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Monitoring, Evaluation, and Reporting (MER) Guidance (v.2.7): Prevention of Mother-to-Child Transmission (PMTCT)

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Training Outline

Section 1: Overview of the Technical Area

Section 2: Indicator Changes in MER 2.7

Section 3: Overview of Indicators

Section 4: Data Use

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Section 1: Overview of PMTCT

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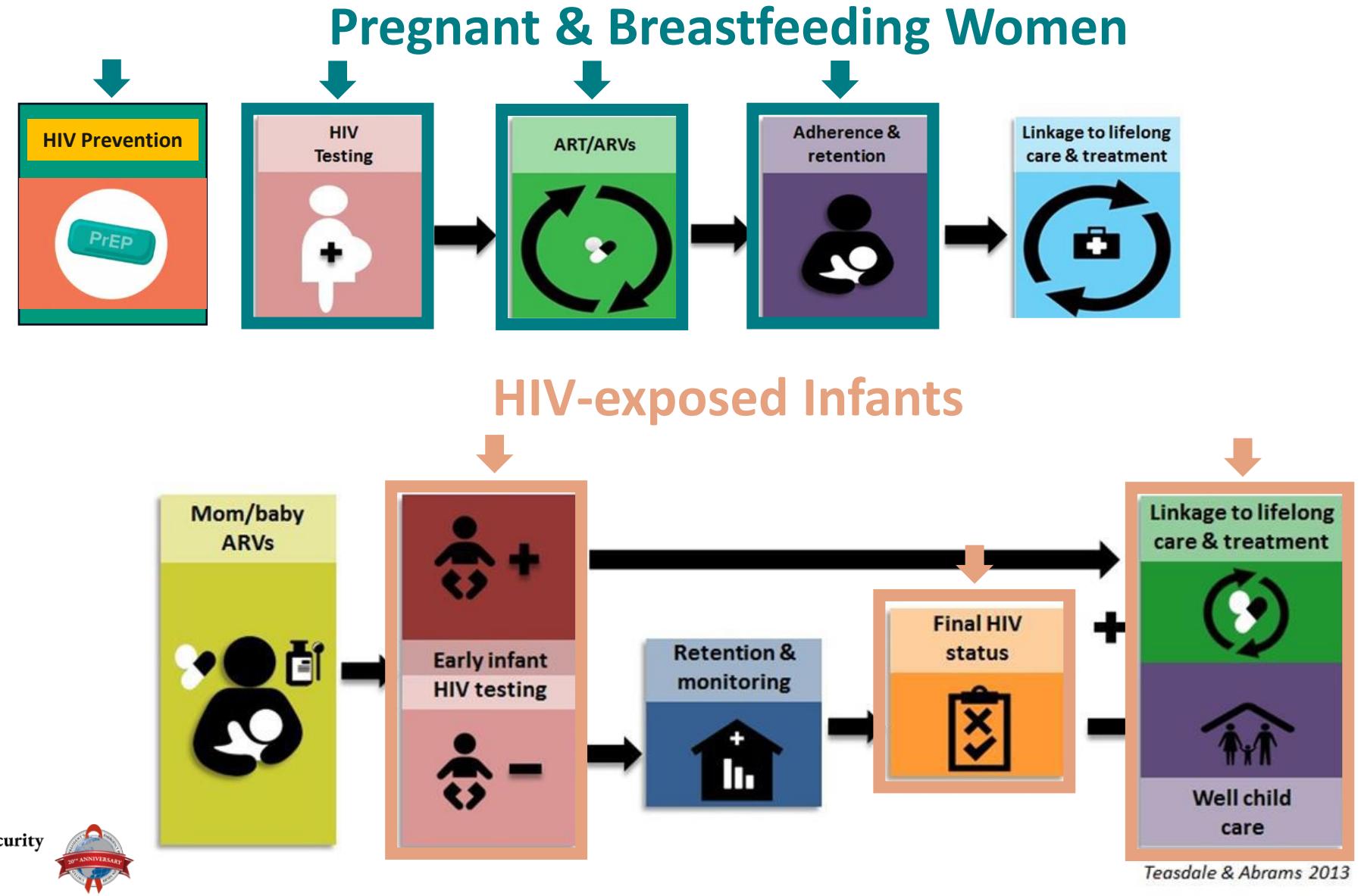
PMTCT Program Goals

To keep mothers healthy and alive on ART and eliminate HIV transmission from the HIV+ mother to her infant

We accomplish this by:

- Identifying all HIV+ pregnant and breastfeeding women (PBFW)
- Retaining them in care on ART through completion of BF
- Monitoring the viral load of women to reach suppression
- Early identification and linkage of HIV infected infants to treatment

Aligning MER Indicators to the PMTCT Cascade



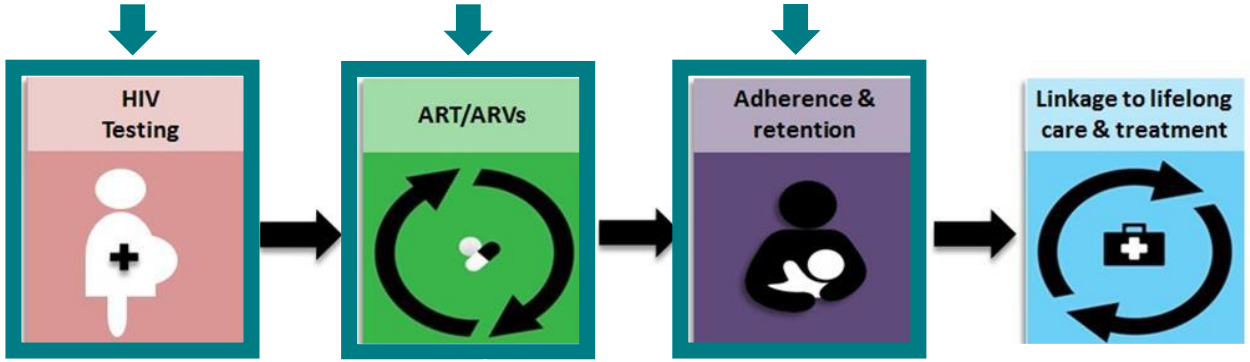
Aligning MER Indicators to the PMTCT Cascade

Pregnant & Breastfeeding Women

MER Prevention Indicator	Disaggregates Associated with Pregnant & Breastfeeding Women
PrEP_NEW	Number of individuals who have been newly enrolled on pre-exposure prophylaxis (PrEP) to prevent HIV infection in the reporting period - Pregnant Disagg - Breastfeeding Disagg
PrEP_CT	Number of individuals, excluding those newly enrolled, that return for a follow-up visit or re-initiation visit to receive PrEP to prevent HIV during the reporting period - Pregnant Disagg - Breastfeeding Disagg

Aligning MER Indicators to the PMTCT Cascade

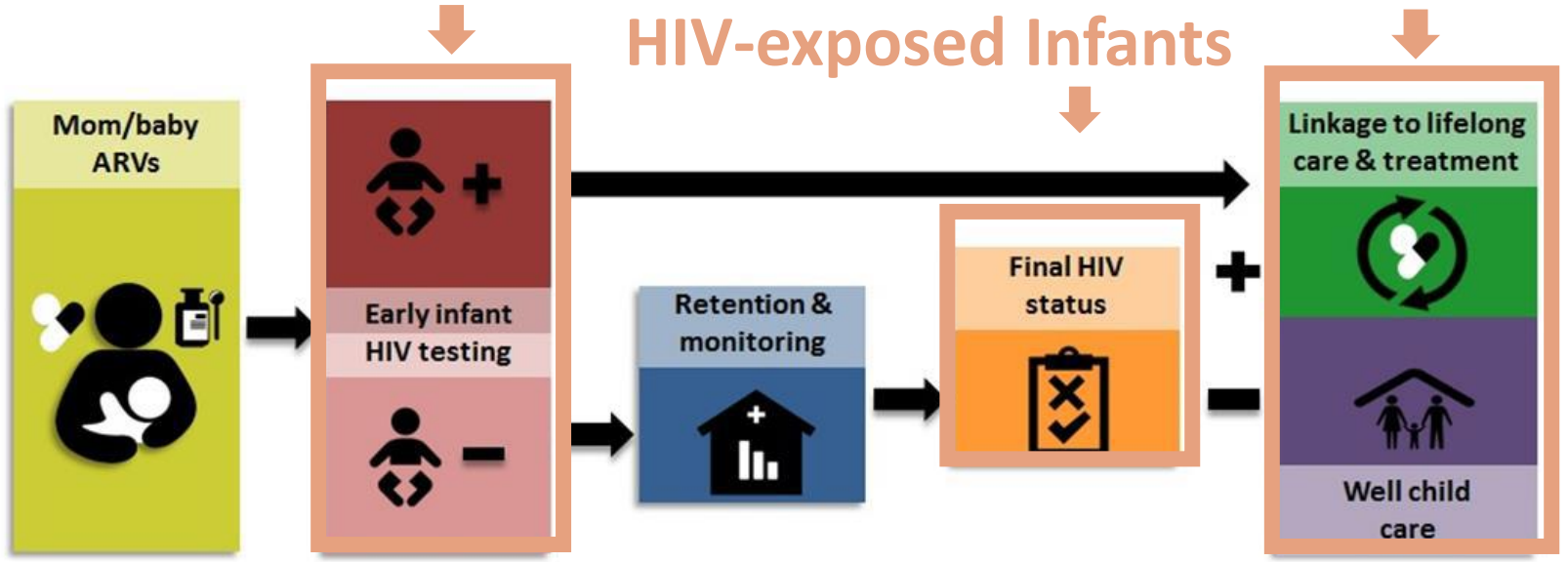
Pregnant & Breastfeeding Women



Maternal Cascade	MER Indicator
Pregnant women who attend ANC1	PMTCT_STAT_D
Pregnant women with known HIV status at ANC1	PMTCT_STAT_N
HIV+ pregnant women at ANC1	PMTCT_STAT_POS
HIV+ pregnant women after ANC1	HTS_TST_POS (Post ANC1: Pregnancy/L&D)
HIV + breastfeeding women after ANC1	HTS_TST_POS (Post ANC1: Breastfeeding)
HIV+ pregnant women receiving ART	PMTCT_ART_N
Breastfeeding women new on treatment	TX_NEW (breastfeeding disagg)
HIV+ pregnant women virally suppressed	TX_PVLS pregnancy disagg
HIV+ breastfeeding women virally suppressed	TX_PVLS breastfeeding disagg

Aligning MER Indicators to the PMTCT Cascade

HIV Exposed Infant Cascade	MER Indicator
HIV exposed infants (Proxy: HIV+ Pregnant & BF women)	PMTCT_STAT_POS + PMTCT_STAT_POS + HTS_TST_POS from the [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities
HIV exposed infants who had samples collected for a virologic HIV test by 12 months of age	PMTCT_EID
HIV-exposed infants with a virologic HIV test result returned in the reporting period, whose diagnostic sample was collected by 12 months of age	PMTCT_HEI
HIV infected infants new on ART	PMTCT_HEI_POS_ART
HIV exposed infants with known HIV status (positive and negative), unknown status, and died without status	PMTCT_FO



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Summary of Indicators

Program Area Group	Indicator	Indicator Description	Reporting Frequency	Reporting Level
Testing	PMTCT_STAT	Percentage of pregnant women with known HIV status at antenatal care	Quarterly	Facility
	PMTCT_EID	Percentage of infants born to women living with HIV who had sample collected for a virologic HIV test by 12 months of age	Quarterly	
	PMTCT_HEI	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_FO	Percentage of final outcomes among HIV exposed infants registered in a birth cohort	Annual	
Treatment	PMTCT_ART	Percentage of pregnant women living with HIV who received ART to reduce the risk of mother-to-child-transmission (MTCT) during pregnancy	Quarterly	

Section 2: Indicator Changes in MER 2.7

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Indicator Changes in MER 2.7

Change	Programmatic Rationale
PMTCT_EID will disaggregate by first virologic HIV test and second/subsequent tests.	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.
PMTCT_HEI (formerly PMTCT_HEI_POS) now documents infants with a virological HIV test results returned and is disaggregated by positive and negative test results.	Improves tracking of results returned to the facility and prompt actions if there is a mismatch between sample collection (PMTCT_EID) and results returned (PMTCT_HEI).
Additional Changes to Note	**Programmatic Rationale**
Post ANC1 (Pregnant/L&D/BF) will become two separate modalities – Post ANC1 (Pregnant/L&D) and Post ANC1 (Breastfeeding)	Improves tracking of when pregnant women are getting tested/retested and will be used to improve programming around vertical transmission trends.
PrEP_NEW will include an optional disaggregate for Pregnant and Breastfeeding Women	This has been updated to match PrEP_CT and allows for better monitoring of PrEP uptake trends among priority populations such as PBFW.

Section 3: Overview of Indicators

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PMTCT_STAT

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Indicator Definition: PMTCT_STAT

Indicator Definition: 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)

Denominator: Number of new ANC clients in reporting period

Numerator Description:

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

Numerator Disaggregates: PMTCT_STAT

Disaggregate Groups	Disaggregates
Status and Age [Required]	• Known Positives: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age • Newly Tested Positives: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age • New Negatives: <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age • Recent Negatives at Entry: <10, 10-14, 15-19, 20-24, 25- 29, 30-34, 35-39, 40-44, 45-49, 50+, Unknown Age

Denominator Disaggregates: PMTCT_STAT

Disaggregate Groups	Disaggregates
Age [Required]	• <10, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45- 49, 50+, Unknown Age

Definitions of Disaggregates: [PMTCT_STAT]

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 positive prior 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 pregnancy and 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 are tested 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 three months of attending ANC1 may not be recommended for testing per country clinical guidelines. This is expected to be a less utilized disaggregate.

How to Use: PMTCT_STAT

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: PMTCT_STAT

- **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.
- **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.
- **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

How to Review for Data Quality: PMTCT_STAT should never be above 100% at a site, and therefore review of the method of data collection and correction of any errors at sites with greater than 100% coverage is important to ensuring data quality for this indicator. Retesting of HIV-negative women during pregnancy, at L&D, and through the postpartum period is an important program strategy and is collected under the respective HTS modalities: Post ANC1: Pregnancy/L&D and Post ANC1: Breastfeeding.

How to Calculate Annual Total: Assuming site level records avoid double counting across the annual reporting cycle, sum numerator and denominator across all reporting periods for the annual result.

Guiding Narrative Questions: PMTCT_STAT

1. Provide context for poor performance in PMTCT_STAT coverage (Numerator/Denominator = STAT coverage) by geographic area, age, or partner/implementing mechanism, including any planned activities/remedial actions.

2. For areas where age disaggregates are NOT completely reported, describe challenges for collecting and/or plan and timeline for collection.

PMTCT_EID

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Indicator Definition: PMTCT_EID

Indicator Definition: Percentage of infants born to women living with HIV who had 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

Denominator: PMTCT_STAT_POS + HTS_TST_POS from the [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities *(see PMTCT_STAT & HTS_TST reference sheets)*

Numerator Description:
The numerator is a measure of sample collection for virologic testing. Age refers to age at collection.

Denominator Description:
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 HTS_TST_POS: [PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities (see HTS_TST reference sheet for more details)

Numerator Disaggregates: PMTCT_EID

Disaggregate Groups	Disaggregates

Infant Test by Age at Sample Collection [Required]	• 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

Denominator Disaggregates: PMTCT_EID

Disaggregate Groups	Disaggregates
N/A	See PMTCT_STAT and HTS_TST: ANC1 + PostANC1 (Pregnancy/L&D) + Post ANC1 (Breastfeeding) PMTCT_STAT_POS + HTS_TST_POS from the [PostANC1: Pregnancy/L&D] + [Post ANC1: Breastfeeding] modalities

Definitions of Disaggregates: PMTCT_EID

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.

How to Use: PMTCT_EID

- **This indicator measures the extent to which infants exposed to HIV 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.**

How to Collect: PMTCT_EID

- 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.
- This indicator should be collected from the clinical source to ensure unduplicated patient counting.
- **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 "subsequent test," respectively, under the ≤2 month disaggregate. By the first year of life, infants who receive birth testing may thus have one sample reported under first test (0-2 months) and two samples reported under subsequent testing (0-2 months and 2-12 months).
- What should **not** be reported:
  - Serologic testing of children >18 months of age or those who have completed breastfeeding.
  - Virologic tests conducted with the purpose of confirming the diagnosis of HIV
  - Virologic tests used for clinical monitoring of children on ART, such as viral load quantification.
  - Subsequent or repeat samples collected from the same infant due to a quality issue, indeterminate result, or confirmation of a positive test

How to Review for Data Quality: PMTCT_EID

How to Review for Data Quality:

- PMTCT_EID total numerator should NOT exceed the PMTCT_EID denominator unless there are issues with deduplication of infants.
- 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 subsequent test, 0 - ≤2 month disaggregate.
  - 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 test.
- Caution should be used when using the proxy calculation Infant testing coverage = (PMTCT_EID / PMTCT_STAT_POS + HTS_TST_POS from the[PostANC1: Pregnancy/L&D] + [PostANC1: BF] modalities) as it depends on the assumption that the total number of pregnant and breastfeeding women living with HIV (denominator), and therefore HEI, does not significantly vary quarter by quarter

How to Calculate Annual Total: Sum total numerator results across quarters reflecting first sample collected for a virologic HIV test (0-12 months)

Guiding Narrative Questions: PMTCT_EID

1. Provide context for low EID testing coverage by geographic area or partner/implementing mechanism, including any planned activities/remedial actions. For example, PMTCT_EID is lower than previous quarters due to a stock out of DBS reagent.

2. Provide context for ability of programs to collect virologic samples for infants at different time points in the first year of life (e.g. birth, 4-6 weeks, and 9 months).

PMTCT_HEI

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Indicator Definition: PMTCT_HEI

Indicator Definition: 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

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Denominator: N/A

Numerator Description:
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

Numerator Disaggregates: PMTCT_HEI

Disaggregate Groups	Disaggregates
Infant age at virologic sample collection and result returned [Required]	• Negative, 0 to ≤2 months • Negative, 2 to 12 months • Positive, 0 to ≤2 months • Positive, 2 to 12 months
Result returned, Positive, confirmed initiated ART by age at virologic sample collection [Required]	• Positive, confirmed initiated ART, 0-≤2 months of age • Positive, confirmed initiated ART, 2-12 months

Definitions of Disaggregates: PMTCT_HEI

Infant age at virologic sample collected and results returned: For the numerator to be calculated, implementing partners are required to report: (These values will auto-sum to the numerator)

- Negative: 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)
  - 2-12 months of age (61-365 days)
- Positive: HIV-infected infants identified in a quarter, disaggregated by the age at time of sample collection
  - 0-≤2 months of age (0-60 days)
  - 2-12 months of age (61-365 days).

Result returned, Positive, confirmed initiated ART by age at virologic sample collection: Implementing partners are required to report:

- Positive, confirmed ART initiation, infant was between 0-≤2 months of age (0-60 days) at time of virologic sample collection
- 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.

How to Use: PMTCT_HEI

This indicator measures how many 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.

- 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 subsequent testing, and they should be counted in this indicator as long as they were aged 0 - 12 months at the time of 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.

How to Use PMTCT_HEI to Understand Infant Positivity & Linkage to ART

Infant positivity: PMTCT_HEI_POS/ (PMTCT_HEI_POS + PMTCT_HEI_NEG)

- Number of positive infant test results divided by the sum of positive and negative infant test results returned
- Infant positivity can be calculated for 0-≤2 months, 2-12 months, and 0-12 months age groups.
- Summing multiple quarters of data is recommended, as quarter-specific comparisons may provide a less accurate calculation.

Positive Infants and Linkage to ART: PMTCT_HEI will be used to track how many positive infants 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 HIV-infected infants (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 positive infants 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**.

How to Collect: PMTCT_HEI

- 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.
- 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.
- Confirmatory testing (collection of a second sample for repeat virologic testing after the first virologic test is positive) and indeterminate test results should not be included.
- Serologic testing or "rapid" testing cannot diagnose HIV infection in an infant and so infants with a positive serologic test result and no virologic test result should NOT be included.
- PMTCT_HEI positive disaggregates should include all HIV+ infants identified at the facility in the quarter, regardless of entry point; a PMTCT clinic may need to compile testing data from other entry points at the facility to report accurately/completely on this indicator.
- Some infants may have two results returned in the same quarter (e.g. first and subsequent test) - only the most recent result should be captured as long as 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 across reporting quarters
- An infant should only be included in the initiated ART disaggregate if 1) the infant initiated ART in the same quarter as the result was received at the facility and 2) has documentation of an ART regimen in their record.

How to Review for Data Quality: PMTCT_HEI

How to Review for Data Quality:

- 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: positive, initiated on 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.

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).

How to Calculate Annual Total: Sum results across quarters

Guiding Narrative Questions: PMTCT_HEI

1. Describe the data source used for reporting on this indicator, and any key information about data quality that is important for interpretation of quantitative results.

2. Linkage: (PMTCT_HEI_POS confirmed initiated ART (disaggregation) / PMTCT_HEI_POS disaggregate). Please describe rates of linkage of positive infants (including young infants, ages 0-≤2 months based on age of virologic sample collection) by subnational area. Please provide context for areas with low linkage rates, and describe activities aimed at improving infant ART initiation.

3. Please describe the proportion of positive and negative results returned in a quarter (including young infants 0-≤2 months) by subnational area. Please provide context for areas with low results returned rates, and detail activities to improve results return.

PMTCT_FO

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Indicator Definition: PMTCT_FO

Indicator Definition: 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

Denominator: Number of HIV-exposed infants who were born 24 months prior to the reporting period and registered in the birth cohort

Numerator Description:
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 old 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

Denominator Description:
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.

Numerator Disaggregates: PMTCT_FO

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

Definitions of Disaggregates: PMTCT_FO

For the numerator to be calculated, implementing partners are required to report the following for Outcome Type:

- **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.
- **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
  - Interruption in treatment: Number of HIV-exposed infants who did not attend the 18- month visit
  - Transferred out: Number of HIV-exposed infants who transferred out between 0 and 18 months without confirmation of HIV-infection
  - 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.

Every infant in a given cohort should be assigned one outcome only.

How to Use: PMTCT_FO

- In settings where national guidelines support breastfeeding of HIV-exposed infants, **antibody testing of all children exposed to HIV, 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 children exposed to HIV**. 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 of the 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 HIV-infected women to breastfeed less than or more than 18 months please describe in the narrative the final outcome time point.

How to Collect: PMTCT_FO

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. Not all infants are exactly 18 months at their 18 month appointment. This indicator is intending to capture data at the time the child goes to their 18 month visit but the child may in fact be 18-24 months of age. 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

Other Key reporting considerations:

- 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
- All infants should be assigned an outcome but only one outcome
- If breastfeeding lasts past 24 months, consider documenting “final status unknown”

How to Review for Data Quality: PMTCT_FO

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.

Guiding Narrative Questions: PMTCT_FO

1. Provide context for PMTCT_FO results (e.g., PMTCT_FO not equal to 100%, low or high rate of HIV-uninfected infants) and describe how this data being use for program management?

2. Provide context on:
   - The status of birth cohort monitoring in your operating unit, geographic area or partner/implementing mechanism, including any planned activities.
   - The data source used for reporting, and any key information about data quality that is important for interpretation of results (see MER reference sheet for examples).
   - The number and proportion of PEPFAR-supported PMTCT sites implementing cohort monitoring and able to (1) report on PMTCT_FO and (2) longitudinally track mothers to assess continuity of treatment/viral suppression

3. Provide context on trends for the proportion of infants with a unknown outcome (the sum of “unknown” plus “died” over time. Has this increased or decreased? What approaches are being implemented to reduce the proportion of infants with unknown (“unknown” + “died”) status?

PMTCT_ART

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Indicator Definition: PMTCT_ART

Indicator Definition: 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

Denominator: PMTCT_STAT_POS

Numerator Description:	**Denominator Description:**
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	Collected as part of PMTCT_STAT. Calculated indicator in DATIM, sum of: 1) New Positives, 2) Known Positive at entry

Numerator Disaggregates: PMTCT_ART

Disaggregate Groups	Disaggregates
Maternal Regimen Type and Age [Required]	• 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 Ag

Denominator Disaggregates: PMTCT_ART

Disaggregate Groups	Disaggregates
N/A	See PMTCT_STAT_POS

Definitions of Disaggregates: PMTCT_ART

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).

How to Use: PMTCT_ART

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: PMTCT_ART

- **Data source is the ANC or PMTCT register depending on country context.** There is a risk of double counting, as a pregnant woman receiving ART at ANC should have multiple visits for each pregnancy.
- **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 or an electronic medical record/patient tracking system. There is also a risk of undercounting if those women who are already on ART 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: PMTCT_ART

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).
- 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.

How to Calculate Annual Total: Sum results across quarters for both the numerator and denominator.

Guiding Narrative Questions: PMTCT_ART

1. Provide context for low PMTCT_ART coverage (PMTCT_ART / PMTCT_STAT_POS = ART coverage) by geographic area or partner/implementing mechanism, including any planned activities/remedial actions.

2. Describe activities related to ensuring continuity of treatment through the breastfeeding period. If additional data available in country, describe continuity of treatment rates or rates of interruption in treatment (IIT) among pregnant women continuing or starting ART as of ANC1.

3. Explain any differences in PMTCT_ART coverage among newly identified women living with HIV initiating ART compared to known positives already on ART.

Section 4: Data Use

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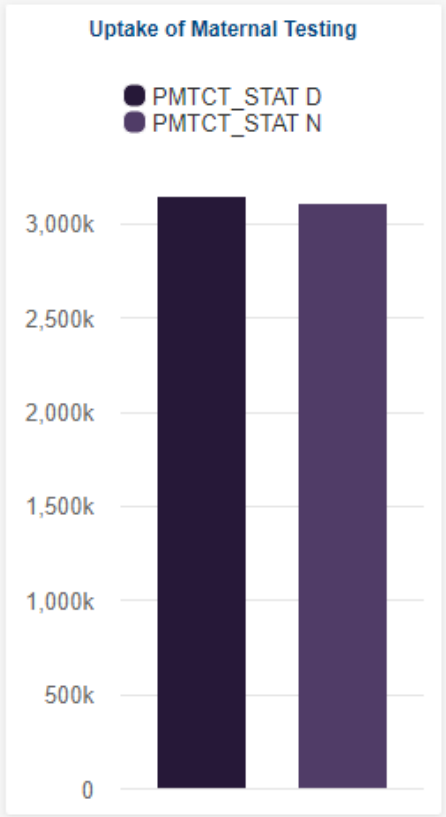
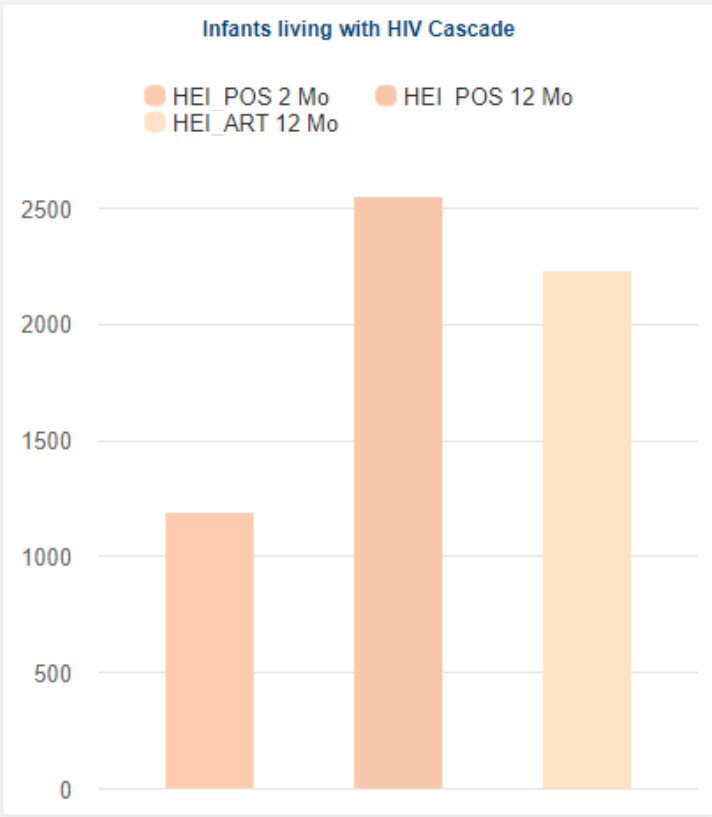
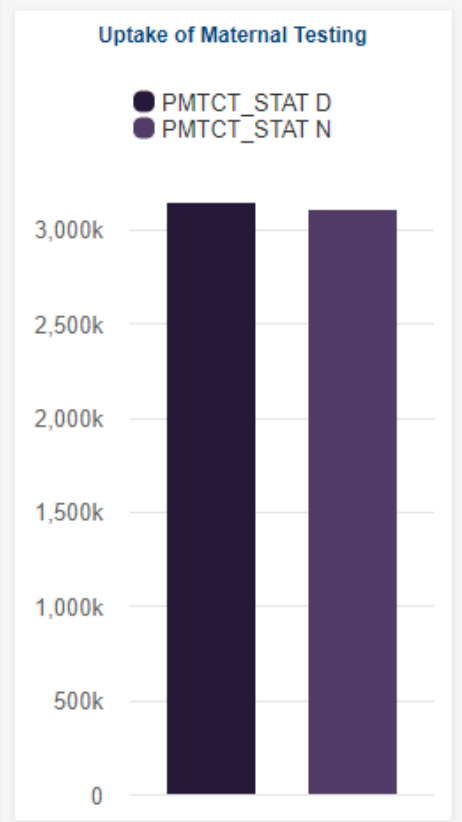
PMTCT Cascade

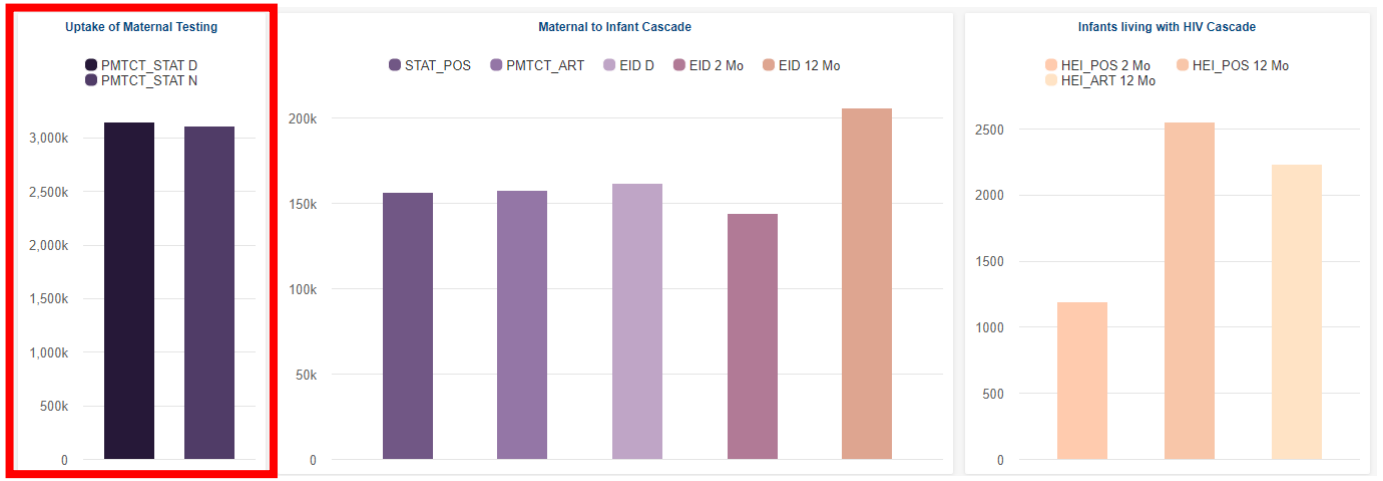




Source: pepfar-panorama.org; PMTCT Cascade Dashboard

PMTCT Cascade (cont.)





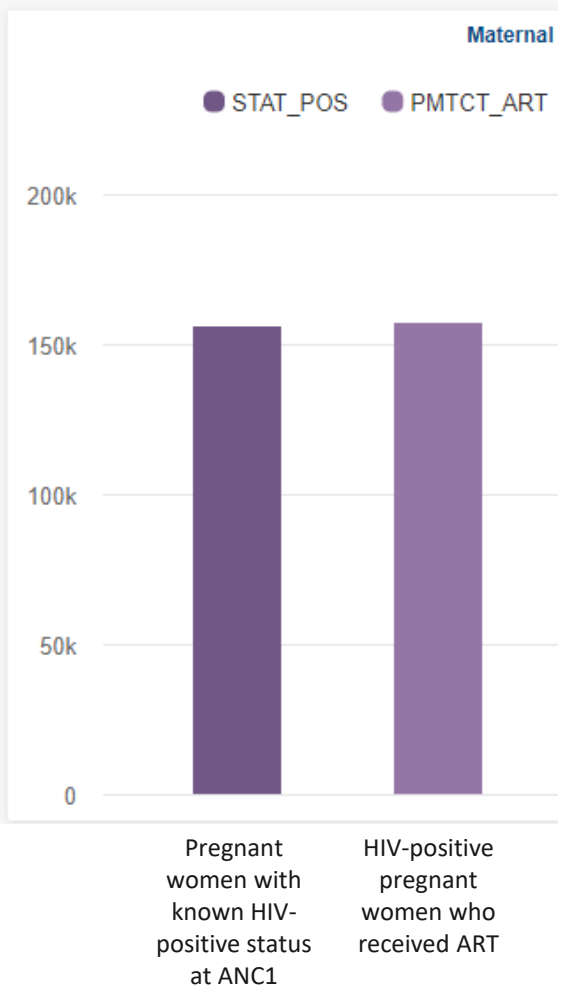
Analytic Question:
What percentage of pregnant women who attend ANC have a known HIV status?

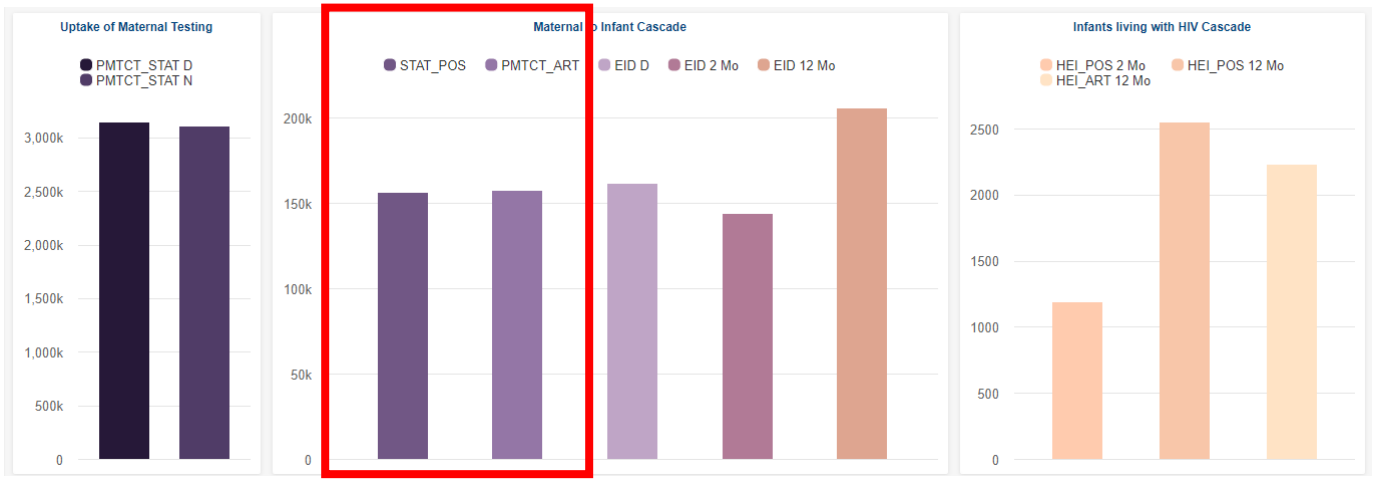
Answer: 3,120 known HIV status = 98%
3,200 attend ANC

Our program is doing well at the OU level! We can do the same analysis at the SNU and mechanism level to check for any gaps.

Source: pepfar-panorama.org; PMTCT Cascade Dashboard

PMTCT Cascade (cont.)





Analytic Question:
Are 95% of HIV-positive pregnant women receiving ART?

Answer: $\frac{\text{150,400 on ART}}{\text{150,900 HIV+}} = 99\%$

Our program is doing well at the OU level! We can do the same analysis at the SNU and mechanism level to check for any gaps.

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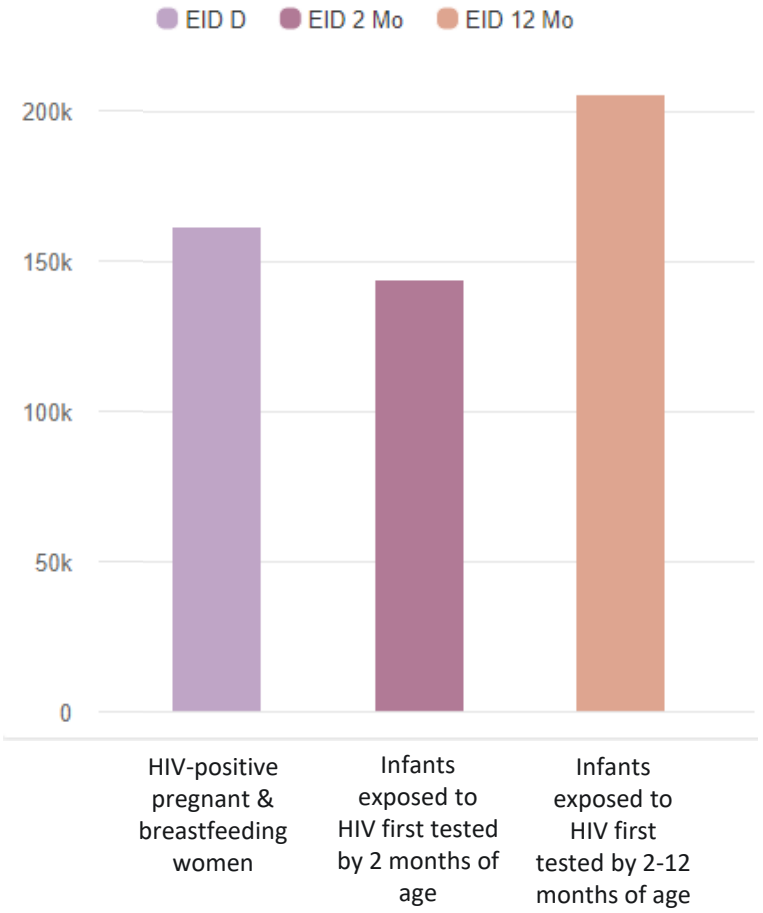
Source: pepfar-panorama.org; PMTCT Cascade Dashboard

PMTCT Cascade (cont.)



Analytic Question:
Are 90% of HIV-exposed infants are tested by 2 months of age? Number of HIV-positive pregnant women can be used as a proxy for number of HIV exposed infants.

Answer:

$$\frac{\text{140,000 first tested by 2 months}}{\text{165,000 HIV+ pregnant women}} = 85\%$$

We need to improve the testing of HIV exposed infants within 2 months.

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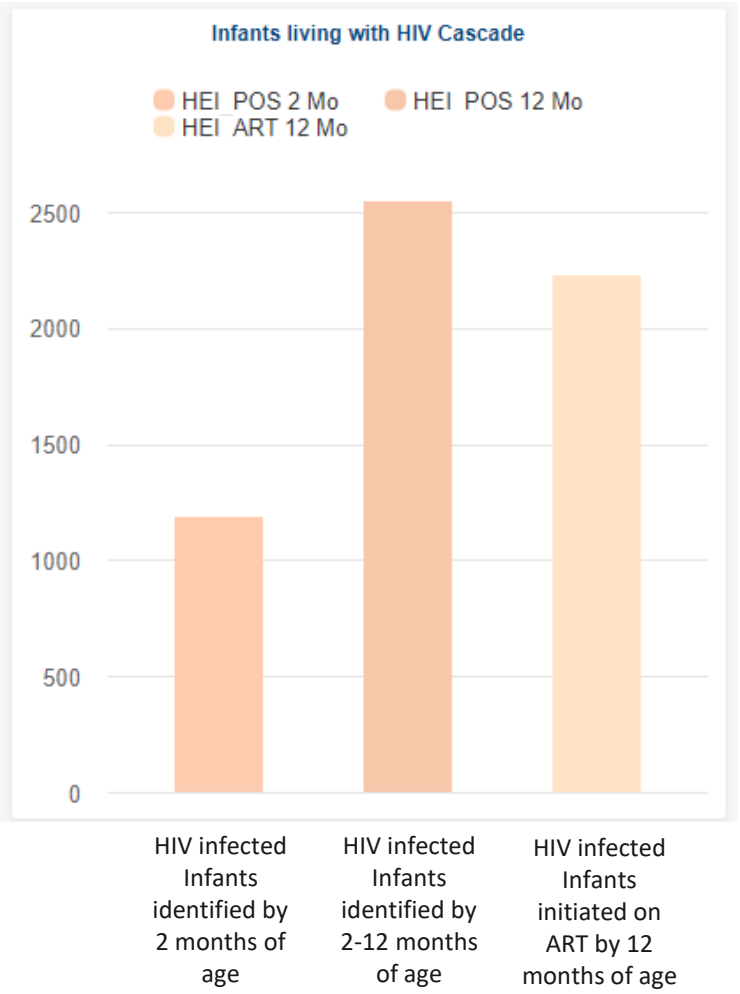
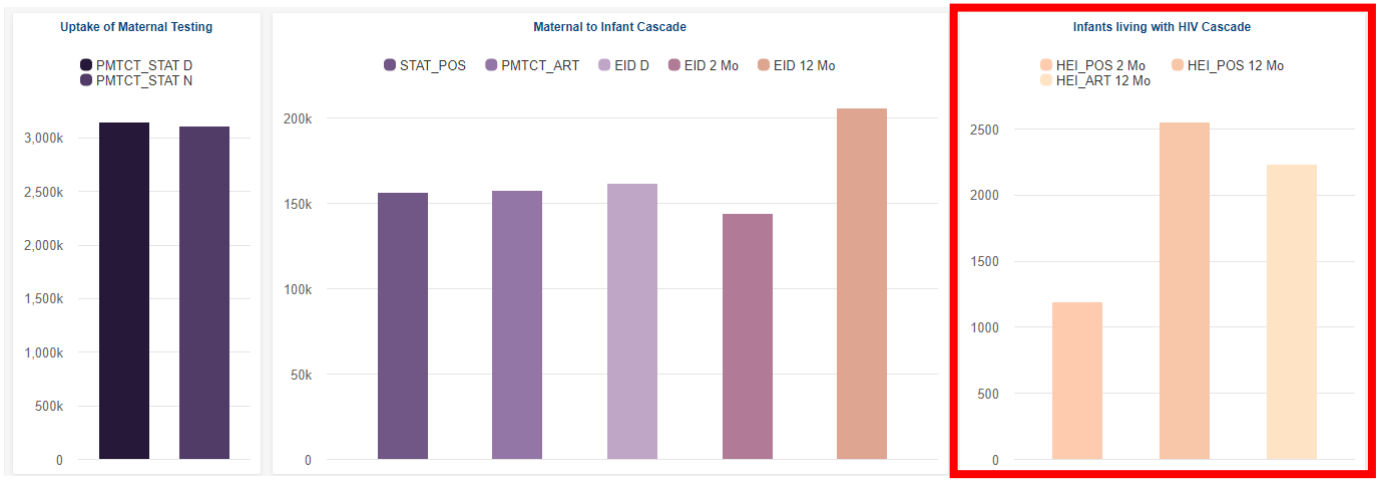
Source: pepfar-panorama.org; PMTCT Cascade Dashboard

PMTCT Cascade (cont.)





Analytic Question:
Are 90-100% of HIV-infected infants linked to ART?

Answer: $\frac{\text{2200 infected infants new on ART by 12 mos}}{\text{2550 infected infants identified by 12 mos}} = 86\%$

We need to work on improving the linkage of HIV infected infants to treatment.

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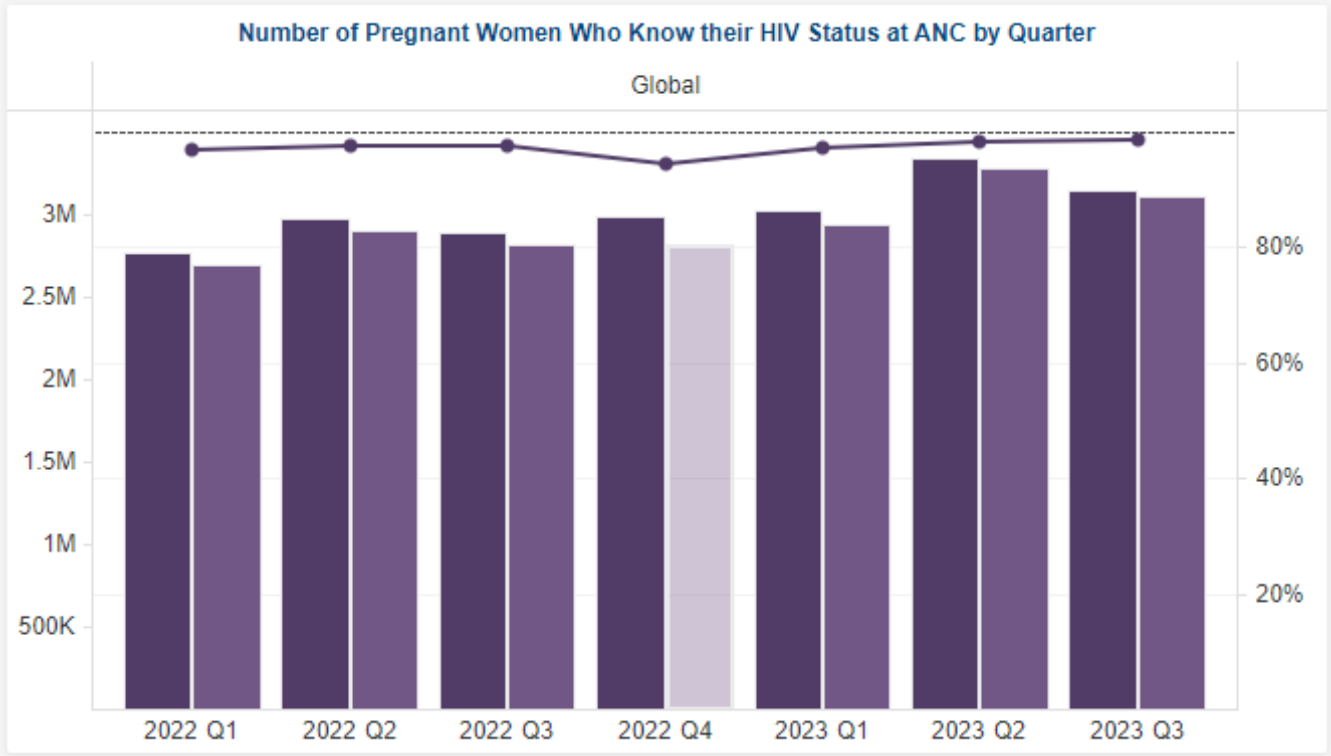
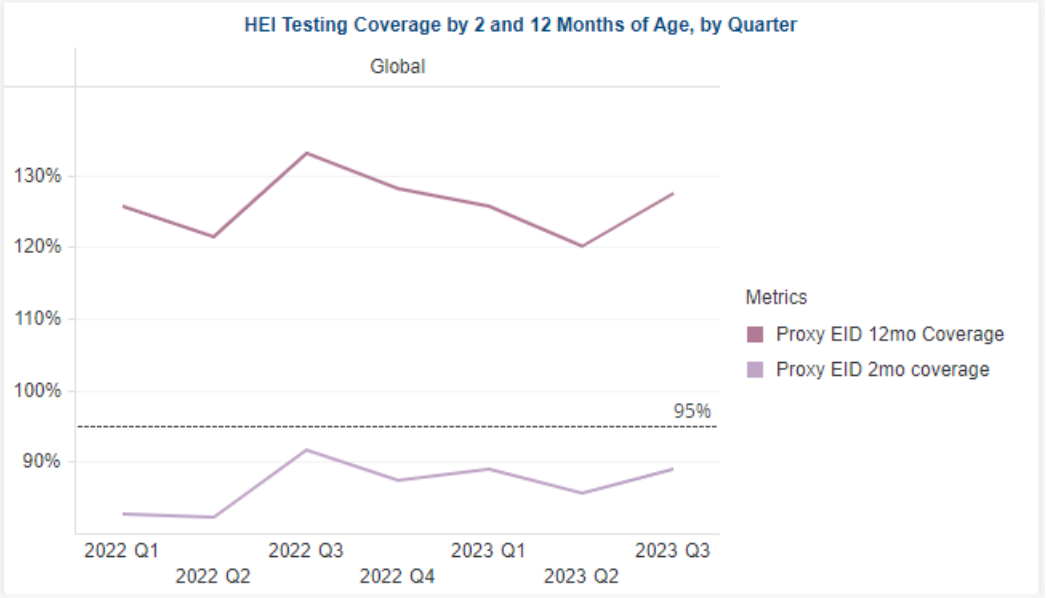
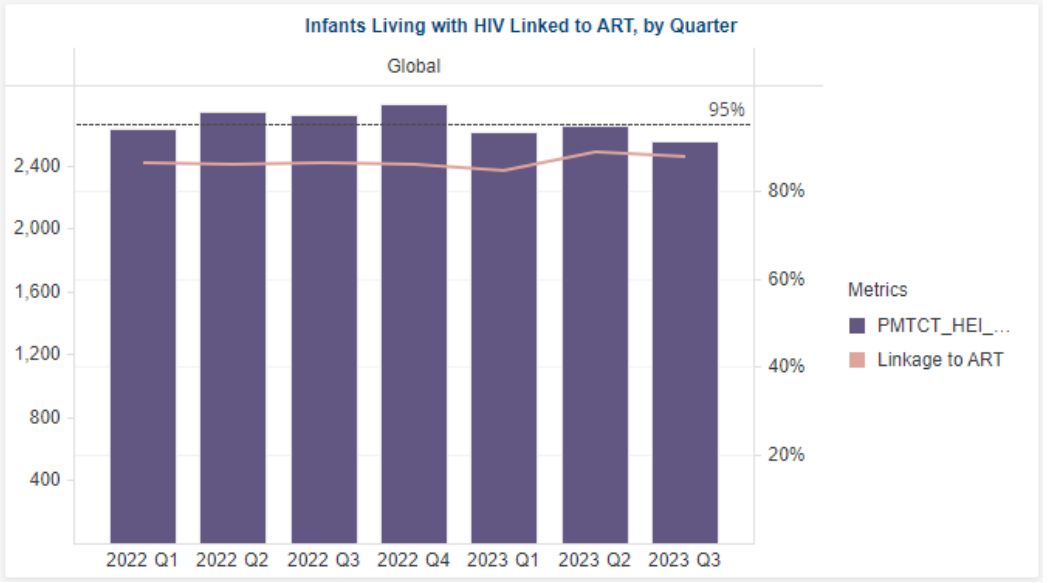
Source: pepfar-panorama.org; PMTCT Cascade Dashboard

Trend Analysis Examples







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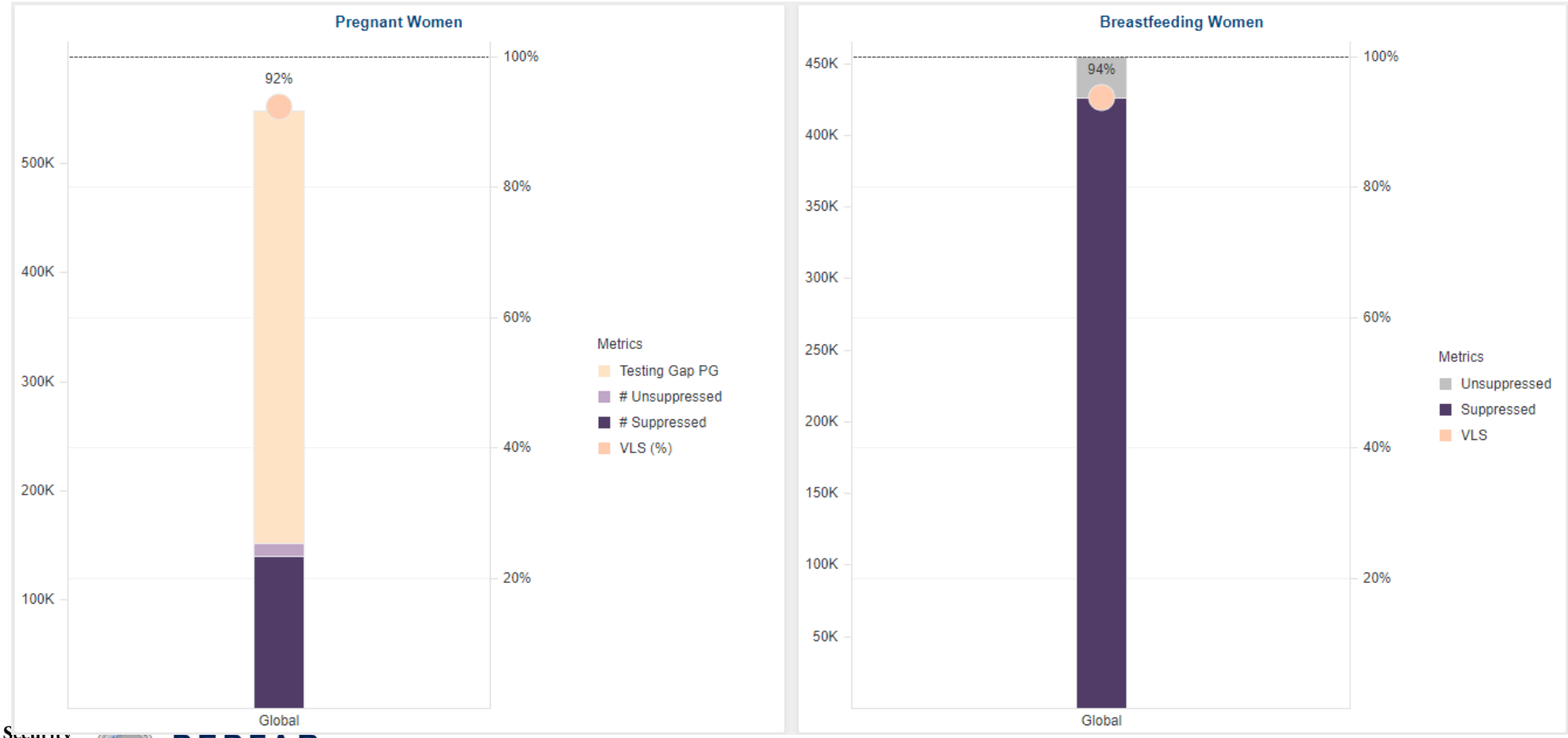
Source: pepfar-panorama.org; PMTCT Cascade Dashboard

Additional Analyses to Consider

Are pregnant and breastfeeding women virally suppressed? We can answer this question using pregnant and breastfeeding disaggregates of TX_PVLS Numerator and Denominator.

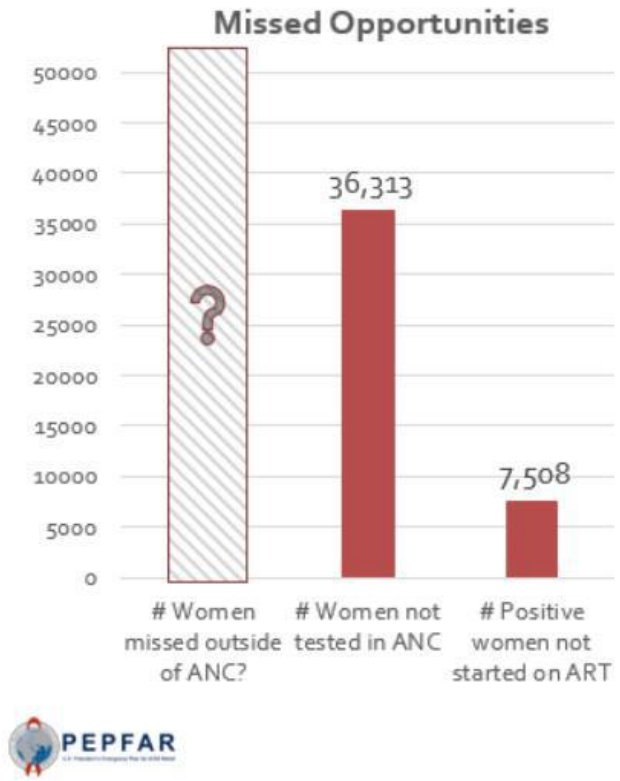


Source: pepfar-panorama.org; PMTCT Cascade Dashboard

Additional Analyses to Consider (cont.)

Flip the cascade and review missed opportunities in:

- Women missing from ANC
- Women in ANC not tested for HIV
- HIV positive women not started on ART



Using MER data:

women who don't know their HIV status at ANC1

HIV+ women not linked to ART

HEI not tested by 2 months of age

Outside of MER data:

How many women are not making it to ANC?

How many of these women might be positive?

How many women seroconvert during MTCT risk period?

Section 5: Additional Resources and Acknowledgements

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Additional Resources and Acknowledgements

Additional Resources:

- UNAIDS Update on preventable new HIV infections among children: https://www.unaids.org/en/resources/presscentre/featurestories/2022/january/20220131_preventable-new-HIV-infections-among-children
- The Global Alliance to End AIDS in Children: https://www.unaids.org/sites/default/files/media_asset/global-alliance-end-AIDS-in-children_en.pdf

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Thank you!

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