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Monitoring, Evaluation, and Reporting (MER) Guidance (v.2.6): TB and HIV

Office of the U.S. Global AIDS Coordinator & Health Diplomacy

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Date: 2021

Video Outline

1) **Section 1:** Overview of the technical area
2) **Section 2:** Indicator changes in MER 2.6
3) **Section 3:** Review of numerator, denominator, and disaggregates
   - What is the programmatic justification and intention for the data being collected?
   - How are program managers expected to use this data to make decisions that will improve PEPFAR programming?
   - How does it all come together? How should the data be visualized (e.g., cascades)? How do these indicators relate to other MER indicators?
4) **Section 4:** Overview of guiding narrative questions
5) **Section 5:** Data quality considerations for reporting and analysis
6) **Section 5:** Additional resources and acknowledgments

Section 1:
Overview of the technical area

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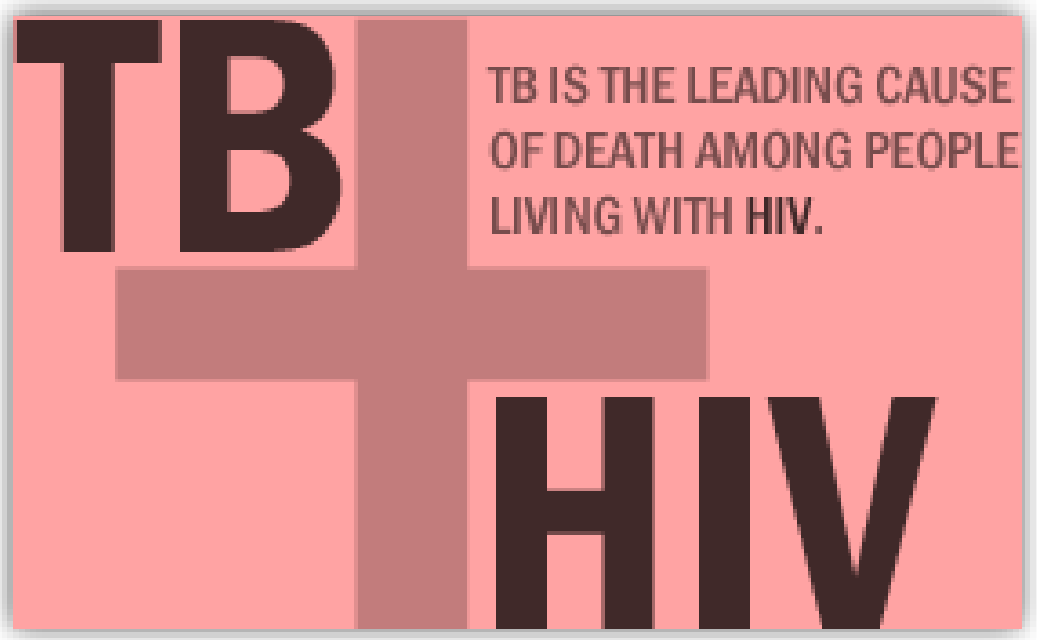
Why is this topic important?



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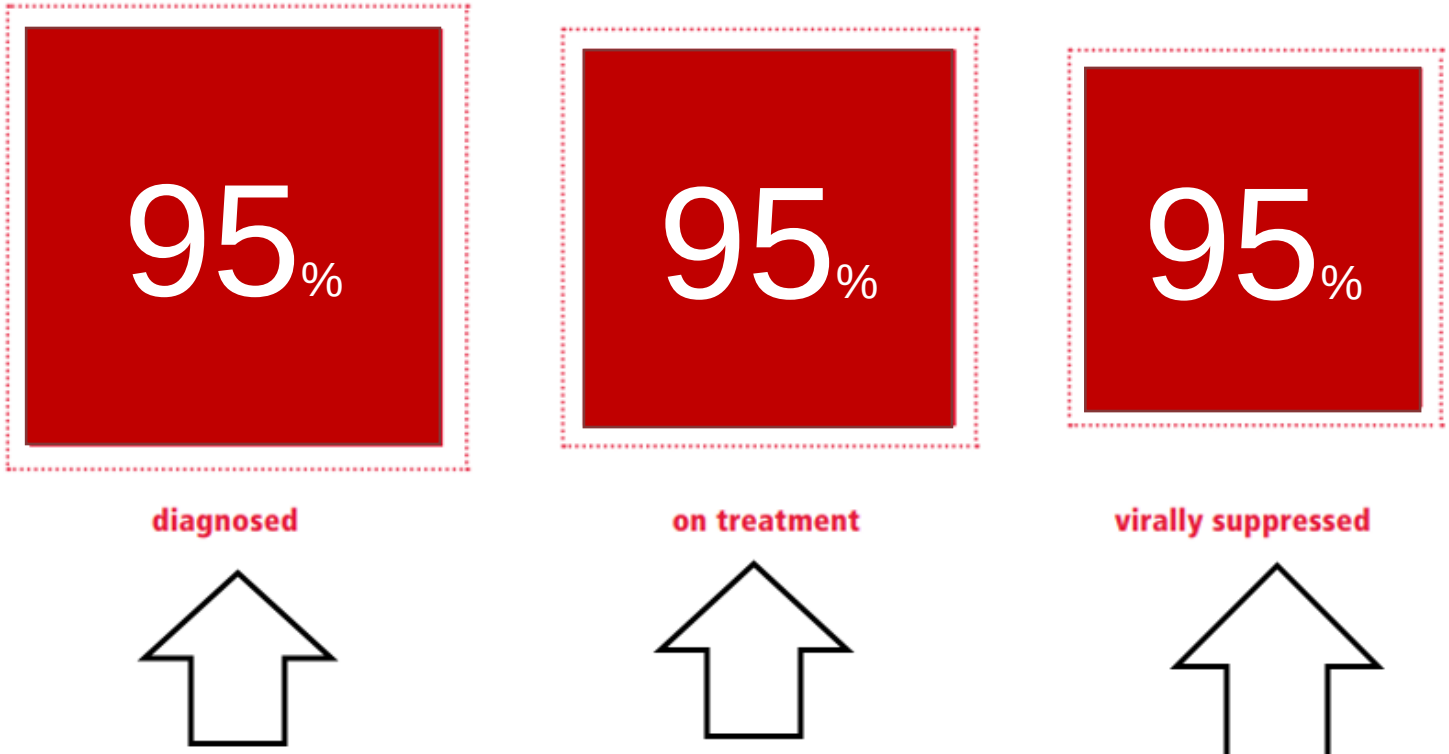
How does TB fit into 95-95-95?



1. Do all TB patients know their HIV status?

** Are persons with TB symptoms being identified and tested for HIV?

2. Are all TB patients who are HIV-positive on ART?

3. Are all ART patients being routinely screened for TB? And based on the result, initiating TB preventive therapy or TB treatment?

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Overview of TB/HIV Indicators

TB_STAT Num.
TB_STAT Den.

&

TB_STAT_POS
TB_ART Num.

Program Area Group	Indicator Name	Numerator or Denominator	Definition
Knowing HIV Status	**TB_STAT**	Numerator	# of new and relapsed TB cases with documented HIV status
		Denominator	total # of new and relapsed TB cases
On ART	**TB_ART**	Numerator	# of TB cases with documented HIV-positive status who start or continue ART

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Overview of TB/HIV Indicators

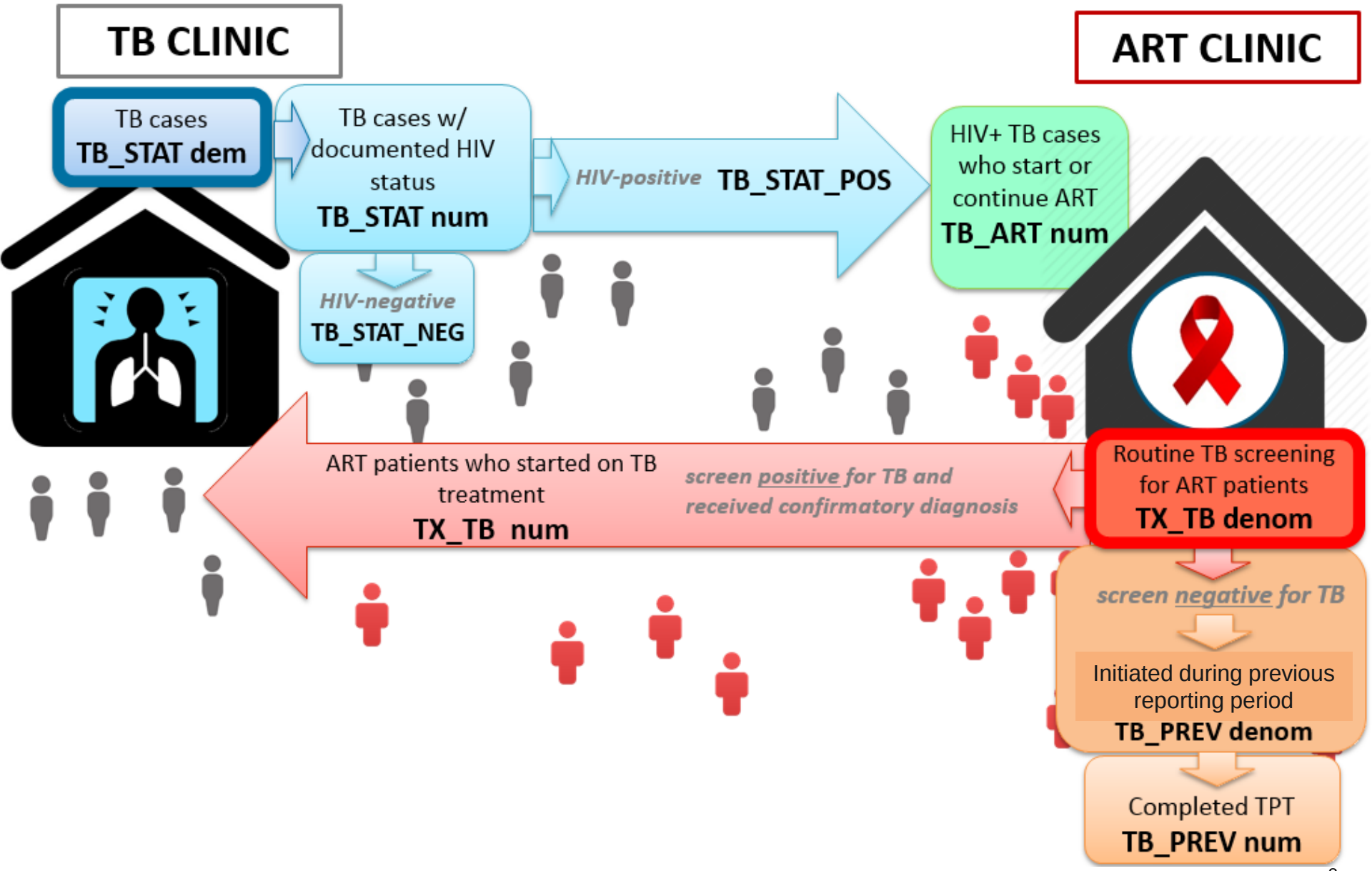
TX_TB Num.
TX_TB Den.

&

TB_PREV Num.
TB_PREV Den.

Program Area Group	Indicator Name	Numerator or Denominator	Definition
On ART	**TX_TB**	Numerator	# of ART patients who were started on TB treatment during the semiannual reporting period
		Denominator	# of ART patients who were screened for TB at least once during the semiannual reporting period
Prevention	**TB_PREV**	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 mo. of weekly isoniazid and rifapentine or 3-HP)
		Denominator	# of ART patients who were initiated on any course of TPT during the **previous** reporting period

TB/HIV Patient Flow



Section 2:

Indicator changes in MER 2.6

1 change

to TB_ART only

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TB/HIV Indicators: MER 2.5 to 2.6

TB_ART

1

Frequency of reporting from quarterly to annual

The impact of this change is that for FY22, one will be able to assess **ART coverage for TB cases*** annually instead of quarterly.

$$* \quad \frac{\text{\# HIV-positive TB cases on ART (TB\_ART Numerator)}}{\text{\# HIV-positive TB cases (TB\_STAT\_POS)}}$$

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Section 3:

Review of numerator, denominator, and disaggregates

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TB_STAT Numerator

TB_STAT Num.

- reported quarterly at facilities

Numerator Disaggregations:	
Disaggregate Groups	**Disaggregates**
Status by Age/Sex [Required] ***Underlined portions auto-populate into the TB HTS_TST modality.***	• 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 • Newly Tested 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 49 M, 50+ F, 50+ M, Unknown Age F/M • New Negatives: <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_STAT Denominator

TB_STAT Den.

- reported quarterly at facilities

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+ F/M, Unknown Age F/M

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TB_ART Numerator

TB_ART Num.

- reported annually at facilities

Numerator Disaggregations:	
Disaggregate Groups	**Disaggregates**
ART Status by Age/Sex [Required]	• 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+ 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+ F/M, Unknown Age F/M

How to Review this Data: TB_STAT, TB_ART

% of TB cases who know their HIV status = $\frac{\text{TB\_STAT Num.}}{\text{TB\_STAT Den.}}$

% of HIV-positive TB cases who are on ART = $\frac{\text{TB\_ART Num.}}{\text{TB\_STAT\_POS (sum of Q1-Q4)}}$

percent coverage should be 100%

Review % coverage by geographic unit (OU to site), partner, agency, age/sex disaggregates

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TB_STAT Den. and TB_STAT Num. should be **summed** over quarters; to calculate TB_ART coverage, sum TB_STAT_POS for all four quarters to calculate the denominator.

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TX_TB Numerator

TX_TB Num.

- Reported semi-annually at facilities

Numerator Disaggregations:	
Disaggregate Groups	**Disaggregates**
ART Status (Current/New on ART) by Age/Sex [Required]	• Number of patients starting TB treatment who newly started ART during the reporting period: <15 F/M, 15+ 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: <15 F/M, 15+ F/M, Unknown Age F/M

TX_TB Denominator

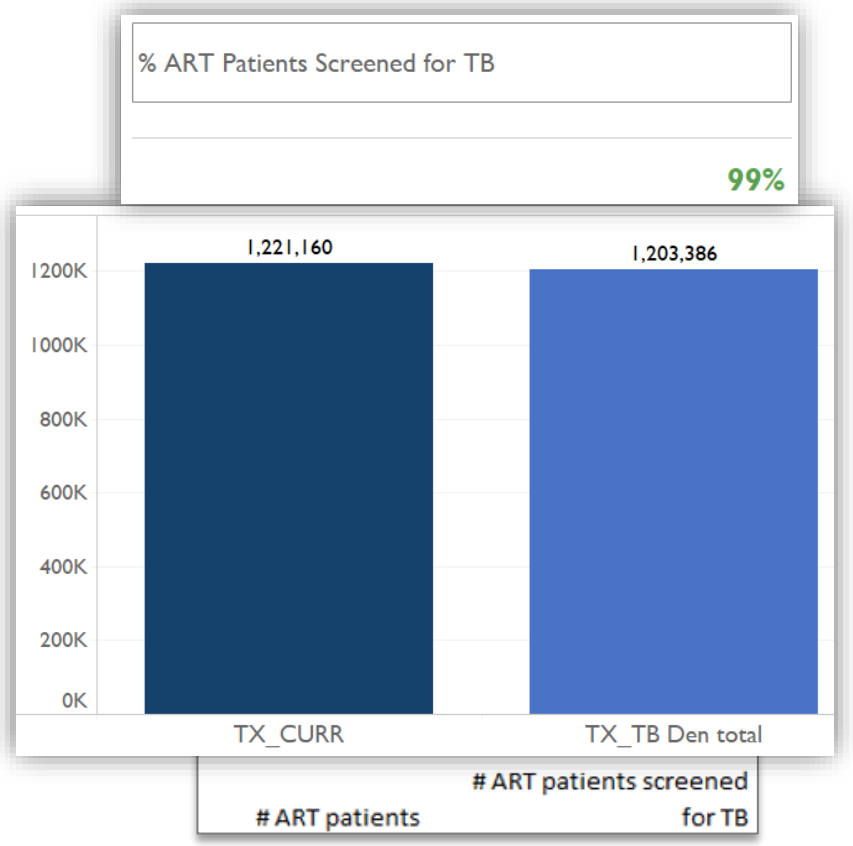
TX_TB Den.

- Reported semi-annually at facilities

Denominator Disaggregations:	
Disaggregate Groups	**Disaggregates**
Start of ART by Screen Result by Age/Sex [Required]	• New on ART/Screen Positive: <15 F/M, 15+ F/M, Unknown Age F/M • New on ART/Screen Negative: <15 F/M, 15+ F/M, Unknown Age F/M • Previously on ART/Screen Positive: <15 F/M, 15+ F/M, Unknown Age F/M • Previously on ART/Screen Negative: <15 F/M, 15+ F/M, Unknown Age F/M
Specimen Sent [Required]	Number of ART patients who had a specimen sent for bacteriologic diagnosis of active TB disease.
Diagnostic Test (Disaggregation of Specimen Sent) [Required]	• GeneXpert MTB/RIF assay (with or without other testing) • Smear microscopy only • Additional test other than GeneXpert
Positive Result Returned [Required]	Number of ART patients who had a positive result returned for bacteriologic diagnosis of active TB disease.

How to Review this Data: TX_TB

1. All ART patients should be routinely screened for TB
   - TX_TB Den. should be ~100% of TX_CURR



2. % Achievement* for TX_TB Denominator should be on track.

** % Achievement = Result/Target*

TX_TB Den. FY20 Q2	TX_TB Den. Target FY20	TX_TB Den. % Achievement FY20
2,083,512	3,850,106	54%

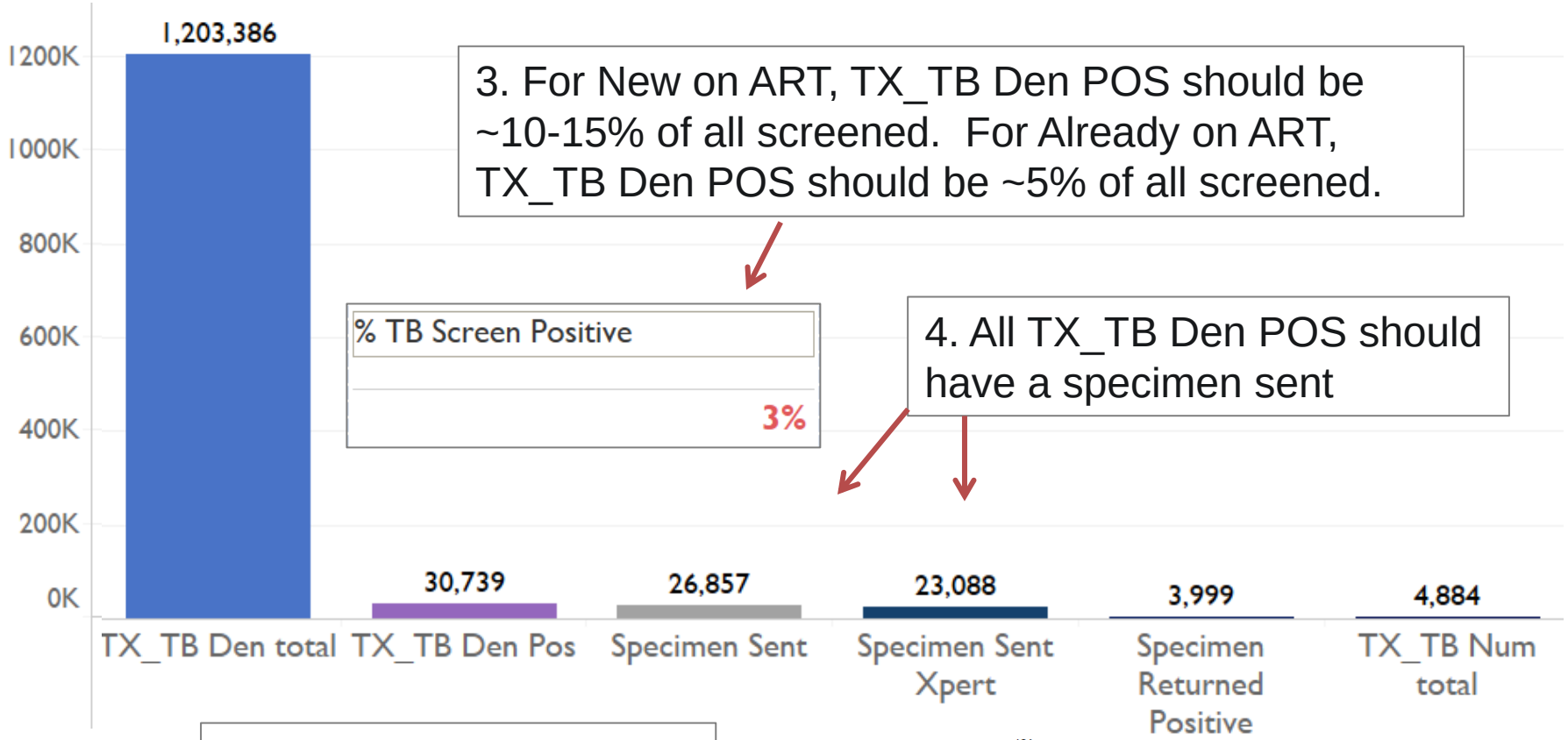
Example data

Source: Panorama: TB Screening and TPT: Single OU > Summary Visuals > Screen Pos for TB

How to Review this Data: TX_TB

Source: Panorama: TB Screening and TPT: Single OU > Summary Visuals > Screen Pos for TB

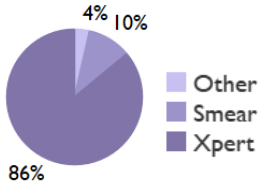
Example data



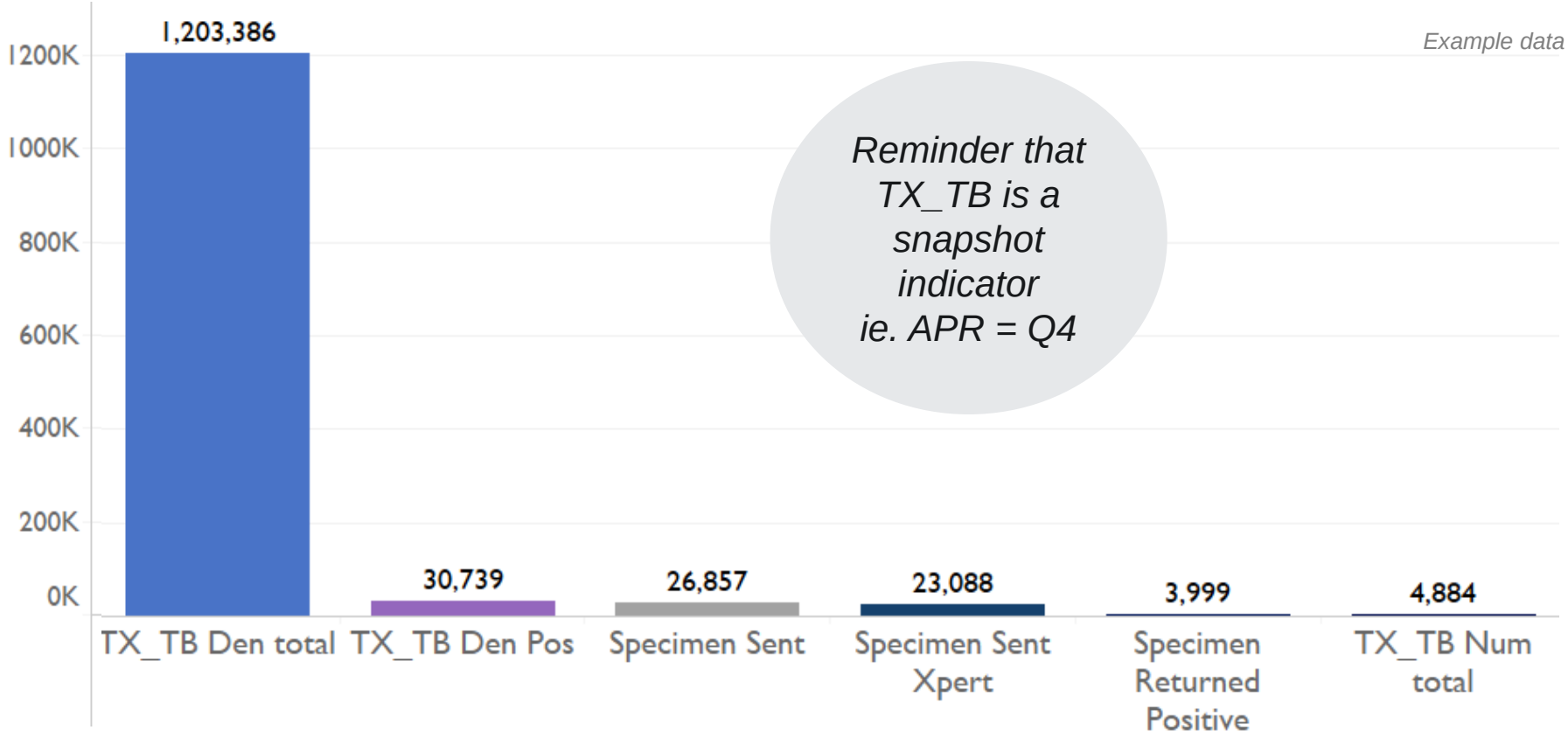
3. For New on ART, TX_TB Den POS should be ~10-15% of all screened. For Already on ART, TX_TB Den POS should be ~5% of all screened.

4. All TX_TB Den POS should have a specimen sent

5. Review distribution of Specimen Sent Type to ensure optimization of Gene Xpert machines



How to Review this Data: TX_TB



6. This cascade should also be viewed by **new on ART** and **already on ART** to ensure that TB screening is routinely being offered to these populations.

Source: Panorama: TB Screening and TPT: Single OU > Chapter 3: TB Treatment Cascade > B. New/Existing TB Treatment Cascade

TB_PREV Numerator and Denominator

TB_PREV Den. & **TB_PREV Num.**

TB_PREV Den.

Number of ART patients who were initiated on any course of TPT during the **previous** reporting period

TB_PREV Num.

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)

- Reported semi-annually at facilities
- Den. and Num. have the **same** disaggregates:

Numerator Disaggregations:	
Disaggregate Groups	**Disaggregates**
Age/Sex by ART Start: [Required]	• 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
Denominator Disaggregations:	
Disaggregate Groups	**Disaggregates**
Age/Sex by ART Start: [Required]	• 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

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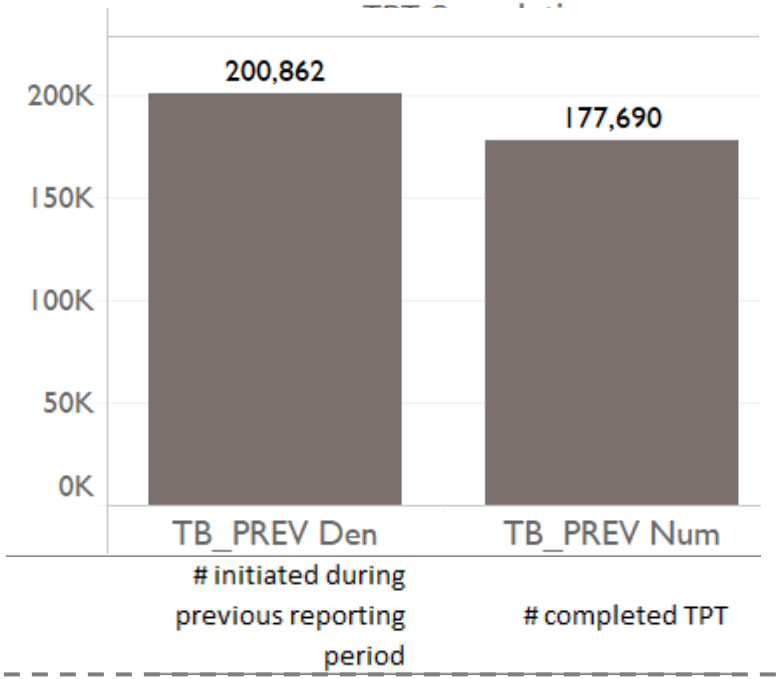
How to Review this Data: TB_PREV



Example data

% TPT Completion	88%

1. % TPT Completion should be equal to or greater than 85%.

TB_PREV Num. FY20 Q2	TB_PREV Num. Target FY20	TB_PREV Num. % Achievement FY20
160,800	270,500	59%

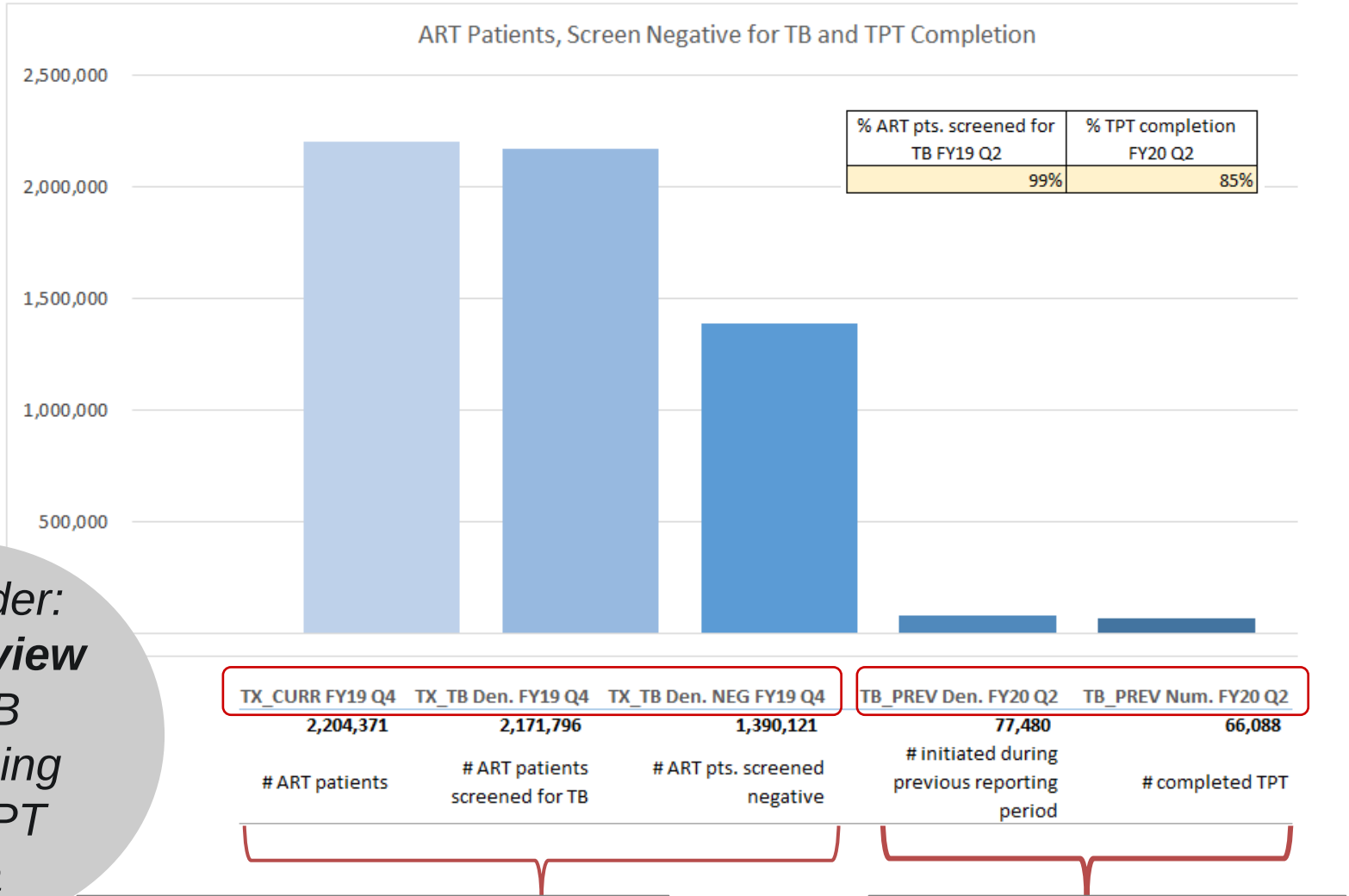
2. % Achievement* for TB_PREV Numerator should be on track.

* *% Achievement = Results/Targets*

Source: Panorama: TB Screening and TPT: Single OU > Chapter 2 TPT completion > TPT cascade

How to Review this Data: TB_PREV

Example data



Reminder: ***cohort view*** *for TB Screening and TPT data*

TX and Screening data from the ***previous*** reporting period

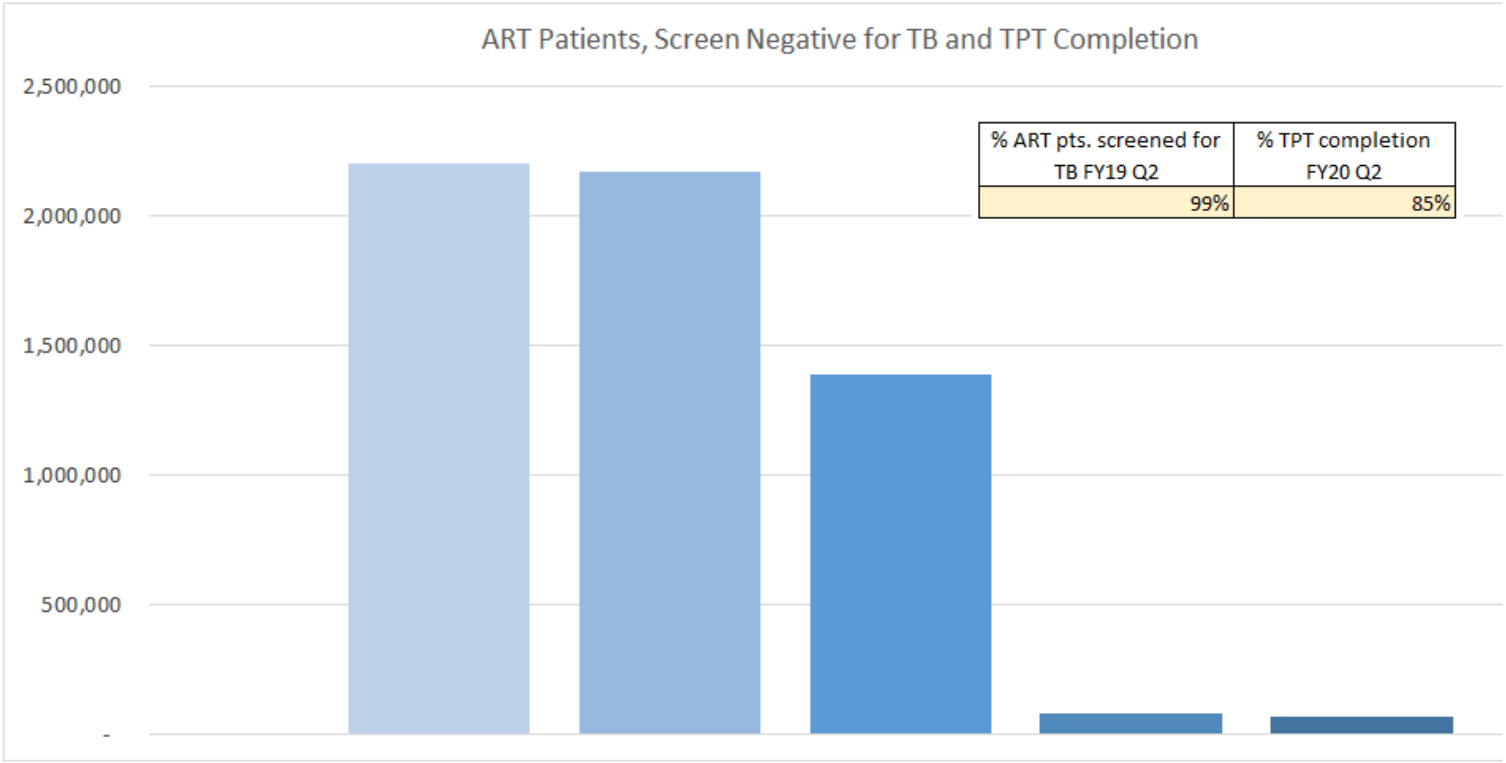
should be adjacent to

TPT data from the ***current*** reporting period

Source: Panorama: TB Screening and TPT: Single OU > Summary Visuals > TPT

How to Review this Data: TB_PREV

Example data



% ART pts. screened for TB FY19 Q2	% TPT completion FY20 Q2
99%	85%

TX_CURR FY19 Q4	TX_TB Den. FY19 Q4	TX_TB Den. NEG FY19 Q4	TB_PREV Den. FY20 Q2	TB_PREV Num. FY20 Q2
2,204,371	**2,171,796**	**1,390,121**	**77,480**	**66,088**
# ART patients	# ART patients screened for TB	# ART pts. screened negative	# initiated during previous reporting period	# completed TPT

3. If ART patients screen negative for TB and they are clinically eligible, they should initiate TPT (especially true for new on ART patients).

Source: Panorama: TB Screening and TPT: Single OU > Summary Visuals > TPT

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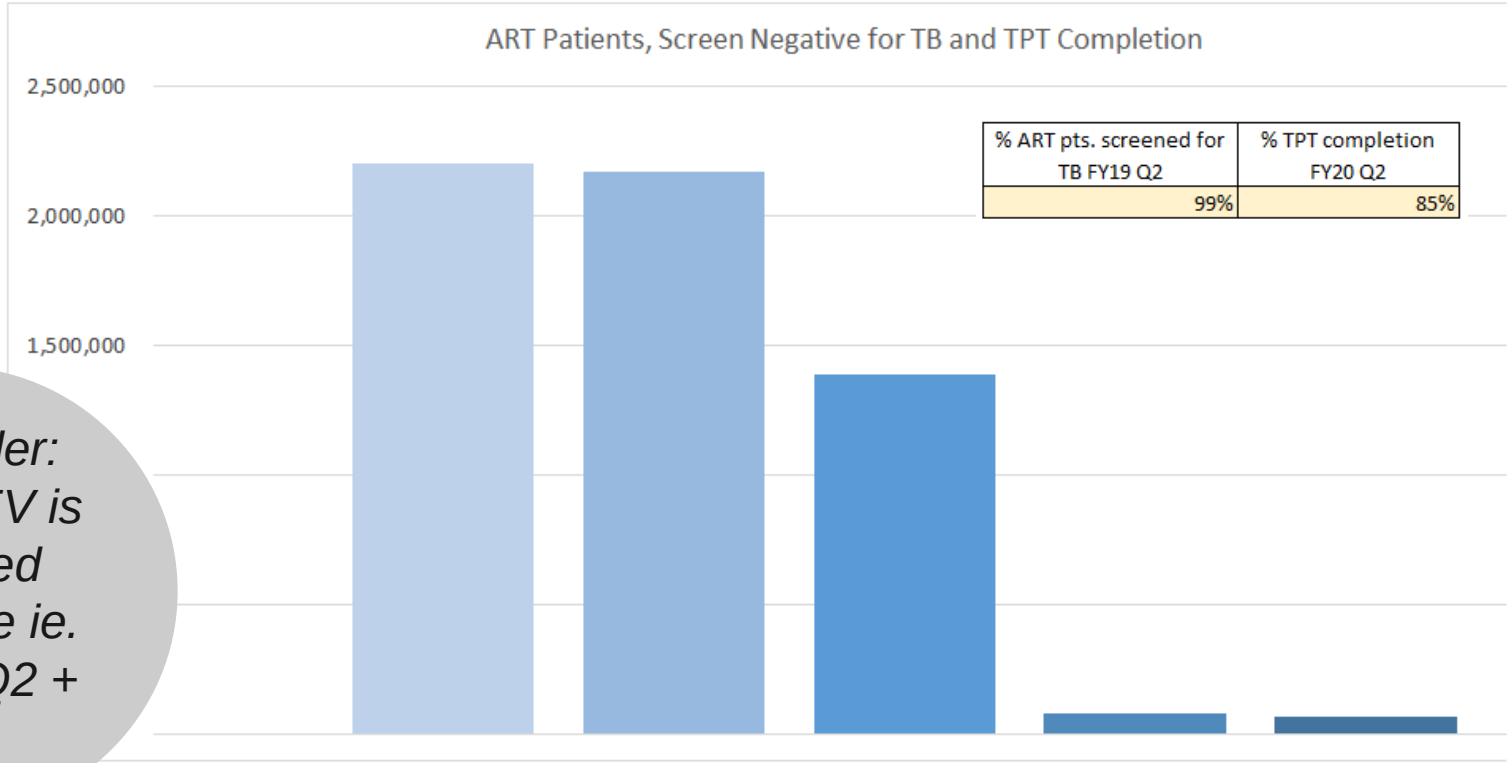
How to Review this Data: TB_PREV

Example data



TX_CURR FY19 Q4	TX_TB Den. FY19 Q4	TX_TB Den. NEG FY19 Q4	TB_PREV Den. FY20 Q2	TB_PREV Num. FY20 Q2
2,204,371	**2,171,796**	**1,390,121**	**77,480**	**66,088**
# ART patients	# ART patients screened for TB	# ART pts. screened negative	# initiated during previous reporting period	# completed TPT

Reminder: TB_PREV is summed over time ie. APR = Q2 + Q4

4. This cascade should also be viewed by **new on ART** and **already on ART** to ensure that TPT is being given to both of these populations.

Source: Panorama: TB Screening and TPT: Single OU > Summary Visuals > TPT

Section 4:

Overview of guiding narrative questions

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Guiding Narrative questions

TB_STAT

1. If coverage for this indicator is less than 90%, please explain why.
2. Please describe how the denominator was determined.
3. Describe the sources for the data that you are reporting (i.e., are the data from just PEPFAR-supported facilities or do the data reflect national-level data, including those from non-PEPFAR supported facilities)?

TB_ART Num.

1. If % coverage for TB_ART / TB_STAT_POS is less than 90%, please explain why.
2. Describe the sources for the data that you are reporting (i.e., are the data from just PEPFAR-supported facilities or do the data reflect national-level data, including those from non-PEPFAR supported facilities)? As above, please describe the sources of the data you are reporting.

Guiding Narrative questions

TX_TB

1. If the denominator does not roughly equal TX_CURR, please describe the main reasons.
2. If there are issues with reporting the disaggregations, please describe.
3. If there are issues with performance (e.g., if specimens are not sent for all persons who screened positive for TB symptoms, or if the numerator doesn't equal positive specimen returned), what are they and how can they be addressed?
4. Are the patients in the numerator all receiving care from PEPFAR-supported sites? Are they receiving TB and HIV care from the same site?
5. Describe access to GeneXpert testing for ART patients who screen positive for TB.

TB_PREV

1. What proportion of patients who completed TPT received IPT, 3-HP, or an alternative TPT regimen (e.g., 1-HP)?
2. Roughly what proportion of patients who received TPT were treated with the 6-month isoniazid regimen?
3. Broadly describe the main reasons why TPT was not completed (e.g., adverse events, interruption in treatment, patients refused to continue, etc.).
4. Roughly what proportion of all PLHIV on treatment have already completed TB preventive therapy prior to this reporting period (and were not eligible for TPT and not include in this indicator)?
5. If TB preventive therapy was not provided to all PLHIV in care, what are the main reasons for limited scale-up?

Section 5:

Data quality considerations for reporting and analysis

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Data Quality Considerations: TB_STAT

Data source:

- TB register, which creates a risk of double-counting or under-counting

TB_STAT data quality check:

- Only one disaggregate type is used for age and gender (fine age and gender disaggregates)
- Denominator ≥ Numerator.
- Numerator ≥ subtotal of each of the disaggregates.
- Denominator ≥ subtotal of each of the disaggregates

Calculating annual total:

- Sum results across quarters for both the numerator and denominator.

Data Quality Considerations: TB_ART

TB_ART data quality check:

- Only one disaggregate type is used for age/sex.
- Numerator ≥ subtotal of each of the disaggregates.

Calculating annual total:

- TB_ART: N/A. Data is reported only once annually at Q4.
- For the TB_ART denominator (TB_STAT_POS): Sum results across quarters.

Data Quality Considerations: TX_TB

TX_TB data quality check:

- Only one disaggregate type is used for age (coarse disaggregates).
- Numerator ≥ subtotal of each of the disaggregates.

Calculating annual total:

- TX_TB Denominator is a snapshot indicator (i.e., the APR calculation = Q4) because it is intended to capture a clinical event (screening), and not unique patients.
- TX_TB Denominator should be compared to TX_CURR, another snapshot indicator.
- **Note:** TX_TB Numerator, if analyzed on its own, could be summed across semiannual time periods to conclude the number of ART patients who were started on TB treatment during the fiscal year.

Data Quality Considerations: TB_PREV

TB_PREV data quality check:

- TB_PREV: Data Element ≥ subtotal of each of the disaggregates.

Calculating annual total:

- TB_PREV Q2 and Q4 should be summed to calculate the total number of ART patients who initiated and completed a course of TPT.
- **Note:** 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. Ex: TB_PREV captures those 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.

Section 6: Additional Resources and Acknowledgments

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Additional Resources

- Global Tuberculosis Report, 2020; WHO: https://www.who.int/teams/global-tuberculosis-programme/tb-reports
- Consolidated Guidelines on Tuberculosis Screening, 2021; WHO: https://apps.who.int/iris/bitstream/handle/10665/340255/9789240022676-eng.pdf
- Latent TB Infection : Updated and consolidated guidelines for programmatic management; WHO: http://www.who.int/tb/publications/2018/latent-tuberculosis-infection/en/
- A guide to monitoring and evaluation for collaborative TB/HIV activities, WHO: http://www.who.int/tb/publications/m_and_e_document_page/en/
- Monitoring an Evaluation Framework; Global Fund: https://www.theglobalfund.org/en/monitoring-evaluation/framework/

Acknowledgments

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Thank you!