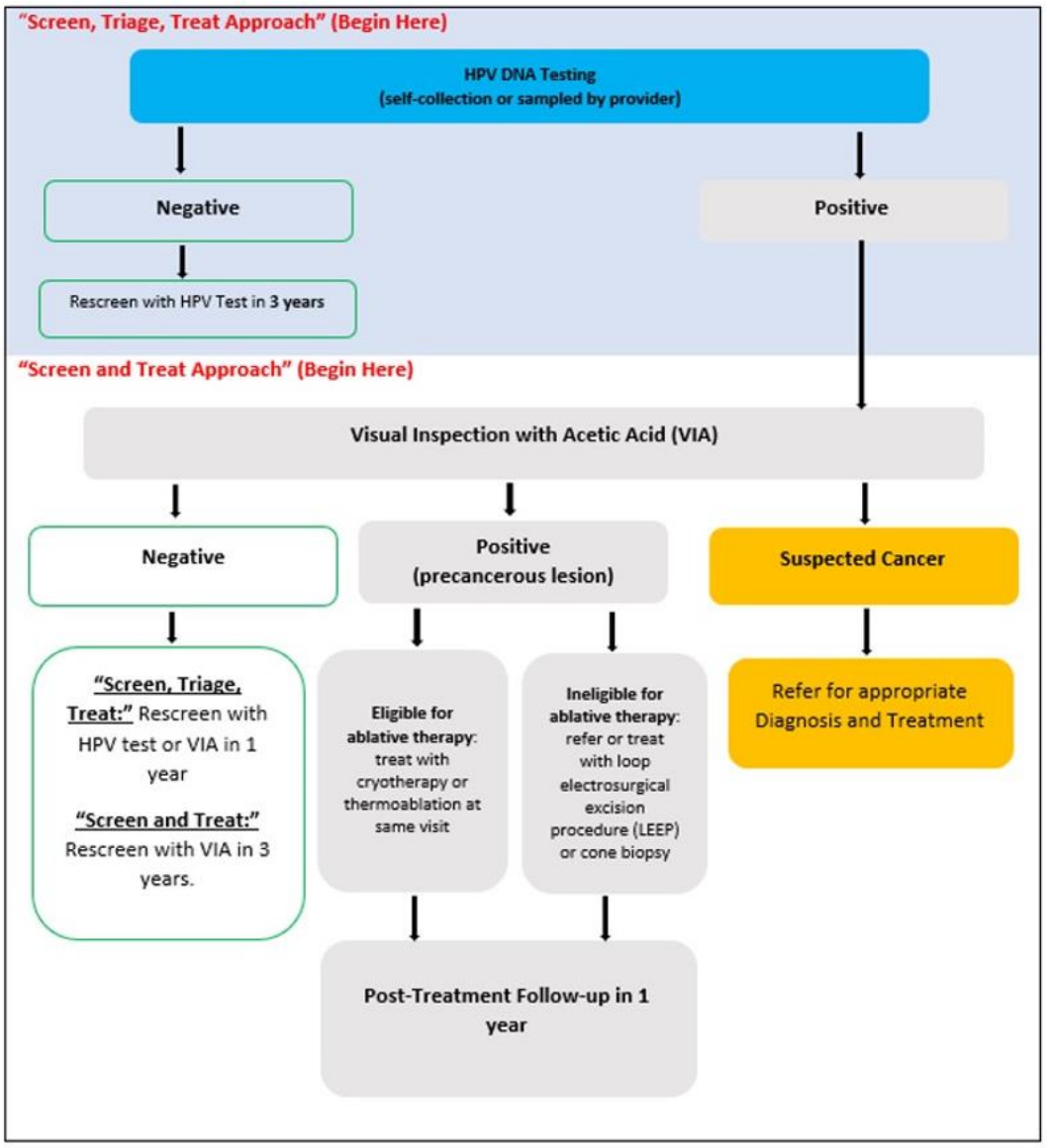
TESTING INDICATORS



CXCA_SCRN (INCLUDING CXCA_SCRN_POS)

Description:	Number of women living with HIV on ART screened for cervical cancer	
Numerator:	Number of women living with HIV on ART screened for cervical cancer	The numerator captures the number of individual women living with HIV on ART who received a screening test for cervical cancer.
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional.**	
Reporting level:	Facility	
Reporting frequency:	Semi-Annually	
How to use:	This indicator is vital for understanding and estimating the demand for screening services and forecasting and planning for the resources required to meet that demand and the resulting treatment needs. Disaggregation enhances sensitivity of this indicator in order to help identify the need for further outreach, as well as trigger further situational investigation at lower levels of the health system. CXCA_SCRN and CXCA_TX should be analyzed together at the district or sub-regional level that includes sites where both screening and treatment would occur, to monitor the percentage of women living with HIV who receive treatment while accounting for patient referrals between facilities. For VIA, the benchmark of 5%-25% screen-positivity for women (aged 30-60) screened for the first time should be used when monitoring performance. (WHO, 2013; ACCP, 2004)	

How to collect:	The primary data sources for this indicator are registers or logbooks in use at the point of cervical cancer screening service delivery at PEPFAR-supported ART sites. Client and facility level data collection tools should include the data elements required for disaggregation.
	Data for the numerator should be generated by counting the total number of women living with HIV on ART who received a cervical cancer screening test.
	For the purposes of this indicator, "screened" is defined as receiving the tests necessary to determine the need for treatment of precancerous lesions – or referral for suspected invasive cervical cancer.
	• For programs using a VIA based screen-and-treat strategy, the number of women receiving a VIA result should be counted here.
	• For programs using a screen-triage-treat strategy (e.g., HPV test with VIA triage, with treatment only if the woman is VIA-positive), the following should be counted:
	  ○ The number of women who received a negative result on the initial screening test (e.g., HPV test).
	  ○ The number of women who received BOTH a positive result on the initial screening test(e.g., HPV test) AND any (positive, suspected cancer, or negative) result on the triage test (e.g., VIA).
	Only completed screenings should be counted under this indicator – screening tests that were not completed due to cervicitis or who had a positive HPV screen with no follow up VIA should not be counted and should be reported in the narratives. Screening visits where cancer is suspected based on initial speculum examination, prior to the application of acetic acid, should be counted as "completed screenings." This is because the **defined purpose** of the screening was **fulfilled** (i.e., to identify individuals with increased probability of having either the disease itself or a precursor of the disease).	



How to review for data quality:	The numerator for this indicator should not be larger than TX_CURR among women 15+ years.
How to calculate annual total:	Sum results across reporting periods for the numerator.

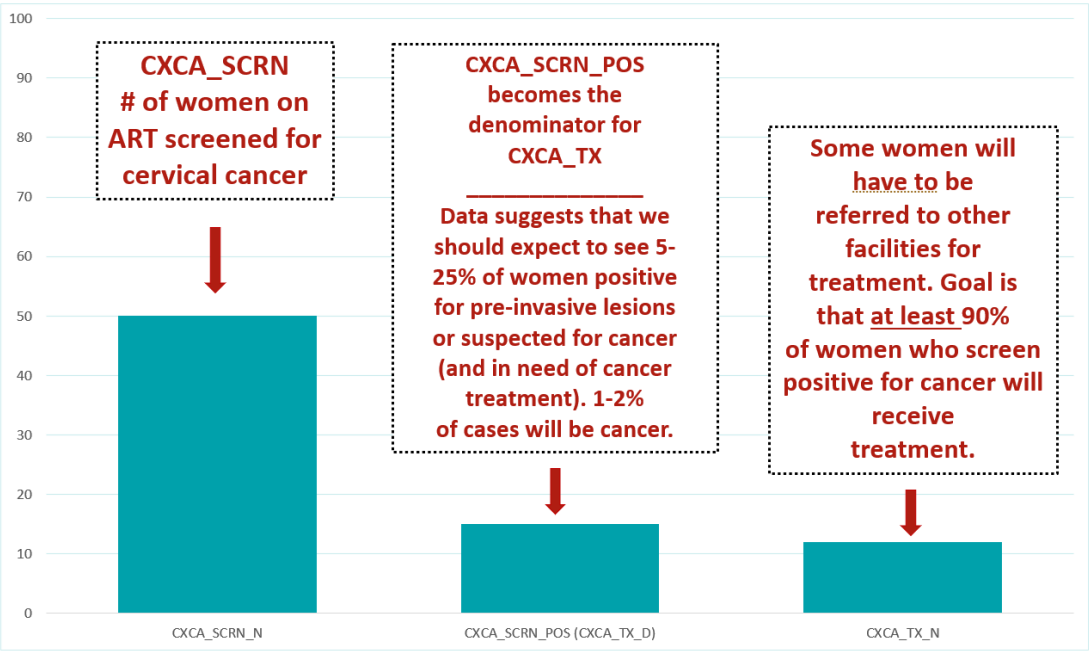
Disaggregations:

Numerator Disaggregations:

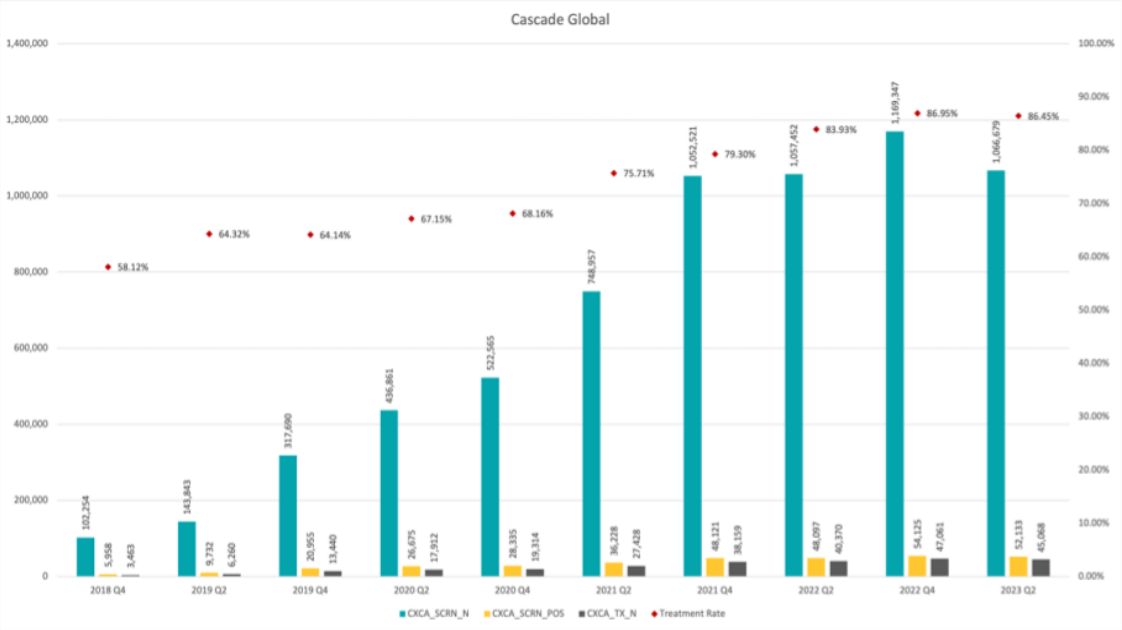
Disaggregate Groups	Disaggregates
Screening Visit Type and Result by Age [Optional]	• 1st time screened (Negative, Positive, Suspected Cancer) by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44,45-49, 50+, Unknown Age • Rescreened after previous negative (Negative, Positive, Suspected Cancer) by: 15-19, 20-24, 25-29, 30-34, 35- 39, 40-44, 45-49, 50+, Unknown Age • Post-treatment follow-up (Negative, Positive, Suspected • Cancer) by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44,

		45-49, 50+, Unknown Age
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	N/A	N/A

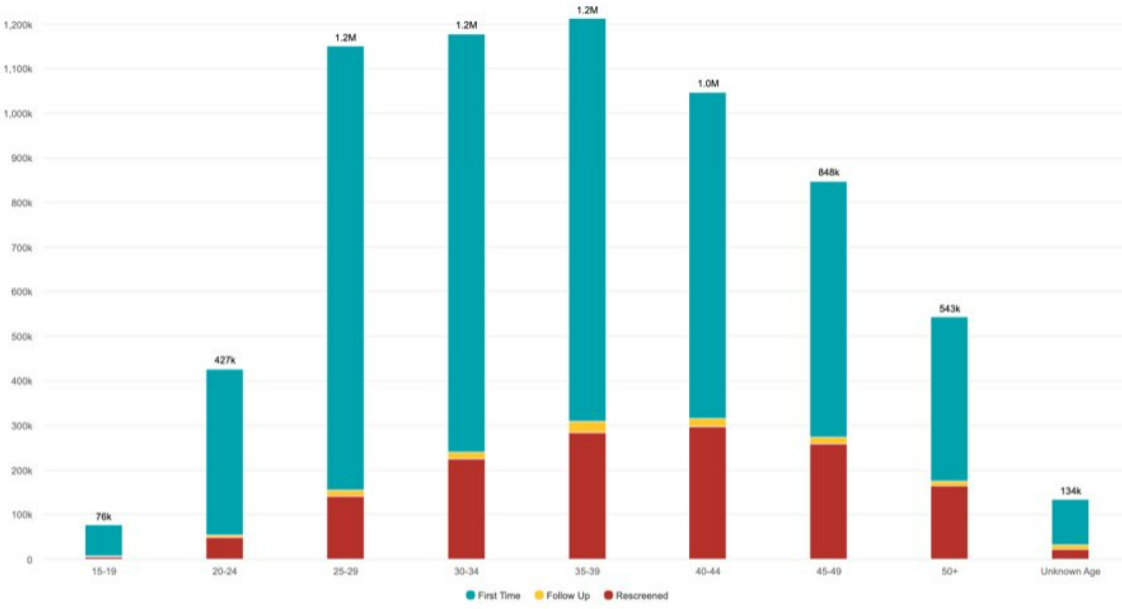
Disaggregate descriptions & definitions:	**Result:**
	• Negative
	  ○ Indicates that neither a lesion, nor any indication of invasive cervical cancer were visualized during the VIA test, including a negative VIA after a positive HPV test. Although not captured in MER reporting, custom indicators may be used to track screening outcomes by testing modality.
	• Positive (**CXCA_SCRN_POS**)
	  ○ Indicates the presence of a positive result on the initial screening test (e.g., HPV test) AND the visualized presence of an aceto-white lesion on the cervix following the application of acetic acid with the "screen-triage-treat" approach, OR the presence of an aceto-white lesion on the cervix with VIA with the "screen and treat" approach.
	  ○ In practice, women with a positive result are further differentiated into 'eligible for cryotherapy' and 'ineligible for cryotherapy', based on the size and location of the lesion.
	  ○ Women with fulminating masses or other indication of suspected cervical cancer are not counted under this disaggregate.
	• Suspected Cancer
	  ○ Indicates the visualized presence of a fulminating mass, or other clinical indicatorsuspicious for invasive cervical cancer.
	
	In practice, women with a VIA screening (or triage) test result of "positive" or "suspected cancer"are both considered **screen-positive** (or triage-positive); however, for the purposes of monitoring, screen-positive results are separated into precancerous lesions ("positive" disaggregate) and suspected cancer ("suspected cancer" disaggregate) because the care pathways for each are different. Precancerous lesions may be treated immediately with outpatient procedures, whereas suspected cancer requires further evaluation (colposcopy, biopsy, diagnosis) before treatment options can be considered. Clinical definitions can be found in WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention, second edition. Geneva: World Health Organization; 2021.
	
	Screening Visit Type
	• 1st Time screening
	  ○ This disaggregate allows the monitoring of screening service provision (and positivity rate) in the screening-naïve population living with HIV – only women being screened for the first time in their lifetime should be counted under this disaggregate.
	• Rescreening after previous negative result
	  ○ This disaggregate allows the monitoring of screening service provision (and positivity rate) in the population of women living with HIV who have received at least one cervical cancer screening test in their lifetime, and who received a negative result on their mostrecent screening test.
	  ○ WHO recommends that women living with HIV or women of unknown HIV status who receive a negative cervical cancer screening test result be rescreened every 3-5 years.
	  ○ As a program matures, countries should consider adding an additional performance indicator which measures whether women that should return for routine rescreening in a given time period are returning in that time period (e.g., number of rescreened women in a given time period, over the number of women who were expected to be rescreened in the same time period).
	• Post-treatment follow-up
	  ○ This disaggregate allows the monitoring of screening service provision (and positivity rate) in the population of women living with HIV who have received precancerous lesion treatment	

	due to a positive screening result on their last screening test. ○ Some national guidelines require post-treatment follow-up at intervals that differ from the PEPFAR screening algorithm – programs should use additional indicators to monitor the additional follow-up time points, and this should be noted in the narrative.
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. For cervical cancer screening services, direct service delivery includes: ongoing procurement of critical screening related commodities or requisite materials such as specula, acetic acid, bright white light source (bulbs/lamp, or torch/batteries), or other consumables (cotton swabs, exam gloves, gauze, etc.), or funding for salaries of screening service providers including program managers, supervisors, and/or coordinators. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. For cervical cancer screening services, ongoing support for service delivery improvement includes: clinical mentoring/supportive supervision, VIA training, guidance development, infrastructure/renovation of facilities, site level QI/QA, routine support of M&E and reporting, or commodities consumption forecasting and supply management.
Data visualization & use examples:	**HIV/Cervical Cancer Cascade:** 

Cervical Cancer Screening to Treatment Analysis:



Screening Type by Fine Age:



HTS_INDEX

Description:	Number of individuals who were identified and tested using index testing services and received their results	
Numerator:	Number of individuals who were identified and tested using index testing services and received their results	This indicator aims to monitor the scale and fidelity of implementation of HIV index testing-related services
Denominator:	N/A	There is no official denominator. However, this indicator represents a cascade and the collected disaggregations serve as both numerators and denominators when analyzing the index testing cascade.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required with flexibility.** For HTS_INDEX: Under Flexible Topline Path 1 option, then HTS_INDEX becomes optional. Under Path 1 and Path 2, Steps 1-3 are optional. New positives and new negatives will be required under Path 2 Standard Reporting option. HTS_INDEX auto-populates to HTS_TST under Path 2.	
Reporting level:	Facility & Community	
Reporting frequency:	Quarterly	
How to use:	This MER indicator helps monitor PEPFAR programming of safe and ethical HIV index testing services (often also referred to as partner notification services, partner testing, contact tracing, etc.). Index testing is an approach whereby the exposed contacts (i.e., sexual partners, biological children <19 years of age, biological siblings of pediatric index clients, and anyone with whom a needle was shared) of a person living with HIV (i.e., index client), are elicited and offered HIV testing services in a safe and ethical manner. In this context, index testing refers to any HIV testing of the contacts of an index client (i.e., a person known to be living with HIV). **Only the following persons count as contacts:** a. Current or past sexual partner(s) b. Biological children (<19 years of age). Biological children reported under HTS_INDEX should only include: • Biological children of a mother living with HIV, and/or • Biological children of male index clients (fathers) when the biological mother is living with HIV, she is deceased, or her HIV status is not known, not documented, or unable to be obtained. c. Biological parents (if the index client is a child) d. Biological siblings of pediatric index clients e. Anyone with whom a needle was shared. It is important to offer timely HIV testing to biological children of women with an unknown HIV status (i.e., do not delay the child's HIV test to first reach and test the biological mother). It is also imperative to offer HIV testing to children whose biological mothers withHIV or unknown HIV status have died. If the index client is the child, the biological mother should be offered HIV testing services, and if the mother is living with HIV or deceased, the biological father should be offered HIV testing services. In addition, all biological siblings of the index child should be offered HIV testing services. In this way, provision of index testing services is non-directional, whereby we are trying to follow transmission of the disease. Every newly diagnosed individual becomes a subsequent index client from whom to elicit contacts. Like HTS_TST and HTS_SELF, HTS_INDEX is reported at facility and community levels. Testing of persons who have not had exposure through an index client, such as neighbors or family	

members (e.g., children of HIV-negative mother, grandparents, etc.) not born to the index client, should ***not*** be reported under HTS_INDEX. Testing of non-contacts should be reported under the modality that best reflects the service delivery point where testing occurred. For example, if HIV testing were conducted in a mobile clinic, unexposed contacts would be reported under the 'Mobile' modality of HTS_TST.

All index testing services must meet WHO's 5C minimum standards, including consent, counseling, confidentiality, correct test results, and connection to person-centered HIV prevention and treatment services. Additionally, all index clients should be screened for Intimate Partner Violence (IPV) per WHO guidelines. An index client should never feel as if she/heare required to provide contacts in order to receive any services.

Overall, all index testing services being offered at all PEPFAR-supported sites should adhere to PEPFAR's guidance for implementing safe and ethical index testing services.

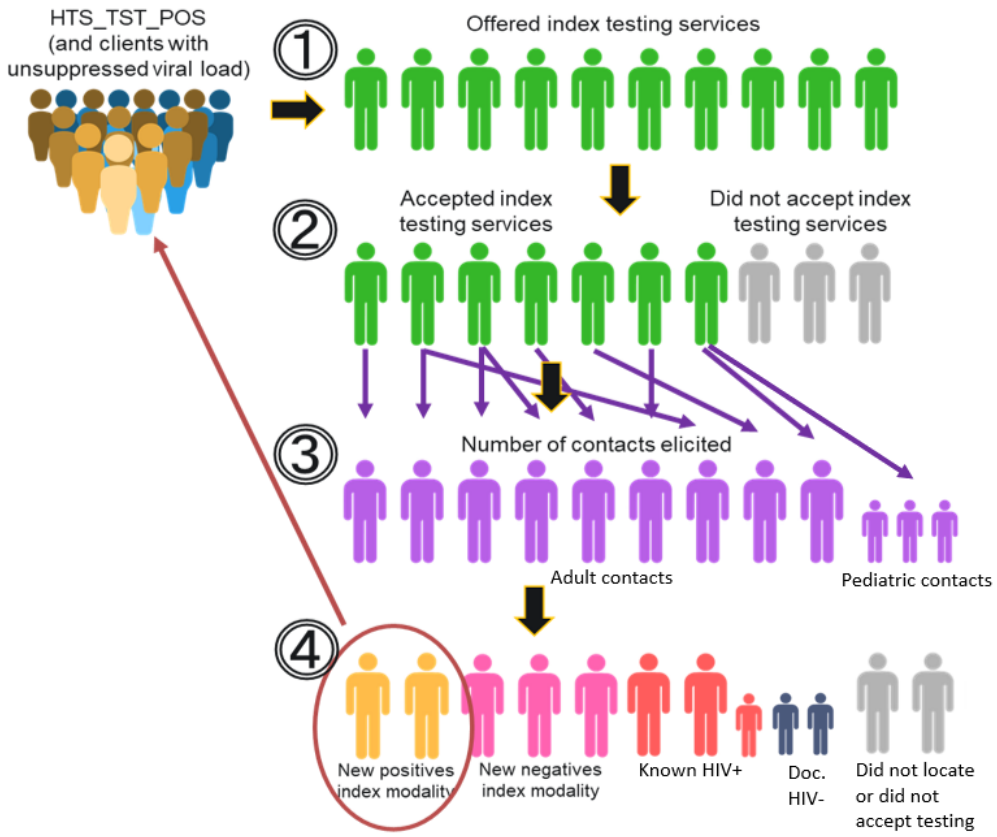
Note: The reporting of HTS_INDEX data by an implementing partner should **not** be used to infer whether a partner has conducted index testing in a manner compliant with PEPFAR's guidance for implementing safe and ethical index testing services. Additional monitoring, such as through SIMS, adverse events monitoring, and remediationefforts, is essential to ensure compliance with the index testing guidance.

HTS_INDEX is separated into several steps (1-4 below) that are aligned with core components of index testing implementation. These steps are part of a cascade of implementation that begins with an offer of index testing services to the index client andends in provision of an HIV test (and results) to the contacts named by the index client. This final step 4 (and the age sex disaggregates) will **auto-populate** into the 'Index' modality in HTS_TST for either facility or community.

The steps are:

1. **How many index clients were offered index testing services?** This is the number of index clients who were offered (e.g., counseled on) index testing services (regardless of whether those services were accepted by the index client) in compliance with PEPFAR's guidance for implementing safe and ethical index testing services. PEPFAR continues to emphasize universal offer of index testing services that are consistently provided in a safe and ethical manner.
2. **How many index clients accepted index testing services?** This is the number of index clients who accepted (e.g., agreed to through informed consent) provision of index testing services by a provider (acceptance of counseling on index testing, or acceptance of elicitation of current or past sexual partners/partner notification, etc.). *PEPFAR's guidance is centered on universal offer of safe and ethical index testing services (Step 1) and there is no expected minimum threshold of acceptance rates (Step 2).*
3. **How many contacts did the index client provide?** This is the number of contact names provided by the index client as a result of accepting index testing services, and additional contact information may be provided at a follow-up appointment if not immediately available. The index client provides the age (<15 years or ≥15 years) and sex (male or female) of the contact(s). Since the index client 'self-reports' these data, the contact's recorded age and/or sex does not need to be corrected in Step 3 if differing age/sex information is collected in Step 4. As mentioned above, contacts are only sexual partners, biological children/parents, and anyone with whom a needle was shared. *PEPFAR's guidance is centered on universal offer of safe and ethical index testing services (Step 1) and there is no expected minimum threshold of number of contacts provided (Step 3).*
4. **How many contacts were tested for HIV and received their results?** Of those tested and received their results, how many tested positive and negative? This is the number of contacts who were tested for HIV and received a seropositive or seronegative result. The positive and negative disaggregations do not include the contact's self-reported status; only the actual provision of an HIV diagnostic test (which, by definition, excludes HIV self-tests) to the contact. However, please note that previous diagnoses (i.e., known positives) should also be recorded as "known positive" in Step 4. ***Individuals who are known to be living with HIV should not be retested.***

Biological children (<19 years of age) of any index client and biological siblings of pediatric and adolescent index clients should be offered HTS. Children with any known or suspected HIV exposure should be retested, including but not limited to: breastfeeding from a mother living with HIV, known or suspected sexual activity, contact or abuse, needle stick exposure (unsafe injection practices) or

	through a blood transfusion. If a child is reported to have received a negative test in the past but the documentation is missing or unavailable, the child should be retested rather than waiting to retrieve the documentation. Biological children or biological siblings who are <15 years of age and who have a documented negative test can be reported as "documented negative with no other HIV exposure risk" (documented negative). HIV-exposed children reported in this category should have received a final negative HIV test at 18 months of age or 3 months after breastfeeding ended, whichever occurred later. Children who have a documented negative HIV test after the time period for early infant diagnosis (EID) services may also be counted. **The documented negative disaggregate applies only to index contacts in the pediatric age bands (<15 years of age).** All index contacts ≥15 years of age who are not known positive should receive an HIV test, regardless of whether she/he are a child of an index case or other type of contact.  Reporting and use of this indicator should not preclude any other data collection or indicators that may be used to monitor implementation, effects, and outcomes related to HIV index testing services. That is, other data may need to be collected and used by the program to ensure efficient and effective implementation of index testing services either at the facility or community level. For example, to have a more accurate denominator for contacts tested, programs may also collect information about the number of contacts reached among the contacts elicited. Furthermore, of those contacts reached, how many agreed to test for HIV? Programs may also wish to disaggregate the numbers of contacts reached and tested by the 4 different approaches to index testing (e.g., client, dual, contract, and provider) to see which approaches are most effective. Programs could also track the number of newly diagnosed partners and children linked to HIV treatment.
How to collect:	The suggested data source is a designated HIV Index Testing Services register or logbook. This will allow easier collection of the data for each step in the index testing cascade shown above (see Steps 1-4 above). Alternatively, existing HTS registers, logbooks, and reporting forms already in use to capture HTS can be revised to include the steps mentioned above and the updated disaggregation

categories. Examples of data collection forms include clientintake forms, activity report forms, or health registers such as HTS registers, health information systems, and non-governmental organization records.

Other important considerations for reporting on high-fidelity index testing services:

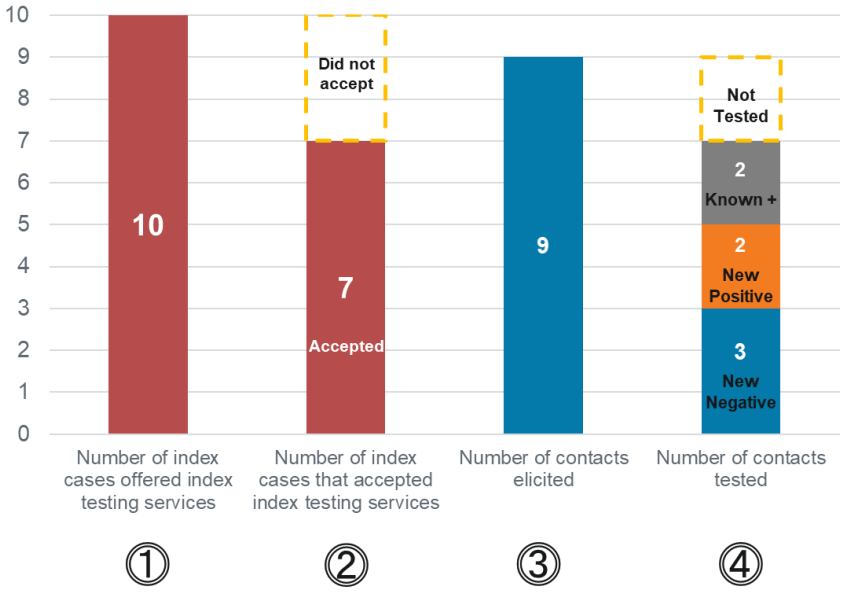
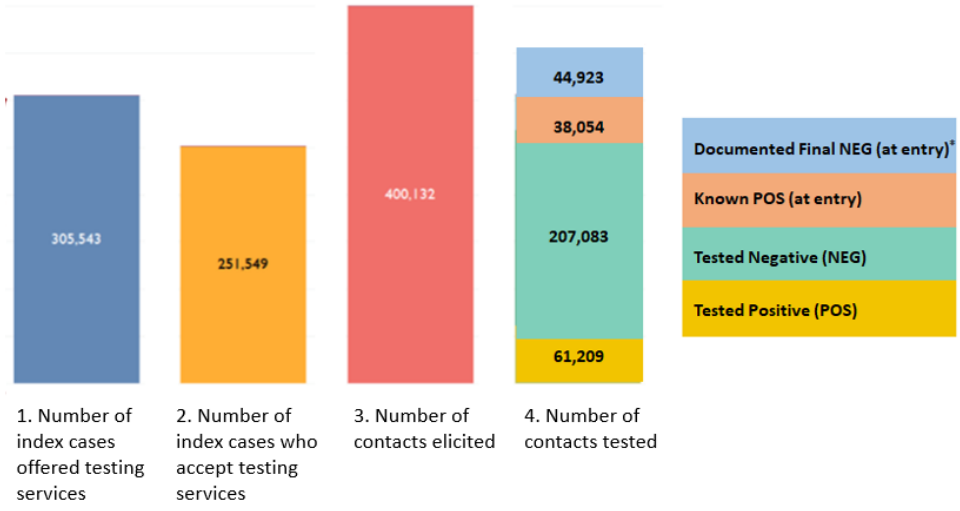
- For a contact to be counted under Step 4, she/he must be tested for HIV and receive their result (seropositive or seronegative) or be a known positive. That contact could either self-report a known exposure to someone with HIV as their reason for testing, have an index testing referral letter/card/coupon given to them from their partner/family member living with HIV (client-referral approach), or have been identified during the elicitation process and contacted by a provider. For example, if someone comes to a facility or mobile unit and requests an HIV test and reports a known exposure to someone with HIV as their reason for testing, that person should be counted under HTS_INDEX. Further, that individual's HIV diagnosis must be confirmed using a nationally validated testing algorithm. For example, an HIV-positive rapid HIV test performed at the community- or facility- level must be confirmed with a second and (in some contexts) third test, which may be performed at the same site or at a differentfacility. If the confirmatory test is performed at a different facility, then this may require follow-up by implementing partners to confirm the diagnosis before reporting on Step 4.
- For children <1 year old, only serologic tests used for diagnostic purposes should be reported under HTS_INDEX. Serologic tests for screening infants should be excluded (including tests to look for HIV exposure at age 9 months or another time point). For example, you may use the HTS_INDEX <1 year disaggregate to report negative diagnostic results if a serologic-based test is used to confirm the absence of HIV infection in infants (<1 year old) who have not breastfed for at least 3 months prior to testing. However, since confirmed diagnosis of HIV infection in children <18 months of age requires virologic, and ***not*** serologic, tests, the general expectation is not to see results in the <1 year "known positive" or "new positive" disaggregate of the HTS_INDEX indicator. HIV virologic testing of HIV-exposed infants should be counted under PMTCT_EID and as appropriate, PMTCT_HEI.
- Programs that utilize the 'dual-referral' approach (i.e., the provider/counselor sits with an index client and their partner(s) to assist with disclosure and/or partner testing) may want to offer re-testing to the index client to protect his or her safety. In this case, the index client's test result should NOT be counted again under HTS_INDEX or HTS_TST. Individuals who undergo couples testing (i.e., neither partner knows their status) should be counted under HTS_TST and the appropriate service delivery modality should be indicated (e.g., ANC).
- The partner elicitation process of index testing is a continuous process. Ongoing partner elicitation should strike a balance between offering individuals who are living with HIV the opportunity for assistance in notifying partners and the respect/support of the client in their decision to continue participation in index testing services. Providers/counselors should follow local procedures to determine when PLHIV are asked again about any new partners or previous partners that may not have been disclosed by the index client previously. That is, for Step 3 on 'Contacts Elicited', contacts may not be elicited all in one session with the HTS counselor. Elicitation may even continue into the next reporting quarter. Some of the contacts tested in Step 4, may not have been part of the elicitation process in Step 2 and Step 3. For example, contacts may choose to come forward themselves after a discussion with the index client. Regardless, any contact who is tested for HIV should be counted under Step 4.
- Retesting for verification of HIV-positive status before or at antiretroviral (ART) initiation should not be counted under HTS_INDEX. Retesting for verification is primarily conducted as a quality assurance activity to avoid misdiagnosis and to ensure those initiated on ART are indeed living with HIV. Therefore, retesting for verification should only be conducted for persons who have received an HIV diagnosis, but have not yet been initiated on ART.
- Clients who present for testing as the result of receiving a social network testing coupon or referral, but who identify as being a sexual and/or needle-sharing partner with an individual known to be living with HIV should be counted under HTS_INDEX and not under the HTS_TST SNS modality.

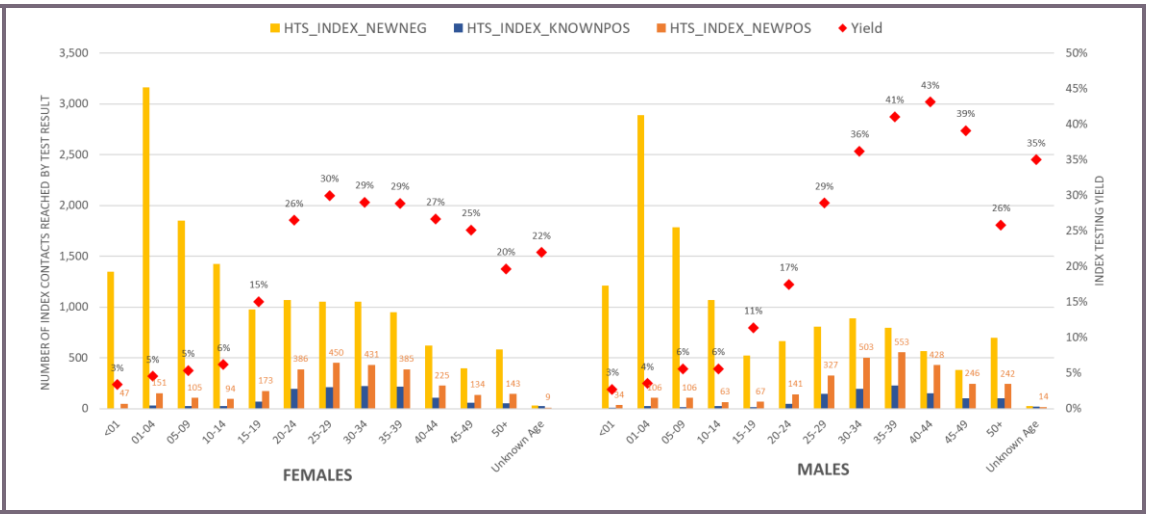
Please refer to HTS_TST for information on Data Quality and reporting considerations that would also apply here.

<table>
<tr><td></td><td></td></tr>
<tr><td>How to review for data quality:</td><td>Data should be reviewed regularly for the purposes of program management, to monitor progress towards achieving targets, and to identify implementation and data quality issues.

In addition, data reported under each step can be compared to the previous step where it makes programmatic sense. Potential scenarios include: (1) Generally speaking, the number of contacts who were tested for HIV (Step 4) should not be greater than the numberof contacts provided (Step 3). Note: testing of a contact of an index client, who was not part of a formal index testing elicitation strategy, may be counted under Step 4 if that contact discloses that their sexual or needle-sharing partner, biological child (<19 years of age), parent, or sibling, is living with HIV. (2) Additionally, it is possible for the number of contacts provided by the index client (Step 3) to be greater than the number of index clients who accepted index testing services (Step 2).</td></tr>
<tr><td>How to calculate annual total:</td><td>Sum results across quarters.</td></tr>
<tr><td>Disaggregations:</td><td>
<table>
<tr><th colspan="2">Numerator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>Number of index cases offered index testing services by age/sex [Optional]</td><td>• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</td></tr>
<tr><td>Number of index cases that accepted index testing services by age/sex [Optional]</td><td>• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</td></tr>
<tr><td>Number of contacts elicited and age/sex [Optional]</td><td>• <15 F/M, 15+ F/M, Unknown Age F/M
(Note that because disaggregation is contacts elicited from index cases, finer age bands may not be known and are not required)</td></tr>
<tr><td>Number of <u>contacts tested by test result</u> and age/sex [Required under Path 2, Optional under Path 1. See HTS_TST for additional information]

<u>Underlined portions auto-populate into the INDEX HTS_TST modality under Path 2.</u></td><td>• <u>New positives by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</u>
• <u>New negatives by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</u>
• Known positives: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
• Documented negatives by: 1-4 F/M, 5-9 F/M, 10-14 F/M</td></tr>
<tr><th colspan="2">Denominator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>N/A</td><td>N/A</td></tr>
</table>
</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td>Please refer to the stepwise process outlined in the “how to use” and “how to collect” sections for more details.</td></tr>
<tr><td>PEPFAR-support definition:</td><td>Standard definitions of DSD and TA-SDI apply.
<u>For HTS services, direct service delivery includes</u>: ongoing procurement of critical HTS related commodities such as rapid HIV test kits or requisite materials (lancets, capillary tubes), samples and materials for proficiency testing, other HIV diagnostic commodities, or funding for salaries of HIV testing service providers including counselors, laboratory technicians, program managers, and/or community health workers. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted.</td></tr>
</table>

	For HTS services, ongoing support for service delivery improvement includes: HTS training, HTS guidance development, routine support of HTS M&E and reporting, or HIV test kits consumption forecasting and supply management.
Data visualization & use examples:	**Index Testing Cascade: Adults**  **Index Testing Cascade: Children**  **Results and Yield of Index Testing by Age and Sex:**


HTS_INDEX_NEWNEG
HTS_INDEX_KNOWNPOS
HTS_INDEX_NEWPOS
Yield
NUMBER OF INDEX CONTACTS REACHED BY TEST RESULT
INDEX TESTING YIELD
FEMALES
MALES
<01
01-04
05-09
10-14
15-19
20-24
25-29
30-34
35-39
40-44
45-49
50+
Unknown Age

HTS_SELF

Description:	Number of individual HIV self-test kits distributed	
Numerator:	Number of individual HIV self-test kits distributed	This indicator aims to monitor trends in the distribution of HIV self-test kits within a country at the lowest distribution point.
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional.**	
Reporting level:	Facility & Community	
Reporting frequency:	Quarterly	
How to use:	This is the only MER indicator to monitor PEPFAR programming of HIV self-testing approaches and distribution of HIV self-test kits. HIV self-testing (HIVST) refers to a process in which a person collects his or her own specimen (oral fluid or blood), performs an HIV test, and then interprets the results. This is often done in a private setting, either alone or with a trusted person. HIV self-testing is a **screening test** and requires self-testers with a reactive result to receive further testing from a trained provider using a validated national testing algorithm. Select HIVST assays may also be used by an adult to help screen a child for HIV, and it is important that HIVST assays are only used in populations for which the specific assay has been validated and in accordance with national HTS guidelines. HIV self-testing approaches include directly assisted self-testing and unassisted self-testing (see "Disaggregate descriptions and definitions"). Self-test kits can be distributed in various ways (e.g., by providers or outreach workers, over-the-counter, etc.). Secondary distribution of HIV self-test kits may also occur (e.g., to partners of ANC attendees, clients of people engaged in commercial sex, social and sexual partners of index clients, and parents or caregivers of children ≥2 years of age with an unknown HIV status). This indicator aims to monitor trends in the distribution of HIV self-test kits within a country at the lowest distribution point (i.e., between the distributer and the intended user(s)/recipient). The implementation of HIV self-testing programs should facilitate and enhance access to and uptake of HIV testing services for populations where HIV test uptake is low and undiagnosed HIV infection is high (e.g., men, adolescents/young adults, other at-risk populations, or where there are barriers to HIV testing and achievement gaps for the 1st 95 (e.g., children).	
How to collect:	The suggested data source is a (newly developed) HIVST register or logbook. This will minimize any potential confusion with HTS_TST data collection and reporting since HIV self-testing is only a screening test and should not be reported under HTS_TST which only includes diagnostic testing. If a standalone HIVST register or logbook is not possible, revise existing HTS registers, logbooks, and reporting forms already in use to include very clear labels to indicate self-testing to prevent information entered in an HTS register from being counted and reported under HTS_TST or HTS_TST_POS. Note that one individual can receive multiple self-test kits (e.g., for themself, for their partner(s), for their child(ren) ≥ 2 years of age, etc.). **Data for the numerator should be generated by counting the number of individual HIV self-test kits distributed, and NOT the number of individuals receiving an HIV self-test kit.** Number of self-test kits distributed should be captured and reported at the lowest distribution point. The lowest distribution point refers to the individual/site distributing self-test kits and capturing data formonitoring purposes. This is to prevent double counting between the various higher supply chain levels.	

	For example, the central warehouse distributes 500 self-test kits to an implementing partner doing outreach. The implementing partner gives their peer outreach workers a total of 50 HIVST kits to give out during an outreach event. The outreach workers return from their event having distributed 30 self-test kits. In this scenario, the lowest distribution point would be the outreach workers who are capturing the monitoring data. Therefore, the number of HIVST kits distributed is 30. Each of these lowest distribution counts should be rolled up (aggregated) to create the numerator for this indicator. The disaggregation by type of self-testing provides information about the proportion of test kits distributed through each model (i.e., directly assisted vs. unassisted self-testing). Further disaggregation by "number of tests distributed to a person by age/sex" (for both directly assisted and unassisted self-testing) and "test kit distributed for use by" (for unassisted self-testing) can provide information about what subpopulations are receiving HIVST kits and who the test kit is intended for use by (e.g., self, sex partner, other) in the unassisted model. The findings can support national government and PEPFAR programs to assess how effective different distribution approaches are at reaching target populations. These data may also be useful for projecting programmatic commodities (e.g., self-test kits) and systems needs (e.g., staffing resources). It is important to note that for the purposes of this indicator, it is assumed that the tests distributed to individuals and counted in the directly assisted self-testing model are used by individuals who received the kit. Therefore, the disaggregation for "test kit distributed for use by" is not requested in the directly assisted model. Please refer to the example clarification below for additional details. **The reporting follows the distribution of the test kits and not the age/sex demographics of the end user of the self-test kit.** **For example**, if an 18-year-old female reports to a testing site and receives a one-on-one testing demonstration for herself – the test for herself will be reported as directly assisted, and the age/sex disaggregation data for one test kit distributed in the 15-19-year-old age female band would be reported. When she leaves the clinic, she takes 3 additional test kits along with her: 1 for her sex partner, 1 for her friend to use later, and 1 to screen her biological child. These 3 test kits would be counted as unassisted. For the age/sex breakdown under unassisted, 3 tests would go in the 15-19-year-old female age band because 3 tests were distributed to the female in that age band. For the "test kit distributed for use by" disaggregate, you would indicate a '1' in the 'sex partner' disaggregate for the test she planned to distribute to her sex partner, '1' in the "caregiver for child' disaggregate to account for test she planned to use to screen her biological child, and a '1' in the 'other' disaggregate to account for the test she planned to distribute to her friend. It is understood that registers and procedures for HIVST are still relatively new in many PEPFAR partner countries and specific distribution methods (e.g., vending machines) may not always allow for collection of detailed data on self-test kit distribution. As such, the onlyrequired disaggregates for this indicator will be: 1. The type of self-testing (i.e., directly assisted vs. unassisted), and 2. Age/sex demographic information for test kits distributed using the directly assisted self-testing model as these individuals should have received an in-person HIV test kit demonstration and demographic information should be collected at that time. Implementing partners should ensure that HIVST users receive materials on how they can access, at the individual's discretion, confirmatory testing services or be linked to enhanced prevention, such as PrEP. Implementing partners, and their sub-recipients, should emphasize strategies that maximize the distribution of HIVST to hard(er)-to-reach populations and minimize barriers to acceptance, such as requiring contact information or follow up activities that do not allow for anonymity. For more information on HIV self-testing, please refer to the "WHO Guidelines on HIV Self- Testing and Partner Notification" released in December 2016. To review a repository of country-specific guidance and polices related to HIV self-testing, please visit the HIV Self-Testing Research and Policy Hub.
How to review for data quality:	Data should be reviewed regularly for the purposes of program management, to monitor progress towards achieving targets, and to identify and correct any data quality issues. For example, the number of test kits distributed should not be greater than the number of test kits a provider was allocated during the reporting period. Careful attention is required regarding the number of HIVST kits distributed through pharmacies and online platforms.

<table>
<tr><td></td><td>Implementing partners should review their data to ensure that HTS_SELF is not reported under HTS_TST (or HTS_TST_POS) results. Furthermore, data should be reviewed to ensure the numerator does not include the number of HIV self-tests performed or used, nor a definitive diagnosis (rapid HIV diagnostic tests should be reported under HTS_TST).
PEPFAR OU teams should closely collaborate with respective Ministries of Health to determine appropriate HIVST implementation, including ensuring all HIVST use and disclosure remains voluntary and that HIVST users are supported to receive linkage to pertinent HIV testing, and treatment services. In rare situations where partner governments might have determined that monitoring HIVST use is required, programs should follow normative guidance and standards regarding any monitoring of HIVST and associated linkage to relevant testing, and treatment services.</td></tr>
<tr><td>How to calculate annual total:</td><td>Sum results across quarters.</td></tr>
<tr><td>Disaggregations:</td><td>
<table>
<tr><th colspan="2">Numerator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>Type of self-testing [Optional]</td><td>• Directly-assisted
• Unassisted</td></tr>
<tr><td>Number of Test Kits Distributed to a Person by Age/Sex [Optional for Directly Assisted; Optional for Unassisted]</td><td>• Directly-assisted by: 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
• Unassisted by: 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</td></tr>
<tr><td>Test kit distributed for use by [For Unassisted Only; Reporting Optional if data are available]</td><td>• Unassisted self-testing by:
○ Self
○ Sex partner
○ Caregiver for child
○ Other</td></tr>
<tr><th colspan="2">Denominator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>N/A</td><td>N/A</td></tr>
</table>
</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td>Type of self-testing:
• According to WHO, “Directly assisted HIV self-testing (HIVST): refers to when individuals who are self-testing for HIV receive an in-person demonstration from a trained provider or peer before or during HIVST, with instructions on how to perform a self-test and how to interpret the self-test result. This assistance is provided in addition to the manufacturer-supplied instructions for use and other materials found inside HIVST kits” (WHO, 2016).
• According to WHO, “Unassisted HIV self-testing refers to when individuals self-test for HIV using only a self-test kit that includes manufacturer-provided instructions for use. As with all self-testing, users may be provided with links or contact details to access additional support, such as telephone hotlines or instructional videos” (WHO, 2016)
• In addition to reporting the total number of HIV self-test kits distributed to individuals, the HTS_SELF indicator includes several disaggregates to characterize aspects of distribution.

Test kit distributed for use by [For Unassisted Only; Reporting]:
• Self: Individual to whom a HIV self-test kit was distributed intends to use the test kit on themselves.
• Sex partner: Individual to whom a HIV self-test kit was distributed plans to further distribute the self-test kit for use on his or her sexual partner(s).
• Caregiver for child: Caregiver to whom a HIV self-test was distributed, with the intent for the HIV self-test kit to be administered to a child.
• Other: Individual to whom a HIV self-test kit was distributed plans to further distribute the test kit</td></tr>
</table>

	to an individual that is not themselves or one of their sex partners (e.g.,relative, friend, etc.). *NB: Children who receive caregiver-assisted testing should **not** be included in this disaggregate.*
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for the distribution of HIVST kits includes: ongoing procurement of HIVST kits or funding for salaries of providers who distribute or directly assist with HIVST including counselors, laboratory technicians, program managers, and community health workers. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. For HIVST, ongoing support for service delivery improvement includes: HIVST training, HIVST guidance development, site level QI/QA, routine support of HIVST M&E and reporting, or HIVST kit consumption forecasting and supply management.

HTS_TST (INCLUDING HTS_TST_POS)

Description:	Number of individuals who received HIV Testing Services (HTS) and received their test results	
Numerator:	Number of individuals who received HIV Testing Services (HTS) and received their test results	The numerator captures the number of individuals who received HIV Testing Services (HTS) and received their test results. At a minimum, this means the person was tested for HIV and received their HIV test results.
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required with flexibility.** **Two options will be provided to countries:** **1. Path 1 – Topline HTS_TST: Flexible reporting with no testing modalities reported, but age/sex still required** **2. Path 2 HTS_TST: standard reporting of testing modality/age/sex (under this option, the Implementing partner would still report HTS_INDEX and TB_STAT)** For PMTCT_STAT (including PMTCT_STAT_POS), this indicator is required for both Path 1 and Path 2 reporting options. Under the flexible Path 1 Topline option, PMTCT_STAT will NOT auto-populate to HTS_TST ANC 1. ANC 1 results should still be included in the Path 1 Topline numerator. For HTS_INDEX: Under Flexible Topline Path 1 option, then HTS_INDEX becomes optional. Under Path 1 and Path 2, Steps 1-3 are optional. New positives and new negatives will be required under Path 2 Standard Reporting option. HTS_INDEX auto-populates to HTS_TST under Path 2. For TB_STAT, this indicator is required with flexibility. Under Flexible Topline Path 1 option, then TB_STAT becomes optional. TB_STAT auto-populates to HTS_TST under Path 2 Standard Reporting.	
Reporting level:	Facility & Community	
Reporting frequency:	Quarterly	
How to use:	This indicator is intended to monitor trends in the uptake of HTS (regardless of the service delivery modality and population group) within a country. The disaggregation by test result provides information about the proportion of persons testing HIV seropositive and the effectiveness of HTS programs in identifying people living with HIV (PLHIV) over time. Further disaggregations are intended to monitor access to and uptake of HTS by population (age, sex, and test result), HTS setting, and service delivery modality. The findings can support national governments and PEPFAR programs to determine the coverage and identify gaps in HTS services. These data may also be useful for projecting programmatic commodities and system needs such as HIV test kits and other staffing resources, although the numerator reflects the number of individuals tested, not the number of tests performed. Please reference the WHO Consolidated Guidelines on HIV Testing Services for information "relevant to the provision of HTS and…issues and elements for effective delivery of HTS that are common in a variety of settings, contexts, and diverse populations."	
How to collect:	Existing HTS registers, logbooks, and reporting forms already in use to capture HTS can be revised to include the updated disaggregation categories. Examples of data collection formsinclude client intake forms, activity report forms, or health registers such as HTS registers, health information systems, and non-governmental organization records. Data for the numerator should be generated by counting the total number of individuals who received HTS and their test results.	

Note: Although several other MER indicators (see below) may report on the HIV status of individuals, actual testing of individuals must be reported under HTS_TST. Thus, any persons who are newly tested as part of the programs linked to the indicators listed below (i.e., PMTCT and TB, must be reported under one of the HTS_TST modalities, unless otherwise indicated below.

- PMTCT_STAT (data from PMTCT_STAT auto-populates to HTS_TST PMTCT ANC1-Only modality)
- TB_STAT (data from TB_STAT auto-populates to HTS_TST TB modality)
- HTS_INDEX (data from HTS_INDEX auto-populates to HTS_TST Index modality)
- PrEP_CT, as a part of PMTCT

Importantly, if an implementing partner or site does not report on TB_STAT or PMTCT_STAT, any HIV testing conducted in locations related to TB or PMTCT should be reported under the 'Other PITC' modality of HTS_TST.

For an individual to be counted under this indicator, that individual's HIV diagnosis must be confirmed using a nationally validated testing algorithm. For example, an HIV-positive rapid HIV test performed at the community- or facility- level must be confirmed following the national testing algorithm. If the confirmatory test is performed at a different site, then this requires follow-up by the reporting implementing partner to confirm the diagnosis before reporting under this indicator. The implementing partner who first identified and tested the individual should report on HTS_TST under the appropriate modality and age and sex disaggregate; however, that implementing partner must ensure that the diagnosis of the individual tested is confirmed. Only a confirmed diagnosis (positive or negative) counts under HTS_TST regardless of the modality used for reporting. Similarly, simply confirming the diagnosis of an individual who has already been tested (as per the national testing algorithm) does ***not*** fulfill the requirements for reporting on HTS_TST regardless of the modality used. For children <1 year of age: Confirmed diagnosis of HIV infection in children <18 months of age requires virologic, and ***not*** serologic, tests. Therefore, the general expectation is for there to be no results under the HTS_TST <1 age disaggregate. Implementing partners should report HIV virologic testing of HIV-exposed infants under PMTCT_EID and as appropriate, PMTCT_HEI. Any (limited) use of serologic diagnostic assays should be reported under the appropriate HTS_TST age and sex disaggregates.

Verification of HIV-positive status before or at antiretroviral therapy (ART) initiation should not be counted under HTS_TST since testing of this individual will have already been counted at the point of the initial diagnosis. Retesting for verification is primarily done as a quality assurance activity to avoid misdiagnosis and to ensure those initiated on ART are indeed living with HIV. Therefore, retesting for verification should only be performed for persons who have received an HIV diagnosis but have not yet been initiated on ART. **While retesting for verification should not be recorded as HTS_TST or HTS_TST_POS**, these data should nevertheless be tracked, and rates of discordancy monitored for broader programmatic use.

Data Systems and Tools

When developing or modifying existing monitoring and evaluation systems and tools to collect and report on this indicator, the following information should be considered (* designates data elements that are required for HTS_TST reporting in DATIM):

1. This indicator counts the number of individuals tested and **not** the number of tests conducted. All efforts should be made to ensure data are collected on individuals tested vs. number of tests conducted through de-duplication. Within HTS registers, collecting data on the following variables can inform HTS program efforts (NB: nearly all the below variables are not reported in MER):
    a. History of HTS: new tester vs. re-tester (e.g., maternal retesting, repeat HTS for reengagement in HIV treatment services) vs.retesting to verify an HIV-positive diagnosis before ART initiation (see above and below for specific reporting considerations for retesting for verification; additionally, see PEPFAR technical considerations for operational considerations regarding retesting for verification)
    b. HIV testing services - *HIV test results, date of HIV test, receipt of HIV test results, previously tested during the reporting period
    c. Demographic - Client's Unique ID, name, *sex, and *age at time of HTS services

<table>
<tr><td></td><td colspan="2">d. Date individuals living with HIV were/are linked to ART
e. Site - *site name and ID, district, region, province, and *service delivery modality
2. Using unique identifiers for individuals is one way to account for retesting and avoid double reporting if electronic systems are available to easily link data through these unique identifiers. Another approach is to record information about prior testing on the HTS client register (see above).
3. Note: Retesting for verification of HIV-positive status before or at antiretroviral (ART) treatment initiation is only done for persons who have already been diagnosed HIV- positive as per the national HIV testing guidelines. All clients diagnosed HIV-positive should be retested for verification before or at ART initiation with a new specimen and preferably a second operator using the same national HIV testing strategy. Retesting forverification is primarily done as a quality assurance activity to avoid misdiagnosis and to ensure those initiated on ART and treatment services are indeed HIV-positive. Thus, HIV testing conducted to verify one's HIV-positive status should not be counted under HTS_TST, since the initial HIV diagnosis will have already been counted at the point of the initial receiptof the HIV diagnosis.
4. Patient-level deduplication: adding "has patient been tested in the last 3 months" to the HTS facility and community registers can help implementing partners de-duplicate at the quarterly reporting level.</td></tr>
<tr><td>How to review for data quality:</td><td colspan="2">Only one disaggregation type is used for age/sex/test result received:
• Numerator ≥ subtotal of each of the disaggregations</td></tr>
<tr><td>How to calculate annual total:</td><td colspan="2">Sum results across quarters.</td></tr>
<tr><td rowspan="3">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>HTS Result by Age/Sex [Required for Path 1 Topline Flexible Reporting]</td><td>• Total HTS_TST Numerator (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</td></tr>
<tr><td>HTS Modality and Result by Age/Sex (Community-Level HTS Reporting) [Required for Path 2 Standard Reporting]

<u>Underlined modalities auto-populate for their respective parent indicators.</u></td><td>• <u>Index (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</u>
• Mobile (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
• SNS (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
• VCT (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
• Other Community Testing Platform (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M</td></tr>
</table>

	HTS Modality and Result by Age/Sex (Facility-Level HTS Reporting) **[Required for Path 2 Standard Reporting]** ***Underlined modalities auto-populate for their respective parent indicators.***	• Index (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • Emergency (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • Inpatient (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • Malnutrition (by Positive/Negative result) by: <1 F/M, 1-4 F/M • Pediatric <5 Clinic (by Positive/Negative result) by: <1 F/M, 1-4 F/M • PMTCT [ANC1-Only] (by Positive/Negative result) by: <10 F, 10-14 F, 15-19 F, 20-24 F, 25-29 F, 30-34 F, 35-39 F, 40-44 F, 45-49 F, 50+ F, Unknown Age F • PMTCT [Post ANC1: Pregnancy/L&D] (by Positive/Negative result) by:<10 F, 10-14 F, 15-19 F, 20-24 F, 25-29 F, 30-34 F, 35-39 F, 40-44 F, 45-49 F, 50+ F, Unknown Age F • PMTCT [Post ANC1: Breastfeeding] (by Positive/Negative result) by <10 F, 10-14 F, 15-19 F, 20-24 F, 25-29 F, 30-34 F, 35-39 F, 40-44 F, 45-49 F, 50+ F, Unknown Age F • SNS (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • STI (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • TB (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • VCT (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5- 9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30- 34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • Other PITC (by Positive/Negative result) by: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	N/A	N/A
Disaggregate descriptions & definitions:	**Disaggregates: Service Delivery Modality** In addition to reporting the total number of individuals tested and receiving their test results and the total type of test results received (negative, positive), HTS_TST data should be disaggregated by service delivery modality, and then also by age/sex/test result within each service delivery modality. Service delivery modalities can reflect a reason for testing (index, SNS, STI), as well as the	

location/place of testing (e.g., inpatient ward, VCT drop-in center). For example, STI, Index, and SNS in this context refer to a reason a person is seeking or being offered an HIV test - e.g., the person suspects she/he may have an STI, or the person is a contact of an index client (see modalities below for more details). Reporting the reason for testing (STI, index, or SNS), takes precedence over the location or setting (inpatient, VCT, drop-in center) where an individual is tested.

Contacts of index clients should be reported under HTS_INDEX (either facility or community in accordance with where index testing services were delivered) according to the steps laid out under HTS_INDEX. Index testing should only be used to refer direct contacts (i.e., sexual partners, needle-sharing partners, and biological children (<19 years of age), and biological siblings of pediatric index clients) while SNS can be used to recruit direct contacts as well as other high-risk individuals who do not meet the definition of a direct contact. If the index client agrees to SNS in addition to index testing services, a system to track those referrals must be implemented to properly report those contacts under the index testing or SNS modality. Index testing should take precedence over SNS if the individual tested was listed as a contact during the elicitation process.

A single person should only be counted once under any given modality.

Service delivery modalities are defined as:

Community-based testing: Applies to any testing done outside of a designated health facility. Within community-based testing, the following disaggregates are available:

A. **Index:** Importantly, the index modality under HTS_TST will auto-populate from HTS_INDEX (see HTS_INDEX reference sheet for more information). Index testing, also referred to as partner testing/partner notification services, is an approach whereby the exposed contacts (i.e., sexual partner(s), biological child(ren) <19 years of age, biological siblings of pediatric index clients and anyone with whom a needle was shared) of a person living with HIV (i.e., index client), are elicited and offered HIV testing services. That is, in this context, index testing refers to any HIV testing of contacts of anindex client (i.e., a known positive).

   Only the following persons count as contacts:

   a. Current or past sexual partner(s)
   b. Biological children (<19 years of age). Biological children reported under HTS_INDEX should only include:
      - Biological children of a mother living with HIV, and/or
      - Biological children of male index clients (fathers) when the biological mother is living with HIV, she is deceased, or her HIV status is not known, not documented, or unable to be obtained.
   c. Biological parents (if the index client is a child)
   d. Biological siblings of pediatric index clients
   e. Anyone with whom a needle was shared.

   It is important to offer timely HIV testing services to biological children of women with an unknown HIV status (i.e., do not delay the child's HIV test to first reach and test the biological mother). It is also imperative to offer HIV testing to children whose biological mothers with HIV or unknown HIV status have died. If the index client is the child, the biological mother should be tested, and if positive or deceased, the father should be tested as well. In addition, all biological siblings of the index child should be offered HIV testing services.

   In this way, provision of index testing services is non-directional, whereby we are trying to follow transmission of the disease, and every newly identified positive becomes a subsequent index client from whom to elicit contacts. While testing the contacts of an index client may occur in mobile, VCT, or other community testing venue, this testing should be reported under HTS_INDEX. That is, if an individual could be reported under both HTS_INDEX and another HTS_TST modality, that individual should only be reported once under HTS_INDEX. Again, the index modality under HTS_TST will auto-populate from HTS_INDEX (see HTS_INDEX reference sheet for more information).

B. **Mobile:** Testing in ad hoc mobile or temporary testing locations, such as community centers,

schools, workplaces, and includes testing in mobile unit such as tents and vans..

C. **SNS (Social Network Strategies):** Social network strategies are a set of distinct case-finding approaches that use individuals' high-risk network connections to refer individuals for HIV testing. These approaches, which include enhanced peer outreach approach (EPOA), leverage social, sexual, and drug- using relationships or behaviors to reach high risk and hidden individuals who may benefit from HIV testing that may otherwise not be captured under traditional testing modalities (e.g., VCT, PITC, or index testing). Programs that have used other modalities (i.e., VCT, Other Community, index testing) to previously report SNS should now report individuals referred for HIV testing via a referral under the SNS modality. Individuals who agree to both index testing and SNS should be carefully tracked to ensure accurate reporting. If a named contact elicited via the index testing process returns with an SNS coupon the contact should be reported under index testing (either facility or community). For example, a newly diagnosed individual agrees to index testing services and shares information about Partner 1 and Partner 2. The provider also offers SNS, and the index client agrees to recruit individuals in their network. Partner 2 returns to the testing site and has a coupon that is used for SNS. The provider would record Partner 2 as index testing, not SNS, since this is one of the contacts that the index client identified during the elicitationprocess. Note: if a site only conducts anonymous testing, the site should report the test as SNS if client returns with a coupon.

D. **VCT (Voluntary Counseling and Testing):** Includes testing conducted in standalone VCT center that exists outside of a designated health facility (e.g., drop-in-center, wellness clinic where HTS services are provided, testing sites aimed at high risk populations,etc.).

E. **Other community platforms:** Includes all community-based modalities not captured above (e.g., ad hoc testing campaign that does not satisfy the mobile testing definitionand community-based OVC testing) should be entered under this modality.

Facility-based testing: Applies to any testing occurring inside a designated health facility. Within the facility-based testing, the following disaggregates are available:

A. **Index:** Importantly, the index modality under HTS_TST will auto-populate from HTS_INDEX (see HTS_INDEX reference sheet for more information). Index testing is an approach whereby the exposed contacts (i.e., sexual partners, biological children (<19 years of age), biological siblings of pediatric index clients, and anyone with whom a needle was shared) of a person living with HIV (i.e., index client), are elicited and offered HIV testing services. That is, in this context, index testing refers to any HIV testing of contacts of an index client (i.e., a known positive).

Only the following persons count as contacts:

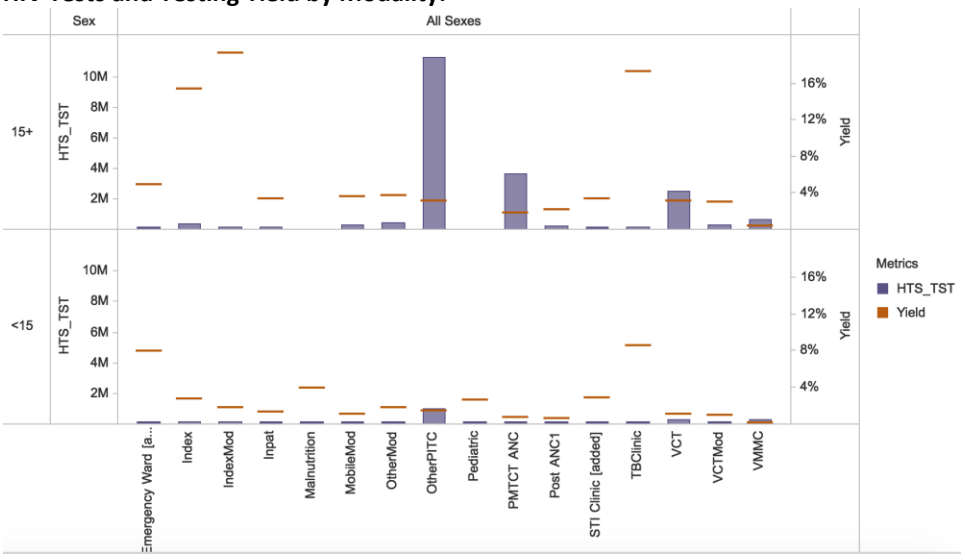
a. Current or past sexual partner(s)
b. Biological children (<19 years of age). Biological children reported under HTS_INDEX should only include:
   - Biological children of a mother living with HIV, and/or
   - Biological children of male index clients (fathers) when the biological mother is living with HIV, she is deceased, or her HIV status is not known, not documented, or unable to be obtained.
c. Biological parents (if the index client is a child)
d. Biological siblings of pediatric index clients
e. Anyone with whom a needle was shared.

It is important to offer timely HIV testing to biological children of women with an unknown HIV status (i.e., do not delay the child's HIV test to first reach and test the biological mother). It is also imperative to offer HIV testing to children whose biological mothers with HIV or unknown HIV status have died. If the index client is the child, the biological mother should be tested, and if positive or deceased, the father should be tested as well. In addition, all biological siblings of the index child should be offered HIV testing services.

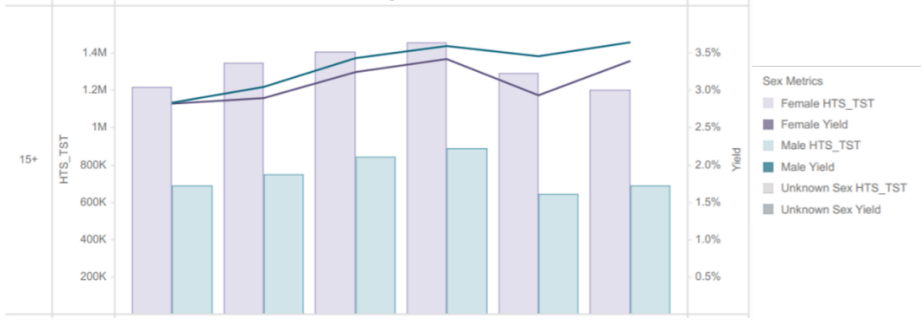
In this way, provision of index testing services is non-directional, whereby we are trying to follow transmission of the disease, and every newly identified positive becomes a subsequent index client from whom to elicit contacts. While testing the contacts of an index client may occur in mobile, VCT or other community testing venue, this testing should be reported under

HTS_INDEX. That is, if an individual could be reported under both HTS_INDEX and another HTS_TST modality, that individual should only be reported once under HTS_INDEX. Again, the index modality under HTS_TST will auto-populate from HTS_INDEX (see HTS_INDEX reference sheet for more information).

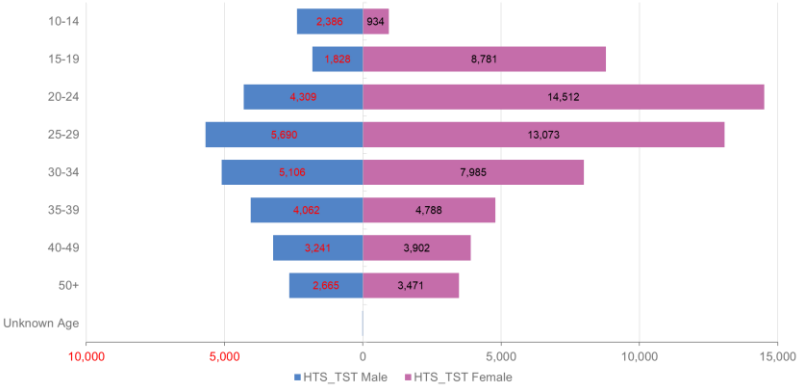
B. **Provider Initiated Counseling and Testing (PITC):**
   a. **Emergency:** Includes persons tested or seen in a designated emergency department or ward for the immediate care and treatment of an unforeseen illness or injury.
   b. **Inpatient:** Includes PITC occurring among those patients admitted in the inpatient and surgery wards.
   c. **Malnutrition:** Clinics and inpatient wards predominately dedicated to the treatment of malnourished children. Many children with malnutrition are routinely identified through well child clinics, when they have poor growth* (stunting, wasting, underweight / "falling off the growth curve") and/or a concerning mid-upper arm circumference (MUAC) measurement (Refer to WHO Malnutrition Guidance for more information). All children identified with growth problems should receive HIV testing and evaluation for TB with documentation under the respective MER indicator. While this service delivery modality may be part of either inpatient or outpatient services, if an individual could be reported under both malnutrition and another service delivery modality, report an individual only once and under malnutrition if the reason she/he were referred for HIV testing was due to growth problems. However, the biological children of female index cases should be classified under the appropriate index testing modality if the parents'/siblings' HIV-positive status was the reason they were referred for HIV testing.
   d. **Pediatric <5 Clinic:** Includes PITC occurring in the pediatric <5 years clinic only. This modality refers only to children tested in the <5 years clinic. Children tested for any other reason should be counted under the respective modality where their testing occurred. Note that this modality does **not** include virologic testing, which is reported under PMTCT_EID, nor rapid HIV testing used to identify HIV-exposed infants. This modality should also not include children of index cases who should be classified under the Index modality or malnourished children who should be classified under Malnutrition.
   e. **PMTCT (ANC1 Only):** Pregnant women tested at their 1st antenatal care clinic (ANC) for their current pregnancy (who are also reported under PMTCT_STAT) are reported under this modality. Refer to PMTCT_STAT reference sheet for guidelines on data collection. Individuals counted under PMTCT_STAT who already knew their status should not be reported under HTS_TST.
   f. **PMTCT (Post ANC1: Pregnancy/L&D):** Includes pregnant women who receive a first test **or** retest after ANC1 ("Post ANC1"), including women who are tested later in pregnancy (>ANC2) or during labor & delivery (L&D).
   g. **PMTCT (Post ANC1: Breastfeeding):** Includes women who receive a first test or retest after ANC1 ("Post ANC1") while breastfeeding. If a woman is both pregnant and breastfeeding, she should be reported under PMTCT (Post ANC1: Pregnancy/L&D).
   h. **STI:** Includes persons seen in a designated STI clinic as well as patients seen in the OPD for STI symptoms. This includes suspect and confirmed STI cases. HIV testing may take place in an STI clinic, an OPD, a co-located VCT or othersetting. However, if the reason for the HIV testing is the individual is either a suspect or confirmed STI case, then the test should be reported under the STI modality.
   i. **TB:** Includes persons referred for HIV testing because they have diagnosed TB (new or relapse). Refer to TB_STAT for guidelines on data collection for TB. Individuals counted under TB_STAT who already knew their status should **not** be reported under HTS_TST. Individuals with presumptive TB and who receive HTS should be reported under Other PITC.
   j. **Other PITC:** This includes any other provider-initiated testing and counseling that is not captured in one of the other testing modalities listed above. For reporting purposes, this includes testing of patients triaged to other clinics within the OPD that see patients for routine/chronic care (i.e., eye, dental, dermatology, diabetes, etc.). This does **not** include patients seen in the OPD for emergency care or an STI. Those patients should be classified under the emergency and STI modalities, respectively.

	C. **SNS (Social Network Strategies):** Social network strategies are a set of distinct case- finding approaches that use individuals' high-risk network connections to refer individuals for HIV testing. These approaches, which include enhanced peer outreach approach (EPOA), leverage social, sexual, and drug- using relationships or behaviors to reach high risk and hidden individuals who may benefit from HIV testing that may otherwise not be captured under traditional testing modalities (e.g., VCT, PITC, or index testing). Programs that have used other modalities (e.g., VCT, other community, index testing) to previously report SNS should now report individuals referred for HIV testing via a referral under the SNS modality. Individuals who agree to both Index testing and SNS should be carefully tracked to ensure accurate reporting. If a named contact elicited via the index testing process returns with an SNS coupon, the contact should be reported under index testing (either facility or community). For example, a newly diagnosed individual agrees to index testing services and shares information about Partner 1 and Partner 2. The provider also offers SNS and the index client agrees to recruit individuals in their network. Partner 2 returns to the testing site and has a coupon that is used for SNS. The provider would record Partner 2 as index testing, not SNS, since this is one of the contacts that the index client identified during the elicitation process. Note: if a site only conducts anonymous testing, the site should report the test as SNS if client returns with a coupon. D. **VCT:** Refers to a clinic specifically intended for HIV testing services that is co-located within a broader health care facility. This data can typically be found in the VCT register. **This should not include testing of patients referred by providers from other clinical services within the facility (TB, ANC, Inpatient, emergency, etc.). Even though the actual test may be administered in the VCT clinic, report those individuals under the serviced delivery modality from which they were referred.** This modality should not include testing of exposed partners and exposed family members of an index case, who should be reported under the Index disaggregate.
PEPFAR-support definition:	Standard definitions of DSD and TA-SDI apply. For HTS services, direct service delivery includes: ongoing procurement of critical HTS related commodities such as rapid HIV test kits or requisite materials (lancets, capillary tubes), samples and materials for proficiency testing, other HIV diagnostic commodities, or funding for salaries of HIV testing service providers including counselors, laboratory technicians, program managers, and/or community health workers. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. For HTS services, ongoing support for service delivery improvement includes: clinical mentoring/supportive supervision, HTS training, HTS guidance development, routine support of HTS M&E and reporting, or HIV test kits consumption forecasting and supply management.
Data visualization and use examples:	**HIV Tests and Testing Yield by Modality:** 

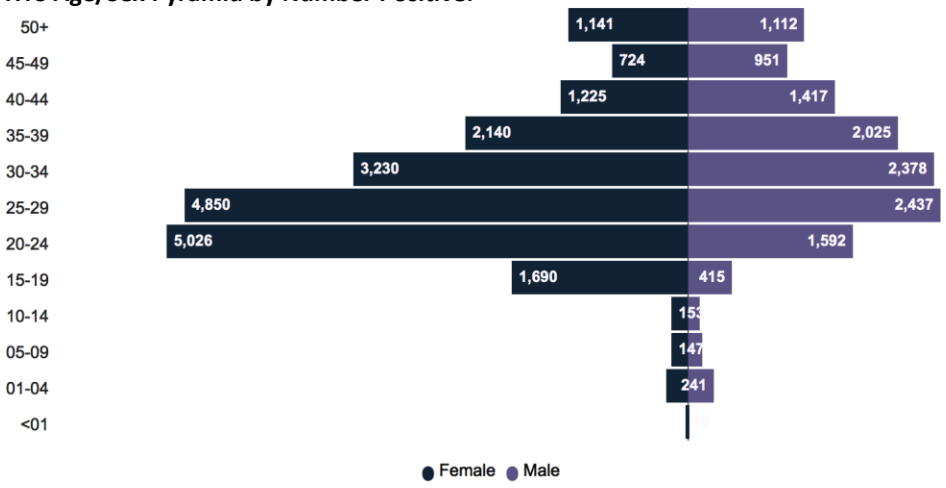
HIV Tests and Testing Yield Among Adult Men and Adult Women Over Time:



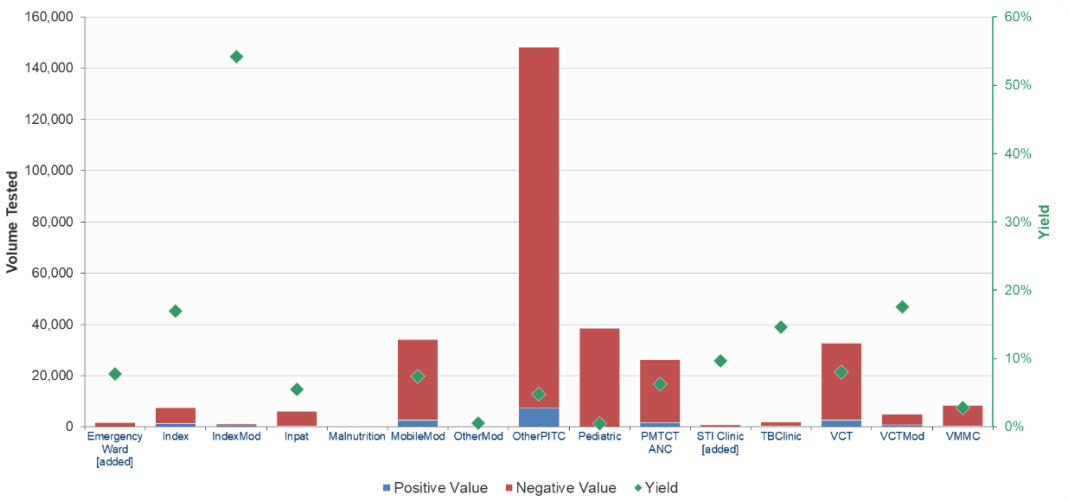
HTS Age/Sex Pyramid by Number Tested:



HTS Age/Sex Pyramid by Number Positive:



HTS Positives, Negatives and Yield by Testing Modality:



PMTCT_EID

Description:	Percentage of infants born to women living with HIV who received a sample collected for a virologic HIV test by 12 months of age	
Numerator:	Number of infants who had a virologic HIV test (sample collected) by 12 months of age during the reporting period	The numerator is a measure of sample collection for virologic testing. Age refers to age at specimen collection
Denominator:	PMTCT_STAT_POS + HTS_TST_POS from the [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities (see PMTCT_STAT & HTS_TST reference sheets)	Calculated indicator, sum of: PMTCT_STAT POS: **(1)** Newly Tested Positive, **(2)** Known Positive at entry (see PMTCT_STAT reference sheet for more details) and **(3)** HTS_TST_POS: [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities (see HTS_TST reference sheet for more details)
Indicator changes (MER v2.7 to 2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	This indicator measures the extent to which HIV-exposed infants receive a virologic HIV test to determine their HIV status by 12 months of age. The indicator is disaggregated by the age of the infant at the time of sample collection, specifically between birth and ≤2 months and between 2 and 12 months of age. It is also disaggregated by the number of tests that an infant has had, specifically, a first test or a second/subsequent test. Previously, this indicator only captured the first virologic test. Because there is ongoing exposure of infants to HIV throughout the duration of breastfeeding, this revised indicator will now capture all virologic tests collected by 12 months of age. Subsequent sample collected refers to the second or next sample collected in the infant testing cascade per the country's national algorithm (i.e., at 9 months for an infant who previously had a sample collected at 6 weeks or 4-6 weeks with a sample previously collected at birth). The 0 to ≤2 month and 2-12-month age periods are based on age at collection of sample, not on date of result return to the facility or caregiver. It is likely that at the time of reporting there will be samples that have been collected but for which no result is documented in the register or patient record. This percentage is a proxy measure, relying on PMTCT_STAT_POS + HTS_TST_POS [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities as a proxy denominator for total number of HEI. Reviewing infants with a virologic test (N) against this proxy denominator should be done with caution; see assumptions and limitations in the data quality section below.	
How to collect:	This indicator should be collected from the clinical source (i.e., HIV-exposed infant registersor patient records) to ensure unduplicated patient counting. HIV-exposed infant registers should be used to count exposed infants and samples collected for virologic testing. (If available, information could come from electronic systems). If the standard report does not contain all the required information, individual patient files should be used. Additional supporting information for this indicator can be obtained from standard laboratory Information systems (i.e., DNA PCR or POC/near POC logbooks or electronic systems); however, it will be important to ensure that repeat tests of the same sample or infants living with HIV receiving a confirmatory virologic HIV test result are not included to avoid double counting. A virologic test is a test used for HIV diagnosis in infants up to 18 months of age. The most commonly	

	used form of virologic testing is qualitative HIV DNA PCR or nucleic acid testing ("NAT") using dried blood spots (DBS), but this indicator also includes whole-blood samples. Three other types of sample collection for testing should not be reported: **(1)** Serologic testing of children >18 months of age or those who have completed breastfeeding should not be reported in this indicator. (See HTS_TST for additional details). **(2)** Virologic tests conducted with the purpose of confirming the diagnosis of HIV, and **(3)** Virologic tests used for clinical monitoring of children on ART, such as viral load quantification. Repeat samples collected from the same infant due to a quality issue, indeterminate result, or confirmation of a positive test should not be documented under PMTCT_EID. The results of HIV infant virologic testing are collected under the PMTCT_HEI indicator. Please see the reference sheet for PMTCT_HEI for more information. Under PMTCT_EID, implementing partners should report on all infants whose samples were collected for a virologic test, even if no test result has been recorded in the patient record/register at the time of reporting. Comparison of PMTCT_EID with PMTCT_HEI will allow countries to track if there is a mismatch between samples collected and results returned. HIV status of infants at the end of the breastfeeding period and the outcomes of the PMTCT program are measured in PMTCT_FO. **Birth testing:** If an infant receives a test at birth and again by 6 weeks, both tests should be reported into MER, classified as "first test" and "second or more test," respectively, under the ≤2 month disaggregate. It is important for countries with birth testing to develop tracking systems to ensure that all infants with a negative birth test receive the 4–6-week test and can adequately track testing of individual infants over time. By the first year of life, infants who receive birth testing may thus have one sample reported under "first test" (the birth test), and 2 samples reported under "second or more testing" (the 4–6 week test and the 9-month test).
How to review for data quality:	Infant testing coverage = (PMTCT_EID / PMTCT_STAT_POS + HTS_TST_POS from the [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities) is a proxy calculation, relying on PMTCT_STAT_POS + HTS_TST_POS from the [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities as a proxy denominator for the total number of HIV-exposed infants (HEI). Reviewing infants with a virologic test (N) against these denominator results should be done carefully—see assumptions and limitations below. Review of outlier percentages for testingcoverage by age band is recommended (e.g., review high and low outliers for 0-≤2-month testing coverage disaggregate). Assumption: The total number of pregnant and breastfeeding women living with HIV, and therefore HEI, does not significantly vary quarter by quarter. We would not expect all the women reported under PMTCT_STAT_POS to have given birth to the infants reported in the same quarter under PMTCT_EID. However, despite that time period mismatch, the assumption is that the total number of women living with HIV (estimated HEI) does not vary significantly quarter by quarter, so it is reasonable to compare infants tested to the PMTCT_STAT_POS & HTS_TST_POS PostANC1: Pregnancy/L&D and PostANC1: Breastfeeding denominator from the same reporting time period. However, as countries attempt to collect more patient-level data, some countries may track the number of infants expected to have a virologic test at a specific age through tracking estimated delivery dates, cohort monitoring, maternity registers, or through other means. Countries with the ability to track this information may choose to detail the expected number of infants in a quarter and the source of the data in the MER narrative section for this indicator. Additionally, some infants may present for virologic testing whose mother may not have been previously seen at that site (no prior PMTCT services). Countries may also choose to report information about these infants in the narrative, as their mother would not have been included in PMTCT_EID denominator. PMTCT_EID total numerator is defined as the total number of infants who had a first sample collected for a virologic HIV test (0-≤2 months and 2-12 months). PMTCT_EID total numerator should NOT exceed the PMTCT_EID denominator. For historical trend analyses, first test, 0-≤2 months disaggregate, may be compared to prior year PMTCT_EID results. Some countries may see variations depending on whether birth and/or 4-6week testing was previously reported into PMTCT_EID under MER 2.6. In countries that perform birth testing on all infants with the next test at 4–6 weeks, the country should aim to achieve 95% EID coverage for the second or more test, 0-≤2 month disaggregate. In countries that perform birth testing on high-risk infants only, EID coverage for the first test, 0-≤2 month disaggregate, may reach 100% coverage, representing both infants receiving a birth test and 4–6-week

<table>
<tr><td></td><td>test. Countries in this situation may include in their narrative how birth testing may impact the interpretation of EID coverage, and what estimated proportion of the PMTCT_EID first test disaggregate total is from birth testing.</td></tr>
<tr><td>How to calculate annual total:</td><td>Sum total numerator results across quarters, reflecting first sample collected for a virologic HIV test.</td></tr>
<tr><td>Disaggregations:</td><td>
Numerator Disaggregations:
<table>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>Infant Test by Age at Sample Collection [Required]</td><td>• First test:
○ Infants who had a first sample collected for a virologic HIV test between birth and less than or equal to 2 months of age (0-≤2 months)
○ Infants who had a first sample collected for a virologic HIV test between 2 and 12 months of age.
• Second test or more:
○ Infants with at least a second sample collected for a virologic HIV test between birth and less than or equal to 2 months of age (0-≤2 months)
○ Infants with at least a second sample collected for a virologic HIV test between 2 and 12 months of age.</td></tr>
</table>
Denominator Disaggregations:
<table>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>N/A</td><td>See PMTCT_STAT and HTS_TST:
ANC1 + PostANC1 (Pregnancy/L&D) + Post ANC1 (Breastfeeding)</td></tr>
</table>
</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td>Infant Test by Age at Sample Collection: For the numerator to be calculated, implementing partners are required to report:
• Infants who had a first sample collected for a virologic HIV test between birth and 2 months of age (0-≤2 months, or 0-60 days): Age at the time the sample is collected should be reported.
• Infants who had a first sample collected for a virologic HIV test between 2 and 12 months (61-365 days) of age: Age at the time the sample is collected should be reported.
• Infants with at least a second sample collected for a virologic HIV test between birth and ≤2 months of age (0-≤2 months, or 0-60 days): Age at the time the sample is collected should be reported.
• Infants with at least a second sample collected for a virologic HIV test between 2 and 12 months (61-365 days) of age: Age at the time the sample is collected should be reported.

Age: The definition of data collection ≤2 months EID is defined as 0-60 days. 2-12 months EID is defined as 61-365 days to prevent double counting of HIV-exposed infants who have a sample collected for EID by 2 months of age.</td></tr>
<tr><td>PEPFAR-support definition:</td><td>Standard definition of DSD and TA-SDI used.
Provision of key staff or commodities for PMTCT includes: commodities such as test kits, ARVs including infant prophylaxis, lab commodities, or funding for salaries of health care workers.
Ongoing support for PMTCT service delivery improvement includes: training of PMTCT service providers, clinical mentoring and supportive supervision of PMTCT service sites, infrastructure/renovation of facilities, support for PMTCT service data collection, reporting, data quality, QI/QA of PMTCT services support, ARV consumption forecasting and supply management, support of lab clinical monitoring of patients, supporting patient follow-up/ continuity of treatment, support of mother mentoring programs.</td></tr>
</table>

PMTCT_FO

Description:	Percentage of final outcomes among HIV-exposed infants registered in a birth cohort	
Numerator:	Number of HIV-exposed infants with a documented outcome by 18 months of age disaggregated by outcome type. (Note: Collection of 18-month visit outcomes is recommended at 24 months of age, see additional explanation to the right.)	Calculated indicator in DATIM, sum of: HIV-infected, HIV-uninfected, HIV-final status unknown, died without status known. It is recommended to wait to collect the 18 month visit outcomes until the patient is 24 months of age for the following reasons: **(1)** this allows for children who present several months late to their 18-month visit to be included in the numerator and **(2)** cohort reporting is easiest when monthly reporting by facilities is used and where the birth month and the reporting month are the same calendar month (i.e., for infants born in January 2012, their 24-month reporting month would be January 2014, rather than using the 18-month reporting month of July 2013).
Denominator:	Number of HIV-exposed infants who were born 24 months prior to the reporting period and registered in the birth cohort.	Only those HIV-exposed infants, registered in the birth cohort at any time between 0 and 18 months of age (including transfers-ins), who were born 24 months prior to the reporting period are included in the denominator.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional (but only reported at Q4).**	
Reporting level:	Facility	
Reporting frequency:	Annually	
How to use:	In settings where national guidelines support breastfeeding of HIV-exposed infants, **antibody testing of all HIV-exposed children, at 18 months of age and/or 3 months after cessation of breastfeeding, whichever is later, is recommended to determine final HIV status ('final outcome'/FO) of HIV-exposed children.** To accomplish this goal, it is recommended to identify infants at birth or at the first infant follow-up visit and track them through the end ofthe breastfeeding period. This indicator measures progress toward ensuring that all infants born to women living with HIV have an outcome documented. In settings where a mother- infant register is utilized and/or it is common practice for women living with HIV to breastfeed less than or more than 18 months please describe in the narrative the final outcome time point.	
How to collect:	To report on this indicator PEPFAR-supported sites would ideally use registers or facility held cards for HIV-exposed infants that collect longitudinal information on follow-up and are organized by birth month of infants. This methodology is referred to as birth cohort reporting. Two examples of birth cohort reporting: 1. In Kenya, this indicator was first piloted by PEPFAR and the Ministry of Health in Western Kenya and is currently integrated into the national HIV summary reporting tool. Data from the facility HIV-exposed infant longitudinal follow-up register, which organizes infants by birth-month cohorts, are aggregated into a report summarizing outcomes for infants reaching 24 months of age during each month.	

2. In Malawi, clinic staff complete monthly follow up reporting forms as part of the national quarterly supervision visits using data collected directly from cards of HIV-exposed infants, which are kept in a binder that is organized by birth month (no register of HIV-exposed children is used).

As an example, for those infants born in FY 2018, the outcomes would be reported in FY 2020.

FY 2020 (Report results for the entire 12-month reporting period for these indicators at the Q4 reporting cycle)												
Reporting Month (FY18)	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Birth Month (FY20)	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

Both approaches allow a paper-based health facility records to quickly identify the number of HIV-exposed infants registered in the birth cohort at any time between 0 and 18 months of age (denominator).

How to review for data quality:

By design, the numerator should equal the denominator because "unknown" is an outcome type. This allows for facilities to check that all HIV-exposed infants have an outcome assigned to them during the reporting process.

How to calculate annual total:

N/A. Data is reported only once annually at Q4.

Disaggregations:

Numerator Disaggregations:

Disaggregate Groups	Disaggregates
Outcome Type [Optional]	• HIV-infected • HIV-uninfected • HIV-final status unknown • Died without status known

Denominator Disaggregations:

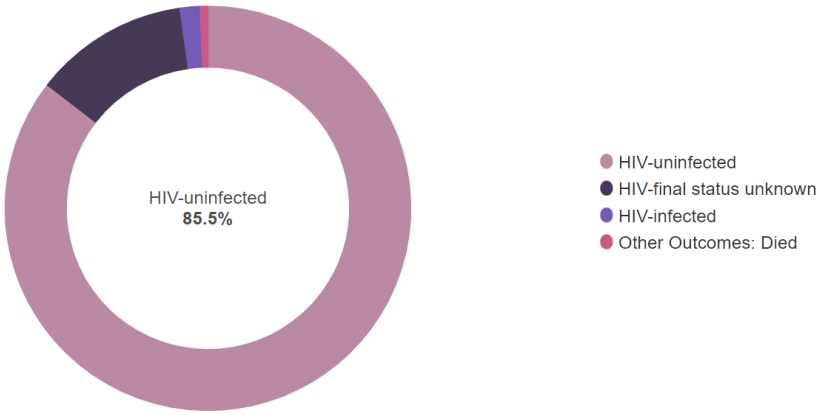
Disaggregate Groups	Disaggregates
N/A	N/A

Disaggregate descriptions & definitions:

Outcome Type:

For the numerator to be calculated, implementing partners are required to report:

- HIV-infected: Number of HIV-exposed infants identified as HIV-infected at any point during follow-up. HIV-infected includes infants and children with diagnostic virologic or serologic confirmation of HIV-infection (DNA PCR before 18 months; rapid test at 18 months) and those with a presumptive HIV diagnosis where DNA PCR is not available.Site should also maintain data on HIV infected infants and whether they are linked or not linked to ART services, or whether they have no information on patient linkage to ART programs.
- HIV-uninfected: Number of HIV-exposed infants with a negative 18-month antibody test documented. Based on national guidelines, countries should determine if "HIV- uninfected" includes infants with a documented negative antibody test that was done at least 3 months after cessation of breastfeeding but before 18 months of age.
- HIV final status unknown: Sum of the following disaggregates (not reported in DATIM but should be documented at site level)
  - In care but no test done: Number of HIV-exposed infants who attended 18-month visit but no antibody test result is documented (unknown FO)
  - Interruption in treatment: Number of HIV-exposed infants who did not attend the 18-month visit (unknown FO)
  - Transferred out (unknown FO): Number of HIV-exposed infants who transferred out between 0 and 18 months without confirmation of HIV-infection (unknown FO)

	• Died without status known: Number of HIV-exposed infants who are documented to have died without confirmation of HIV-infection between 0 and 18 months. Note: HIV-exposed infants who are HIV infected and later confirmed to have died or transferred out during follow-up are still counted under HIV infected and not died or transferred out. **Every infant in a given cohort should be assigned one outcome only.**
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for PMTCT include: commodities such as test kits, ARVs, lab commodities, or funding for salaries of health care workers. Ongoing support for PMTCT service delivery improvement includes: training of PMTCT service providers, clinical mentoring and supportive supervision of PMTCT service sites, infrastructure/renovation of facilities, support for PMTCT service data collection, reporting, data quality, QI/QA of PMTCT services support, ARV consumption forecasting and supply management, support of lab clinical monitoring of patients, supporting patient follow-up/ continuity of treatment, support of mother mentoring programs.
Data visualization & use examples:	**Proportion of Results From Each Final Outcome Status:** 

PMTCT_HEI (INCLUDING PMTCT_HEI_POS)

Description:	Number of HIV-exposed infants, with a virologic HIV test result returned in the reporting period, whose diagnostic sample was collected by 12 months of age.	
Numerator:	Number of HIV-exposed infants with a virologic HIV test result returned in the reporting period, whose diagnostic sample was collected by 12 months of age.	This indicator includes negative results and the first positive test (excludes confirmatory testing). It includes 3 required sets of disaggregations: **(1)** disaggregation by result outcome (positive or negative), **(2)** disaggregation by age based on the infant's age at specimen collection for virologic testing; **(3)** Confirmation of ART initiation, also disaggregated by age at specimen collection.
Denominator:	N/A	
Indicator changes (MER v2.7 to 2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	This indicator measures the number of HIV-exposed infants, with a test result returned in a reporting period, disaggregated by test outcome (positive or negative), age at sample collection, and ART initiation status. Identification is by virologic HIV testing: DNA PCR testing of dried blood spots (DBS) or whole-blood samples analyzed by high-throughput conventional or point of care (POC) platforms. Infants are defined as a child aged between 0 days (newborn) and 12 months of age, and age disaggregation is based on the infant age at the time of sample collection. The infant age reported should not be based on how old the infant was when the result was available to the site but when the sample was collected. This indicator can include infants identified as HIV-uninfected (negative) or HIV-infected (positive) on any virologic test by 12 months of age. Infants may be HIV-uninfected on their first virologic test, but at a later age acquire HIV and be identified as HIV-infected through a second or subsequent testing, and they should be counted in this indicator if they were aged 0–12 months at the time of second or subsequent sample collection. Confirmatory testing (collection of a second sample for repeat virologic testing after the first virologic test is positive) and indeterminate results are excluded. **Positive Infants and Linkage to ART:** PMTCT_HEI will be used to track how many infants living with HIV are identified in a reporting period, and the "ART initiation confirmed" disaggregate can be compared to PMTCT_HEI_POS to describe rates of linkage to ART for infants living with HIV (PMTCT_HEI_POS_ART / PMTCT_HEI_POS). The age disaggregate will also help describe ART linkage rates for very young infants (0-≤2mo). The proportion of infants living with HIV confirmed as initiating ART can be used to help identify sites with potential successes or challenges in documentation, linkage, and/or initiation of infants living with HIV. **Comparison to TX_NEW Age <1 Year:** The disaggregate for PMTCT_HEI_POS infants confirmed as initiating ART (sum of 0-≤2 and 2-12 months) could be compared to "infants <1-year-old initiated on ART (TX_NEW <1)." However, equal values for PMTCT_HEI_POS_ART and TX_NEW age <1 may not be expected, as each indicator may not be counting the same infants. Notably, infants may be >12 months of age at time of ART initiation and be included under PMTCT_HEI_POS_ART if the sample collection occurred at <12 months of age. The ART initiation disaggregate within HEI will allow us to report a linked infant ART initiation outcome for each positive infant reported. For more information, see	

	section on "How to review for data quality." **Proxy Positivity:** Proxy positivity is best calculated using age disaggregates (0-≤2 months and 2-12 months) for PMTCT_HEI_POS, divided by the sum of PMTCT_HEI_POS + PMTCT_HEI_NEG using the same age disaggregates. Summing multiple quarters of data is recommended, as quarter-specific comparisons may provide a less accurate proxy. A rough proxy calculation for results returned: PMTCT_HEI_POS + PMTCT_HEI_NEG total numerator (results returned) can be compared with PMTCT_EID (samples collected) in the same quarter to understand the proportion of all samples collected that have been returned. At the site level, this analysis can prompt action if there is a mismatch between sample collection (PMTCT_EID) and results returned (PMTCT_HEI_POS + PMTCT_HEI_NEG). Mismatches between samples collected and returned or drops in results returned only should warrant additional evaluation. Mismatches might also be due to multiple samples per infant in the PMTCT_HEI numerator or results taken near the end of a reporting period. It Is also important to note that infants reported under HEI may not be exactly the same as infants reported through PMTCT_EID in the quarterly time period due to turnaround times that may extend from one quarter to another. Also, samples that have been collected but have data quality or indeterminate results will not be reported in PMTCT_HEI, which only includes positive and negative test results. Additionally, PMTCT_EID is limited to infants with a first virologic test sample collected during the reporting period; whereas PMTCT_HEI includes infants whose result was returned during the reporting period, but their sample could have been collected in the prior period. Birth cohort monitoring: HIV status of infants at the end of the breastfeeding period and the outcomes of the PMTCT program are measured in the PMTCT Final Outcome indicator, PMTCT_FO. **Limitations and Considerations:** • This indicator does not collect the number of infants whose test result is unknown, including those infants with unresolved indeterminate tests. As such, “percent unknown” cannot be calculated through the MER indicator, though it is still an important metric for program monitoring. Notifying caregivers of infant test results remains important. • The infants reported as tested under the revised PMTCT_EID indicator are not necessarily the same infants whose positive results would be reported under the PMTCT_HEI positive infant disaggregate in the same quarter. • In MER, there is no way to report that an infant is linked in a quarter different from when the infant received the diagnosis. PMTCT_HEI_POS_ART is a disaggregate of PMTCT_HEI_POS, meaning that the ART status of an infant must be reported in the same quarter in which the infant is reported in HEI_POS. It is important for countries to track infant linkage and ensure that all infants are initiated on treatment as soon as possible, even if it cannot be reported in MER.
How to collect:	This indicator should be collected from the clinical source (i.e., HIV-exposed infant registers or patient records) to ensure unduplicated patient counting and patient care. HIV-exposed infant registers should be used to count infants whose results were returned in the reporting period and the age at the time of sample collection. (If available, information could come from electronic systems). If the standard report does not contain all the required information, individual patient files should be used. Additional supporting information for this indicator can be obtained from standard laboratory information systems (i.e., DNA PCR or POC/near POC logbooks or electronic systems); however, it will be important to ensure that repeat tests of the same sample or HIV-infected infants receiving a confirmatory virologic HIV test result are not counted twice. Indeterminate test results should not be included. Please note that PMTCT_HEI_POS should include all HIV-positive infants identified at the facility in the quarter, regardless of entry point (i.e., not just those identified through the PMTCT entry point). Therefore, a PMTCT clinic may need to compile testing data from other entry points at the facility (e.g., inpatient wards, malnutrition program) to report accurately and completely on this indicator. Only HIV-exposed infants receiving a positive or negative result returned from a virologic HIV test on a sample collected when they were between ages 0 through 12 months should be included in this

	indicator. In certain circumstances, some infants may have 2 results returned in the same quarter (e.g., first and subsequent tests). **Only the most recent test should be captured for this indicator if the infant was still aged 12 months or less at the time of sample collection.** Infants who initially were identified negative from a first virologic test but who were later identified as HIV-infected after a later virologic test should be included, if the infant was still aged 12 months or less at the time of sample collection. Identification is by virologic HIV testing: DNA PCR testing of dried blood spots (DBS) or whole-blood samples analyzed by high-throughput conventional or point of care (POC) platforms. Serologic testing or "rapid" testing cannot diagnose HIV infection in an infant, so infants with a positive serologic test result and no virologic test result should NOT be included; however, infants with a positive serologic test and a negative or positive virologic test result with sample collected by 12 months of age should be included and reflect the result of the virologic test. The numerator is divided into HIV-exposed infants who had their diagnostic sample collected for virologic testing between birth and ≤2 months of age and those whose diagnostic sample was collected between 2 and 12 months of age. The 0–≤2 month and 2–12-month time periods are based on age at sample collection for virologic HIV testing, not on date of result available to the facility or caregiver. HIV-exposed infants with a negative or positive test result should be reported in the quarterly time period in which they are identified, even if the sample was collected/sent in the previous quarter; their age should be reported by age at the time of collection of the sample that produced the negative or positive result, and not the age when the result was available to the site. Example scenario to clarify time period and age: An infant has a DBS collected in quarter 3, aged 11 months. Due to long turnaround times, the positive result returns to the site in quarter 4 and staff now identify him/her as HIV-infected at 13 months old. This infant should be counted in quarter 4 as HIV-infected, and his/her age should be reported as 11 months (2–12 months age band). **ART Initiation:** An additional disaggregate of the numerator is that an infant living with HIV is confirmed as having initiated ART. An infant living with HIV reported as "ART initiation confirmed" should have documentation of an ART regimen in their record. An infant living with HIV whose record includes documentation of "referred to ART" or an ART clinic number without evidence of receipt of an ART regimen should not be reported as "ART initiation confirmed." ART does **not** include infant ARV prophylaxis regimens for PMTCT. An infant should only be included in the initiated ART disaggregate if the infant initiated ART in the same quarter as the result was received at the facility.
How to review for data quality:	**PMTCT_HEI total numerator =** PMTCT_HEI_POS (sum of results returned for 0 to ≤2 months and 2- 12 months disaggregates) + PMTCT_HEI_NEG (sum of results returned for 0 to ≤2 months and 2- 12 months disaggregates). **Linkage and ART Initiation:** • Compare the PMTCT_HEI_POS ART initiation confirmed (disaggregate) to the PMTCT_ HEI_POS disaggregate to calculate linkage to ART. Significantly <100% or >100% linkage of HIV-infected infants to ART may reflect referrals to different sites, program weakness, or poor data quality and requires review to confirm. • TX_NEW comparison: HEI_POS_ART disaggregate is expected to be close in value to TX_NEW age <1; however, some discrepancies could be expected, and significant discrepancies should be reviewed to confirm. These values may differ in part because the age disaggregate definitions for these indicators differs. TX_NEW age is based on age at ART initiation, while PMTCT_HEI_POS is based on age at virologic sample collection. o Scenario: An infant's virologic sample was collected when the infant was 11 months old near the end of Q1. The infant's positive result was available to the site in Q2, and she started ART in Q2 at 13 months of age. Under PMTCT_HEI_POS in Q2, she would be reported as "Positive, ART initiation confirmed, age 2-12mo;" however, under TX_NEW in Q2 she would be reported in the 1-9-year age group.

<table>
<tr><td>How to calculate annual total:</td><td colspan="2">Sum results across quarters.</td></tr>
<tr><td rowspan="5">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Infant age at virologic sample collection and result returned [Required]</td><td>• Negative, 0 to ≤2 months
• Negative, 2 to 12 months
• Positive, 0 to ≤2 months
• Positive, 2 to 12 months</td></tr>
<tr><td>Result returned, Positive, confirmed initiated ART by age at virologic sample collection [Required]</td><td>• Positive, confirmed initiated ART, 0-2 months of age
• Positive, confirmed initiated ART, 2-12 months</td></tr>
<tr><td colspan="2">Denominator Disaggregations:</td></tr>
<tr><td></td><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td></td><td>N/A</td><td>N/A</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td colspan="2">Description of infant age at virologic sample collection for negative infants: For the numerator to be calculated, implementing partners are required to report:
• HIV-exposed negative infants identified in a quarter, disaggregated by the age at time of sample collection: 0-≤2 months of age (0-60 days), or between 2-12 months of age (61-365 days). These values will auto-sum to the numerator.

Description of infant age at virologic sample collection for positive infants: For the numerator to be calculated, implementing partners are required to report:
• HIV-infected infants identified in a quarter, disaggregated by the age at time of sample collection: 0-≤2 months of age (0-60 days), or between 2-12 months of age (61-365 days). These values will auto-sum to the numerator.
Description of positive, confirmed initiated ART by age at virologic sample collection:
• Implementing partners are required to note infants living with HIV, disaggregated by age 0-≤2months and between 2-12 months, who are confirmed as initiating ART by:
a. Positive, confirmed ART initiation, infant was between 0-≤2 months of age (0-60 days) at time of virologic sample collection
b. Positive, confirmed ART initiation, infant was between 2-12 months of age (61- 365 days) at time of virologic sample collection
Age: The definition of data collection ≤2 months EID is defined as 0-60 days. 2-12 months EID is defined as 61-365 days to prevent double counting of HIV-exposed infants who have a sample collected for EID by 2 months of age.</td></tr>
<tr><td>PEPFAR-support definition:</td><td colspan="2">Standard definition of DSD and TA-SDI used.
<u>Provision of key staff or commodities for PMTCT includes</u> commodities such as test kits (e.g., including but not limited to DBS bundles or collection kit, POC/near POC sample collection kits and testing devices), ARVs including infant prophylaxis, lab commodities; or funding for salaries of health care workers.
<u>Ongoing support for PMTCT service delivery improvement includes</u>: training of PMTCT service providers, clinical mentoring and supportive supervision of PMTCT service sites, infrastructure/renovation of facilities, support for PMTCT service data collection, reporting, data quality, QI/QA of PMTCT services support, ARV consumption forecasting and supply management, support of lab clinical monitoring of patients, supporting patient follow-up/ continuity of treatment, support of mother mentoring programs.</td></tr>
</table>

PMTCT_STAT (INCLUDING PMTCT_STAT_POS)

Description:	Percentage of pregnant women with known HIV status at antenatal care (includes those who already knew their HIV status prior to ANC)	
Numerator:	Number of pregnant women with known HIV status at first antenatal care visit (ANC1) (includes those who already knew their HIV status prior to ANC1)	The numerator is the sum of the following 2 data elements: 1. The number of women with a previously known HIV status (both known HIV-positive and known negative) attending their first ANC visit (ANC1) for a new pregnancy over the last reporting period. 2. The number of women attending ANC1 who were tested for HIV and received results
Denominator:	Number of new ANC clients in reporting period	N/A
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required for both Path 1 and Path 2 reporting options.** **Under the flexible Path 1 Topline option, PMTCT_STAT will NOT auto-populate to HTS_TST ANC 1. ANC 1 results should still be included in the Path 1 Topline numerator.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	Track progress toward ensuring that all pregnant women who attend PEPFAR-supported antenatal care (ANC) know their HIV status and those newly testing positive are initiated on ART.	
How to collect:	The data source is the ANC register. There is a risk of double counting as a pregnant woman could be tested multiple times during one pregnancy; therefore, partners should ensure a data collection and reporting system is in place to minimize double counting, including a longitudinal ANC register (meaning a register that is able to record all information about one pregnancy in one location, with rows or columns that allow for recording information on multiple visits during that pregnancy). Subsequent testing during pregnancy and breastfeeding should be counted in the respective HTS modalities: Post ANC1: Pregnancy/L&D and Post ANC1: Breastfeeding. There is also a risk of undercounting if those women who already knew their HIV status prior to attending ANC are not documented; therefore, the ANC register should at a minimum document both “previously known positive” and “newly tested positive.” It may be appropriate to report “Known Negative” women under the “Recent Negative” disaggregate if national guidelines do not require retesting women known to be HIV-negative (often women tested in the last 3 month; however, exact timing depends on local guidelines). See disaggregate definitions below for additional information. Women reported under the “Newly Tested Positive” and “New Negative” disaggregations will auto-populate the HTS_TST ANC1 modality. Women who are tested later in pregnancy, during L&D, and/or during breastfeeding should be reported under the respective HTS modalities: Post ANC1: Pregnancy/L&D and Post ANC1: Breastfeeding.	
How to review for data quality:	PMTCT_STAT should never be above 100% at a site, therefore review of the method of data collection and correction of any errors at sites with greater than 100% coverage is importantto ensuring data quality for this indicator. Retesting of HIV-negative women during pregnancy, at L&D, and through the postpartumperiod is an important program strategy and is collected under the respective HTS modalities: Post ANC1: Pregnancy/L&D and Post ANC1: Breastfeeding. Please see the HTS_TST reference sheet for more information on collecting this information.	

<table>
<tr><td>How to calculate annual total:</td><td colspan="2">Assuming site level records avoid double counting (as described above) across the annual reporting cycle, sum numerator and denominator across all reporting periods for the annual result.</td></tr>
<tr><td rowspan="4">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Status and Age
[Required for Path 1 and Path 2]

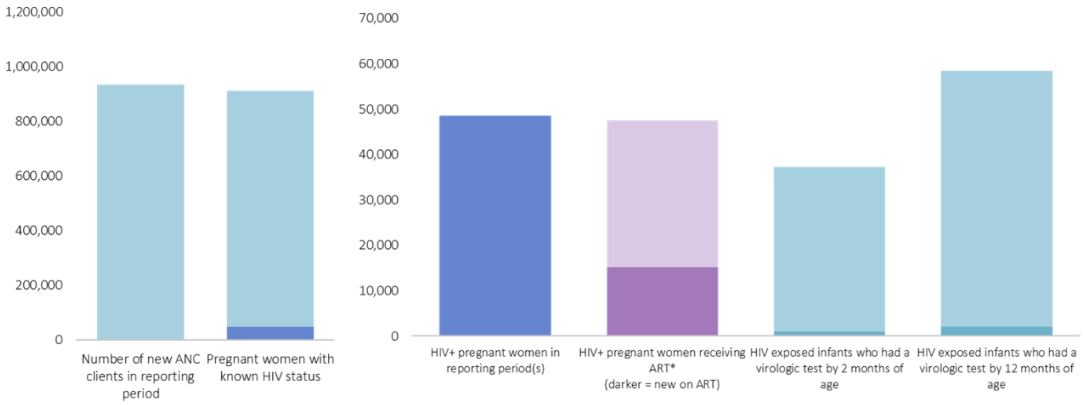
<u>Underlined portions auto-populate into the PMTCT (ANC1-ONLY) HTS_TST modality for Path 2 only.</u></td><td>• Known Positives: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age
• <u>Newly Tested Positives: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age</u>
• <u>New Negatives: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age</u>
• Recent Negatives at Entry: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age</td></tr>
<tr><td colspan="2">Denominator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Age [Required]</td><td><10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td colspan="2">Status and Age:

• Known Positive at entry: Number of pregnant women attending ANC for a new pregnancy who were tested and confirmed HIV-positive at any point prior to the current pregnancy should be reported as known positive at entry. Pregnant women with known HIV status attending ANC for a new pregnancy may not need retesting if they are already on ART, or they may be required to be retested prior to initiating ART based on national guidelines. Known positives who are re-tested and confirmed to be HIV positiveprior to initiating ART should still be documented as known positive at entry.

• Newly Tested Positive: The number of women attending ANC1 who were tested for HIV and received a positive result. Women who tested negative prior to this pregnancyand are tested again at ANC1 for this new pregnancy should be counted in this indicator.

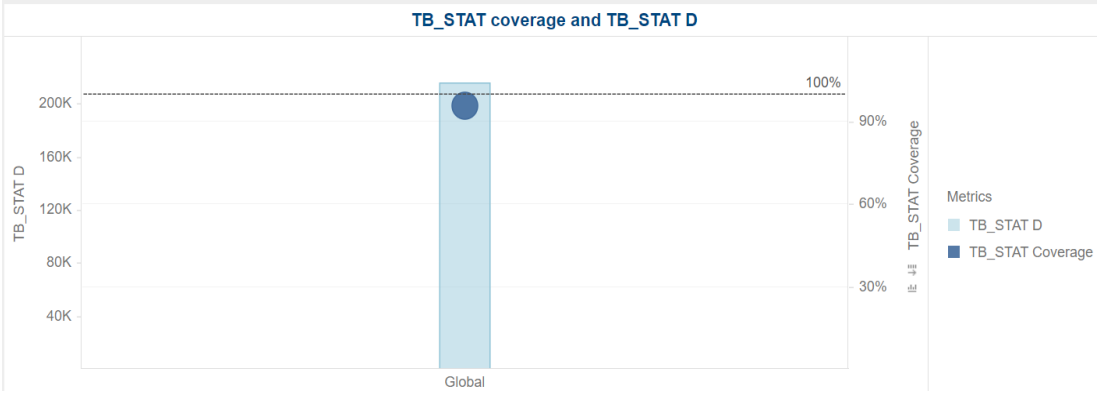
• New Negative: The number of women attending ANC1 who were tested for HIV and received a negative result. Women who tested negative prior to this pregnancy and aretested again at ANC1 should be counted in this indicator.

• Recent Negative at Entry: Number of pregnant women attending ANC for a new pregnancy who recently tested HIV-negative and are not eligible – according to country clinical guidelines - for another HIV test at ANC1. For example, women who tested negative within 3 months of attending ANC1 may not be recommended for testing per country clinical guidelines. This is expected to be a less utilized disaggregate.</td></tr>
<tr><td>PEPFAR-support definition:</td><td colspan="2">Standard definition of DSD and TA-SDI used.
<u>Provision of key staff or commodities for PMTCT includes</u>: commodities such as test kits, ARVs, lab commodities, or funding for salaries of health care workers.
<u>Ongoing support for PMTCT service delivery improvement includes</u>: training of PMTCT service providers, clinical mentoring and supportive supervision of PMTCT service sites, infrastructure/renovation of facilities, support for PMTCT service data collection, reporting, data quality, QI/QA of PMTCT services support, ARV consumption forecasting and supply management, support of lab clinical monitoring of patients, supporting patient follow-up/ continuity of treatment, support of mother mentoring programs.</td></tr>
</table>

Data visualization & use examples:	**Uptake of ANC Testing and PMTCT Treatment Linkage to EID Cascade:** 

TB_STAT (INCLUDING TB_STAT_POS)

Description:	Percentage of new and relapsed TB cases with documented HIV status	
Numerator:	Number of new and relapsed TB cases with documented HIV status, during the reporting period	The numerator can be generated by counting the number of new and relapsed TB cases with documented HIV test results during the reporting period.
Denominator:	Total number of new and relapsed TB cases, during the reporting period	The denominator can be generated by counting the number of new and relapsed TB cases during the reporting period.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required with flexibility.** **For TB_STAT, this indicator is required with flexibility. Under Flexible Topline Path 1 option, then TB_STAT becomes optional. TB_STAT auto-populates to HTS_TST under Path 2 Standard Reporting.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	This indicator measures the performance of the TB program in ensuring that TB cases know their HIV status.	
How to collect:	The numerator and denominator can be obtained from basic management unit TB registers as well as additional data collection sources (i.e., HIV testing registers) that may contain relevant information (i.e., HIV test results, enrollment in HIV care programs). Programs should modify the register as needed to easily capture this information (<1 F, <1 M, 1-4 F, 1-4 M, 5-9 F, 5-9 M, 10-14 F, 10-14 M, 15-19 F, 15-19 M, 20-24 F, 20-24 M, 25-29 F, 25-29 M, 30-34 F, 30-34 M, 35-39 F, 35-39 M, 40-44 F, 40-44 M, 45-49 F, 45-49 M, 50+ F, 50+ M, Unknown age F, Unknown age M) and (Known HIV-positive at service entry). The data source is the TB register. There is a risk of double counting as TB patients could be tested multiple times during their TB treatment; therefore, partners should ensure a data collection and reporting system is in place to minimize double counting. There is also a risk of undercounting if those patients who already knew their HIV status prior to attending TB clinics are not documented; therefore, the TB register at a minimum should document "Known HIV-positive at service entry; Newly tested HIV-positive; Tested HIV-negative; Recently tested HIV-negative."	
How to review for data quality:	Only one disaggregation type is used for age and gender (fine age and gender disaggregations) • Denominator ≥ numerator. • Numerator ≥ subtotal of each of the disaggregations • Denominator ≥ subtotal of each of the disaggregations	
How to calculate annual total:	Sum results across quarters for both the numerator and denominator.	
Disaggregations:	**Numerator Disaggregations:**	
	Disaggregate Groups	**Disaggregates**
	Status by Age/Sex **[Required under Path 2, Optional under Path 1. See HTS_TST for additional information** ***Underlined portions auto-populate into the TB HTS_TST modality under Path 2.***	• Known Positive: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M,40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • Newly Tested Positive: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown

		Age F/M • New Negative: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M • Recently Tested Negative: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M,40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	Age/Sex **[Required under Path 2, Optional under Path 1. See HTS_TST for additional information]**	• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M, Unknown Age F/M
Disaggregate descriptions & definitions:	"**Recently Tested Negative**:" Number of TB cases who recently tested HIV-negative within a 6-week period, or more recently according to country clinical guidelines, and are not eligible for another HIV test at the time of presentation in the TB clinic in accordance with national HTS guidelines. For example, an individual with symptoms of TB (presumptive TB) who underwent HIV testing as part of their clinical evaluation prior to being referred to a TB clinic and arrive at the TB clinic with a negative HIV test result not older than 6 weeks and who may not yet be eligible for additional HTS according to national HTS guidelines.	
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for TB cases receiving HIV-related services includes: funding of test kits, ARVs, ARTs, and lab commodities or funding of salaries or provision of Health Care Workers for TB/HIV-related services. Staff responsible for maintaining patient records are included in this category; however, staff responsible for fulfilling reporting and routine M&E requirements are not included. Ongoing support for TB cases receiving HIV-related services includes: training of TB/HIV service providers, clinical mentoring and supportive supervision of staff at TB/HIV sites, infrastructure/renovation of facilities, support of TB/HIV service data collection, reporting, data quality, QI/QA of TB/HIV services support, ARV consumption forecasting and supply management, support of lab clinical monitoring of patients, supporting patient follow up/ continuity of treatment, support of other TB/HIV programs.	
Data visualization & use examples:	**TB_STAT Coverage:** 	

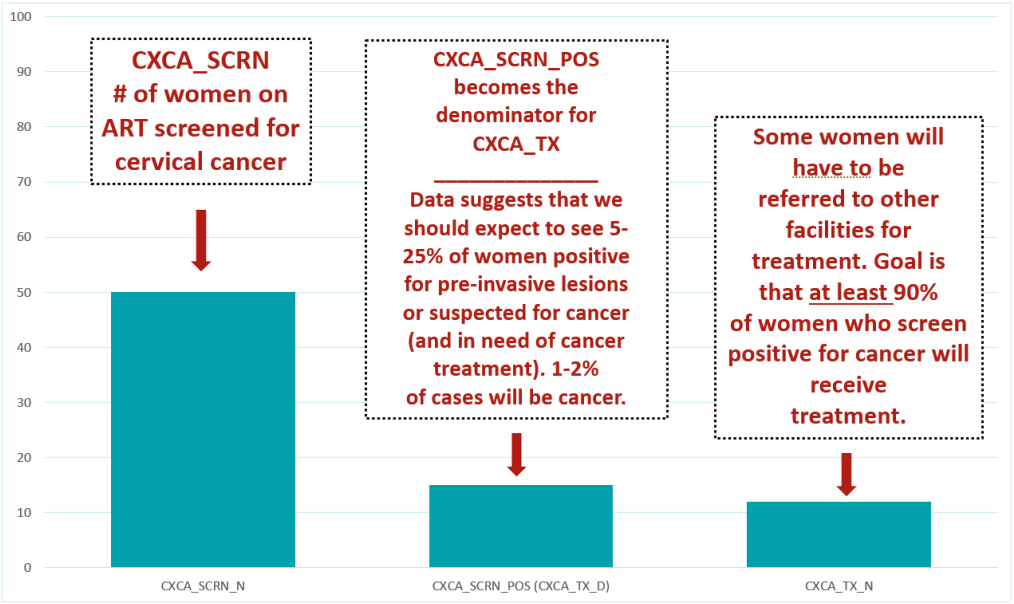
TREATMENT INDICATORS

CXCA_TX

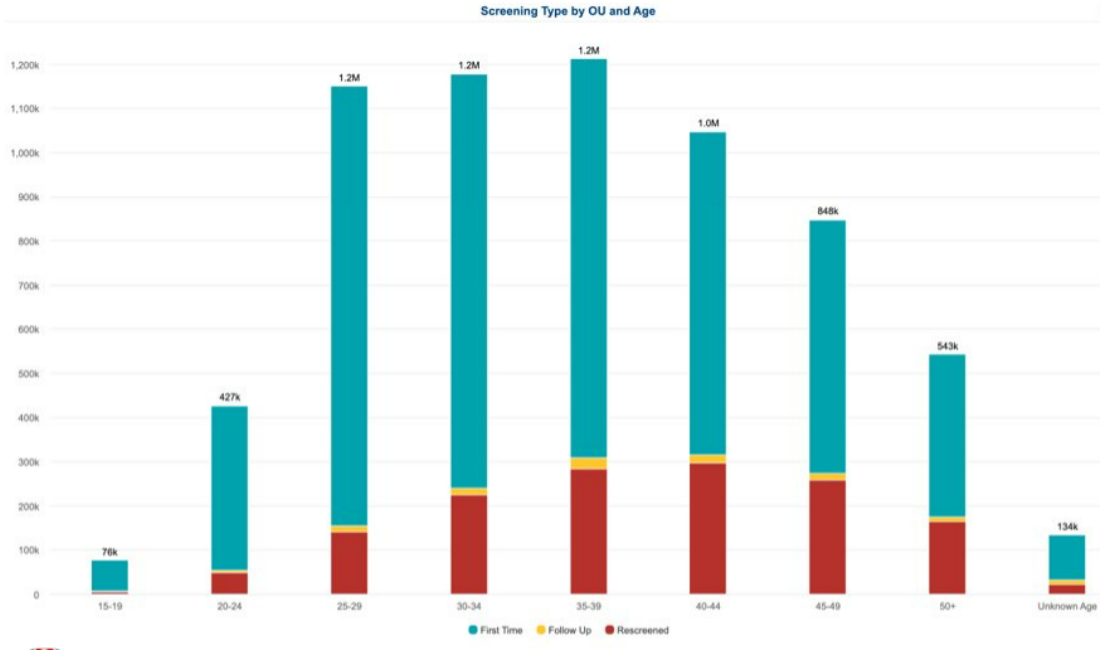
Description:	Percentage of cervical cancer screen-positive women who are living with HIV and on ART, eligible for cryotherapy, thermocoagulation or LEEP who received cryotherapy, thermocoagulation, or LEEP	
Numerator:	Number of women with a positive VIA screening test who are living with HIV and on ART eligible for cryotherapy, thermocoagulation, or LEEP who received cryotherapy, thermocoagulation or LEEP	The numerator captures the number of individual women living with HIV (WLHIV) on ART who required treatment for precancerous cervical lesions, who received that treatment.
Denominator:	Number of women living with HIV (WLHIV) on ART at PEPFAR supported sites who are eligible forcryotherapy, thermocoagulation or LEEP, in other words CXCA_SCRN_POS.	See CXCA_SCRN_POS.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional.**	
Reporting level:	Facility	
Reporting frequency:	Semi-Annually	
How to use:	It is vital that all women living with HIV (WLHIV) on ART requiring treatment for precancerous lesions receive the treatment for which they are eligible. The purpose of this indicator is to monitor whether women requiring (and eligible for) treatment for precancerous lesions received treatment. CXCA_SCRN and CXCA_TX should be analyzed together at the district or sub-regional level that includes sites where both screening and treatment would occur, in order to monitor the percentage of positive women who receive treatment while accounting for patient referrals between facilities. The globally accepted benchmark of at least 90% eligible for treatment of precancerous lesions receiving treatment should be used when monitoring performance (WHO, 2021).	
How to collect:	The primary data sources for this indicator are registers or logbooks in use at the point of precancerous lesion treatment service delivery. Client and facility level data collection tools should include the data elements required for disaggregation. Data for the numerator should be generated by counting the total number of WLHIV on ART who received precancerous lesion treatment (cryotherapy, thermocoagulation or LEEP or other) who were eligible for that treatment. Challenges may arise in counting when women are referred for LEEP, but who are found eligible for cryotherapy (or thermocoagulation) upon presenting at the LEEP service delivery point. It is vital that facility level data collection and program monitoring tools capture the data elements necessary to identify this key performance issue, which can lead to data quality issues for this indicator.	
How to review for data quality:	The numerator for this indicator should not be larger than CXCA_SCRN and should be equal to 100% or less of the CXCA_SCRN_POS disaggregate (not including suspected cancer).	
How to calculate annual total:	Sum results across both reporting periods for the numerator.	
Disaggregations:	**Numerator Disaggregations:**	
	Disaggregate Groups	**Disaggregates**
	Screening Visit Type and Treatment Type by Age [Optional]	• 1st time screened, Cryotherapy by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age

		• 1st time screened: Thermocoagulation by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age • 1st time screened, LEEP by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age • Rescreened after previous negative, Cryotherapy, thermocoagulation or LEEP) by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age • Rescreened after previous negative, Thermocoagulation by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age • Rescreened after previous negative, LEEP by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age • Post-treatment follow-up, Cryotherapy by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age • Post-treatment follow-up, Thermocoagulation by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age • Post-treatment follow-up, LEEP by: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	See CXCA_SCRN_POS.	See CXCA_SCRN_POS.

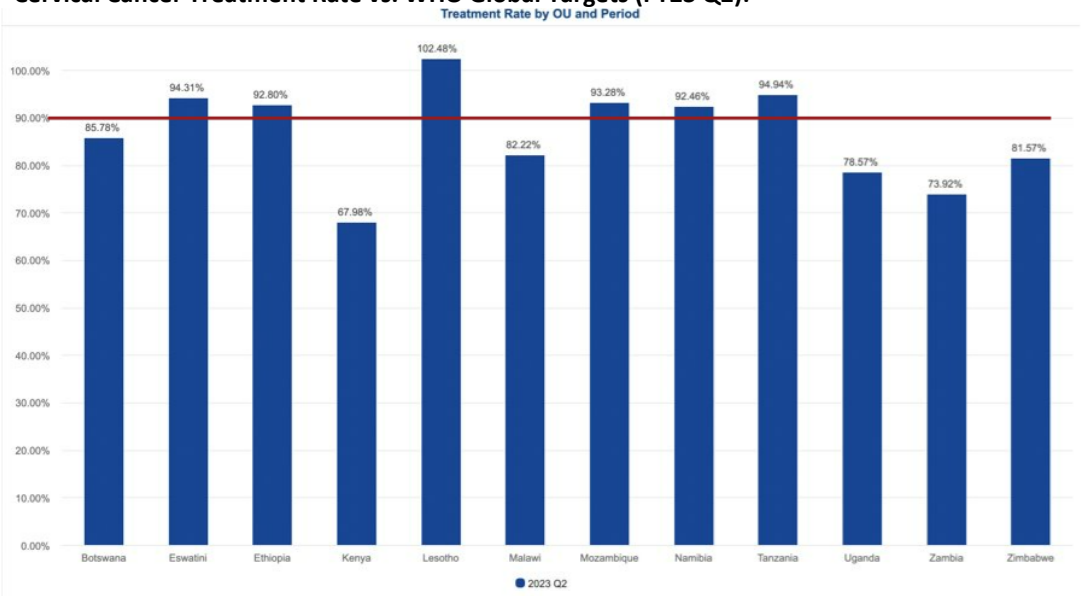
Disaggregate descriptions & definitions:	**Treatment Type**
	• Cryotherapy
	  ○ Outpatient ablative treatment option for small precancerous cervical lesions.
	  ○ By applying a highly cooled metal disc (cryoprobe) to the cervix and freezing the abnormal areas (along with normal areas) covered by it, cryotherapy eliminates precancerous areas on the cervix by freezing.
	• Thermocoagulation
	  ○ Outpatient ablative treatment option for small precancerous cervical lesions.
	  ○ It uses electricity to generate temperatures of 100–120 °C for ablation of cervical lesions and can be used for all stages of cervical cancer.
	• LEEP
	  ○ The primary outpatient treatment for large precancerous cervical lesions.
	  ○ The removal of abnormal areas from the cervix and the entire transformation zone, using a loop made of thin wire powered by an electrosurgical unit; the loop tool cuts and coagulates at the same time; this is followed by use of a ball electrode to complete the coagulation.
	
	Screening Visit Type
	• 1st Time screening
	  ○ This disaggregate allows the monitoring of screening service provision (and positivity rate) in the screening-naïve population living with HIV – only women being screened for the first time in their lifetime should be counted under this disaggregate.
	• Rescreening after previous negative result
	  ○ This disaggregate allows the monitoring of screening service provision (and positivity rate) in the population of WLHIV who have received at least 1 cervical cancer screening test in their lifetime, and who received a negative result on their most recent screening test.
	  ○ WHO recommends that WLHIV or women of unknown HIV status who receive a negative cervical cancer screening test result be rescreened every 3-5 years. (WHO guideline for	

	screening and treatment of cervical pre-cancer lesions for cervical cancer prevention, second edition. Geneva: World Health Organization; 2021.) ○ As a program matures, countries should consider adding an additional performance indicator which measures whether women that should return for routine rescreening in a given time period are returning in that time period (e.g., number of rescreened women in a given time period, over the number of women who were expected to be rescreened in the same time period). • Post-treatment follow-up screening ○ This disaggregate allows the monitoring of screening service provision (and positivity rate) in the population of WLHIV who have received at least 1 cervical cancer screening test in their lifetime, and who received precancerous lesion treatment due to a positive screening result on their last screening test. ○ Some national guidelines require post-treatment follow-up screening at intervals that differ from the PEPFAR screening algorithm – programs should use additional indicators to monitor the additional follow-up time points, and this should be noted in the narrative.
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. For precancerous cervical lesion treatment services, direct service delivery includes: ongoing procurement of critical treatment related commodities such as carbon dioxide or nitrous oxide gas or requisite materials (cryotips, specula, spatulas and swabs, exam gloves, etc.), or funding for salaries of precancerous lesion treatment service providers including program managers, supervisors, and/or coordinators. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. For precancerous cervical lesion treatment services, ongoing support for service delivery improvement includes: clinical mentoring/supportive supervision, cryotherapy, thermocoagulation or LEEP training, guidance development, infrastructure/renovation of facilities, site level QI/QA, routine support of M&E and reporting, or commodities consumption forecasting and supply management.
Data visualization & use examples:	**HIV/Cervical Cancer Cascade:** 

Treatment Type by Fine Age (FY18-FY23 Q2):



Cervical Cancer Treatment Rate vs. WHO Global Targets (FY23 Q2):



PMTCT_ART

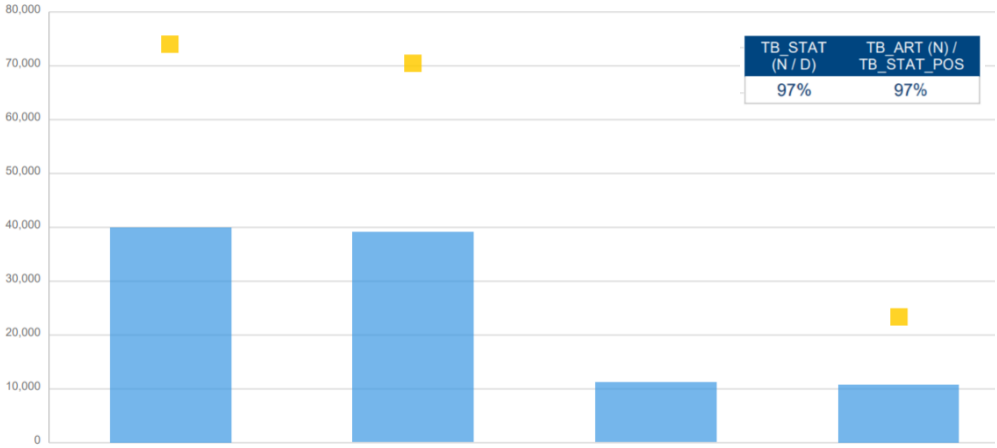
Description:	Percentage of pregnant women living with HIV who received ART to reduce the risk of mother-to-child-transmission (MTCT) during pregnancy	
Numerator:	Number of pregnant women living with HIV who received ART to reduce the risk of mother-to-child-transmission during pregnancy	Auto-Calculated indicator in DATIM, sum of: **(1)** New on life-long ART, **(2)** Already on life-long ART at the beginning of the current pregnancy
Denominator:	**PMTCT_STAT_POS** (see PMTCT_STAT)	Collected as part of PMTCT_STAT. Calculated indicator in DATIM, sum of: **(1)** New Positives, **(2)** Known Positive at entry (**see PMTCT_STAT, Disaggregate Group Positivity Status for more details**)
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	Track progress toward ensuring that all pregnant women who attend PEPFAR-supported antenatal care (ANC) know their HIV status and are initiated on ART.	
How to collect:	Data source is the ANC or PMTCT register depending on country context (in many high HIV prevalence settings information on the number of women receiving ART regimens is integrated into the ANC register). There is a risk of double counting, as a pregnant woman receiving ART at ANC should have multiple visits for each pregnancy. Therefore partners should ensure a data collection and reporting system is in place to minimize double counting of the same pregnant woman across visits including a paper based longitudinal ANC or PMTCT register (meaning a register that is able to record all information about 1 pregnancy in one location, with rows or columns that allow for recording information on multiple visits during that pregnancy) or an electronic medical record/patient tracking system. There is also a risk of undercounting if those women who are already on ART prior to attending ANC are not documented, therefore the ANC register should document both “New on ART” and “Already on ART at the beginning of the current pregnancy.” Note: Those women reported in PMTCT_ART including newly enrolled on ART and already on ART at the beginning of pregnancy should also be reported in the TX_NEW and TX_CURR indicators, respectively. Women who are already on ART should not be counted in TX_NEW. PMTCT_ART is about initiation of ART (yes/no) or already on ART (yes/no). This will most likely be captured at ANC1 but may be captured at a future ANC visit. Women initiated on ART during L&D or breastfeeding should not be reported under PMTCT_ART but should still be reported under TX_NEW.	
How to review for data quality:	Review any site with over 100% coverage or very low coverage to ensure they reflect expected results. In general, services should be reported at the site where they are delivered (however PMTCT_ART- “already on treatment” and PMTCT_STAT_POS “known positive at entry” are exceptions, see details under description of disaggregate below). Therefore, coverage at site level must be understood within the context of the service delivery model at that site. For example, in local areas where ART is integrated into ANC and low volume PMTCT sites are only testing for HIV and then referring women to other facilities for ART, the expectation is that for one individual PMTCT_STAT_POS (newly tested) will be documented at one facility and PMTCT_ART (new on ART) would be documented at another facility leading to the appearance of greater than >100% coverage at one site and 0% coverage at another.	

<table>
<tr><td>How to calculate annual total:</td><td colspan="2">Sum results across quarters for both the numerator and denominator.</td></tr>
<tr><td rowspan="5">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Maternal Regimen Type and Age
[Required]</td><td>• New on ART by: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age
• Already on ART at the beginning of current pregnancy by: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65+, Unknown Age</td></tr>
<tr><td colspan="2">Denominator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td colspan="2">N/A</td><td>See PMTCT_STAT_POS.</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td colspan="2">Maternal Regimen Type:
For the numerator to be calculated, implementing partners are required to report:
• The number of pregnant women living with HIV newly initiated on ART should only be counted in a regimen category if she actually received the regimen. Referral alone for ART should not be counted. Additionally, a woman who temporarily stopped ART and has started again during the same pregnancy should not be counted as new on treatment.

• The number of pregnant women living with HIV already on ART at beginning of pregnancy: May be counted even if ART is continuing to be received at another facility. For example,a woman who is already on treatment becomes pregnant and enrolls in ANC/PMTCT because she is living with HIV but is continuing to receive her ART at a nearby treatment clinic should be counted within this disaggregate. However, if a woman was initiated on ART at another facility during this pregnancy and then transfers-in to the ANC site, she should not be counted (since she was already counted at the first ANC site for this pregnancy).</td></tr>
<tr><td>PEPFAR-support definition:</td><td colspan="2">Standard definition of DSD and TA-SDI used.
Provision of key staff or commodities for PMTCT includes: commodities such as test kits, ARVs, lab commodities, or funding for salaries of health care workers.
Ongoing support for PMTCT service delivery improvement includes: training of PMTCT service providers, clinical mentoring and supportive supervision of PMTCT service sites, infrastructure/renovation of facilities, support for PMTCT service data collection, reporting, data quality, QI/QA of PMTCT services support, ARV consumption forecasting and supply management, support of lab clinical monitoring of patients, supporting patient follow-up/continuity of treatment, support of mother mentoring programs.</td></tr>
</table>

TB_ART

Description:	Proportion of new and relapsed TB cases living with HIV on ART during TB treatment	
Numerator:	Number of TB cases with documented HIV-positive status who start or continue ART during the reporting period	The numerator is generated by counting the total number of TB patients (new and relapse TB cases) with documented HIV-positive status during TB treatment who are newly initiated or already on ART.
Denominator:	**TB_STAT_POS (see TB_STAT)**: Number of registered TB cases with documented HIV-positive status during the reporting period.	Denominator is not collected as part of this indicator, but is TB_STAT_POS.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional.**	
Reporting level:	Facility	
Reporting frequency:	Annual	
How to use:	This indicator will measure the extent to which programs effectively link TB patients infected with HIV to appropriate HIV treatment. The HIV status of TB patients is often determined at the TB clinics (and will be captured with TB_STAT), but ART for TB cases is frequently provided by the HIV program. Therefore, provision of ART for this population often implies successful linkage between the TB and HIV program, which should be followed from TB_STAT_POS to TB_ART.	
How to collect:	The numerator is generated by counting the total number of TB patients (new and relapse TB cases) with documented HIV-positive status during TB treatment who are newly initiated or already on ART.	
How to review for data quality:	Only one disaggregation type is used for age/sex. Numerator ≥ subtotal of each of the disaggregations.	
How to calculate annual total:	• TB_ART: N/A. Data is reported only once annually at Q4. • TB_STAT_POS (See TB_STAT): Sum results across quarters.	
Disaggregations:	**Numerator Disaggregations:**	
	Disaggregate Groups	**Disaggregates**
	ART Status by Age/Sex [Optional]	• New on ART: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M • Already on ART: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	TB_STAT_POS (See TB_STAT).	TB_STAT_POS (See TB_STAT).
Disaggregate descriptions & definitions:	**Age Description:** Age is defined as the age at the date of initiation on ART or current age, not the age at the date of reporting.	

	ART Status Definition: This disaggregation should distinguish those who started ART during the reporting period (this should also be reported under TX_NEW) from those who were already on it at the beginning of the reporting period.
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for TB cases receiving HIV-related services includes: funding of test kits, ARVs, ARTs, and lab commodities or funding of salaries or provision of Health Care Workers for TB/HIV-related services. Staff responsible for maintaining patient records are included in this category; however, staff responsible for fulfilling reporting and routine M&E requirements are not included. Ongoing support for TB cases receiving HIV-related services includes: training of TB/HIV service providers, clinical mentoring and supportive supervision of staff at TB/HIV sites, infrastructure/renovation of facilities, support of TB/HIV service data collection, reporting, data quality, QI/QA of TB/HIV services support, ARV consumption forecasting and supply management, support of lab clinical monitoring of patients, supporting patient follow up/continuity of treatment, support of other TB/HIV programs.
Data visualization & use examples:	**TB_STAT and ART Cascade:** 

Fiscal Year	Fiscal Quarter	New/Relapsed TB cases TB_STAT Denominator	TB cases with HIV status TB_STAT Numerator	TB cases with positive HIV status TB_STAT_POS	HIV-positive TB cases on ART TB_ART Numerator
2018	Q2	40,027	39,025	11,220	10,862
	Target	73,967	70,510		23,309

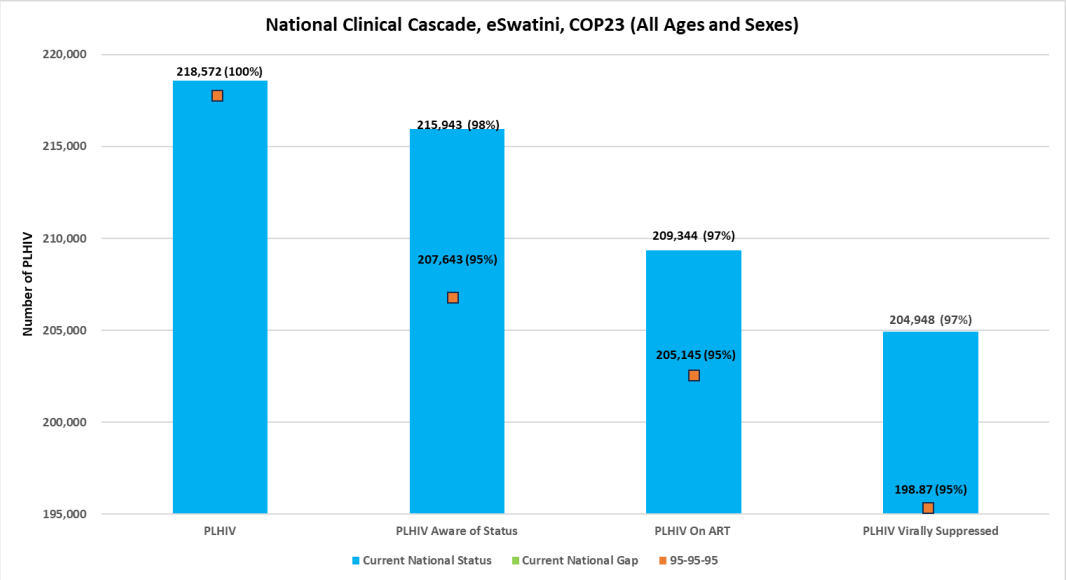
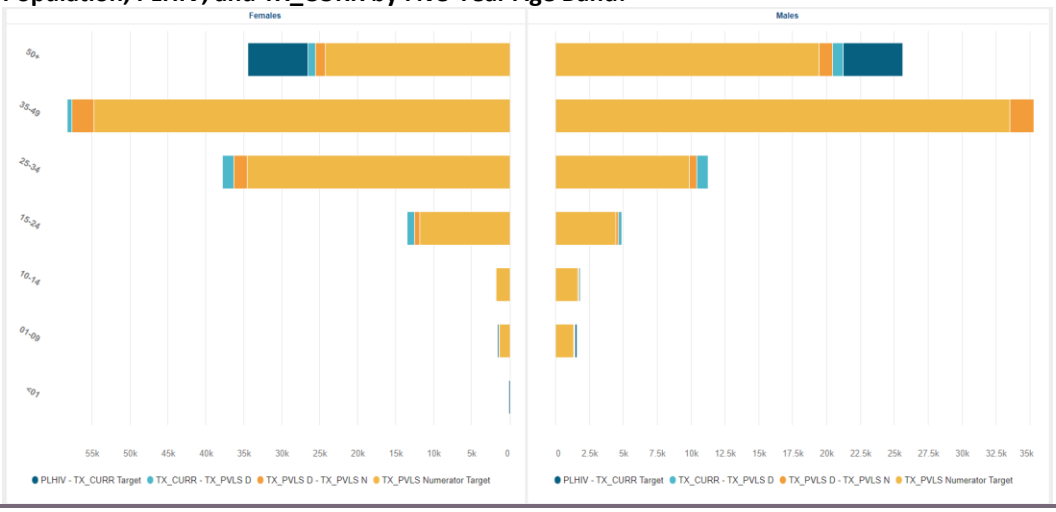
TX_CURR

Description:	Number of adults and children currently receiving antiretroviral therapy (ART)	
Numerator:	Number of adults and children currently receiving antiretroviral therapy (ART)	Count the number of adults and children who are currently receiving ART.
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	This indicator measures the ongoing scale-up and uptake of ART and continuity of treatment in ART programs as a critical step in the HIV service cascade and assesses progress towards coverage of ART for all eligible people with HIV when reviewed against the number of PLHIV that are estimated to be eligible for treatment. It allows us to track the response to the epidemic in specific geographic areas and among specific populations as well as at the national level. Disaggregations by age and sex can help better understand which populations have achieved global HIV/AIDS targets and which populations are lagging behind. Collection of expanded age data (50-54, 55-59, 60-64, and 65+) is needed for planning appropriate HIV services for older adults as well as to integrate service needs. As the treatment cohort continues to age, the ability to monitor lifelong patient outcomes is critical. Finally, disaggregations on ARV dispensing quantity can be used to determine uptake of multi-month dispensing (MMD) at PEPFAR sites, in PEPFAR SNUs, and across PEPFAR partners.	
How to collect:	This indicator should be collected from facility ART registers/databases, program monitoring tools, and drug supply management systems. Count the number of adults and children who are currently receiving ART in accordance with the nationally approved treatment protocol (or WHO/UNAIDS standards) at the end of the reporting period. Importantly, **patients who have not received ARVs within 4 weeks (i.e., 28 days) of their last missed drug pick-up should not be counted.** The following should also be considered: • Patients on ART who initiated or transferred-in during the reporting period should be counted. • Patients that pick up 3 or more months of anti-retroviral drugs at one visit (i.e., multi- month dispensation) should also be counted if they have received enough ARVs to last to the end of the reporting period at a minimum. • However, if it is determined that a patient has died, they should immediately be removed from the TX_CURR results. • Pregnant women with HIV who are eligible for and are receiving antiretroviral drugs for their own treatment should be counted. Pregnant women with HIV initiating lifelong ART through PMTCT will count as "current" on ART under this indicator. These include pregnant women with HIV who have newly initiated ART during the current pregnancy and pregnant women with HIV who are already on ART at the beginning of the current pregnancy. Individuals excluded from the current on ART count are patients who died, stopped treatment, transferred out, or experienced interruption in treatment (IIT). **Patients who have not received ARVs within 4 weeks (i.e., 28 days) of their last missed drug pick-up should not be counted.** Patients do not need to qualify as IIT before tracing efforts commence. Efforts to trace patients that have missed a clinical visit or drug pick-up should begin immediately following a missed clinical contact. Patients who have not received ARVs within 4 weeks of their last missed drug pick-up should be described further in the reporting of the TX_ML indicator. Patients that restart treatment after 4	

<table>
<tr><td></td><td>weeks or more of being off ARVs should also be counted under TX_RTT in the reporting period in which the patient returns to care and restarts ARVs.
TX_CURR should be reported from both PEPFAR-supported sites in the private and/or public sector. Patients currently receiving treatment from mobile clinics can be reported in two ways. Firstly, if the mobile clinic is associated with (e.g., receives commodities, reports to, is staffed by) a nearby health facility, then these individuals should be reported by that facility. Secondly, if a mobile clinic is stationary for more than 2 reporting periods, it should be added to the PEPFAR facility list with geocodes and data should be reported for this mobile clinic directly.
DO NOT include: Patients who receive ARVs for post-exposure prophylaxis (PEP) or short-term ART only for prevention (PrEP) should not be reported in this indicator.
See Appendix J for a visual representation of TX_CURR, TX_ML, TX_NEW, and TX_RTT.</td></tr>
<tr><td>How to review for data quality:</td><td>• Confirm that TX_CURR ≥ TX_NEW.
• Confirm that TX_CURR ≥ TX_RTT.
• Confirm that TX_CURR ≥ Disaggregates for ARV Dispensing Quantity.</td></tr>
<tr><td>How to calculate annual total:</td><td>This is a snapshot indicator. Results are cumulative at each reporting period.</td></tr>
<tr><td>Disaggregations:</td><td>
<table>
<tr><th colspan="2">Numerator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>Age/Sex
[Required]</td><td>• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M</td></tr>
<tr><td>ARV Dispensing Quantity by Coarse Age/Sex
[Required]</td><td>• <3 months of ARVs (not MMD) dispensed to patient by: <15 F/M, 15+ F/M, Unknown Age F/M
• 3-5 months of ARVs dispensed to patient by: <15 F/M, 15+ F/M, Unknown Age F/M
• 6 or more months of ARVs dispensed to patient by: <15 F/M, 15+ F/M, Unknown Age F/M</td></tr>
<tr><th colspan="2">Denominator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>N/A</td><td>N/A</td></tr>
</table>
</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td><u>For age /sex disaggregates:</u>
CURRENT is a state defined by treatment status when last seen, so it is expected that characteristics of these patients would be updated each time they are seen. Age represents an individual's age at the end of the reporting period or when last seen at the facility. For example, a 14-year-old child will be counted as currently receiving treatment in the <15 years of age category at the end of reporting period "A." During reporting period "B" the child turns age 15 years and so at the end of this reporting period the child will be counted under the 15+ years of age category.

<u>For ARV dispensing quantity by coarse age/sex disaggregates:</u>
Patients should be categorized by the coarse age disaggregates while being further categorized by the months of ARVs dispensed: <3 months of ARVs dispensed to the patient, 3-5 months of ARVs dispensed to the patient, or 6 or more months of ARVs dispensed to the patient. By definition, <u>patients dispensed just 1 or 2 months of ARVs are not</u> <u>receiving MMD</u>. However, to ensure data completeness and quality, they are collected herein.

NOTE: MMD should not be confused with multi-month prescriptions. For example, patients receiving 6-month prescriptions that the facility fulfills in 2 refills of a 3-month supply can be counted as receiving MMD in the 3–5-month MMD disaggregate. Inversely, patients receiving 6-month prescriptions that the facility fulfills in 6 refills of a 1-month supply wouldbe counted in the <3 months disaggregated and would not be considered as receiving MMD.</td></tr>
</table>

PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for PLHIV receiving ART includes: the provision of key staff and/or commodities can include ongoing procurement of critical commodities, such as ARVs, or funding for salaries of HCW who deliver HIV treatment services. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. Ongoing support for PLHIV receiving ART service delivery improvement includes: clinical mentoring and supportive supervision of staff at HIV sites providing ART, support for quality improvement activities, patient tracking system support, routine support of ART M&E and reporting, commodities consumption forecasting, and supply management
Data visualization & use examples:	**95-95-95 Cascade Example:**  **Population, PLHIV, and TX_CURR by Five-Year Age Band:** 

TX_ML

Description:	Number of ART patients (who were on ART at the beginning of the quarterly reporting period or initiated treatment during the reporting period) and then had no clinical contact since their last expected contact	
Numerator:	Number of ART patients (currently on ART or newly initiating ART) with no clinical contact or ARV pick-up for greater than 28 days since their last expected clinical contact or ARV pick-up	Clinical contact is defined as any clinical interaction with the patient, such as clinical assessment by a healthcare worker or provision of medication.
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	TX_ML (treatment mortality and loss) is intended to: **(1)** help better understand fluctuations or steady growth in TX_CURR over time, **(2)** encourage tracing of patients when a patient has had no clinical contact for greater than 28 days since their last expected contact and **(3)** promote timely identification of patient outcomes among patients known to have missed clinical visits or drug pickups, and **(4)** provide regular identification of patient outcomes among patients known to have missed clinical visits or drug pick-ups, recognizing that mortality outcomes (i.e., death) may be underreported. Serious attempts should be made to reengage any patient that has not returned for clinical services or drug pick-up and return them to treatment. PEPFAR implementing partners must ensure that immediate programmatic action is being taken to locate patients that have missed appointments. Patients should be traced in an active, safe, and confidential way that assures sustained adherence to treatment moving forward. Health care workers should leverage best practices to reach patients experiencing IIT, while protecting confidentiality. Those individuals that have had no clinical contact for greater than 28 days since their last expected clinical contact form the numerator of this indicator. These data can then be analyzed to understand details of the group of individuals who have interrupted treatment. In case of death, mortality data should be analyzed and investigated to determine causes of death, where possible. From a public health perspective, treatment adherence and continuity of treatment are essential to achieve and maintain viral suppression and ultimately reduce or eliminate disease transmission. Often, patients who appear to have experienced an interruption in treatment may have died or have self-transferred to another health care facility; as such, it is important to understand and make these distinctions as each one may require different programmatic interventions. It is important to note that this is not a cohort monitoring indicator. TX_ML is meant to be used in conjunction with TX_CURR to help better understand fluctuations or steady growth of the ART patient population.	
How to collect:	This indicator should not count or report those patients who were already lost and not counted in TX_CURR at the beginning of the reporting period. Clinical contact is defined as reporting to the clinic for ART pick-up or clinical assessment, or a documented community visit with a community health worker or peer from an ART refill group. Attempts to reach and re-engage patients into treatment should be made as soon as a patient misses a clinical visit.	

When a patient has missed their most recent expected clinical contact, the clinic or other related staff should attempt to reach and reengage the patient as soon as possible. Once a PLHIV has reached 28 days past their expected clinical contact or drug pick-up, she/he/they should be removed from TX_CURR, the clinic should again attempt to reach and re-engage the patient, and her/his/their current outcome should be determined. The outcomes are defined as not currently on ART at the facility if the patient:

1. Died
2. Interruption in treatment (IIT)
    a. On treatment for <3 months when experienced IIT
    b. On treatment for 3-5 months when experienced IIT
    c. On treatment for 6+ months when experienced IIT
3. Transferred out
4. Refused (stopped) treatment

See Disaggregates and Descriptions section below for definitions of each of these outcomes.

Included in the classification of IIT are the following: patients for whom tracing is not attempted, and patients for whom tracing is attempted but unsuccessful or for whom status cannot otherwise be determined (i.e., patient may have died or may have silently transferred, but status is unknown). Patients should also be reported as IIT if they have been traced and scheduled to return after the end of the reporting period (in other words, they have not returned yet). A facility may wish to further distinguish these classifications, but they are not required for MER reporting. It is assumed that tracing will be attempted for every patient who has missed clinical visits at both <28 days and >28 days since the last expected clinical contact or ARV pick-up.

This indicator seeks to reconcile the status of patients who are TX_CURR during the reporting period and then fall off ART, i.e., into the classification of >28 days since clinical contact or ARV pick-up status DURING THE REPORTING PERIOD. This includes those ART patients who continue treatment from the prior reporting period (TX_CURR at the beginning of the reporting period), and those who newly initiate in this reporting period (TX_NEW). To reiterate, this indicator should not count nor report those patients who were already lost and not counted in TX_CURR at the beginning of the reporting period.

If a patient is re-engaged and restarted ART after >28 days of being off treatment, and remains on treatment until the end of the reporting period, then the patient should be added back to TX_CURR, but should not be counted in TX_ML. The patient may also be reported in TX_RTT, provided they were not counted in TX_CURR during the previous reporting period. (See TX_RTT for additional information.) Facilities should make every attempt to continue to contact persons who experienced IIT from a prior reporting period and return them to care, an outcome which would be reflected in the TX_RTT indicator.

Note that TX_ML requires that a patient is on treatment at the beginning of the reporting period or newly initiates treatment during the reporting period, while TX_RTT requires that a patient is not on treatment at the beginning of the reporting period and excludes patients who newly initiate treatment during the reporting period. **Therefore, a patient cannot be counted in TX_ML and TX_RTT in the same reporting period.**

Both TX_ML and TX_RTT have disaggregates on interruption in treatment. The TX_ML IIT disaggregate reflects the amount of time that a patient was on treatment when they experienced an interruption in treatment. The TX_RTT IIT disaggregate reflects the duration of interruption in treatment prior to being returned to treatment.

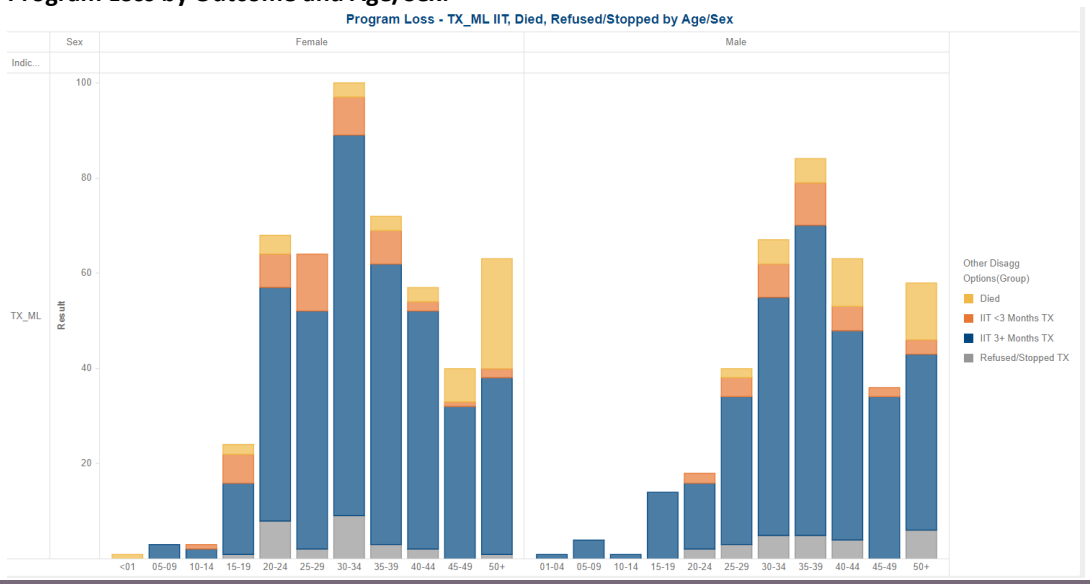
See Appendix J for a visual representation of TX_CURR, TX_ML, TX_NEW, and TX_RTT.

It is widely acknowledged that even where reporting is required, mortality data, especially cause of death, are often underreported or inaccurate. In addition, it may take some time for a clinic to discover that a patient has died. Thus, a clinic may classify a patient as TX_ML_IIT in the quarter the patient gets to >28 days past the expected clinical contact, but later discover that the patient died. If it is later discovered that the patient died, **they do not need to be recounted or reclassified in this indicator in a later quarter**. Data on deaths should only be reported, if available, in the quarter when the patient gets to >28 days past the expected clinical contact.

<table>
<tr><td></td><td colspan="2">Program data available on deaths and the cause of death disaggregate under this indicator should be triangulated with mortality surveillance, where available, to understand causes of death among PLHIV. For more information on routine mortality monitoring, refer to Appendix H.</td></tr>
<tr><td>How to review for data quality:</td><td colspan="2">Patient trackers, tracing logs, missed appointment reports, and other available sources should be routinely checked. These comparisons will help programs understand where efforts are required to better improve and/or ensure completeness of reporting.</td></tr>
<tr><td>How to calculate annual total:</td><td colspan="2">There should be no annual total. Data for this indicator are intended to provide context for TX_CURR results but the numerator should NOT be summed across reporting periods due to the active movement and potential reclassification of patients.</td></tr>
<tr><td rowspan="3">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Outcome by Age/Sex [Required]</td><td>• Died by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• Interruption in Treatment (IIT) by:
○ IIT After being on Treatment for <3 months by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
○ IIT After being on Treatment for 3-5 months by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
○ IIT After being on Treatment for 6+ months by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• Transferred Out by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• Refused (Stopped) Treatment by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F. 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F</td></tr>
<tr><td>Cause of death by age/sex (sub-disaggregate of the ‘died’ outcome above) [Optional]</td><td>• HIV disease resulting in <u>TB</u> by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• HIV disease resulting in <u>cancer</u> by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• HIV disease resulting in <u>other infectious and parasitic disease</u> by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• Other HIV disease, resulting in other diseases or conditions leading to death by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-</td></tr>
</table>

		19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F • **Other natural causes** by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F • **Non-natural causes** by: <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F • **Unknown Cause** by <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24 M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	N/A	N/A

Disaggregate descriptions & definitions:	**Outcome definitions:**
	• **Died:** Patient was confirmed as dead by direct observation or by unambiguous report of family or close contact (neighbors, co-workers, etc.); it should not be presumed.
	• **Interruption in Treatment:** Patient status has not or cannot be assessed (did not attempt to trace or traced but unable to locate). Regardless of whether the patient was on treatment for <3 months, 3-5 months or greater than 6 months, IIT is defined as:
	  ○ Traced patient (unable to locate)**:** Exhaustive attempts (e.g., phone calls, home visits, triangulation with other health facilities) were made to locate the patient, but patient was still not located through these efforts. Exhaustive attempts means completing more than 3 attempts to contact or locate the patient using multiple methods.
	  ○ Traced patient (pending return): Patient was reached, and a return appointment has been scheduled, but the patient has not returned to the clinic before the end of the reporting period.
	  ○ Did not attempt to trace patient: No attempt was made to trace the patient during the reporting period.
	• **Transferred Out:** Patient was confirmed to be successfully transferred to another health facility during the reporting period; this includes both "silent transfers" and "down-referrals." A "down-referral" refers to those instances where a patient is initiated at one facility (counted as TX_NEW and possibly TX_CURR at the initiating facility) and then transferred to a lower level facility for ongoing ART. "Silent transfer" refers to those patients that are lost to treatment at one facility, but have re-entered treatment at another facility without notifying the original departing facility. Through active tracing, the originating facility may learn that a patient has silently transferred.
	• **Refused (Stopped) ART:** Patient was contacted and confirmed to have stopped ART during this reporting period. Reasons that the patient stopped ART should be investigated and well documented in the narratives for this indicator (e.g., stigma and discrimination, faith healing, etc.).
	
	This indicator was originally introduced in FY19 and marked the first time PEPFAR collected mortality information through routine program data. Mortality is an essential measure to assess the impact of the health sector more broadly, and the HIV program in particular. Mortality data should be compared between sites and districts as well as by age and sex to determine the geographic and demographic areas where intensified interventions are most needed. Particularly, determining the cause-of-death (COD) or conditions experienced at the time of death among PLHIV can be used to help identify	

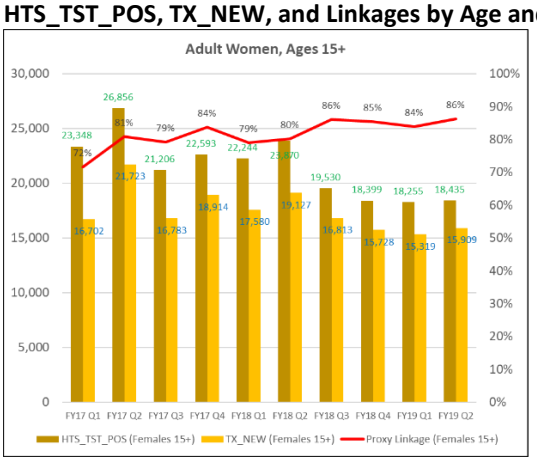
	programmatic gaps and focus resources on interventions aimed at reducing preventable deaths. Appendix I describes the ICD codes associated with the cause of death categories outlined below. **Cause of death definitions:** • HIV disease resulting in TB: Any patient with known or presumed TB (pulmonary and/or extra-pulmonary) at the time of death without another identified COD • HIV disease resulting in other infectious and parasitic disease: Any patient who died from any infectious cause other than TB; this includes infections not otherwise specified • HIV disease resulting in cancer: Any patient with known or presumed cancer at the time of death • Other HIV disease, resulting in other diseases or conditions leading to death: Any patient who died from a non-infectious, non-malignant cause that was related to HIV, such as acute HIV infection syndrome, (persistent) generalized lymphadenopathy, hematological and immunological abnormalities, etc. • Other natural causes: Any patient who died from natural causes (including certain cancers and infections, etc.) that were not directly related to HIV disease. • Non-natural causes: Any patient who died from non-natural causes (e.g., trauma, accident, suicide, war, etc.) • Unknown Cause: Patients in whom cause of death was truly not known
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for PLHIV receiving ART includes: the provision of key staff and/or commodities can include ongoing procurement of critical commodities, such as ARVs, or funding for salaries of HCW who deliver HIV treatment services. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. Ongoing support for PLHIV receiving ART service delivery improvement includes: clinical mentoring and supportive supervision of staff at HIV sites providing ART, support for quality improvement activities, patient tracking system support, routine support of ART M&E and reporting, commodities consumption forecasting and supply management.
Data visualization & use examples:	**Program Loss by Outcome and Age/Sex:** 

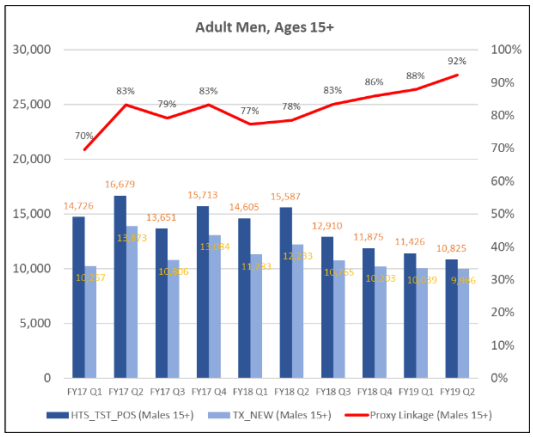
TX_NEW

Description:	Number of adults and children newly enrolled on antiretroviral therapy (ART)	
Numerator:	Number of adults and children newly enrolled on antiretroviral therapy (ART)	The indicator measures the ongoing scale-up and uptake of ART programs.
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	Change to reporting guidance for Unknown CD4 disaggregate	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required with flexibility.** Two options: 1. Standard reporting by CD4 count (<200, 200+, Unknown CD4 result) 2. Flexible reporting – IP would include all results under Unknown CD4 result)	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	The indicator measures the ongoing scale-up and uptake of ART programs. This measure is critical to monitor along with number of patients currently on ART in relation to the number of PLHIV that are estimated to be eligible for treatment to assess progress in the program's response to the epidemic in specific geographic areas and populations as well as at the national level. This is particularly critical in the context of current revisions to country- specific ART eligibility. Reporting the number of new patients enrolled on ART at both the national and overall PEPFAR program levels is critical to monitoring the HIV services cascade, specifically the successful linkage between HIV diagnosis and initiating ART. Disaggregation of new on ART by age/sex at ART initiation, and breastfeeding status at ART initiation, is important to understand the percentage of new ART initiations coming from priority populations. Note that pregnancy status at ART initiation is captured in the PMTCT_ART indicator. The CD4 at ART initiation result returned disaggregates allow for targeted programming directed at reducing mortality from advanced HIV disease. **Same day ART initiation should not be delayed due to pending CD4 results.** CD4 tests ordered during the quarter should be reported by the end of the quarter . Facilities should make every effort to obtain CD4 results as soon as possible including leveraging available health information systems for expedited access to CD4 results. If there is no result at the end of the quarter then it should be reported as "unknown CD4 result".	
How to collect:	Facility ART registers/databases, program monitoring tools, or drug supply management systems. • The numerator can be generated by counting the number of adults and children who are newly enrolled in ART in the reporting period, in accordance with the nationally approved treatment protocol (or WHO/UNAIDS standards). • Patients who transfer in from another facility, should not be counted as new patients. • Patients who have been off treatment for >28 days and restart ART should be counted in TX_RTT. They should not be counted in TX_NEW. • Children under 5 years of age who are positive for HIV are automatically considered to have advanced HIV per WHO guidelines, thus CD4 Counts are not required. • **NEW is a state defined by an individual initiating ART during the reporting period.It is expected that the characteristics of new patients are recorded at the time they newly initiate life-long ART. For example, patients who receive post-exposure prophylaxis (PEP), short term ART only for prevention (PrEP), or ART starter pack alone should not be used to count individuals reached with this indicator.** Pregnant women with HIV who are eligible for and are newly receiving antiretroviral drugs for their own	

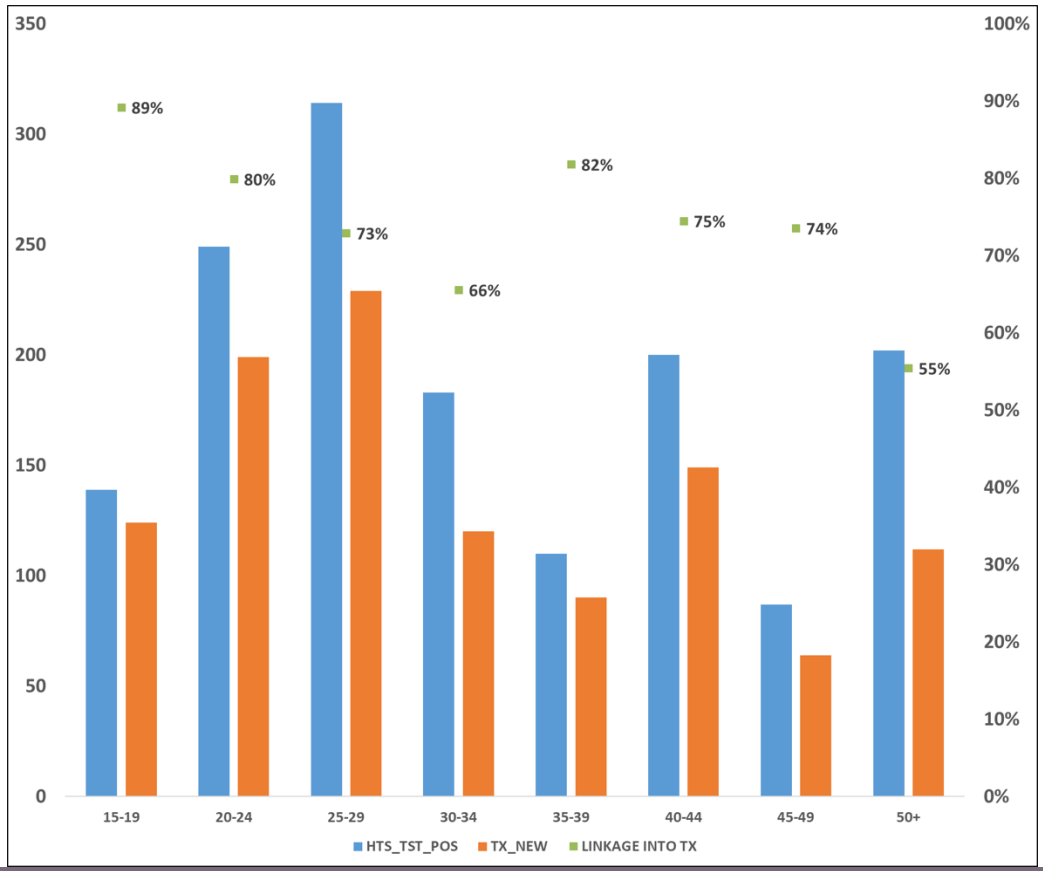
<table>
<tr><td></td><td>treatment are included in TX_NEW. Pregnant women with HIV initiating lifelong ART through PMTCT (Option B+) will count as “current” on ART under TX_CURR.
BF disaggregation: Women who initiate ART while breastfeeding should be counted under this indicator but not in PMTCT_ART.
See Appendix J for a visual representation of TX_CURR, TX_ML, TX_NEW, and TX_RTT.</td></tr>
<tr><td>How to review for data quality:</td><td>• Numerator ≥ subtotal of each disaggregation: The total number of adults and children newly enrolled on ART should be greater or equal to the sum of all the age/sex disaggregations and pregnancy/breastfeeding status.
• Confirm that TX_CURR ≥ TX_NEW.</td></tr>
<tr><td>How to calculate annual total:</td><td>Sum results across quarters</td></tr>
<tr><td>Disaggregations:</td><td>
<table>
<tr><th colspan="2">Numerator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>CD4/Age/Sex [Required]</td><td>• CD4: <200:
○ 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• CD4: ≥200:
○ 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• Unknown CD4:
○ <1 F/M, 1-4F/M, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F</td></tr>
<tr><td>Breastfeeding status at ART initiation
[Required]</td><td>• Breastfeeding at initiation of ART</td></tr>
<tr><th colspan="2">Denominator Disaggregations:</th></tr>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>N/A</td><td>N/A</td></tr>
</table>
</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td>Age/Sex: Age is defined as the age of the patient at the date of initiation on ART, not the age at the date of reporting.
Children Under 5 years: All children under 5 years of age do not require CD4 count testing according to WHO guidelines and should be recorded under Unknown CD4 disaggregate.</td></tr>
<tr><td>PEPFAR-support definition:</td><td>Standard definition of DSD and TA-SDI used.
Provision of key staff or commodities for PLHIV receiving ART includes: the provision of key staff and/or commodities can include ongoing procurement of critical commodities, such as ARVs, or funding for salaries of HCW who deliver HIV treatment services. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted.
Ongoing support for PLHIV receiving ART service delivery improvement includes: clinical mentoring and supportive supervision of staff at HIV sites providing ART, support for quality improvement activities, patient tracking system support, routine support of ART M&E and reporting, commodities consumption forecasting and supply management.</td></tr>
<tr><td>Data visualization & use examples:</td><td></td></tr>
</table>

HTS_TST_POS, TX_NEW, and Linkages by Age and Sex Over Time:





Linkage by Five-Year Age Band:



TX_RTT

Description:	Number of ART patients who experienced an interruption in treatment (IIT) during any previous reporting period, who successfully restarted ARVs within the reporting period and remained on treatment until the end of the reporting period.	
Numerator:	Number of ART patients who experienced IIT during any previous reporting period, who successfully restarted ARVs within the reporting period and remained on treatment until the end of the reporting period.	**These are individuals who were previously on ART who restarted ARVs after being off treatment for ≥28 days (and therefore experienced IIT).**
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	Change to reporting guidance on Unknown CD4 disaggregate	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	TX_RTT counts those individuals who fulfill all of the following: **(1)** initiated ART prior to the start of the reporting period, **(2)** were not on treatment at the beginning of the reporting period after experiencing an interruption in treatment (i.e., more than 28 days since the last expected clinical contact), **(3)** restarted ARVs during the reporting period, and **(4)** remained on treatment at the end of the reporting period. Monitoring this indicator may also help to identify those PLHIV who were diagnosed and started ART in the past but have experienced an interruption in treatment (IIT). IIT is defined as no clinical contact or ARV drug pickup for greater than 28 days since the last expected contact. Clinical contact is defined as reporting to the clinic for ART pick-up or clinical assessment, or a documented community visit with a community health worker or peer from an ART refill group. This indicator seeks to encourage ongoing contact with patients who experience IIT and/or to encourage supportive services to facilitate restarting ARV therapy. It also seeks to encourage identification and the return to treatment of those PLHIV with a history of ART but are currently unknown to the health care system. National clinical guidelines typically recommend that patients with ART history are restarted on ARVs, rather than newly initiate patients as if they were treatment-naïve. Nonetheless, many clinics – lacking sufficient clinical history or documentation – newly initiate patients with prior ART history. From a public health perspective, treatment adherence and continuity of treatment are essential to achieve and maintain viral suppression and ultimately reduce or eliminate disease transmission. Serious attempts should be made to reengage and return to treatment any patient that has not returned for clinical services or drug pick-up as soon as the patient does not have their expected clinical contact. Patients should be traced in an active, safe, and confidential way that assures sustained adherence to treatment moving forward. Health care workers should leverage best practices to reach patients experiencing IIT, while protecting confidentiality. Successful reengagement of patients who do not attend an appointment or experience interruption in treatment within the reporting period but return to treatment within the same period will not be counted under TX_RTT but will be reflected in strong quarterly continuity of treatment metrics and/or proxy metrics. TX_RTT can be used to monitor successful reengagement of patients who experienced an interruption in treatment in any previous reporting period, and to identify opportunities for reengaging patients earlier. For all patients eligible to be counted under TX_RTT, it is required to report duration of treatment	

	interruption before returning to treatment. This can help inform patient reengagement strategies by leveraging best practices at sites that successfully and efficiently bring patients back to care. Additionally, this disaggregate will be helpful forproviding high level oversight for clinical outcomes. The CD4 result returned disaggregate for restarting or reinitiating on ART allows for targeted programming directed at reducing mortality from advanced HIV disease. **Same day ART initiation should not be delayed due to pending CD4 results.** CD4 tests ordered during the quarter should be reported by the end of the quarter. Facilities should make every effort to obtain CD4 results as soon as possible including leveraging available health information systems for expedited access to CD4 results. If there is no result at the end of the quarter, then it should be reported as "unknown CD4 result."
How to collect:	When a patient experiences interruption in treatment (i.e., more than 28 days since their most recent expected clinical contact), the clinic or other related staff should attempt to reach and reengage the patient as soon as possible. A patient is counted under TX_RTT in the reporting period in which the patient returns to treatment and restarts ARVs. To be counted under TX_RTT, the patient must be returned to treatment during the current reporting period, and they must remain alive and on treatment until the end of the reporting period. Additionally, a patient should not have been counted under TX_CURR in the previous reporting period. The reason for not being counted under TX_CURR in the previous reporting period could include having experienced IIT in the previous reporting period, having experienced IIT at an earlier time point, or having stopped/refused treatment. A newly initiated patient who experiences IIT and is returned to treatment within the same reporting period should not be counted in TX_RTT. A newly initiated patient who experiences IIT and is not on treatment at the end of a reporting period may be counted in TX_RTT during the next reporting period only if they are successfully returned to treatment during that next reporting period. A patient should not be counted as TX_RTT if they have been traced and returned to treatment within 28 days of the last expected contact (clinical or ARV pick up). **Furthermore, a patient should not be counted as TX_RTT if they do not remain current on ART at the end of the reporting period.** For example, if a patient returns in the current reporting period after experiencing IIT in the previous reporting period, but again experiences IIT by the end of the current reporting period, the patient should not be counted as part of TX_RTT within the same reporting period. • A patient who is counted on TX_RTT must be counted in TX_CURR in the same reporting period. • A patient who was counted in TX_CURR in the previous reporting period cannot becounted in TX_RTT in the current reporting period. • A patient cannot be counted on TX_NEW and TX_RTT in the same reporting period. • A patient cannot be counted on TX_ML and TX_RTT in the same reporting period. • A patient counted in TX_RTT should have been counted in TX_ML at some point intime, but not necessarily in the previous reporting period. IIT is defined as no clinical contact or ARV drug pickup for greater than 28 days since the last expected contact. Clinical contact is defined as reporting to the clinic for ART pick-up or clinical assessment, or a documented community visit with a community health worker or peer from an ART refill group. Both TX_ML and TX_RTT have disaggregates on interruption in treatment. The TX_ML IIT disaggregate reflects the amount of time that a patient was on treatment when they experienced an interruption in treatment. The TX_RTT IIT disaggregate reflects the durationof interruption in treatment prior to being returned to treatment. See Appendix J for a visual representation of TX_CURR, TX_ML, TX_NEW, and TX_RTT.
How to review for data quality:	• Confirm that TX_CURR ≥ TX_RTT.

<table>
<tr><td>How to calculate annual total:</td><td colspan="2">Data for this indicator can be summed across reporting periods.</td></tr>
<tr><td rowspan="5">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>CD4 Result/Age/Sex [Optional]</td><td>• CD4: <200:
○ 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• CD4: ≥200:
○ 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• Unknown CD4:
○ <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F
• Not Eligible for CD4:
○ <1 M/F, 1-4 M/F, 5-9 M/F, 10-14 M/F, 15-19 M/F, 20-24M/F, 25-29 M/F, 30-34 M/F, 35-39 M/F, 40-44 M/F, 45-49 M/F, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age M/F</td></tr>
<tr><td>Duration of treatment interruption before returning to treatment [Required]</td><td>• Experienced treatment interruption of <3 months before returning to treatment
• Experienced treatment interruption of 3-5 months before returning to treatment
• Experienced treatment interruption of 6+ months before returning to treatment</td></tr>
<tr><td colspan="2">Denominator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td colspan="2">N/A</td><td>N/A</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td colspan="2">Outcome definitions:
• Duration of treatment interruption: This disaggregate is used to track how long patients who were returned to treatment experienced an interruption in ART by <3 months, 3-5 months, or 6+ months intervals. Duration of interruption in treatment should be measured by the time period between the missed appointment that triggered IIT and theappointment where the patient was restarted on treatment. For example, if a patient misses a clinical contact on March 1, has no clinical contact for 28 days, and returns to treatment on April 1, their total duration of IIT would be 31 days. They would be counted in the <3 month “duration of IIT” disaggregate for TX_RTT.

Children Under 5 years:
All children under 5 years of age do not require CD4 testing according to WHO guidelines and should be recorded under Unknown CD4 disaggregate.</td></tr>
<tr><td>PEPFAR-support definition:</td><td colspan="2">Standard definition of DSD and TA-SDI used.

<u>Provision of key staff or commodities for PLHIV receiving ART include</u>: the provision of key staff and/or commodities can include ongoing procurement of critical commodities, such as ARVs, or funding for salaries of HCW who deliver HIV treatment services. Staff who are responsible for the completeness</td></tr>
</table>

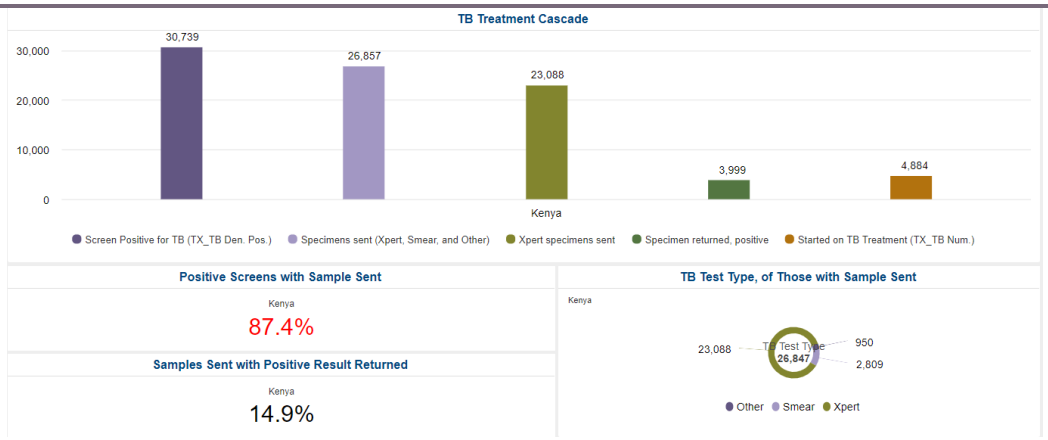
	and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. Ongoing support for PLHIV receiving ART service delivery improvement includes: clinical mentoring and supportive supervision of staff at HIV sites providing ART, support for quality improvement activities, patient tracking system support, routine support of ART M&E and reporting, commodities consumption forecasting and supply management.

TX_TB

Description:	Proportion of ART patients screened for TB in the semiannual reporting period who start TB treatment.	
Numerator:	Number of ART patients who were started on TB treatment during the semiannual reporting period.	The numerator can be generated by counting the number of screened ART patients who were diagnosed with TB and started on anti-TB therapy during the reporting period.
Denominator:	Number of ART patients who were screened for TB at least once during the semiannual reporting period.	The denominator can be generated by counting the number of ART patients who were screened for TB at least once during the reporting period.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional.**	
Reporting level:	Facility	
Reporting frequency:	Semi-Annually	
How to use:	This indicator documents the TB screening of ART patients as well as the proportion who were diagnosed and started on TB therapy. The disaggregates demonstrate the cascade from screening to testing and can be used to identify gaps and challenges in TB diagnostic activities.	
How to collect:	The denominator can be generated by counting the number of ART patients who were screened for TB at least once during the reporting period. This includes newly enrolling ART patients as well as those already on ART. The numerator can be generated by counting the number of ART patients screened for TB who were diagnosed with TB and started on anti-TB therapy during the reporting period. These data should be captured in ART registers as well as additional data collection sources (e.g., facility-based TB screening and notification registers or forms, TB microscopy result registers, mWRD data collection systems) that may contain relevant information (e.g., TB screening results, TB specimen testing results). Programs should modify the register as needed to easily capture this information. Documentation of screening is generally collected in patient charts but may also be collected in another aggregate partner-generated data source. Screening for TB and/or initiation of anti-TB therapy might not happen at the same time that ART is started. For PLHIV new to HIV care, those who are diagnosed with TB are usually started on anti-TB therapy before they initiate ART (e.g., 2-8 weeks as per current recommendations). Regardless of when they occur relative to ART initiation, TB screening and initiation of TB therapy should be included for all patients who were already on ART or who started ART at any time during the reporting period. For TB screening type, patients who receive CXR or mWRD for screening purposes (i.e., as an initial approach for identifying presumptive TB) should be reported under the corresponding disaggregates 'CXR' or 'mWRD', even if they were screened using algorithms that also include symptom screening. These "enhanced TB screening" approaches recommended by the WHO may use CXR or mWRD alone or in combination with WHO four-symptom screening (W4SS) to optimize TB case detection among people living with HIV (PLHIV), including those who are asymptomatic. Patients who are screened using W4SS alone should be reported under the 'Symptom Screen' disaggregate. Further information on how to use and collect these data is provided by WHO in the following guidelines: "Latent Tuberculosis Infection: Updated and Consolidated Guidelines for Programmatic Management."	
How to review for data quality:	Only one disaggregation type is used for age (fine disaggregates). Numerator ≥ subtotal of each of the disaggregations.	

<table>
<tr><td>How to calculate annual total:</td><td colspan="2">TX_TB Denominator is a snapshot indicator (i.e., the APR calculation = Q4) because it is intended to capture whether a clinical event (screening) happened within the reporting period. This is why TX_TB Denominator should be compared to TX_CURR, another snapshot indicator. Note that the TX_TB Numerator, if analyzed on its own, could be summed across semiannual time periods to determine the number of ART patients who were started on TB treatment during the fiscal year.</td></tr>
<tr><td rowspan="11">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>ART Status (Already/New on ART) by Age/Sex [Optional]</td><td>• Number of patients starting TB treatment who newly started ART during the reporting period: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M
• Number of patients starting TB treatment who were already on ART prior to the start of the reporting period: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M</td></tr>
<tr><td colspan="2">Denominator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Type of Screening [Optional]</td><td>• Number of patients that were screened for TB at least once during the reporting period with these types of screening:
○ Symptom Screen (alone)
○ CXR
○ mWRD</td></tr>
<tr><td>Start of ART by Screen Result by Age/Sex [Optional]</td><td>• New on ART/Screen Positive: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M
• New on ART/Screen Negative: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M
• Already on ART/Screen Positive: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M
• Already on ART/Screen Negative: <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M</td></tr>
<tr><td>Specimen Sent [Optional]</td><td>Number of ART patients who had a specimen sent for bacteriologic diagnosis of active TB disease.</td></tr>
<tr><td>Diagnostic Test (Disaggregation of Specimen Sent) [Optional]</td><td>• mWRD: Molecular WHO-Recommended Diagnostic PCR (with or without other testing)
• Smear microscopy only
• Additional test other than mWRD</td></tr>
<tr><td>Positive Result Returned [Optional]</td><td>Number of ART patients who had a positive result returned for bacteriologic diagnosis of active TB disease.</td></tr>
<tr><td>Disaggregate descriptions & definitions:</td><td colspan="2">Age/Sex by ART Status:
• Number of patients starting TB treatment who newly started ART during the reporting period: These individuals initiated TB treatment within 6 months of being enrolled on ART.</td></tr>
</table>

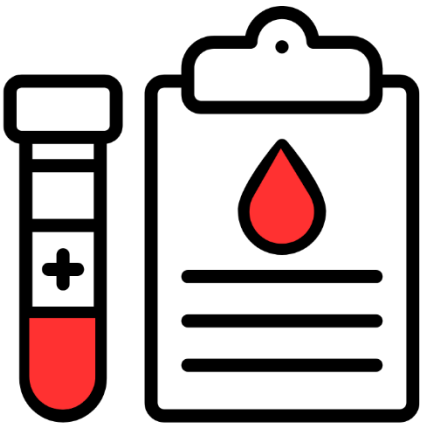
	• Number of patients starting TB treatment who were already on ART prior to the start of the reporting period: These individuals initiated TB treatment at least 6 months (or longer) after being enrolled on ART. **Type of Screening:** • Symptom Screen: patients who received symptom screening alone (without CXR, or mWRD, or other methods). A screening is considered positive if a patient reports at least one or more W4SS symptom during the reporting period. Screening negative is the absence of any of the symptoms at all clinical encounters. • CXR: patients who received a CXR for screening purposes, with or without symptom screening. A screening is considered positive if a CXR is suggestive of TB. All other results should be reported as a negative screening. • mWRD: patients who received an mWRD for screening purposes, with or without symptom screening. A screening is considered positive if Mycobacterium Tuberculosis (MTB) is detected and negative if MTB is not detected. All other unsuccessful results (invalid, indeterminate RIF, error) should not be reported, but instead followed up with repeat sample collection and testing, and any successful repeat results reported as positive or negative. Patients with a positive mWRD result will not need further diagnostic tests and should start TB treatment. **Age/Sex/Start of ART and Screen Result by Fine Age/Sex Disaggregates:** • Age/Sex/New on ART/Screen Positive: The number of patients who started ART in the reporting period and screened positive (according to the appropriate "Type of Screening" definition above) during the reporting period. • Age/Sex/New on ART/Screen Negative: The number of patients who started ART in the reporting period and who did not screen positive for TB during the reporting period. • Age/Sex/Already on ART/Screen Positive: The number of patients who were on ART prior to the reporting period and who screened positive (according to the appropriate "Type of Screening" definition above) during the reporting period. • Age/Sex/Already on ART/Screen Negative: The number of patients who were on ART prior to the reporting period and who did not screen positive for TB during the reporting period.
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for routine HIV-related services includes: ongoing provision of critical re-occurring costs or commodities (such as ARVs, TB preventive therapy and diagnostic/screening tests) or funding of salaries or provision of Health Care Workers for HIV clinic services. Staff responsible for maintaining patient records in both HIV and TB clinics are included in this category; however, staff responsible for fulfilling reporting and routine M&E requirements are not included. Ongoing support for patients receiving routine HIV-related services includes: training of HIV service providers, clinical mentoring and supportive supervision of staff at HIV sites, infrastructure/renovation of facilities, support of HIV service data collection, reporting, data quality, QI/QA of HIV services support, ARV and IPT consumption forecasting and supply management, support of lab clinical.
Data visualization & use examples:	**TB Treatment Cascade:**


TB Treatment Cascade
30,739
26,857
23,088
3,999
4,884
30,000
20,000
10,000
0
Kenya
Screen Positive for TB (TX_TB Den. Pos.)
Specimens sent (Xpert, Smear, and Other)
Xpert specimens sent
Specimen returned, positive
Started on TB Treatment (TX_TB Num.)

Positive Screens with Sample Sent
Kenya
87.4%
Samples Sent with Positive Result Returned
Kenya
14.9%

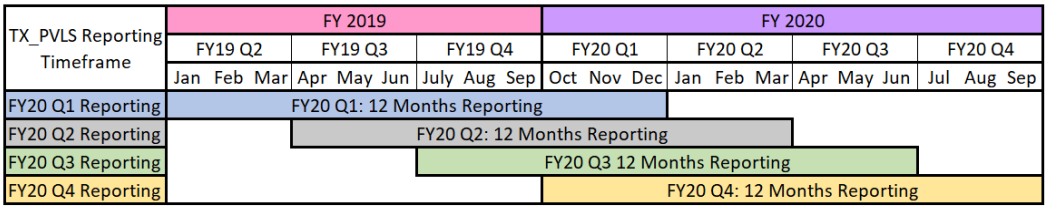
TB Test Type, of Those with Sample Sent
Kenya
23,088
TB Test Type
26,847
950
2,809
Other
Smear
Xpert

VIRAL SUPPRESSION INDICATORS

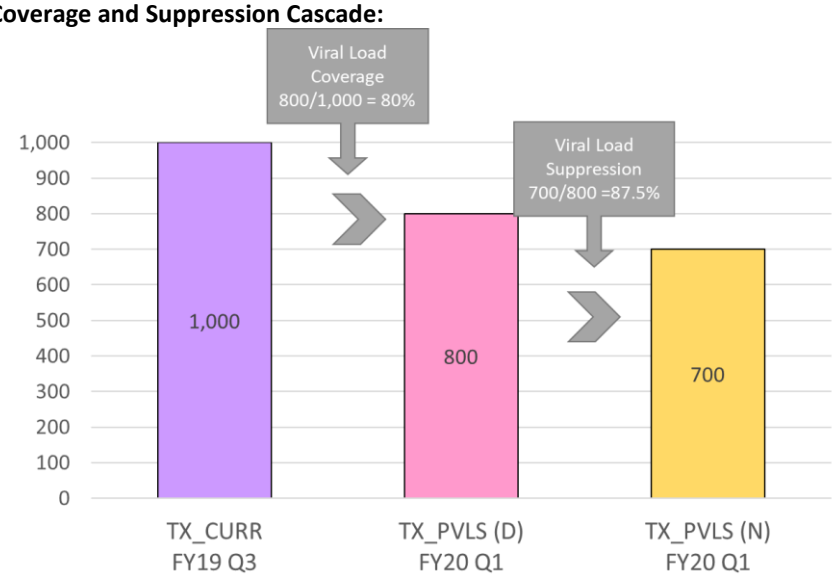


TX_PVLS

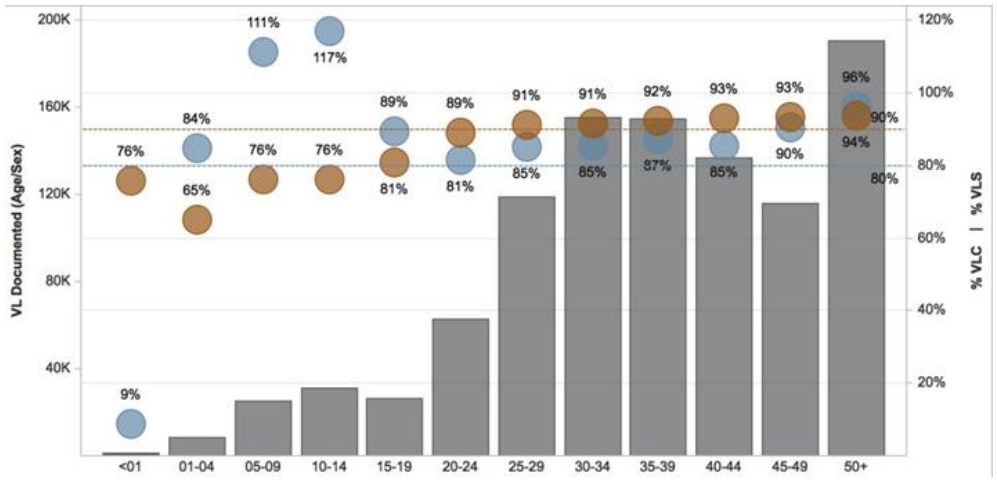
Description:	Percentage of ART patients with a suppressed viral load (VL) result (<1000 copies/ml) documented in the medical or laboratory records/laboratory information systems (LIS) within the past 12 months	
Numerator:	Number of ART patients with suppressed VL results (<1,000 copies/ml) documented in the medical or laboratory records/LIS within the past 12 months	• If there is more than one VL result for a patient during the past 12 months, report the most recent result. • Only patients who have been on ART for at least 3 months should be considered.
Denominator:	Number of ART patients with a VL result documented in the medical or laboratory records/LIS within the past 12 months.	Only patients who have been on ART for at least 3 months should be considered.
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is required.**	
Reporting level:	Facility	
Reporting frequency:	Quarterly	
How to use:	**Viral Load Suppression Outcomes:** This indicator monitors the proportion of documented viral load results from adult and pediatric ART patients who have been on ART for at least 3 months (or according to national guidelines) with a suppressed result (<1,000 copies/ml). This allows ART programs to monitor individual and overall programmatic response to ART as measured by virologic suppression. This indicator will provide data on patients who have had a viral load (VL) test in the past 12 months and the percentage who were virally suppressed at the most recent test. **Viral Load Testing Coverage:** Comparison of the denominator for this indicator with the result for TX_CURR from 6 months earlier (i.e., 2 quarters prior) can be used to crudely estimate VL testing coverage supported by PEPFAR. For example, a comparison may be made between the FY20 Q1 denominator for TX_PVLS and FY19 Q3 TX_CURR, given that patients newly initiating ART and included in TX_CURR in FY19 Q4 and FY20 Q1 may not be eligible for a viral load test. In calculating this estimate, it is important to ensure that individuals, not tests, are being reported for TX_PVLS. Analyzing both VL testing coverage and suppression rates by geography, sub-population, and implementing mechanisms is essential for program management and quality of care. Real-time review of VL results should trigger an immediate response to follow-up on patients who are not suppressed (i.e., VL ≥1000 copies/mL). **Pregnant Women Viral Load Testing Coverage Considerations:** VL testing coverage for pregnant women can be estimated by comparing the TX_PVLS denominator "Pregnant" disaggregate to the sum of the last 4 quarters of PMTCT_ART "Already on ART" disaggregate. This coverage calculation may underestimate the number of pregnant women that need a viral load test as it does not include pregnant women newly initiating ART. When country level guidance indicates a viral load test for pregnant women newly initiating ART, the coverage denominator should include both PMTCT_ART "New on ART" and PMTCT_ART "Already on ART." TX_PVLS only includes the most recent viral load test, but a woman's pregnancy and breastfeeding status changes over time. For example, when considering VL testing coverage proxy calculations, a woman with a VL test during pregnancy may not be included in the pregnancy disaggregate, if the woman's most recent VL test was during breastfeeding or after breastfeeding cessation.	
How to collect:	This indicator should be collected from clinical sources (e.g., electronic or paper patient records), where possible, to ensure de-duplicated patient counting and receipt of results to inform patient care. Ideally, data for this indicator should be collected from an electronic medical records system (EMR) to	

<table>
<tr><td></td><td>minimize data collection errors and ensure that results inform patient care. If data collection from an EMR is not possible, indicator data maybe collected from paper-based registers or reports that reflect the VL results. If standard patient registers do not contain all the required information, individual patient records should be reviewed.
If a clinical source does not exist or does not contain the desired information, data may beextracted from an electronic laboratory information system (LIS). VL results from an LIS must be linked back to the individual patients and their record at sites.
NOTE: If patient-linked VL results from LIS are used for reporting, it is incumbent that the implementing partner ensure this information is transcribed into the patient record for timely VL results utilization/patient management.
The data source used for reporting on this indicator should be specified and data reported should be de-duplicated and used to inform patient care at sites. If the LIS is used, please explain why clinical sources could not be used to report on this indicator in the narrative (see guiding narrative question section below).
VL results should be reported for patients who have been on ART for at least 3 months (or according to national guidelines). It is important to ensure that the data sources used to collect and aggregate data are updated to be able to report VL results data for patients who have been on ART for at least 3 months.
Beginning in FY19, this indicator moved from annual to quarterly collection. The reporting period still covers a 12-month period and may include data from the previous fiscal year (see visual below). For example, when reporting data in FY20 Q1, country teams would be required to report data for January – September of FY19 and October – December of FY20.
 

Only VL tests with recorded results and VL results that are linked back to patients should be included in the numerator and denominator of this indicator. This indicator should be reported for all PEPFAR-supported treatment sites (i.e., from all reporting TX_CURR). VL monitoring result utilization should be promoted for individual patient, site, and program use. If a PEPFAR-supported treatment site (i.e., a site that has reported TX_CURR) has not collected any samples for VL testing, “0” should be entered for both the numerator and denominator.
<u>Where more than one result is available for the reporting period, the most recent</u> <u>result should be reported</u>. Programs should describe the method(s) of data collection, andthe results de-duplication methodology utilized in their narratives.</td></tr>
<tr><td>How to review for data quality:</td><td>• Denominator ≥ Numerator: The number of VL results from adults and children on ART must be greater than or equal to the number of VL results from adult and pediatric ART patients with a VL <1,000 copies/ml.
• Numerator = sum of the Age/Sex numerator disaggregate: The total number of VL results from adult and pediatric ART patients with a VL <1,000 copies/ml.
• TX_CURR ≥ TX_PVLS (D): TX_CURR should be greater than or equal to the number of adults and children on ART with VL results</td></tr>
<tr><td>How to calculate annual total:</td><td>This is a snapshot indicator. Results are cumulative at each reporting period.</td></tr>
<tr><td>Disaggregations:</td><td>Numerator Disaggregations:
<table>
<tr><th>Disaggregate Groups</th><th>Disaggregates</th></tr>
<tr><td>Age/Sex [Required]</td><td>• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M</td></tr>
</table></td></tr>
</table>

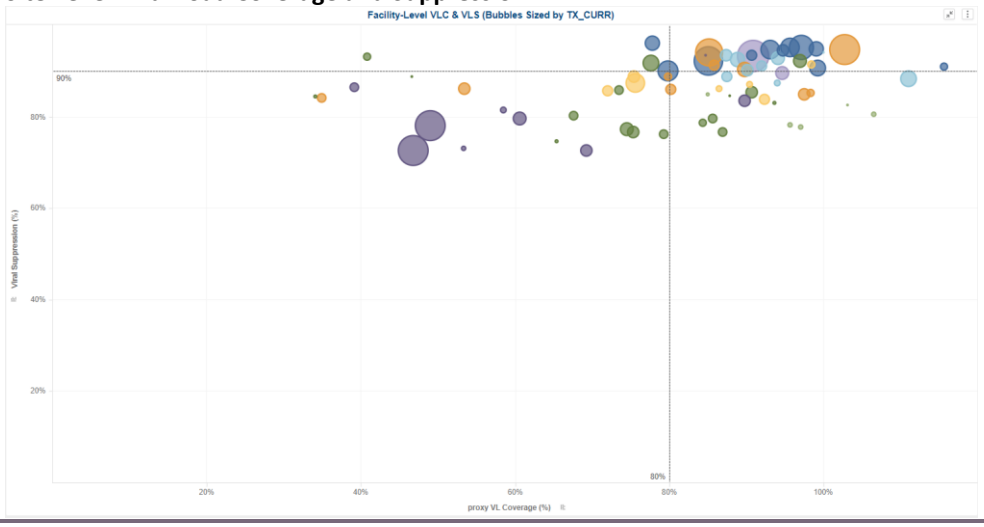
	Pregnant/Breastfeeding [Required]	• Pregnant • Breastfeeding
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	Age/Sex [Required]	• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50-54 F/M, 55-59 F/M, 60-64 F/M, 65+ F/M, Unknown Age F/M
	Pregnant/Breastfeeding [Required]	• Pregnant • Breastfeeding
Disaggregate descriptions & definitions:	• N/A	
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used. Provision of key staff or commodities for PLHIV on ART who receive VL monitoring includes: the provision of key staff and/or commodities can include ongoing procurement of critical commodities, such as ARVs, or funding for salaries of HCW who deliver VL monitoring services. Staff who are responsible for the completeness and quality of routine patient records (paper or electronic) can be counted here; however, staff who exclusively fulfill MOH and donor reporting requirements cannot be counted. Ongoing support for PLHIV receiving ART VL monitoring improvement includes: clinical mentoring and supportive supervision of staff at HIV sites providing ART and VL monitoring services, support for quality improvement activities, patient tracking, enhanced adherence counseling system support, routine support of VL related M&E and reporting, VL related commodities consumption forecasting, and supply management •	
Data visualization & use examples:	**Viral Load Coverage and Suppression Cascade:** 	

Viral Load Coverage and Suppression by Age and Sex:

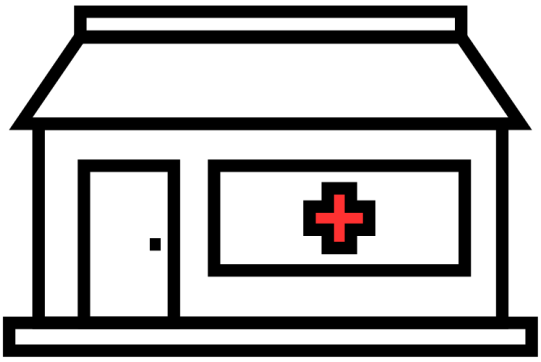


Site-Level Viral Load Suppression:

Site-Level Viral Load Coverage and Suppression:



HEALTH SYSTEMS INDICATORS



LAB_PTCQI

Description:	Number of PEPFAR-supported laboratory-based testing and/or Point-of-Care Testing (POCT) sites engaged in continuous quality Improvement (CQI) and proficiency testing (PT) activities.	
Numerator:	• Number of PEPFAR-supported laboratory-based testing and/or Point-of-Care Testing sites engaged in CQI activities. • Number of PEPFAR-supported laboratory-based testing and/or Point-of-Care Testing sites engaged in PT activities. • Number of specimens received for testing at all PEPFAR-supported laboratory-based testing and/or Point-of-Care Testing sites within a testing category.	The numerator is generated by counting the number of PEPFAR-supported laboratory-based testing and point-of-care testing sites for each testing category by their level of engagement in CQI and PT activities; and the number of specimens received for testing at laboratory-based testing and point-of-care testing sites within each testing category.
Denominator:	N/A	
Indicator changes (MER v2.7 to v2.8):	None	
Indicator changes (MER v2.8 to v2.8.1):	**This indicator is optional (but only reported at Q4).**	
Reporting level:	Facility	
Reporting frequency:	Annually	

How to use:	• **Monitoring Engagement in CQI and PT:** CQI and PT programs are critical to ensure efficient and quality assured laboratory testing. Monitoring testing sites' levels of engagement in CQI and PT enables the identification of facilities, geographic areas, and implementing partners that may benefit from additional support related to laboratory quality. Engagement in CQI and PT may also be used to monitor progress over time (e.g., progress toward laboratory accreditation) and maintenance of quality assured laboratory testing.
	  ○ **Recommendations for engagement in CQI and PT are outlined below. Implementing partners reporting data that do not meet these recommendationsshould be prepared to provide detailed explanations and action plans.**
	  ▪ 100% of laboratory-based testing sites participating in CQI and PT.
	  ▪ >90% of POCT sites, particularly HIV serology/diagnostic testing sites, participating in CQI and PT; with the goal of all POCT sites participating in CQI and PT.
	  ▪ Year-over-year increases in the proportions of testing sites achieving higher levels of engagement in CQI (e.g., an increase in the proportion of accredited testing sites as compared to the previous year). Once saturation is achieved, it is critical that this indicator be used to monitor maintenance of CQI and PT programs.
	• **Providing Context for Testing Results:** Levels of engagement in CQI and PT may be used to provide context for testing results at the facility, SNU, or OU levels. Testing results reported in an SNU where a low percentage of testing sites are engaged in CQI,for example, may infer a lower degree of confidence than if the SNU had a high percentage of testing sites engaged in CQI. Please note that enrollment and achievement in CQI and PT programs are proxy indicators for laboratory quality and provide an indication of quality practices rather than a direct measurement of testing quality at the site.
	• **Monitoring Availability of Laboratory Services:** The number of specimens received for each testing category assesses the extent to which PEPFAR-supported laboratories and/or POCT sites	

	are maintaining or expanding laboratory services. The number of specimens received may also be used to monitor the capacity of testing sites and scale- up efforts over time. • **Assessing the Clinic-Lab Interface:** The number of specimens received for testing may be used in conjunction with other indicators to monitor the clinic-lab interface.
How to collect:	**Which facilities are counted?** Collect data for the LAB_PTCQI indicator, both laboratory and POCT, at facilities with PEPFAR-supported laboratories or POCT sites. A PEPFAR-supported laboratory or testing site is defined as a facility that receives direct service delivery (DSD) or technical assistance for service delivery improvement (TA-SDI) from PEPFAR, is the recipient of specimens from PEPFAR-supported clinics, and/or receives proficiency testing panels via PEPFAR support. See definitions for 'laboratory' and 'POCT site' below. **How many laboratory-based testing sites are in the facility?** A facility may have one laboratory-based testing site (e.g., HIV Viral Load laboratory-based testing site), multiple laboratory-based testing sites with different testing categories (e.g., HIV Serology/Diagnostic and HIV Viral Load laboratory-based testing sites), and/or multiple laboratory-based testing sites with the same testing category (e.g., Two HIV Viral Load laboratory-based testing sites - each under a distinct entity/department within the facility). **How many POCT sites are in the facility?** A facility may have one POCT site (e.g., HIV Rapid Test POCT site), multiple POCT sites with different testing categories (e.g., HIV Rapid Test POCT site and CD4 POCT site), and/or multiple POCT sites with the same testing category (e.g., Two HIV Serology/Diagnostic test POCT sites – one associated with the PMTCT program and the other associated with the TB program). **Where can data for this indicator be found?** Data on engagement in CQI and PT can be obtained from program records of PEPFAR- funded partners. Additionally, laboratory-based testing and POCT site-level documentation can be used to assess CQI and PT engagement. Data on the number of specimens received for testing can be obtained from specimen registers/logbooks and/or laboratory information systems. **How are data interpreted and reported (Laboratory-Based Testing)?** Identify the level of engagement in CQI activities for each laboratory-based testing site by choosing one of the following: • Performs this test but does not participate in CQI (see definition of "CQI participation"below). • Performs this test, participates in CQI, but is not fully accredited (see definition of "accreditation" below). • Performs this test, participates in CQI, and is fully accredited. Identify the level of engagement in PT activities for each laboratory-based testing site by choosing one of the following: • Performs this test but does not participate in PT (see definition of "PT participation" below). • Performs this test and participates in PT. Sum the number of specimens received for testing at all POCT sites within a testing category. See definition for "specimens received for testing." **How are data interpreted and reported (Point-of-Care Testing)?** Identify the level of engagement in CQI activities for each POCT site by choosing one of the following: • Performs this test but does not participate in CQI. • Performs this test, participates in CQI, but has not been fully certified/accredited. • Performs this test, participates in CQI, and has been fully certified/accredited. Identify the level of engagement in PT activities for each POCT site by choosing one of the following: • Performs this test but does not participate in PT (see definition of 'PT participation'below). • Performs this test and participates in PT. Sum the number of specimens received for testing at all POCT sites within a testing category. See definition for "specimens received for testing." **DEFINITIONS (LABORATORY-BASED TESTING SITES):**

Laboratory:

A. Having dedicated physical laboratory infrastructure
B. Having dedicated trained laboratory professionals performing testing
C. Conducting laboratory testing in one or more of the following areas:
    a. Diagnosis of HIV infection with rapid test kits, EIA, WB, or other molecular methods
    b. Infant Virologic Testing / Early Infant Diagnosis (IVT/EID)
    c. HIV viral load
    d. TB diagnostics: molecular WHO-recommended diagnostic (mWRD), LF-LAM, AFB, or culture
    e. CD4
    f. Rapid Test for Recent Infection

Note: If a point-of-care assay (such as a rapid diagnostic test or Pima CD4) is performed at a laboratory-based testing site, as defined above, data should be reported in the laboratory portion of the LAB_PTCQI indicator.

Laboratory-based testing site: A point within a facility (with a PEPFAR-supported laboratory) that performs one of the tests defined in the testing categories within a laboratory.

CQI Participation: CQI activities implement, improve, or maintain a Quality Management System (QMS). A functioning QMS is essential to provide accurate and reliable results with safety, efficiency, monitoring, and accountability throughout the testing process.

A laboratory-based testing site is counted as participating in CQI if they are engaged in activities within the testing category that are supported by a locally, nationally, regionally, or internationally recognized CQI or accreditation preparedness program.

Examples of recognized programs:

A. Strengthening Laboratory Management Towards Accreditation (SLMTA)
B. Other established programs that utilize an auditing process such as WHO AFRO Stepwise Laboratory Quality Improvement Process Towards accreditation (SLIPTA) stepwise processes or CDC/PAHO Caribbean Laboratory Quality Management System Stepwise Improvement Process towards Accreditation (CDC/PAHO LQMS-SIP).
C. Locally-recognized basic laboratory quality management system programs
D. Locally-recognized laboratory mentorship programs
E. Participation in laboratory accreditation programs based on recognized laboratory standards such as African Society for Blood Transfusion (AfSBT), College of American Pathologists (CAP), or International Organization for Standardization (ISO).

Accreditation: Refers to accreditation by a national, regional, or internationally recognized accreditation body, such as College of American Pathologists (CAP), International Organization for Standardization (ISO) accreditation programs, regional accreditation bodies such as the South African National Accreditation System (SANAS), or other approved accreditation organizations. A laboratory-based testing site is assessed by a standardized set of criteria defined by an acceptable national, regional, or international organization. Accreditation certificates are a formal recognition that a laboratory is competent to perform clinical testing. Laboratory-based testing site accreditation status must be current.

PT Participation: Defined as enrollment/participation in at least one round of a local, national, regional, and/or international external quality assurance or proficiency testing program at any time during the reporting period.

Specimen received for testing: A specimen is received for testing if its arrival at the laboratory-based testing site was recorded in a register/logbook and/or LIS within the reporting timeframe. A specimen received for testing may or may not have been tested/analyzed.

DEFINITIONS (POINT-OF-CARE TESTING SITES):

POCT site:

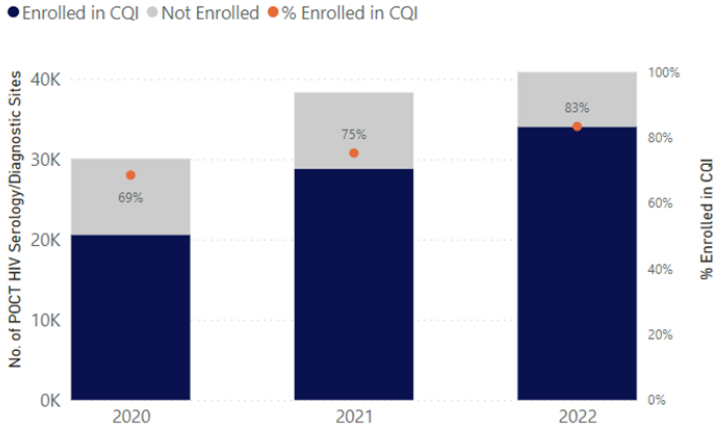
A. The site performs testing near or at the place of interaction with the patient/client.
B. The site performs testing in an environment which does not have a formal laboratory infrastructure.
C. Testing at the POCT site is performed by healthcare workers who may not be laboratorians.
D. Conducting POCT in one or more of the following areas:
    a. HIV rapid test

<table>
<tr><td></td><td colspan="2">b. Infant Virologic Testing / Early Infant Diagnosis (IVT/EID)
c. HIV viral load
d. TB diagnostics: molecular WHO-recommended diagnostic (mWRD), LF-LAM, or AFB
e. CD4 testing
f. Rapid Test for Recent Infection
Notes: Sites conducting HIV rapid testing are considered POCT unless the testing is conducted in a laboratory (see definition of laboratory) by laboratorians. A laboratory-based testing site and POCT site may both be present at a facility. If a point-of-care assay (such as an HIV rapid test or Pima CD4) is performed at a laboratory-based testing site, CQI and PT data should be reported in the laboratory portion of the indicator (LAB_PTCQI (Laboratory)). LAB_PTCQI reporting only applies to facility-based testing. Data on CQI engagement, PT participation, or the number of specimens received for HIV rapid testing (or other POCT) that is conducted outside of a designated health facility (e.g., at a community-level service delivery point) should not be reported for LAB_PTCQI.
CQI Participation: A POCT site is counted as participating in CQI if they are engaged in activities within the defined test category that are supported by a locally, nationally, regionally, or internationally recognized CQI or certification preparedness program.
Examples of POCT CQI programs:
A. Rapid Testing Continuous Quality Improvement (RT-CQI)
B. Other established programs that utilize WHO/CDC Stepwise Process for Improving the Quality of HIV rapid testing (SPI-RT) or the WHO/CDC Stepwise process for Improving the Quality of HIV-Related Point-of-Care-Testing (SPI-POCT) Checklists to audit the POCT sites.
C. Locally-recognized basic quality management system programs
D. Locally-recognized laboratory mentorship programs

Certification/Accreditation: Refers to accreditation or certification by a national, regional or internationally recognized accreditation body, such as College of American Pathologists (CAP), International Organization for Standardization (ISO) accreditation programs, regional accreditation bodies such as the South African National Accreditation System (SANAS), local certification bodies, or other approved accreditation organizations. A point-of-care testing site is assessed by a standardized set of criteria defined by an acceptable local, national, regional, or international organization. Accreditation or certification certificates are a formal recognition that a point-of-care site is competent to perform clinical testing. Point-of-care testing site accreditation or certification status must be current.
PT Participation: Defined as enrollment or participation in at least one round of a local, national, regional, and/or international external quality assurance or proficiency testing program within the reporting period.
Specimen received for testing: A specimen is received for testing if its arrival at the POCT site was recorded in a register/logbook and/or LIS within the reporting timeframe. A specimen received for testing may or may not have been tested/analyzed.</td></tr>
<tr><td>How to review for data quality:</td><td colspan="2">There is no total numerator for this indicator. Subtotals are automatically summed across the CQI and PT data elements for each laboratory-based testing category.</td></tr>
<tr><td>How to calculate annual total:</td><td colspan="2">N/A. Data is reported only once annually at Q4.</td></tr>
<tr><td rowspan="3">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>CQI at laboratory-based testing sites by test category: HIV serology/diagnostic testing, HIV IVT/EID, HIV Viral Load, TB mWRD, TB LF-LAM, TB AFB, TB Culture, CD4, Rapid Test for Recent Infection)
[Optional]</td><td>1. How many sites perform this test but do not participate in CQI?
2. How many sites perform this test, participate in CQI, but are not fully accredited?
3. How many sites perform this test, participate in CQI, and are fully accredited?</td></tr>
</table>

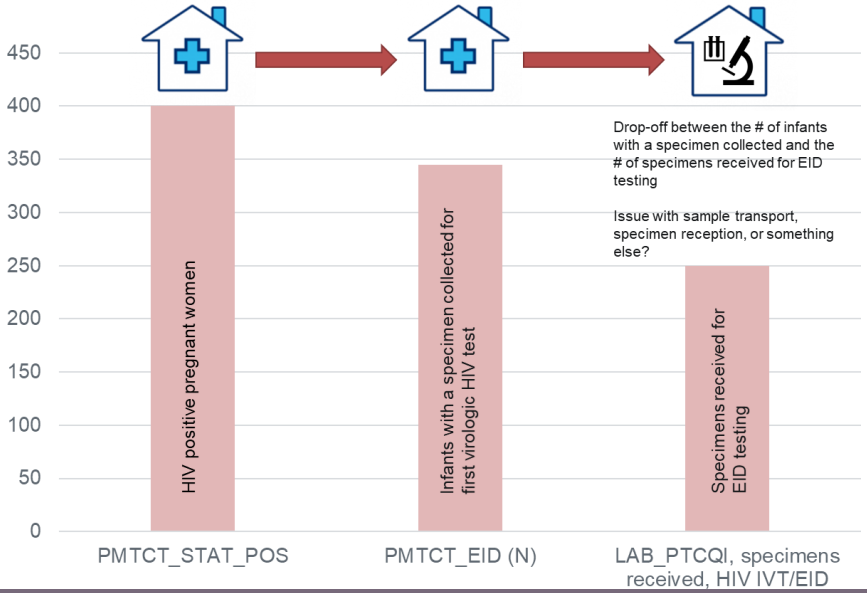
	CQI at point-of-care-based testing sites by test category: HIV serology/diagnostic testing, HIV IVT/EID, HIV Viral Load, TB mWRD, TB LF-LAM, TB AFB, CD4, Rapid Test for Recent Infection) [**Optional**]	1. How many sites perform this test but do not participate in CQI? 2. How many sites perform this test and participate in CQI, but are not fully certified/accredited? 3. How many sites perform this test, participate in CQI, and are fully certified/audited?
	PT at laboratory-based testing sites by test category: HIV serology/diagnostic testing, HIV IVT/EID, HIV Viral Load, TB mWRD, TB_LF-LAM, TB AFB, TB Culture, CD4, Rapid Test for Recent Infection) [**Optional**]	1. How many sites performed this test but do not participate in PT? 2. How many sites perform this test and participate in PT?
	PT at point-of-care testing sites by test category: HIV serology/diagnostic testing, HIV IVT/EID, HIV Viral Load, TB mWRD, TB_LF-LAM, TB AFB, CD4, Rapid Test for Recent Infection) [**Optional**]	1. How many sites performed this test but do not participate in PT? 2. How many sites perform this test and participate in PT?
	Testing Volume by laboratory vs. point-of-care testing and test category: HIV serology/diagnostic testing, HIV IVT/EID, HIV Viral Load, TB mWRD, TB LF-LAM, TB AFB, TB Culture, CD4, Rapid Test for Recent Infection) [**Optional**]	Number of specimens received for testing at all PEPFAR-supported laboratory-based testing sites within a testing category
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	N/A	N/A
Disaggregate descriptions & definitions:	For both CQI and PT disaggregate groups, testing category disaggregations are only applicable if specific test category is performed by the laboratory.	
PEPFAR-support definition:	Standard definition of DSD and TA-SDI used.	
Data visualization & use examples:	**Monitoring CQI Example:**	

90% of POCT sites should be enrolled in CQI with the end-goal of reaching 100%



Year-over-year increases in the proportion of testing sites enrolled in CQI

Interfacing of the Clinic and Laboratory Example:



HOST COUNTRY INDICATORS

DIAGNOSED_NAT

Description:	Percentage of people living with HIV who know their HIV status
Numerator:	Number who know their HIV status
Denominator:	Number of people living with HIV (PLHIV Estimate)
Indicator changes (MER v2.7 to v2.8):	None
Reporting level:	National and Sub-national: Data should be entered for all SNUs, regardless of PEPFAR-funded support for these geographical areas; so that the total of the sub-national number should equal the total number of national number.
Reporting frequency:	Annually
How to use:	Diagnosed is the first 95 of the global targets. To ensure people living with HIV receive the care and treatment required to live healthy, productive lives, and to reduce the chance of transmitting HIV, it is critical that they know their status. In many countries, targeting testing and counselling at locations and populations with the highest HIV burden will be the most efficient way to reach people living with HIV and ensure they are aware of their status. This indicator captures the efficacy and coverage of HIV testing interventions. This indicator is harmonized with GAM indicator "People living with HIV who know their HIV status."

How to collect:	There are multiple methods to estimate the number of people living with HIV who know their status.
	• Case-based surveillance: In countries with well-functioning HIV reporting systems, the number of people diagnosed can be estimated from national case-based data. The number of deaths among PLHIV must be subtracted from the cumulative number diagnosed to calculate the number of people living with HIV who know their status.
	• Survey-based reporting:
	  ○ Certain population-based surveys include questions about known HIV status. Although this information may be subject to under-reporting bias, when combined with survey-related HIV testing it can provide an estimate of known status among survey respondents.
	  ○ Many population-based surveys include questions on HIV testing history. These questions can provide a range for the proportion of PLHIV with known status. The percentage of people living with HIV in the survey who have been tested in the past 12 months and received the results provides the upper range of known status (there will be a small proportion equal to the annual incidence rate – less than 2% in most cases – of people who might have converted in the 12 months after being tested). The percentage of people living with HIV in the survey who have ever been tested and received the results provides the lower range of known status.
	  ○ When using survey-based methods, note that:
	  ▪ Household surveys are often restricted to respondents of reproductive age (15– 49), and so may not be representative of people living with HIV <15 years and >49 years.
	  ▪ Because household surveys are typically only done every 5 years, data from non-recent surveys may not reflect current levels of testing coverage.

Disaggregations:

Numerator Disaggregations:

Disaggregate Groups	Disaggregates
Age/Sex [Required]	• <15 F/M, 15+ F/M
Sex-Only [Conditional, if age/sex reporting is not possible]	• Female • Male

	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	PLHIV Estimates	Denominator is not collected as part of indicator, but rather is submitted in DATIM during COP planning [PLHIV estimates submitted in the PEPFAR Implementation and Planning Attributes].
Data entered by:	This data should be entered in DATIM by the USG country team.	

PMTCT_STAT_NAT

Description:	Percentage of pregnant women with known HIV status
Numerator:	Number of pregnant women attending antenatal clinics (ANC) and/or had a facility-based delivery and were tested for HIV during pregnancy, or already knew they were living with HIV
Denominator:	Number of pregnant women who attended ANC or had a facility-based delivery in the past 12 months
Indicator changes (MER v2.7 to v2.8):	None
Reporting level:	National and Sub-national: Data should be entered for all SNUs, regardless of PEPFAR-funded support for these geographical areas; so that the total of the sub-national number should equal the total number of national number.
Reporting frequency:	Annually
How to use:	The risk of mother-to-child transmission (MTCT) can be significantly reduced by providing ARVs to the mother during pregnancy, delivery, and (if applicable) breastfeeding. This indicator provides information on coverage of the first step in the prevention of mother-to-child transmission (PMTCT) cascade. High coverage enables early initiation of care and treatment for mothers living with HIV. The total number of identified women living with HIV provides the facility-specific number of pregnant women living with HIV to start a facility-based PMTCT cascade. This indicator is harmonized with GAM indicator "Percentage of pregnant women with known HIV status."
How to collect:	For the numerator and denominator: The data source is ANC, PMTCT and L&D program monitoring tools, such as patient registers and summary reporting forms. Numerator: Count all women who were enrolled in ANC during the 12-month reporting period whose HIV status is known positive, or who received an HIV test result (positive or negative) during ANC. Reconcile with all women in the L&D register who whose date of delivery was in the 12 months reporting period and whose HIV status at L&D was known positive, or who received an HIV test result (positive or negative) at ANC or L&D to avoid double counting. The numerator is a composite of the following two data components: 1. The number of women with known (positive) HIV infection attending ANC for a new pregnancy over the last reporting period 2. The number of women attending ANC, L&D who were tested for HIV and received results The numerator can be summed from categories a-d below: a. Number of pregnant women with unknown HIV status attending ANC who received an HIV test and result during the current pregnancy b. Pregnant women with known HIV infection attending ANC for a new pregnancy c. Number of pregnant women with unknown HIV status attending L&D who received an HIV test and result during their current pregnancy d. Women with unknown HIV status attending postpartum services within 72 hours of delivery who were tested for the first time in the current pregnancy and received results. A "status" is defined as a confirmed test result from a test during this pregnancy (either positive or negative) or already known HIV infection at antenatal clinic entry. An indeterminate test result should not be counted or reported as a part of this indicator. For the denominator: Count all women who were enrolled in ANC during the 12-month reporting period OR delivered at the facility (recorded in the L&D register), reconciling the latter with the former using the ANC No. to avoid double counting. As per global guidance (see GARPR link above), it is expected that the national program can reconcile information collected from ANC with L&D records. However, in MER 2.0 the PEPFAR indicator for

<table>
<tr><td></td><td>PMTCT_ART has been simplified to collect information only at antenatal care (ANC) sites to better align with 2016 WHO Consolidated ARV guidelines, reduce burden on data collection, and improve data quality. Therefore, in reporting this indicator PEPFAR operating units should (1) utilize the national system whether it is able avoid double counting or not and are not expected to collect or report this information through a separate system (2) if it this is not possible to report individuals from both ANC and L&D, please include an explanation in the narrative whether the data is from ANC, L&D and/or both.
Pregnant women’s HIV status should be counted only once per pregnancy. This may be difficult if national guidelines recommend testing a pregnant woman more than once during a pregnancy or if a woman seroconverts during her pregnancy and has multiple tests.</td></tr>
<tr><td rowspan="5">Disaggregations:</td><td colspan="2">Numerator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Disaggregated by Status [Required]</td><td>• Known positives
• New positives
• New negatives</td></tr>
<tr><td colspan="2">Denominator Disaggregations:</td></tr>
<tr><td>Disaggregate Groups</td><td>Disaggregates</td></tr>
<tr><td>Data entered by:</td><td colspan="2">This data should be entered in DATIM by the USG country team.</td></tr>
</table>

PMTCT_ART_NAT

Description:	Percentage of pregnant women living with HIV who received antiretroviral medicine (ARV) during pregnancy to reduce the risk of mother-to-child transmission
Numerator:	Number of pregnant women living with HIV who delivered and received ARV to reduce the risk of mother-to- child transmission during pregnancy and delivery.
Denominator:	Estimated number of pregnant women living with HIV
Indicator changes (MER v2.7 to v2.8):	None
Reporting level:	National and Sub-national: Data should be entered for all SNUs, regardless of PEPFAR-funded support for these geographical areas; so that the total of the sub-national number should equal the total number of national number.
Reporting frequency:	Annually
How to use:	The risk of mother-to-child transmission can be significantly reduced by providing ARVs for the mother during pregnancy and delivery, with antiretroviral prophylaxis for the infant, and antiretroviral medicines to the mother or child if breastfeeding, and the use of safe delivery practices and safer infant feeding. The data will be used to track progress towards global and national goals of eliminating mother-to-child transmission; to inform policy and strategic planning; for advocacy; and for leveraging resources for accelerated scale-up. It will help measure trends in coverage of antiretroviral prophylaxis and treatment, and when disaggregated by regimen type, will also assess progress in implementing more effective antiretroviral therapy regimens. As the indicator usually measures ARVs dispensed and not those consumed, it is not possible to determine adherence to the regimen in most cases. This indicator is harmonized with GAM indicator "Percentage of pregnant women living with HIV who received antiretroviral medicine to reduce the risk of MTCT of HIV."
How to collect:	For the numerator: the source of this information is national program records aggregated from program monitoring tools, such as patient registers and summary reporting forms. The numerator can be generated by counting the number of pregnant women living with HIV who received antiretrovirals to reduce MTCT in the reporting period, by regimen. For the denominator: Two methods can be used to estimate the denominator: an estimation model, such as Spectrum, using the output, number of pregnant women needing PMTCT; or, if Spectrum estimates are not available, by multiplying the number of women giving birth in the past 12 months (which can be obtained from estimates of the central statistics office, UN Population Division or pregnancy registration systems) by the most recent national estimate of HIV prevalence in pregnant women (which can be derived from HIV sentinel surveillance in ANC and appropriate adjustments related to coverage of ANC surveys).
Disaggregations:	**Numerator Disaggregations:**

Disaggregate Groups	Disaggregates
Maternal Regimen Type [Required]	• New on ART • Already on ART

Denominator Disaggregations:

Disaggregate Groups	Disaggregates
None	None

Data entered by:	This data should be entered in DATIM by the USG country team.

TX_CURR_NAT

Description:	Percentage of people living with HIV receiving antiretroviral therapy
Numerator:	Number of PLHIV on ART at the end of the reporting period
Denominator:	Number of people living with HIV (PLHIV Estimate)
Indicator changes (MER v2.7 to v2.8):	None
Reporting level:	National and Sub-national: Data should be entered for all SNUs, regardless of PEPFAR-funded support for these geographical areas; so that the total of the sub-national number should equal the total number of national number.
Reporting frequency:	Annually
How to use:	ART coverage is the second 95 of the global target, and an important step in ending the AIDS epidemic. Antiretroviral therapy has been shown to reduce HIV-related morbidity and mortality among those living with HIV, and onward HIV transmission. Studies have also shown that early initiation, regardless of an individual's CD4 cell count, can enhance treatment benefits and save lives, and WHO currently recommends treatment for all. The percentage of adults and children receiving antiretroviral therapy among all adults and children living with HIV provides a benchmark for monitoring global targets over time and comparing progress across countries. It is one of the 10 global indicators in WHO's 2015 Consolidated strategic information guidelines for HIV in the health sector. This indicator is harmonized with GAM indicator "People living with HIV on antiretroviral therapy." **It is imperative that country teams use the host country indicator narrative to describe what definition of interruption in treatment/loss to follow-up is being used for TX_CURR reporting. Does the host country result assume an IIT/LTFU definition of <28 days or <90 days?**
How to collect:	This indicator measures the progress towards providing antiretroviral therapy to all people living with HIV. The data source for this indicator is ART program monitoring tools, such as ART patient registers, pharmacy dispensing records, and summary reporting forms. The number of adults and children receiving treatment can be obtained through data from facility-based antiretroviral therapy registers or drug supply management systems. Data should be collected continuously and aggregated on a monthly or quarterly basis to obtain subnational and national totals. The most recent full year of data should be used for annual reporting. Data should be collected from health facility recording and reporting forms, program data, health information system. This indicator can be generated by counting the number of adults and children receiving antiretroviral therapy at the end of the reporting period. This value should equal the number of adults and children who have ever started antiretroviral therapy minus those not currently on treatment prior to the end of the reporting period. This will exclude those who died, stopped treatment, or experienced interruption in treatment during the year. Some people pick up several months of antiretroviral medicines (ARVs) at one visit, which could cover the last months of the reporting period. Efforts should be made to include these people in the numerator as receiving antiretrovirals even if they do not attend the clinic in the last month of the reporting period. When disaggregating the numerator by age, people receiving antiretroviral therapy should be reported in the relevant age category based on their age at the end of the reporting year. Pregnant women living with HIV who are on antiretroviral therapy should be included in the numerator. People receiving antiretroviral therapy in the private and public sectors should be included where data are available.
Disaggregations:	**Numerator Disaggregations:**

Disaggregate Groups	Disaggregates

	Age/Sex (Fine) [Required, if possible]	• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M
	Age/Sex (Coarse) [Conditional, if finer is not possible]	• <15 F/M, 15+ F/M
	Sex-Only [Conditional, if both fine age/sex and coarse age/sex are not possible]	• Female • Male
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	PLHIV Estimates	Denominator is not collected as part of indicator, but rather is submitted in DATIM during COP planning [PLHIV estimates submitted in the PEPFAR Implementation and Planning Attributes].
Data entered by:	This data should be entered in DATIM by the USG country team.	

VL_SUPPRESSION_NAT

Description:	Percentage of people living with HIV who have suppressed viral loads at the end of the reporting period
Numerator:	Number of people living with HIV and on ART [in the reporting period] who have a suppressed viral load (<1000 copies/mL)
Denominator:	Number of people living with HIV (PLHIV Estimate)
Indicator changes (MER v2.7 to v2.8):	None
Reporting level:	National and Sub-national: Data should be entered for all SNUs, regardless of PEPFAR-funded support for these geographical areas; so that the total of the sub-national number should equal the total number of national number.
Reporting frequency:	Annually
How to use:	Viral suppression is the third and last 95 of the global targets, and the ultimate goal of the HIV treatment cascade. Patients on ART who achieve and maintain viral suppression minimize their risk of disease progression and HIV transmission. Viral suppression is a critical quality of service quality; unsuppressed viral load can be indicative of suboptimal treatment adherence and can lead to the development and spread of drug resistance. This indicator is harmonized with GAM indicator "People living with HIV who have suppressed viral loads."
How to collect:	The numerator can be generated by counting the number of adults and children receiving antiretroviral therapy who have a suppressed viral load at the end of the reporting period. Count the patient if, during the reporting months, viral load has been recorded and is <1000 copies/mL. For countries with other thresholds (e.g., undetectable <50 copies/ml or <400 copies/ml), preliminary evidence from several studies suggests the proportion of those with 50 copies/ml or above and less than 1000 copies/ml is small, so no adjustment is required. The testing threshold value should be reported in the narrative for countries with thresholds other than <1000 copies/ml. Viral-load testing should be routine rather than targeted (e.g., when treatment failure is suspected). If multiple viral-load tests are done annually for a person, only the last routine test result should be reported. Results from targeted viral loads should not be reported. If viral-load testing coverage is less than 75% of those receiving antiretroviral therapy in the reporting year, results should be interpreted with caution. Tools for measuring viral load may vary across countries. Routine viral-load suppression tests from clinical and program data should be reported where available. In countries where such data are not available, results from HIV population-based surveys or drug-resistance surveys based on a random sample of people on antiretroviral therapy may be reported. Countries should report the source of the numerator and denominator data, and data from both sources should be reported if available, although clinical and program data are preferred. If results from a survey are used, that should be included when reporting. Where clinical and program data are available from routine monitoring systems, results will be recorded in patient files or in a laboratory system. Data should be de-duplicated where patients receive multiple viral-load tests in a year. If an HIV population-based or drug-resistance survey is used in place of routine program monitoring data, measurement of viral load should be done for the entire population of HIV- positive individuals where ARV is detected in specimens. Self-reported treatment status has been shown to be of limited quality. Therefore, viral-load estimates among those who report receiving antiretroviral therapy should not be used.
Disaggregations:	**Numerator Disaggregations:**
	Disaggregate Groups / **Disaggregates**

	Age/Sex (Fine) [Required, if possible]	• <1 F/M, 1-4 F/M, 5-9 F/M, 10-14 F/M, 15-19 F/M, 20-24 F/M, 25-29 F/M, 30-34 F/M, 35-39 F/M, 40-44 F/M, 45-49 F/M, 50+ F/M
	Age/Sex (Coarse) [Conditional, if finer is not possible]	• <15 F/M, 15+ F/M
	Sex-Only [Conditional, if both fine age/sex and coarse age/sex are not possible]	• Female • Male
	Denominator Disaggregations:	
	Disaggregate Groups	**Disaggregates**
	PLHIV Estimates	Denominator is not collected as part of indicator, but rather is submitted in DATIM during COP planning [PLHIV estimates submitted in the PEPFAR Implementation and Planning Attributes].
Data entered by:	This data should be entered in DATIM by the USG country team.	

MONITORING SPECIAL INITIATIVES

CERVICAL CANCER SCREENING AND TREATMENT

Starting in FY18, PEPFAR refocused its support for the implementation of cervical cancer screening and treatment of precancerous cervical lesions in ART clinics among women living with HIV on ART. All countries utilizing PEPFAR resources for cervical cancer services are expected to report on the following indicators: CXCA_SCRN and CXCA_TX and their associated indicator narratives.

APPENDICES

APPENDIX B: DQA OF NATIONAL AND PARTNER HIV TREATMENT AND PATIENT MONITORING SYSTEMS

The following appendix is an excerpt from the "Data Quality Assessment of National and Partner HIV Treatment and Patient Monitoring Systems" implementation tool. This tool was developed in collaboration with WHO, UNAIDS, the Global Fund, and PEPFAR to ensure that there is one agreed upon methodology for conducting data quality assessments of treatment numbers.

The objectives of DQA are:

1) to assess the quality of reported data by using standard indicator definitions to recreate the reported numbers for selected indicators and compare with the numbers reported by the national data collection system, such as DHIS2 (District Health Information Software), and by partners;
2) to verify the quality of and to improve the reported HIV patient monitoring data and systems at the facility level;
3) to cross-validate a sample of patient records and manually count patient records and describe any systematic data quality challenges with applied indicator definitions and data recording and to recommend actions to improve data quality;
4) to determine the percentage of people receiving ART nationally over- or undercounted (and sub-nationally when feasible or the country needs this) and use this to reset the numbers at both the site level and within the national data collection system in addition to ensuring accurate reporting in any reporting systems moving forward; and
5) to update national reporting data and national epidemiological estimates for improved planning.

The DQA requires 6 steps:

1) Setting up a country-based implementation team of stakeholders to agree on the scope and methods and to support the implementation and dissemination of the results of the DQA;
2) To agree on the sampling required and the indicators to include in the assessment and to finalize the site-level instruments;
3) Assessing at the site level to collect data, including assessing the HIV patient monitoring system and recreating the numbers of people receiving and initiating ART;
4) Conducting a desk review to identify challenges in national reporting (can take place simultaneously with step 3;
5) Analyzing the results and resetting the site-level and national numbers of people receiving and initiating ART; and
6) Developing a communication strategy and disseminating the updated values.

A 2-stage phased approach for implementing a DQA is recommended to assist countries in giving priority to scaling up DQA activities over time and to prepare countries to implement larger-scale DQA when significant data quality issues are identified or when the country needs or wants to review and adjust treatment data at the subnational level.

The scope of the two phases is as follows.

- **Phase 1**: in the initial phase, the DQA will be implemented within a nationally representative number of ART sites in which the 6 steps indicated above will be implemented with a view to validate the number of people on ART and if necessary reset the national ART number as needed, as well as strengthen the overall HIV patient monitoring system.
- **Phase 2**: implementation of the second phase DQA is in response to identified DQA challenges in the phase 1 DQA which warrant further investigation and review of HIV treatment data in a larger number of ART sites or within the context of implementing a DQA strategy in which DQA activities are scaled up over time. Countries completing the first phase of DQA and finding a verification factor (recreated/reported times 100) of less than 90% or greater than 110% within the sample should transition to the second phase in which the exercise is expanded to additional ART sites for an overall representation of 80% of the people currently receiving ART for the reporting period being reviewed. This should be done for a more in-depth review of data quality and to reset ART numbers at these sites and the site-level systems as needed following the same steps identified above. This second phase can be conducted by the Ministry of Health and implementing partners with site staff.

  In addition, with larger site sample sizes, countries can also consider analyzing and adjusting subnational ART data based on country need and interest in this phase.

DQA Step 1: Set up a multi-stakeholder implementation team.

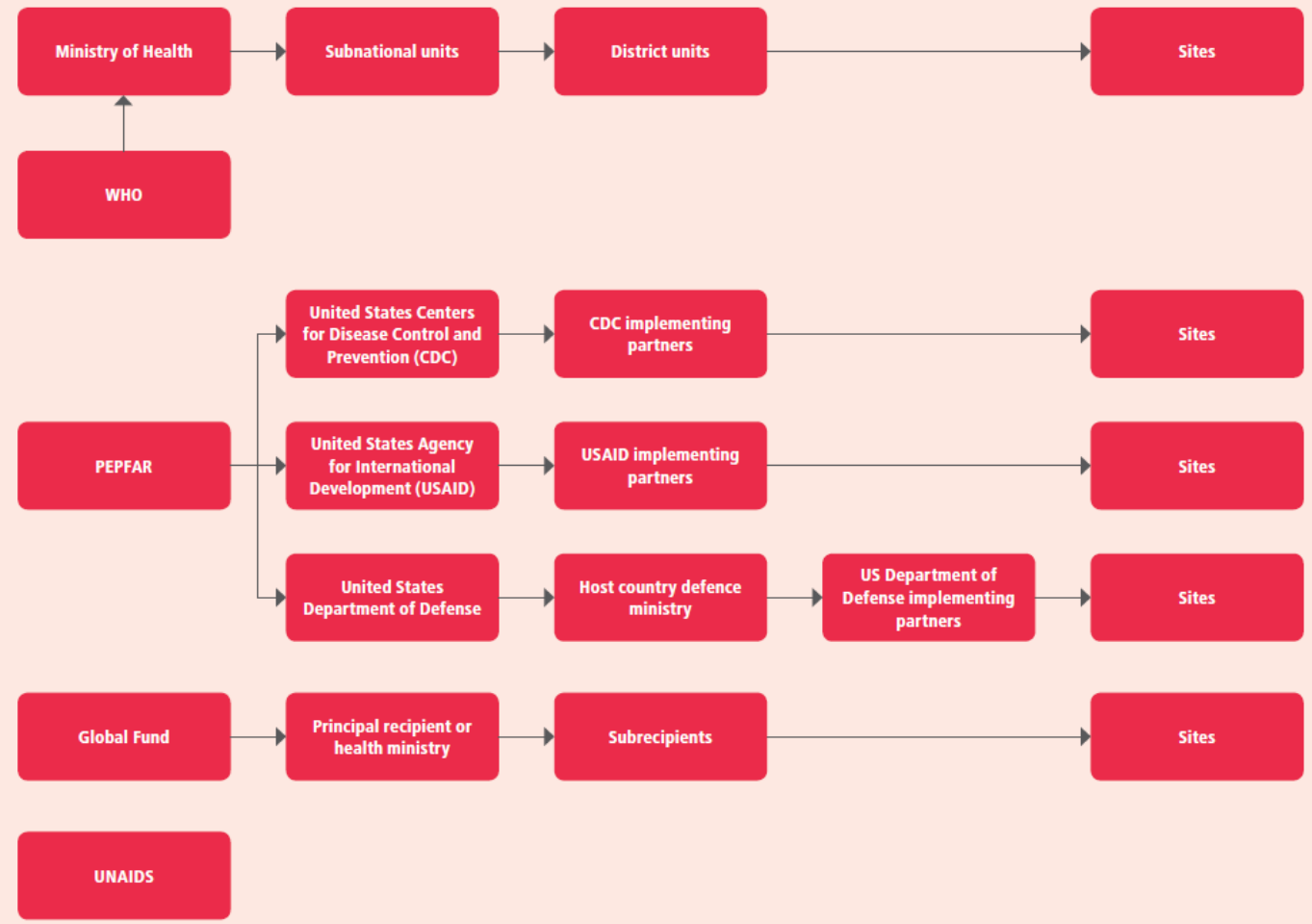
Institutionalizing routine assessment and monitoring of the quality of reported data is an integral part of an effective HIV program. Data quality is especially important given the use of this data to plan for program implementation, the use of global resources and to affirm progress towards epidemic control. As such it is critical there is full ownership and support for DQA from Ministries of Health and partners. Within this context, the specific roles and responsibilities of country stakeholders are detailed below.

Before starting any data collection or review processes, the Ministry of Health and the host country team will inform other national and local authorities, such as the district health office, of this assessment and engage them, seeking their involvement in the data validation activities and other subsequent activities to improve data quality.

Roles and responsibilities

- Ministries of Health: Ministries of Health are responsible for leading the implementation and overall coordination of the DQA in collaboration with partners, including PEPFAR, the Global Fund, UNAIDS, etc.
- PEPFAR: PEPFAR headquarters staff will provide technical assistance to interagency country teams for the development of their specific DQA protocols. In addition, some in-person technical support will be provided from PEPFAR headquarters staff.
  PEPFAR field staff from each of the PEPFAR-supported agencies (such as the United States Centers for Disease Control and Prevention, United States Agency for International Development, and Department of Defense) are required to participate in planning and implementation of the DQA. PEPFAR field teams should work within the interagency country team to select sites from all ART sites in the country and draft the DQA schedule, draft notification letters to relevant stakeholders and notify implementing partners and site staff before DQA visits. PEPFAR field staff should also participate in developing the final DQA report and remediation plan and should ensure that implementing partners and sites receive additional technical assistance and remediation, as necessary. Lastly, PEPFAR field staff should coordinate with Ministries of Health to ensure that divergent numbers identified in PEPFAR-supported sites are corrected in the health ministry reporting system and are reported correctly at the next PEPFAR quarterly reporting cycle.
- Global Fund: The Technical Advice and Partnerships Department of the Global Fund Secretariat will work closely with the country teams for respective countries to support the implementation of DQA and the use of the findings for programs. The Global Fund will also provide funding and technical assistance for implementing DQA by mobilizing technical resources in the monitoring and evaluation technical assistance pool, local Global Fund agents and quality assurance providers for health facility assessments and data quality reviews. The Global Fund country teams will coordinate with national AIDS programs and in-country partners to ensure that the correct national numbers are used for quantifying ARV drugs, laboratory reagents and key performance indicators.
- UNAIDS: UNAIDS will support its national counterparts responsible for ART reporting to ensure partner buy-in and alignment with the adjustments. In addition, UNAIDS will support country estimates teams to adjust their current and historical numbers of people receiving ART used in their Spectrum models to reflect the DQA results and produce accurate epidemiological estimates.
- Interorganizational country team: The interagency country team includes the Ministry of Health, UNAIDS, WHO, PEPFAR, the Global Fund and other representatives or stakeholders based in the country that will work collaboratively to carry out the DQA. Within this group, one or more individuals should be chosen as the team leads to oversee the assessment teams and take a leadership role in the site selection, assessment, and remediation.
- Providers of ART (referred to as implementing partners by the United States Government): Implementing partners will work alongside the country team to support implementation of the DQA at sites they are supporting, including facilitating communication regarding the assessment and DQA activities at the site level.

FIG. 1. STAKEHOLDERS INVOLVED IN DQA AT THE GLOBAL AND COUNTRY LEVELS



DQA Step 2: Decide on the sampling frame and indicators and finalize the instruments.

A key aim is to implement a sampling frame that is practical and that implements objectives 1 and 2 and provides results for objectives 4 and 5 of DQA, to provide coordinated national and partner-specific assessment.

The primary sampling framework will therefore implement initial stratification by three domains:

- National representation: to validate and correct as required the national numbers of people receiving and initiating ART;
- PEPFAR-supported sites: to validate PEPFAR-supported sites, including specific implementers as required; and
- Potentially Global Fund–supported districts if relevant: to assess districts supported by the Global Fund (if these are not distinct, the national strata can be used).

Within these domains, and given the needs of the government and the availability of funds and timing, additional strata can be sampled if required, including:

- By facility type or facilities with paper versus electronic patient monitoring records;
- Of particular programmatic importance: for example, 2 or 3 districts might be oversampled to meet the particular needs of a partner or meets the concerns of the Ministry of Health; and
- To measure the reporting adjustments at the subnational level (recommended for the second phase of DQA).

This should be balanced against the sample size implications of increasing the number of strata. In implementing the sampling approach, the following steps are followed.

I. Create a sampling frame: a list of all ART sites nationally. In the second phase of DQA, countries may consider disaggregating this list by subnational unit (such as region or district). The sample frame should include the following information:
    a. Site name and location, such as province, district, etc.;
    b. The number of people currently receiving ART in the past calendar year – to validate the primary indicator of currently receiving ART;
    c. The number of new ART initiators in the most recent reporting time frame (such as quarter or year) – to validate the indicator of new ART initiators;
    d. Domains (such as PEPFAR support, Global Fund support, etc.); and
    e. Any additional strata of interest (such as facility type, paper versus electronic, etc.).

II. Decide on the number of ART sites to be sampled nationally and by strata in phase 1. This is a country decision usually based on the objectives of the DQA, feasibility, cost and whether the objective is to develop a correction factor, achieving an acceptable relative margin of error at the national and subnational levels and within specific strata of interest. The interorganizational country team should determine the appropriate sample size based on country priorities for the specific objectives of the DQA and precision of the desired estimates, available resources, feasibility, and time considerations. Countries may assess data quality in a limited sample of sites to obtain understanding of data quality issues to determine whether a correction factor is needed or sites with 80% of the people receiving ART should have their numbers of people receiving ART reset. However, a relative margin of error of 10% for a 90% confidence interval is recommended as a minimum level of acceptable precision for the national correction factor for the number of people receiving ART (see subsection 3.5).

III. ART sites should be selected for the assessment by probability sampling, such as simple random sampling, stratified random sampling, systematic random sampling, or probability proportional to size sampling, in which size would be based on the number of people facilities reported to be receiving treatment. To obtain a national correction factor, a qualified statistician should perform the sampling of sites and the country team should archive all the programs and/or tools used to select the sites, specifically the sampling frame, site selection probabilities and relevant design information, since certain designs require the use of sampling weights during the analysis phase.

IV. Some countries may have sites that are very small (such as fewer than 100 people receiving ART) or may be difficult to access because of geographical remoteness or political instability. In these cases, the interorganizational country team may consider excluding some or all of these sites from the evaluation because of logistical considerations. In general, if these sites represent less than 10% of the population receiving ART in the country, countries may choose to exclude these clinics from the sampling frame. In this case, the exclusion from the sampling frame needs to occur before site selection. The final report should include a list of all excluded facilities and reasons for their exclusion. The reported number of people receiving ART from these sites should not be adjusted using the ratio method, since these sites would not be part of the sampling frame and target population. These sites can be included in the second phase of DQA.

DQA Step 3. Site-level assessment.

I. **Site-assessment:** For this activity in both phases 1 and 2, the interorganizational country team uses standardized processes to review existing information on people receiving ART that is routinely collected through facility- or community-based patient monitoring systems and site assessment tools. DQA activities use a set of standardized tools and data collection instruments developed specifically for the treatment indicators, although these may be adapted to fit local contexts or to accommodate additional indicators. Data quality should be assessed at the sites for both treatment indicators (number of people currently receiving ART and number of people initiating ART) disaggregated by age and sex.

Selected facilities will be contacted to identify a date and time for the DQA visit. Countries may use their own template for notifying the sites of the visit and should include the following information: the purpose of the visit, proposed visit dates and a request for key staff to be present for the visit.

The site-level assessment visit will consist, at minimum, of the following activities:

- Introductory discussions with key staff of the site and implementing partners;

- Review and completion of informed consent;
- Review and completion of the patient monitoring system checklist;
- Site walk-through and assessment of record systems to determine patient and data flow from the point of initial data capture (patient files) to data aggregation and reporting (registers and monthly aggregate tools) and to identify gaps and opportunities to improve data quality;
- Recount of reported numbers for selected indicators disaggregated by age and sex and comparison against the numbers reported to the Ministry of Health routinely as well as PEPFAR, for example in DHIS2 and DATIM (Data for Accountability, Transparency and Impact Monitoring), which may include reviewing paper charts, registers, EMR systems, pharmacy records, or other record systems;
- Cross-validation of a sample of paper charts, registers, EMR systems, pharmacy records or other record systems; depending on the result, a physical count using patient charts should be conducted if needed; and
- Outbrief with key site and implementing partner staff to summarize key findings from the visit.

Past experience with implementing DQA in countries indicates that 1 site per day on average is feasible for completing these activities. In terms of human resource, cost and time requirements, this varies significantly according to the number of facilities sampled and patient files reviewed as well as the geographical distribution of facilities and country context. As broad guidance, however, a recent exercise implemented in 84 facilities required a team of 31 data collectors and supervisors over 25 days and 24 data entry clerks over 20 days.

II. **Data collection and analysis:** To assure the quality of collected data for review, interorganizational country teams are expected to apply standard data quality assurance practices during data collection. This includes double data entry when possible or having 2 teams enter a sample of the data to check the quality. At the least, data capture will be conducted in pairs with one partner monitoring the data entry of the other. This will ensure that the data collection team is not introducing any error during the review process. The process for each activity is outlined below.

Primary activity (required):

Recreating selected indicators and validating the report:

a. Site staff members first describe the site's data systems, reporting process and methods for calculating each indicator during the discussions.
b. The assessment team calculates the selected indicators according to the current definitions, attempting to replicate the procedures used by each site to aggregate and report quarterly totals. If sites report the indicator using a definition that differs from the standard definition, this alternative definition will be known as the site definition and will be documented using the site questionnaire. The reporting and site method for the indicator should be used when recreating the reported number. However, if time and other constraints are present, recreating the standard definition is the priority activity.
c. The recreation of the selected indicators should use the same data source the sites use to report the indicator. For instance, if the sites use the ART register to report the number of people currently receiving ART, the recreation should also use the ART register. Some sites may use the patient charts or other data sources, such as ARV drug pick-up records to report on the number of people currently receiving ART. If this is the case, the recreation should be based on the tools used by the site for reporting.
d. This recreation may include computing patient tallies and confirming results from facility registers, patient databases, pharmacy logs, and laboratory records and should review the most recently reported data.
    i. When recreating indicators in facilities with an electronic database, and where indicators were calculated by the site using that electronic system, ask the site staff or database manager for the software report or query used to run the calculations, and validate the consistency of that query with partner and/or Ministry of Health definitions for the respective indicator, when possible. Reports are often routine and so definitions and queries used at sites will often be the same across sites using the same electronic systems.
    ii. A random sample of inactive patient charts (such as 10 charts) should be selected and reviewed to assess misclassification and determine how many may actually still be active. If this review identifies issues with the classification of inactive patient charts, physically counting patient charts should be considered (as described in the section on other data validation activities).

e. The assessment team then compares the calculated results from the reported and site (if this exists) method recreation with the reported value and discuss differences (if any). The measure for comparison will be the verification factor (recreated/reported times 100) and confidence interval, which explains how much of the reported data can be verified. A verification factor within 90% to 110% is within acceptable levels but should still be recorded, reported and reviewed by the Ministry of Health and country team to adjust national ART data.
f. Discrepancies between the reported and recreated values (percentage difference) are computed, described, and discussed with each site. To the extent possible, the reasons for possible differences between the values computed during the site visit and the values reported by that site are further investigated and described (see other data validation activities for the details of methods that can be used). If immediate remediation is needed, action plans should be developed with the sites and options for correcting the data should be discussed.

To support the primary data validation activity and implement the final step of assessing the discrepancies between reported and recalculated ART numbers, at least one of the data validation activities below should be conducted alongside the DQA. These activities will inform the DQA by providing additional information on the completeness and accuracy of the data sources and reporting tools.

Other data validation activities:

1. Site-level cross-validation: The process of checking the completeness and accuracy of site level source documents by cross-referencing identified data elements in routine reporting source documents (typically patient charts) with other reporting documents, such as the ART register, pharmacy records or EMR system.
    a. The assessment team randomly samples a number of patient charts from the ART register beginning with the start of the time period being reviewed. Assessment teams should define the number of charts to be selected and the specific sampling method (such as every fifth person) during the planning stages of the assessment.
    b. The following are options for selecting the number of charts.
        i. Select 10% of the charts from active patients receiving treatment. If at least 10% of the charts reviewed are inconsistent with the register, an additional 10% of patient charts are reviewed to better understand the consistency. For example, if 1000 people are active, then 10% (100/1000) of the charts should be reviewed. If 10 or more charts are inconsistent with the register, then the number of charts reviewed is increased by 100.
        ii. A random sample of charts may be selected to estimate the completeness and accuracy with a high degree of statistical precision (narrow confidence interval). This often requires a larger sample size and can be calculated using a sample size calculator. For instance, the HIVQUAL sampling method could be used.
    c. Selected data elements such as the last ARV drug pick-up date and last clinic visit will be compared between data sources (such as ART register, EMRs, pharmacy records etc.) using a data verification tool, which will be adapted to the country data systems. The number and types of data elements to be reviewed will be determined by the country team.
    d. The data collected will be used to calculate the percentage of discordance between the source document (patient charts) and other data from reporting tools such as the pharmacy system, EMRs and/or ART register.
    e. For this activity, teams have access to patient records and charts or personally identifying health information, and the teams therefore apply a standardized practice to data extraction, making sure to cover the name, age, address, and phone number of each patient. The patient identifiers such as name, date of birth, and sex are used to identify the records for this activity, confirming the same patient across different data sources. These identifiers are not removed from the facility and are not part of the data collected. The identifiers are destroyed before leaving the health facility. Only aggregated data are captured. All data abstraction occurs in a private area, away from patients, and covered (such as closing the folder) if patients are present.

f. This activity seeks to determine agreement (and the percentage difference) among reporting tools at the same site, to describe reasons for the discrepancies observed and to make recommendations, if possible, for improvement.

2. Physical count using patient charts: In instances where the validity of the indicators produced from site-level reporting tools or from cross-validation are of significant concern, the patient files can be checked and physically counted to confirm the "actual" total of people actively receiving ART. Examples of when a physical count might be beneficial include: when source documents used for reporting appear to be significantly incomplete or when there are larger data quality concerns, such as issues with appropriately accounting for people experiencing interruption in treatment (IIT) and/or deaths.
    g. The assessment team should identify patient charts that fall into the following categories and review the charts to confirm the patient status and count the patients whose charts or medical records fall into each category (the definition of these categories may vary from country to country).
        i. Active: people actively receiving ART: currently have enough medication that will last until their next scheduled visit.
        ii. Missed appointment: missed their last appointment but are within 7 days of their missed appointment.
        iii. Defaulters: missed their appointments but do not qualify as IIT within the 3-month window following their missed appointment.
        iv. Interruption in treatment: missed appointments and are outside the 3-month window following their missed appointment.
        v. Transfer out: initiated care and treatment at the current facility.
        vi. Deceased: died.
        vii. Transfer in: initiated care and treatment services at another health facility.
    h. People who are deceased, transferred out, or experienced interruption in treatment are not considered actively receiving ART. All other people are considered active.
    i. People may also be actively visiting the facility during the physical recount, so their charts may not be in the file room or charts may be kept in other locations within the health facility such as tuberculosis, maternal and child health clinics etc. The assessment team should ensure that a comprehensive chart count and review is performed.
    j. The count of people actively receiving ART should be compared with the number reported by the clinic.
    k. The number of people actively receiving ART reported may differ from the physical recount. However, this number should be within acceptable error bounds because of flow in and out of the facility.

3. Interruption in treatment (IIT) assessment: In facilities that utilize electronic systems for patient monitoring and tracking, queries on recent interruptions in treatment can generate a list of patients meeting the IIT criteria. Verification of IIT status in the patient chart can provide an additional opportunity for validating the accuracy of the electronic system.
    l. The assessment team works with site staff to query the electronic system to generate a list of people that have been marked as IIT based on standard definitions.
    m. The assessment team pulls each person's chart from the list generated and confirms whether the person is still actively receiving treatment based on chart documentation. In some cases, the pharmacy system might need to be queried as well, since people might bypass clinical visits but still pick up medication from the pharmacy.
    n. People misidentified as IIT will be totaled and used to calculate a percentage of variance.

Assessing and correcting errors in the reported data that result in incorrect counts of people receiving treatment at sites because of interruptions in treatment, transfer out, and death using one of the latter two data validation activities above is a critical step for adjusting the national ART data.

The assessment teams use standardized data collection sheets to collect qualitative and quantitative data from each site. All quantitative information is consolidated using tables (spreadsheets) and shared among participating staff. Implementing partners are asked to maintain the results of all DQAs in a centralized database to demonstrate routine monitoring of data quality and quality improvement over time.

The assessment team works with site-level staff to summarize the results and identify the potential root causes of poor data quality at that site. The results will be used to develop site-specific action plans for improving the quality of data and correcting the problems discovered in the activity. The lessons learned will be summarized across all sites and shared during quarterly meetings with the Ministry of Health and partners.

DQA Step 4. Desk review of ART data submitted to the national level.

A desk review of the quality of existing ART data reported to the national level should be undertaken to evaluate the dimension of data quality. At a minimum, aggregated ART data at the national level should be checked for the completeness and timeliness of ART reports, and this should be quantified. Monthly or quarterly reports on the number of people receiving ART reported by ART sites to the national level should be reviewed in addition to the number of submitted reports and the number of ART sites expected to report for the reporting period covered. Reports from previous years can also be reviewed for a longer-term view of reporting trends.

The desk review is intended to assess errors in reporting and aggregation caused by missing or delayed reports and, when feasible, duplicate reports. For the latter, if possible, EMRs should be used to estimate the number of duplicate reports because of silent patient transfer across ART sites and assess interruption in treatment at the national level.

DQA Step 5. Analyze the results and reset the numbers or people receiving ART for the site and nationally.

I. **Data management:** The data collected and analyzed as part of this assessment will be shared by all partners and the Ministry of Health. These data may be collected using a combination of paper and electronic forms. Data that are collected on paper forms will be kept in the possession of the field team leads throughout the field exercise. Upon completion of fieldwork, team leads will be responsible for destroying all personal identifying data forms and transporting all aggregated data back to the main office. All aggregated data will be entered into an electronic format such as Microsoft Access, Excel, or similar software. The database used will be password protected and will be available on computers that are only accessible to the project team.

The data taken from the site will not include any patient identifiers. Patient identifiers may be used at the sites to identify charts. However, this information will be destroyed before leaving the site.

The data collected will be backed up on password protected and, where available, encrypted computers at the country office or the Ministry of Health. The results of the DQA will be shared with partners for activity monitoring purposes. However, the raw data files will not be distributed beyond the country team. The data collected on paper forms may be kept for up to 5 years and then destroyed.

II. **Correction factor to apply to the national numbers of people receiving ART:** A key output from the DQA is a quantitative understanding of the likely level of under- or overreporting of the number of people receiving treatment nationally during the assessment period. Misreporting of this number can arise from the following.

Incorrect reporting from the facility and aggregation at the national level. Aggregation of facility level reports to count the number of people receiving treatment at any given time can be subject to error if facility reports are delayed or missing and not adjusted for or if reports for the facility are entered in duplicate. This type of error can result in either over- or undercounting the actual number of people receiving treatment. The numbers of people receiving treatment should be corrected to account for missing facility reports or reports that have been mistakenly entered in duplicate. The desk review in step 4 assesses this.

Incorrect counting of people receiving treatment at the facility level. In addition to simple errors in aggregation of data between patient records and reporting forms, incorrect counts of the number of people receiving treatment may arise from a failure to properly define “currently receiving ART,” from failure to remove people who have died or disengaged from care or who have transferred facilities or from incomplete or backlogged patient records,

registers, charts, or files. Errors of this type can result in either over- or undercounting the actual number of people receiving treatment at a facility. The correct number can be determined by recreating the reported number using patient records and registries (see subsection 3.3, Step 3: site-level assessment for details).

People who simultaneously seek care at more than one facility. The number of people receiving treatment can be incorrectly counted if people are simultaneously registered at and considered to be receiving treatment by two facilities.

This error will always result in over-counting the number of people receiving treatment. The correct number can be determined by comparing electronic records, where available, across facilities, reviewing possible matches to determine whether they are the same person, and then assigning a single location for counting purposes. When this comparison can be done with only a subset of the people receiving treatment, a correction factor could be calculated and applied in addition to the correction factor from step i below, if there is agreement that the same level of duplication is occurring in facilities not included in the comparison. If insufficient information is available to determine the unique identity of individuals, this correction factor should not be used.

To the extent possible, all sources of errors should be considered when reporting on the number of people receiving treatment for the current and historical reporting periods.

The following steps are used to calculate that national reset value in the year in which the DQA was done.
Step i. Estimate the ratio of the number of people verified to be receiving treatment from the DQA to the number of people facilities reported to be receiving treatment and confidence interval using the method.

Step ii. Multiply the total number of people reported to be receiving treatment from the sites included in the sampling frame by the above ratio and by the upper and lower bound ratio estimates. This will yield adjusted national estimates along with an upper and lower bound estimate.

Step iii. Correct for duplication across facilities, if possible (where comparison across facilities has been done using EMRs), by applying the cross-facility duplication adjustment to all sites. If duplicates are resolved at the time of the validation, the cross-facility duplication correction should only be applied to the numbers of people receiving treatment in sites without EMRs.

Step iv. If applicable, apply additional correction factors to the adjusted estimate.

The following steps are used to calculate the historical value in years before the DQA.
One approach to adjusting the previous year's data (assuming that errors in reporting are directly linked to patient load) is to identify the year since 2010 with the largest percentage increase in the numbers of people reported to be receiving treatment and then calculate an interpolated adjustment factor (either linear or exponential) for each year until the year before the DQA was done.

Other approaches could be considered based on whether the country believes that miscounting is likely to be associated with different partner-level support in clinics, the type of reporting system (paper versus electronic) or patient load at the clinic. These approaches would require historical understanding of how these facilities attribute changes over time.

DQA Step 6. Disseminating, notifying, and reporting results.

A primary aim of the work will be to adjust the number of people receiving ART at the facility level and further correct any strategic information used for planning and reporting. Clear documentation of the assessment, the results and the decision about the correction factor will be critical for explaining changes to ministry officials and development partners. The country report will therefore inform the process of updating estimates rapidly after the report is provided.

Once a nationally representative adjustment factor has been calculated, it needs to be reviewed and agreed by stakeholders. Clear and transparent messaging about the change in the values should be agreed by the interorganizational team and disseminated widely. The corrected treatment values for the year in which the review was done should be

submitted through the UNAIDS Global AIDS Monitoring online tool for the year of the assessment. The adjusted ART data also need to be corrected in the national (or subnational) Spectrum estimates file. This will require correcting the historical years as well as the current year. See the section above on national correction factors to determine how this is done.

Based on the findings from the above methods, the interorganizational country team will produce a brief report summarizing any systematic problems with defining indicators and data recording, reporting and aggregation from the facility to the national level (where relevant), data quality challenges, and recommendations to improve the quality of aggregate data reporting and the system that generates the data in the future. This report should be shared with all stakeholders in the interorganizational country team, including implementing partners and Ministries of Health. For more examples and templates to support your DQA, please visit:
https://apps.who.int/iris/bitstream/handle/10665/274287/WHO-CDS-HIV-18.43-eng.pdf?sequence=5&isAllowed=y

APPENDIX C: SITE AND SNU ATTRIBUTES AND EPIDEMIOLOGIC ESTIMATES

Overview: PEPFAR collects administrative, epidemiologic, and service-related data about facilities and subnational units (SNUs) that help to better illuminate where services should be provided, where services are actually provided, who is delivering these services, and what is the service capacity. Some of these attributes are routinely collected in the form of MER indicators, others are collected at the time a facility is added to a master facility list and subsequently DATIM (e.g., facility name, geographic coordinates), and others are collected during the annual PEPFAR planning cycle.
Through the collection of these data, PEPFAR strives to have more complete information available on service provision and facility infrastructure. Use of these data facilitates improved decision-making when country programs are determining what services should be targeted by geographic locations to the populations in greatest need of these services.

Signature Domain Attributes: Signature domain data attributes are those elements that can be used to identify and locate a site or SNU and are those data elements that should not change significantly over time. Much like a person's signature can ensure his or her identity; the signature domain attributes would ensure a health facility's identity.

Attribute	Definition	Points of Collection	Response Options
Unique Facility ID	Auto-generated, unique code that distinguishes one facility from anothe	Facility	Variable
Facility Name	Official, registered name of the facility	Facility	Variable
Geographic Coordinates	Physical location of the facility; represented as latitude and longitude	Facility	Variable
Administrative Areas	District, province, or other administrative levels	Country-Specific	Variable
Type of Facility	Classification of each facility by type	Facility	-Hospital -Primary Health Center -Health Post -Dispensary/Pharmacy -Standalone Laboratory -Mobile Health Clinic -Temporary Facility -Other Facility
Ownership or Managing Authority *Multiple response options can be selected and analyzed for this attribute*	Entity that owns (has exclusive legal rights to the facility) or manages (coordinates its service delivery) the heath facility	Facility	-Government: MOH -Government: Other -University -NGO or Non-Profit -Private -Faith-Based

Service Domain Attributes: Service domain data elements describe the basic services, infrastructure, and human resources at a facility; therefore, service domain data are critical for planning and resource allocation. Compared with signature domain data, these data tend to change more frequently, so greater effort is required to keep information current.

Attribute	Definition	Points of Collection	Response Options
SNU-Level Planning Prioritization	COP planning prioritization definitions as described in the COP guidance	PEPFAR Priority SNU-level (e.g., district)	-Attained -Scale-Up Saturation -Scale-Up Aggressive -Sustained -Centrally Supported -Sustained: Commodities -Not PEPFAR-Supported
Do the staff at this facility provide services such as HIV testing, HIV treatment, and PrEP in the community?	Understanding community service provision conducted by facility-based staff	Facility	-Yes -No
Clinic Hours	Hours that the clinic is open to provide HIV-testing and/or treatment services	Facility	-Standard shift (Standard workday as described by government) -Extended hours to accommodate evolving population health needs (e.g., men, adolescents) -24-hour
Site Digital System(s)	Tag to identify which digital health system(s) exist at a specific site	Facility by System Category	- Electronic Medical Records/Patient Medical System (EMR/PMS)

			- Logistics Management Information System (LMIS) - Laboratory Information Systems (LIS) - Pharmacy Information Systems (PIS) - Other

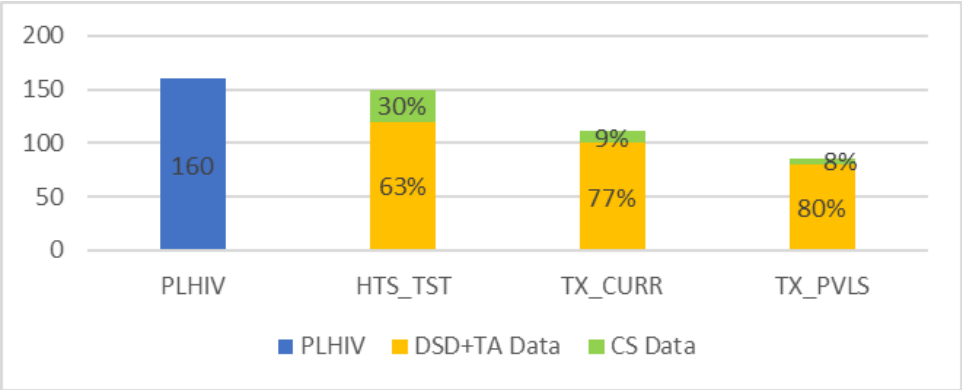
Epidemiologic Estimates:

Attribute	Definition	Points of Collection	Response Options
Population Estimates	Number of people living in a country or geographic area as determined via Census or other method of civil registration	National PEPFAR Priority SNU-level (e.g., district)	Total population estimate disaggregated by: • Fine Age/Sex • Coarse Age/Sex
PLHIV Estimates	Estimated number of people living with HIV infection as determined by using a survey or some other globally consistent estimation method	National PEPFAR Priority SNU-level (e.g., district)	Total number of adults and children living with HIV disaggregated by: • Fine Age/Sex Coarse Age/Sex
HIV Prevalence Estimates	Estimated proportion of the adult population living with HIV infection	National PEPFAR Priority SNU-level (e.g., district)	The prevalence of HIV in the adult population disaggregated by: • Coarse Age/Sex • Sex

APPENDIX G: CENTRAL SUPPORT

Central Support Overview: PEPFAR and global partners are looking to fill gaps in data to enhance epidemiologic and programmatic data in support of OUs' pursuits of the UNAIDS 95-95-95 targets. Central Support (CS) data has been identified as a data classification, that does not overlap with TA or DSD, which could fill these gaps and would add to our understanding of an OU's epidemic – highlighting successes and areas needing support. CS data collection is done in conjunction with DSD/TA data collection, to help provide additional context to services being provided, and the status of the epidemic. In addition to a broader understanding of an epidemic, collection of CS data provides insight into services and funding provided outside of the DSD/TA service definitions through support of Host Country governments.

Definition of Central Support: Centrally supported sites are sites located in areas where PEPFAR is solely providing financial support at the national, regional or district level, with site-level support through annual visits. The purpose of this collection activity is to understand further, how close countries are to achieving the 95-95-95 targets, or how they are maintaining goal targets with the inclusion of Central Support (CS) data. This chart provides an example of how the inclusion of CS data can provide a different view of the epidemic at the OU level.



As evidenced in the chart above, inclusion of CS results allows us to see that this OU is closer to the 95-95-95 goals than previously evidenced with only DSD/TA data.

Data Type vs. Prioritization

- Central Support Data Type: The CS data type, in comparison to the DSD and TA data types, should be reported from sites where PEPFAR is **solely providing financial support** at the national, regional or district level, and site support is through annual visits. Collection of this data allows for insight into programs not directly supported (but financially supported) by PEFPAR.
- Central Support Prioritization: Prioritization levels are determined for SNUs during COP planning, based on where an SNU sits in reaching 95/95/95 goals. CS prioritization is given when site specific activities have transitioned to government or other support.
    - CS Prioritization does not mean all data should be collected under the CS data classification. SNUs with a CS prioritization currently collect data under DSD, TA, and CS data types.
    - Please review the most recent COP Guidance for further information on the Central Support prioritization.

Central Support Reporting Requirements

- Indicators: Centrally Supported site-level data should be reported for each of the 6 required indicators for centrally supported data: HTS_TST, TX_NEW, TX_CURR, TX_PVLS, PMTCT_STAT, PMTCT_ART.
- Disaggregates: CS results should be disaggregated at the most complete, and specific level possible. Complete reporting on the age/sex disaggregates that sum to the total numerator is necessary for accurate monitoring and review of programmatic framework. If reporting on additional disaggregates is not feasible, please contact please contact GHSD_SI at GHSD_SI@state.gov and copy your PEPFAR Program Manager.
- Frequency: CS Indicators should be reported on at least an annual basis. CS Indicators are available for quarterly reporting for OUs with available data. If available, CS indicators should be reported on a quarterly basis. If reporting annually, CS indicators should be summed (except for TX_CURR) so that Q4 data is equal to the annual cumulative.

- Implementing Mechanisms (IM):
  - Data **will not** be de-duplicated across CS, DSD/TA. Ensure that you are only submitting applicable data under CS or DSD/TA.
  - The same IM can be used for DSD/TA data reporting, with the appropriate CS/DSD/TA tab being utilized in the DATIM entry screens.
  - IMs used for central support are determined on country-by-country basis, and these decisions should have been made during COP discussions.
- Data Entry in DATIM:
  - Required indicators for CS reporting will reflect an option for "CS" reporting where OUs can report site-level results for centrally supported sites. A snapshot of the tab from the DATIM data entry screen is provided below.

Details on central support reporting – including the designation of centrally supported SNUs, reporting frequency, and reporting mechanisms - should be decided during COP discussions. Further questions on CS reporting should be directed to your PPM, who can reach out to your DUIT Liaison for additional support as needed.

Central Support Reporting Examples

Central Support PSNU with DSD, TA, and CS Data Types

*Mock data for example purposes only, does not represent a PEPFAR OU.

PSNU	Partner	Implementing Mechanism	HTS_TST			TX_NEW			TX_NEW		
			DSD	TA	CS	DSD	TA	CS	DSD	TA	CS
Centrally Supported District	Department of Health	1111			2,011			2,011			2,611
	NGO Partner B	2222	14								-
	NGO Partner A	3333	188			188			289		
		3334	56	12		56	12		312	170	

Data reported for an SNU prioritized as Central Support:

Majority of data reported through the DOH – Mechanism 1111 falls within the CS Data classification

NGO Partner B reports DSD and TA data in a CS prioritized PSNU that does not fall within CS data classification

The example above illustrates summarized results by IM and data type for the PSNU. The data reported by Department of Health reflects results from centrally supported sites within the PSNU. NGO Partner A reports results from sites within the same PSNU that receives DSD or TA support. Therefore, the results summary reflects a mix of DSD, TA, and CS support at the PSNU-level.

The following example provides a snapshot of results by different data types at the site-level:

Site	Implementing Mechanism	HTS_TST			PMTCT_STAT		
		DSD	TA	CS	DSD	TA	CS
Site A	1111	178					246

The site-level example reflects both DSD and CS results from the same site. However, there are differences in the type of support by program area. PEPFAR is directly assisting with the implementation of testing, but is only providing financial support for PMTCT_STAT. Since PMTCT_STAT activities are still being conducted, but without direct PEPFAR assistance, this data is collected under the CS data type.

Technical Assistance results vs. Central Support results

- Technical assistance data type should be used when PEPFAR is providing ONLY support to improve quality of services through site visits.
- Central support data type should be used when PEPFAR is ONLY providing financial support at an above-site level.

Questions on Central Support Reporting

Please reach out to GHSD_SI@state.gov for any questions or further clarification on your reporting Central Support Data for your OU.

APPENDIX H: MONITORING MORTALITY AMONG PLHIV

A robust civil registration system that provides high quality, directly measured HIV-related mortality data is the best way to monitor mortality. As recommended in the United Nations Statistics Division (UNSD), Principles and Recommendations for a Vital Statistics System, for every death, civil registration systems should collect information such as date and cause of death (COD), age, sex, and place of residence.

Any time activities to reach and reengage patients on treatment are conducted and it is concluded that an ART patient has died, the death should be reported into the formal civil registration system if it is established that this has not already been done. Where it has been done, in settings where death registration systems are active, it may be possible to link existing civil registration records of death and COD with ART patient records to ascertain those who have experienced an interruption in treatment (IIT).

PEPFAR teams should work collaboratively with their Ministries of Health in conjunction with civil registration authorities (often located within Ministries of Interior or Home Affairs) to enhance civil registration and vital statistics systems and to establish consistent procedures for collecting and linking mortality data (i.e., to ensure the same data elements are collected for matching purposes). WHO guidance is available to help countries establish or strengthen civil registration systems. CDC has a team dedicated to strengthening CRVS systems internationally, within the National Center for Health Statistics (NCHS), which is available to provide technical assistance.

Deaths among ART patients that occur in the health facility: Deaths occurring within the health facility should be immediately recorded in the ART register and/other relevant tracking register, which may or may not already include cause of death. The Medical Certificate of Death and Cause of Death (MCCD) should be filled to ascertain COD and is also a data source for obtaining mortality-related data for patients who died in the facility. If filled according to WHO/ICD guidelines, and coded correctly, the underlying cause of death (UCOD) will be identified. When filled correctly, the MCCD will also include a sequence of events leading to the immediate cause of death. It will also list conditions that are not in the causal chain but are related to the cause of death. If these are entered electronically (through the WHO DHIS mortality module or alternative electronic system), these fields (Part I, a-d, and Part II) can all be coded and/or searched.

MCCD forms are typically embedded in national death reporting forms, which include demographic information and other country-specific requirements for registration. Completed death reporting forms should be sent to the national registration authorities for legal registration. Even without COD, recording and reporting all deaths among patients living with HIV, and the general population, as well as knowing mortality rates, etc., is valuable.

Deaths among ART patients that occur outside the health facility: Deaths that occur outside the facility should be confirmed by unambiguous report of family or close acquaintance (i.e., it should not be presumed). COD in community settings is commonly ascertained through verbal autopsy. Verbal autopsy is a method of gathering health-information about a patient that has died in order to determine their probable COD; it typically includes an interview with a caregiver to elicit known diagnoses, signs, and symptoms experienced by the deceased as well as an open narrative describing the circumstances of the death. Where a system for verbal autopsy is in place, PEPFAR teams should coordinate with local authorities to identify the best COD information available (e.g., reported conditions, open narrative, probable COD assigned). Where such a system is not in place, verbal autopsy could be introduced or, for purposes of this indicator, unvalidated family reporting can be accepted to determine cause of death. For more information on verbal autopsy, see the WHO verbal autopsy standards.

Caveats: It is widely acknowledged that even where reporting is required, mortality data, especially cause of death, are often underreported or inaccurate. Where high quality MCCD is available, PEPFAR teams can expect to find UCOD according to the standard definitions provided. However, where systems are weak, teams may need to use whatever COD information is available for reference to best describe conditions co-existing at the time of death. For verbal autopsy, it should also be noted that since verbal autopsy results are generally considered valid only at the population level, teams are likely to be able to elicit information about conditions coexisting at the time of death rather than a specific UCOD. For reference, the National Center for Health Statistics at CDC compiled a status table below, that describes the completeness of mortality and COD reporting in several PEPFAR countries.

Country	National death registration coverage rate, based on country	Source of National death registration coverage rate	National death registration with COD coverage rate (From either from MCCD or VA)	Source of National death registration with COD coverage rate	National death registration coverage rates, based on official UNSD Data	Year(s) for Official UNSD Data	Latest year that death registration data was submitted to UNSD from 2019 Population and Vital Statistics Report
Angola	-	-	-	-	-	-	-
Botswana	76.3%	http://www.statsbots.org.bw/sites/default/files/publications/Vital%20Statistics%20%202015.pdf	-	-	75%	2014	2014
Burundi	-	-	-	-	-	-	-
Cameroon	-	-	-	-	-	-	-
Cote d'Ivoire	-	-	-	-	-	-	-
DRC	-	-	-	-	-	-	-
Eswatini	55%	Unofficial	40%		less than 75%	2010-2015	-
Ethiopia	-	-	-	-	-	-	-
Ghana	19% (2013)	http://www.statsghana.gov.gh/docfiles/publications/CRVS%20Assessment%20Report%20Final_%2018.04.17.pdf	Limited	http://www.statsghana.gov.gh/docfiles/publications/CRVS%20Assessment%20Report%20Final_%2018.04.17.pdf	25%	2014	2013
Kenya	41%	Report: Mortality Trends in Kenya 2012-2016: Cause of death, trends, and data quality (March 2018)	33.1% (with MCCD)	Report: Mortality Trends in Kenya 2012-2016: Cause of death, trends, and data quality (March 2018)	45.6%	2014	2016
Lesotho	-	-	-	-	less than 75%	2010-2015	2012
Malawi	<10%	Unofficial	<10%	Unofficial	less than 50%	2008	-
Mozambique	-	-	-	-	-	-	-
Namibia	88.5%	http://pubdocs.worldbank.org/en/184451466711154296/1617304-Namibia-ID4D-Web.pdf	-	-	70%	2008	
Nigeria	12.5%	Unofficial	-	-	-	-	-
Rwanda	30% (2014/2015)	NISR (2015), referenced in 2016 report: https://www.unicef.org/rwanda/RWA_resources_crvscafinal.pdf	"practically no reliable CoD recorded"	https://www.unicef.org/rwanda/RWA_resources_crvscafinal.pdf	less than 75%	2010-2015	2012
South Africa	96% (2011-2016)	http://www.statssa.gov.za/publications/P03093/P03093232016.pdf	92% (2015)	http://www.who.int/gho/mortality_burden_disease/registered_deaths/en/	75-89%	2008	2014
Tanzania	~16% (2017)	Unofficial	8% (VS)	2018 article: http://www.vitalstrategies.org/vital-stories/tanzania-cause-92-deaths-unknown-solution-better-data/	less than 75%	2010-2015	-
Uganda	<1% (2014)	https://www.globalfinancingfacility.org/sites/gff_new/files/documents/Uganda-Investment-Case.pdf	-	-	-	-	-
Zambia	20% (2016)	Country Presentation made in 2018, by DNRPC (Department of National Registration, Passport and Citizenship)	20%	All registered deaths require a COD, rate assumed	-	-	-
Zimbabwe	-	-			-	-	-

For additional information on the quality of mortality and cause of death data, please see the resources below.

- WHO Analyzing mortality levels and causes-of-death https://www.who.int/standards/classifications/classification-of-diseases/services/analysing-mortality-levels-and-causes-of-death
- CRVS Knowledge Gateway Learning Centre: Modules 4 & 5 https://crvssystems.ca/crvs-elearning-course

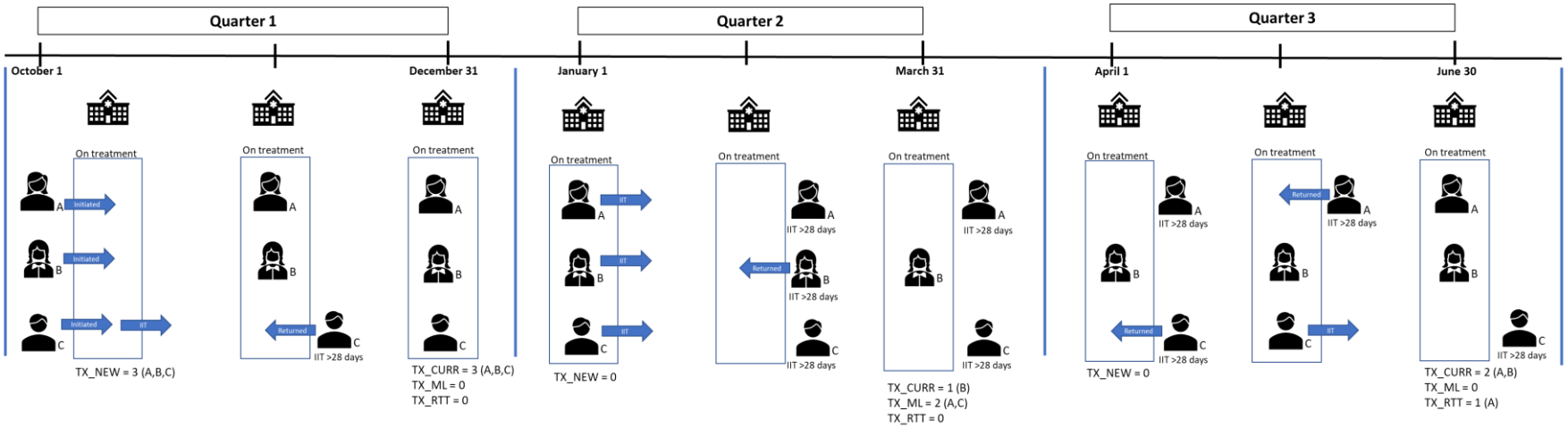
APPENDIX I: PROPOSED HIV-SPECIFIC SHORT CAUSE OF DEATH LIST

Proposed HIV-specific short Cause of Death list, with ICD-10 codes mapped accordingly for reference

1. **HIV disease resulting in TB**
    a. B20.0 HIV disease resulting in mycobacterial infection – HIV disease resulting in tuberculosis
2. **HIV disease resulting in cancer**
    a. B21.0 HIV disease resulting in Kaposi's sarcoma
    b. B21.1 HIV disease resulting in Burkitt's lymphoma
    c. B21.2 HIV disease resulting in other types of non-Hodgkin lymphoma
    d. B21.3 HIV disease resulting in other malignant neoplasms of lymphoid, haematopoietic and related tissue
    e. B21.7 HIV disease resulting in multiple malignant neoplasms
    f. B21.8 HIV disease resulting in other malignant neoplasms
    g. B21.9 HIV disease resulting in unspecified malignant neoplasms
3. **HIV disease resulting in other infectious and parasitic diseases**
    a. B20.1 HIV disease resulting in other bacterial infections
    b. B20.2 HIV disease resulting in cytomegaloviral disease
    c. B20.3 HIV disease resulting in other viral infections
    d. B20.4 HIV disease resulting in candidiasis
    e. B20.5 HIV disease resulting in other mycoses
    f. B20.6 HIV disease resulting in Pneumocystis jirovecii pneumonia – HIV disease resulting in Pneumocystis carinii pneumonia
    g. B20.7 HIV disease resulting in multiple infections
    h. B20.8 HIV disease resulting in other infectious and parasitic diseases
    i. B20.9 HIV disease resulting in unspecified infectious or parasitic disease – HIV disease resulting in infection
4. **Other HIV disease, resulting in other diseases or conditions leading to death**
    a. B22 HIV disease resulting in other specified diseases (including: encephalopathy, lymphoid interstitial pneumonitis, wasting syndrome, and others)
    b. B23 HIV disease resulting in other conditions (including: acute HIV infection syndrome, (persistent) generalized lymphadenopathy, haematological and immunological abnormalities, and others)
    c. B24 Unspecified HIV disease
5. **Other natural causes**
    a. Any patient who died from natural causes (including certain cancers and infections, etc.) that were not directly related to HIV disease
6. **Non-natural causes**
    a. Any patient who died from non-natural causes (e.g., trauma, accident, suicide, war, etc.)
7. **Unknown cause**
    a. Patients in whom cause of death was truly not known

APPENDIX J: VISUAL REPRESENTATION OF TX_CURR, TX_ML, TX_NEW, AND TX_RTT

The following visual represents hypothetical scenarios of patients A, B, and C moving in and out of treatment over the course of 3 quarters. Refer to the indicator reference sheets for TX_CURR, TX_ML, TX_NEW, and TX_RTT for the full definition of each indicator and additional guidance. When considering scenarios like the ones below, programs should continuously review data to note patterns of patient initiation and interruption in treatment and adjust programs to meet the needs of newly initiating clients.



Quarter 1: Patient C was newly initiated on treatment. During the reporting period, Patient C did not attend an appointment and had no clinical contact for 28 days after that appointment. Patient C was then contacted and came in for an appointment. At the end of the reporting period, Patient C is on treatment.

- Patient C is counted in TX_CURR because they were on treatment at the end of the reporting period.
- Patient C is not counted in TX_ML because they restarted treatment after >28 days of being off treatment and are on treatment at the end of the reporting period.
- Patient C is not counted in TX_RTT because patients are excluded from TX_RTT in the quarter on which they initiated treatment. A patient cannot be included in TX_NEW and TX_RTT in the same reporting period.

Quarter 2: Patients A, B, and C started the reporting period on treatment, but all did not attend an appointment and had no clinical contact for 28 days afterwards. Patient B was successfully contacted and came in for an appointment. At the end of the quarter, Patient B is on treatment.

- Patient B is counted in TX_CURR because they are on treatment at the end of the reporting period.
- Patient B is not counted in TX_ML because they are on treatment by the end of the reporting period.
- Patient B is not counted in TX_RTT because they were on treatment at the end of the **previous** reporting period.
- Patients A and C are counted in TX_ML because they started the reporting period on treatment but experienced an interruption in treatment and were not on treatment at the end of the reporting period. Patients A and C are eligible to be counted in TX_RTT in the **next** reporting period if they 1) are successfully re-engaged during the **next** reporting period and 2) are on treatment at the end of the **next** reporting period.

Quarter 3: Patients A and C started the reporting period not on treatment. Patient A was successfully contacted and came in for an appointment. Patient C was contacted and came in for an appointment but experienced an interruption in treatment again during the reporting period. By the end of the reporting period, Patients A and B are on treatment.

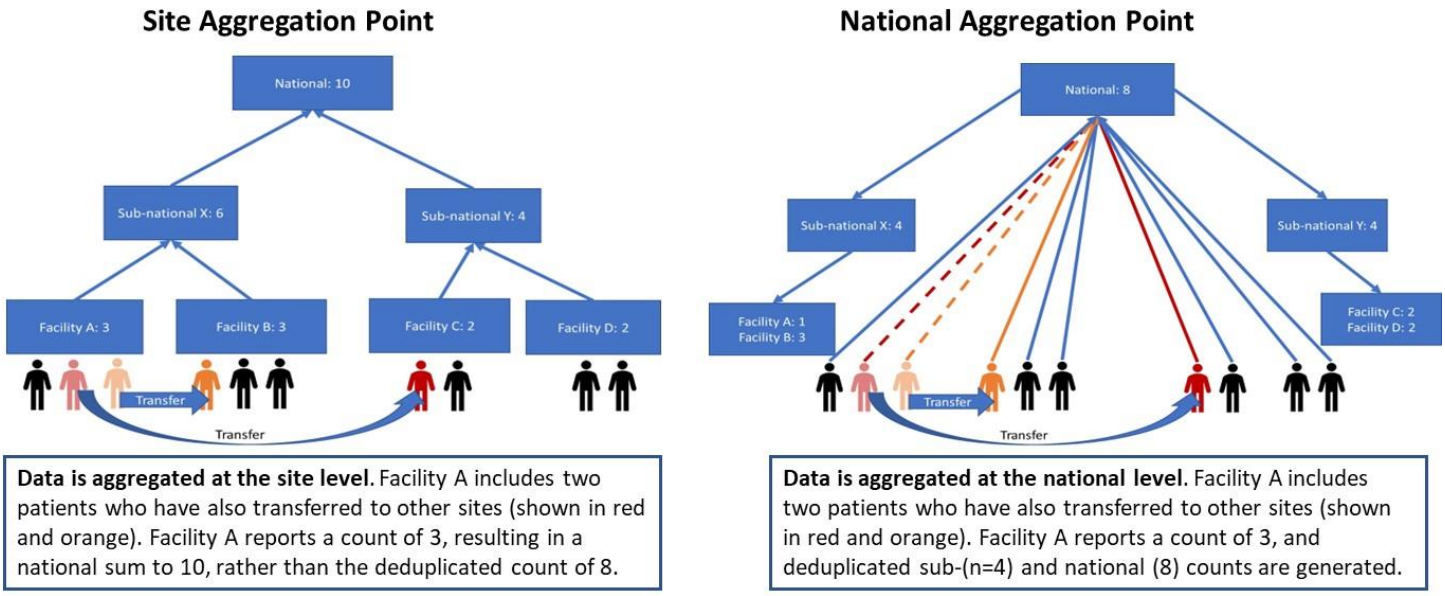
- Patients A and B are counted in TX_CURR because they are on treatment at the end of the reporting period.
- Patient A is counted in TX_RTT because they were not on treatment at the end of the **previous** reporting period, were returned to treatment during the reporting period, and were on treatment at the end of the reporting period.
- Patient C is not counted in TX_ML in this reporting period because Patient C did not start the reporting period on treatment. Patient C is not counted in TX_RTT because Patient C did not remain on treatment until the end of the reporting period.

APPENDIX K: POINTS OF DATA AGGREGATION FOR GREATER REPORTING ACCURACY

Focusing on individual level data at large scale can enable programs to understand the particular challenges and gaps faced by individuals that may not be easily addressed at the single facility level. Examples include mobile populations, people who experience repeated interruptions in treatment, and groups that may face stigma and discrimination. Closing these gaps and challenges will be critical to closing the last mile to end HIV/AIDS as a public health threat. This appendix illustrates the value and goal of moving towards national level aggregation point health information systems. As PEPFAR moves towards a sustainable ongoing response to ending HIV/AIDS as a public health threat and maintaining public health control of HIV/AIDS it is important to move towards national aggregation point health information systems that can fully serve the needs of clients.

National HIV health information systems can be broadly categorized by the point at which individual level data are aggregated. Whether paper or electronic, individual level data are always collected at the site in the patient record or register. Figure 1 depicts increasing accuracy in the indicator calculations moving from aggregation at the site to aggregation from national individual level data de-duplicated across sites.

Figure 1: Point at Which Individual Level Data Are Turned Into Aggregate Data



Data is aggregated at the site level. Facility A includes two patients who have also transferred to other sites (shown in red and orange). Facility A reports a count of 3, resulting in a national sum to 10, rather than the deduplicated count of 8.

Data is aggregated at the national level. Facility A includes two patients who have also transferred to other sites (shown in red and orange). Facility A reports a count of 3, and deduplicated sub-(n=4) and national (8) counts are generated.

The table below highlights key factors related to where indicator data are generated (i.e., point data are aggregated to calculate indicators).

Table 1: Key Implications of Point at Which Data Aggregation is Generated

	Site	**National**
Deduplication	Person level deduplication only happens at the site.	Person level deduplication occurs across all sites and data sources consolidated within the country.
Implications	Accounts for patients served by more than one implementing mechanism at one site, allowing for accurate site level attribution as well as attribution to the implementing partners at that site.	Accounts for patient movement across sites and sub national units throughout the country, allowing for accurate national level attribution as well as attribution to site, IP, and sub national unit.
Calculating Indicators	Indicators are calculated at the site level – where sub national and national values are estimated by summing site level indicators.	All indicators at all levels are calculated from the national data repository (NDR).

Data Quality Review	Conducted at site to recreate reported values and to review sample records for completeness – both content and inclusion.	Ongoing batch review across all sites for data element completeness and internal content consistency, with follow up to sites for resolution; monitoring for data integrity and volume changes; periodic check at sites for persons not captured electronically.
Reporting to HQ	Manual entry or electronic import and combined other indicator data, as well as other data streams.	Electronic import of site level, sub national level, and national level values and combined with other indicator data.

PEPFAR

U.S. President's Emergency Plan for AIDS Relief