

FY 2022 PERFORMANCE PLAN

Tuberculosis (TB) Control and Prevention Program		PHD/CHPB	Tania St. Clair, x5604 Colleen Kotb, x5664
Program Purpose	<ul style="list-style-type: none"> • Prevent the transmission of tuberculosis (TB) and cure individuals with active TB disease 		
Program Information	<ul style="list-style-type: none"> • Tuberculosis is spread when a person with active pulmonary TB disease coughs. Risk factors include prolonged contact (~8 hours or more) with a person with TB disease, or travel to an area with a high TB incidence. Arlington’s active TB rate was 5.0 cases per 100,000 population in 2021 (up from 2020), while the rate for Virginia was 1.9, the U.S. rate of 2.4 reflected a national increase. • This mandated program serves two populations: <ol style="list-style-type: none"> 1. Active TB disease: those infected with TB bacteria <u>with symptoms</u> of TB disease. Those with pulmonary TB can spread TB to others. Active disease is categorized by response to standard medications: <ul style="list-style-type: none"> ▪ Responsive to all four first line TB drugs ▪ Resistant to one first line drug ▪ Multidrug Resistant (MDR): resistant to at least isoniazid and rifampin, the two most potent first line TB drugs ▪ Extensively Drug Resistant (XDR): a rare type of multidrug-resistant tuberculosis (MDR TB) that is resistant to isoniazid and rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs (i.e., amikacin, kanamycin, or capreomycin). 2. Latent TB infection (LTBI): those infected with TB bacteria who are <u>without symptoms</u> and cannot spread it to others. Progression from latent to active TB is most likely in children, those with chronic diseases such as diabetes, and those recently infected. • The program treats all with active TB to prevent disease spread and prioritizes LTBI treatment for those most at risk for progression to active TB. <ul style="list-style-type: none"> ○ Treatment of active TB disease typically takes 6 to 9 months. Treatment completion is critical to prevent bacteria in the person from becoming medication resistant. Treatment of drug-resistant TB can take 2 years or longer. ○ Directly Observed Therapy (DOT) is the Centers for Disease Control and Prevention’s (CDC) standard of care for active TB to assure completion. Staff observe the client taking every dose of their medication to ensure compliance. Services are provided in the home, workplace or virtually using a Virginia Dept of Health (VDH) approved video application. <ul style="list-style-type: none"> ▪ Arlington provides DOT for non-residents working in the County to ensure compliance; other jurisdictions reciprocate. • The Arlington Newcomer Health Program provides an initial health screening to newly arrived refugees and other qualified individuals, refers/addresses health issues that may impact successful resettlement, and identifies and intervenes on diseases and conditions of public health concern. The program is part of the Virginia Department of Health, Division of Clinical Epidemiology Tuberculosis (TB) Control Program. • The TB program’s services are based on the Virginia Department of Health (VDH) and CDC guidelines: 		

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	<ul style="list-style-type: none"> ○ Services include laboratory testing, radiology referral, and physician consultation. Environmental and infection prevention controls are used to prevent disease transmission in the clinical area. ○ Nurse case management services for clients with active TB may include arranging temporary housing for isolation and referring to other DHS services to ensure compliance with isolation and treatment until cure. ○ Outbreak investigation and screening occurs at congregate settings such as schools, worksites and nursing homes to identify those exposed to clients with new, active TB disease. ● The program is partially funded by a grant from CDC. ● Partners: VDH, Division of Consolidated Laboratory Services (DCLS) and other labs, Virginia Hospital Center, and private medical providers.
Service Delivery Model	<ul style="list-style-type: none"> ● Since March 2020, video services via a Virginia Dept of Health (VDH) approved application are offered to all clients with active disease and LTBI. Clients report that they prefer video method - it affords more flexibility, they do not need to leave work, find transportation or address childcare issues created by in-person visits. Clients are offered an in-person option for services. ● There are times (e.g., drawing blood) when clients need to be seen in person. Clients have the option to go to LabCorp for TB screenings and other treatment-related labs. Clients are referred to Virginia Hospital Center for chest x-rays with the cost covered by the TB program. ● Medications for LTBI and active disease treatment can be shipped directly to client homes from the State Pharmacy in Richmond to eliminate the need for clients to come into clinic.

PM1: How much did we do?

Staff	<p>Total 8.25 FTEs:*</p> <ul style="list-style-type: none"> ● 1 FTE Supervisor (vacant from July 2021 to present) ● 1 FTE Public Health Nurse Coordinator ● 1 FTE Nurse Practitioner ● 2.5 FTE Public Health Nurses (50% of 5 FTEs) ● 2 FTE Outreach Workers ● 0.5 FTE Clinic Aide (vacant from April 2021 to July 2022) ● 0.25 FTE Pharmacy Technician (position not utilized for fiscal year) <p>Contractors</p> <ul style="list-style-type: none"> ● TB Nurse Consultant (20 hrs per week) ● TB Pulmonology Consultant (2 hrs per month) <p>*This is the planned allocation of staff.</p>
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Customers and Service Data		FY 2019	FY 2020	FY 2021	FY 2022
	TB Clinic Clients *	715	512	196	299
	Newcomer Health Clients	28	6	10	71
	Total Active TB Cases on Treatment (includes all confirmed, suspected, and transferred-in cases that received treatment)	24	24	16	16

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New Active TB (diagnosed in Arlington or transferred from other jurisdictions)	14	13	7	10
Latent TB on treatment	101	88	32	64
Visits (all settings, excluding DOT)	1,811	1,159	533	694
DOT Visits**	1,861	1,846	1,115	1,212
X-ray services	346	257	0 [†]	138

*Clients who do not have active or latent TB are also served by the TB program. Services include, and are influenced by, the number of contacts to active TB cases, TB testing, chest x-rays, and letters certifying that individuals are free of active TB. Employment related testing and contact tracing as well as referrals to the TB program were greatly reduced during 2020 and early 2021.

**The variation in DOT visits is attributed to the total number of active TB cases, including drug-resistant cases that require added staff, client visits, and treatment time.

†In FY 2021, clients were referred to VHC Hospital for x-rays due to COVID precautions. It was decided that going forward x-rays will no longer be done on site at TB Clinic and clients will continue to be referred to VHC. In FY 2022, a mechanism for tracking referrals was created.

PM2: How well did we do it?

2.1	Clients with active TB disease who were started on the recommended treatment regimen and initiated DOT
2.2	Identified contacts to an active pulmonary TB case who were assessed to determine their infection status
2.3	Clients with active pulmonary TB disease who met the criteria for a safe hospital discharge to the community

PM3: Is anyone better off?

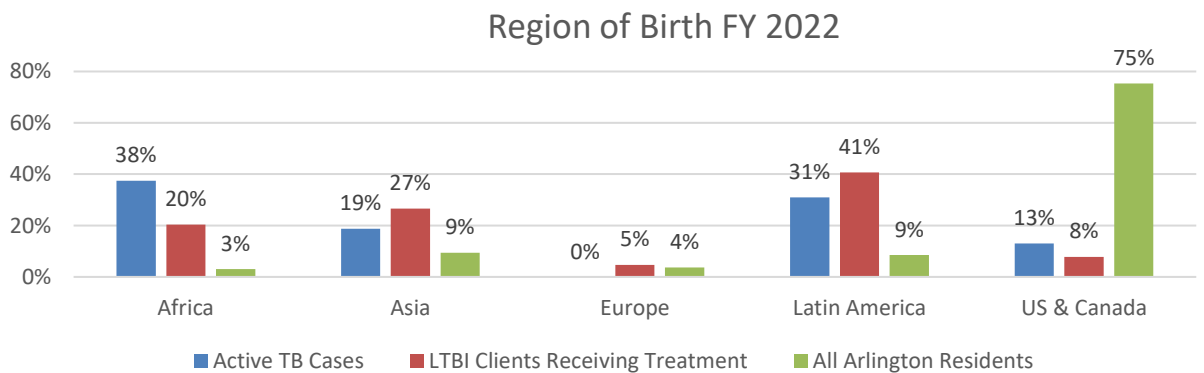
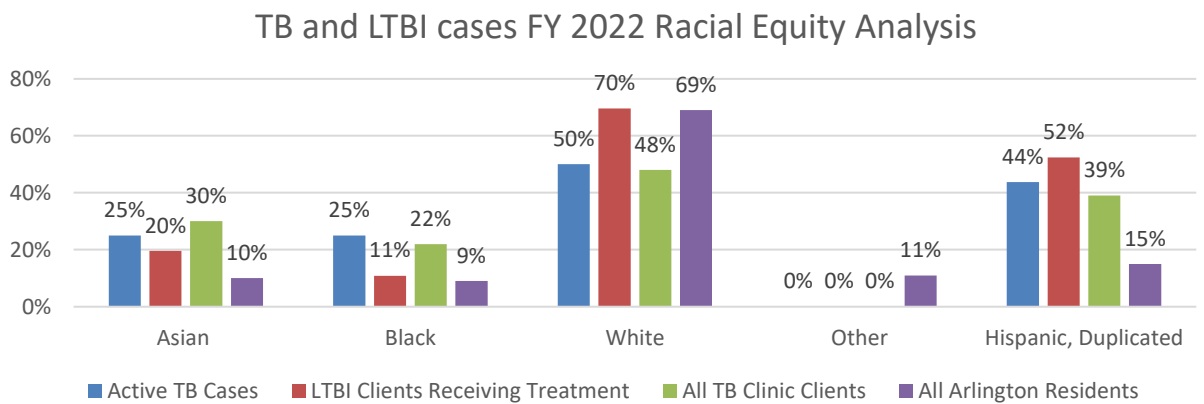
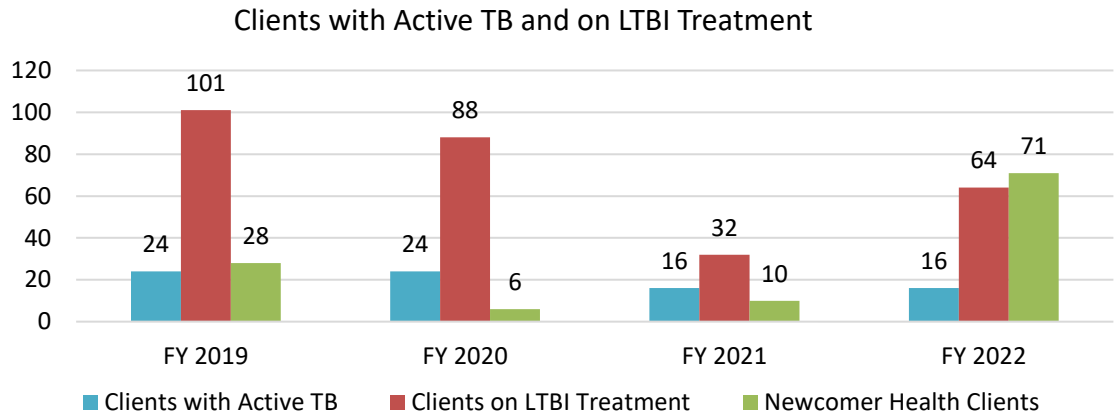
3.1	Clients with active TB who completed or are on schedule to complete treatment according to protocol
3.2	Clients with latent TB infection starting medications who completed or are on schedule to complete treatment according to protocol

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Tuberculosis (TB) Control and Prevention Program

Measure 1 Clients with active TB and LTBI on treatment

Data



Data Summary

- Non-US born clients have the greatest risk of TB and represented 87% of Arlington cases of active TB in FY 2022.
- Minority groups including non-Hispanic Asian and Black and Hispanic continue to be heavily represented among those with active TB in VA.
- The number of clients with Active TB and on LTBI treatment has decreased since FY 2018.
- Data from local databases and WebVision.

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What is the story behind the data?

- Country of birth continues to be a major risk factor for TB in the United States. Reactivation of LTBI rather than recent transmission is the primary cause of TB disease in the US.
- The reduction in LTBI treatment may correspond to the increased use of a TB blood test beginning in FY 2019, which has been shown to have higher sensitivity than the TB Skin Test for those with a history of a TB vaccine (BCG). BCG is given in countries where the incidence of TB is high. This has resulted in fewer follow-up x-rays and a decreased need for LTBI treatment.
- The increase in clients in the Newcomer Health program have largely been through qualifying agencies serving people from Afghanistan and Ukraine.
- In FY 2021, fewer people were working due to the pandemic; this reduced employment requirements for TB testing and resulted in fewer LTBI cases being diagnosed. In FY 2022, the increase in LTBI cases was likely due to the reversal in the trend.
- Treatment of all clients diagnosed with LTBI, rather than only those at highest risk of progression, resumed in December 2020 as staff began to shift from COVID response.
- The TB Clinic has a diverse bilingual and bicultural staff with staff members from Ghana, Philippines, Guinea, Ethiopia, and Bolivia.

Recommendations

- Continue offering virtual appointments to clients where appropriate and continue to see clients in person based on their individual need.

Target Dates

- On-going

Forecast

- For FY 2023, the number of clients with active TB and on LTBI Treatment will remain about the same.

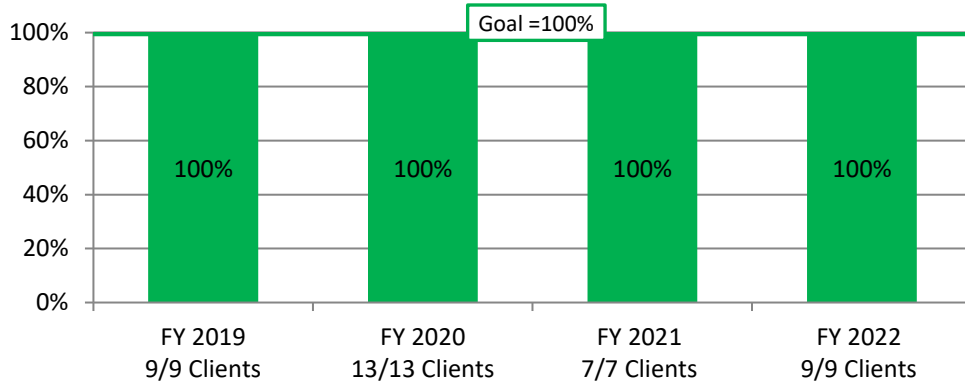
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Tuberculosis (TB) Control and Prevention Program

Measure	2.1	Clients with active TB disease who were started on the recommended treatment regimen and initiated DOT
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Data

Percent of clients with suspected active TB disease who were started on the recommended treatment regimen and initiated DOT



Data Summary

- Data from the Active TB Database.
- All Arlington residents with clinically suspected or confirmed active pulmonary or extrapulmonary TB disease, who were recommended to begin treatment during the fiscal year, are included in the data.
- One client, who died before diagnosis, was excluded from the analysis.

What is the story behind the data?

- In FY 2022, nine out of ten clients with active TB disease were successfully started on treatment and DOT.
- Provision of DOT via telehealth has reduced barriers to treatment for many clients.
- Challenges to meeting this goal include:
 - Client cannot be located. In such cases, staff notify VDH and work diligently to locate clients and get them on treatment.
 - Client has underlying medical conditions that delay treatment start (e.g. advanced cancer, HIV).
 - Clients with non-infectious TB may refuse treatment. Treatment is not mandatory unless infectious.

Recommendations

- Stay the course

Target Dates

- On-going

Forecast

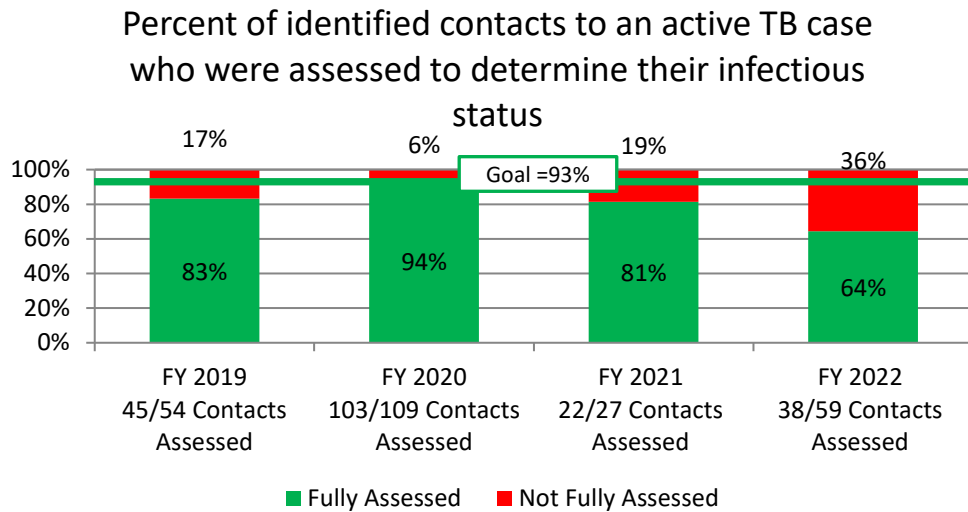
- In FY 2023, treatment initiation and DOT rates are expected to remain the same.

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Tuberculosis (TB) Control and Prevention Program

Measure	2.2	Identified contacts to an active pulmonary TB case who were assessed to determine their infection status
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Data



Data Summary

- CDC’s 2020 National TB Indicator target for complete evaluation of contacts to infectious TB cases is 93%.
- Data were obtained from the Active TB Database for cases of pulmonary and laryngeal tuberculosis.
- In FY 2022, 64% of identified contacts were fully assessed.

What is the story behind the data?

- The greatest challenge to assessing contacts is the lack of a legal mandate compelling TB screening (compared to clients with suspected TB disease).
 - We saw an increase in the number of contacts refusing to be screened at the beginning of FY 2022. As COVID pandemic numbers surged due to the variant, some contacts may have been hesitant to seek care due to fear of COVID.
 - Others felt that TB disease risk was low despite having education materials available regarding LTBI in the top 5 languages.
 - Some contacts were located outside of Arlington and were referred to local HD in that jurisdiction and subsequently lost to follow-up.
- Staff utilize a range of strategies (e.g., phone calls, letters, home visits) to encourage contacts to be screened. Client willingness to be screened varies by investigation.

Recommendations

- Continue culturally and linguistically appropriate services.

Target Dates

- On-going

Forecast

- In FY 2023, contact assessment rate is expected to improve to 81%.

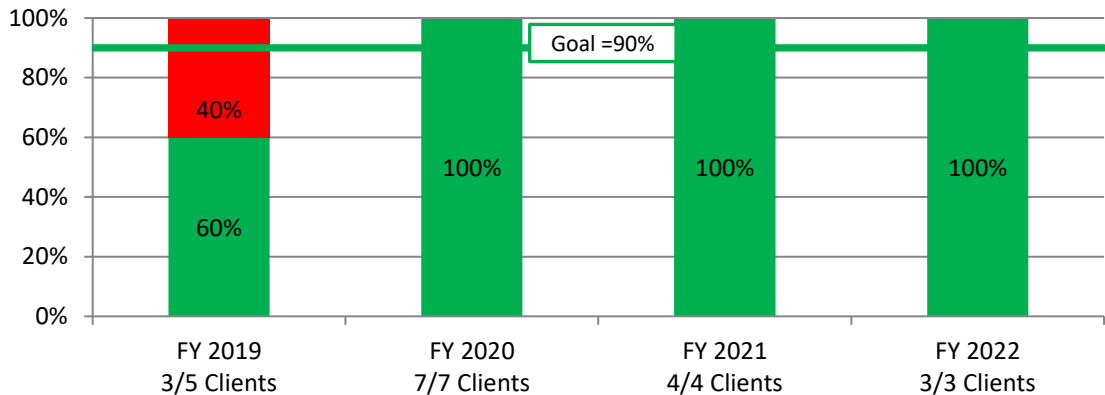
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Tuberculosis (TB) Control and Prevention Program

Measure	2.3	Clients with active pulmonary TB disease who met the criteria for a safe hospital discharge to the community
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Data

Percent of clients with active TB who met the criteria for a safe hospital discharge to the community



Data Summary

- Data from Active TB database.
- All clients who met the following criteria are included: a) suspected or confirmed active pulmonary TB disease, b) recommended to begin treatment during the fiscal year, c) were admitted to the hospital, and d) were Arlington residents.

What is the story behind the data?

- All of the hospitalized clients who were discharged met the criteria for a safe discharge.
- Criteria to ensure a safe discharge from a hospital to the community include:
 - 1) Client has an approved treatment plan that is signed off by the PHD director.
 - 2) The case manager visits the client in hospital to discuss PHD role in providing care to client, including the need for the client’s isolation at home to prevent spread of disease.
 - 3) The case manager visits the client’s home to make sure it is appropriate for isolation. If home is unsuitable (e.g. young children living in the house), the case manager works with EID and VDH to find alternate housing
- During COVID-19, we restructured how to ensure a safe discharge, to include phone calls to patients while in the hospital, establishing close relationships with hospital infection control staff, as well as video conferencing with infected client and family members. For some apartments, we were able to research online the layout, size and ventilation.
- In person hospital and home visits resumed in the latter part of FY 2022.

Recommendations

- Continue to review cases where all the criteria for safe hospital discharge have not been met to find the reasons for any delay or unsafe discharge.

Target Dates

- On-going

Forecast

- In FY 2023, the safe hospital discharge rate is expected remain the same as the past 2 years.

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Tuberculosis (TB) Control and Prevention Program

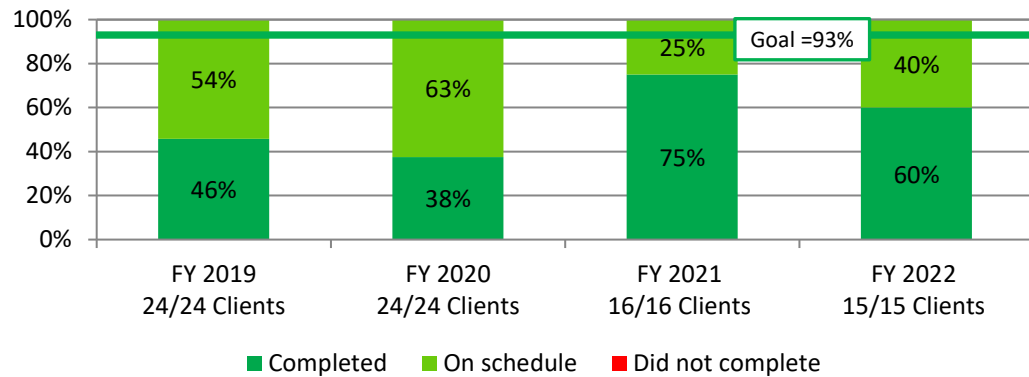
Measure

3.1

Clients with active TB who completed or are on schedule to complete treatment according to protocol

Data

Percent of clients with active TB who completed or are on schedule to complete treatment according to protocol



Data Summary

- Data from the Active TB Database.
- Includes confirmed cases of active TB who received treatment during the fiscal year. Does not include cases suspected of active TB on treatment.
- Determination of treatment “completed” is made by TB physician based on treatment protocol and client condition, not on length of treatment.
- “On schedule” totals include clients who were on schedule to complete treatment at the time that they left Arlington or died.

What is the story behind the data?

- All clients on treatment in FY 2022 either already completed treatment or are on target to complete treatment.
- Treatment completion is critical to prevent bacteria in the person from becoming medication resistant. Additionally, if clients fail to complete treatment, they are at risk of potential relapse.
- Mail order pharmacy directly from VDH to client has made a tremendous difference for both the client and County, offering greater convenience to clients.

Recommendations

- Continue to offer mail order pharmacy.

Target Dates

- On-going

Forecast

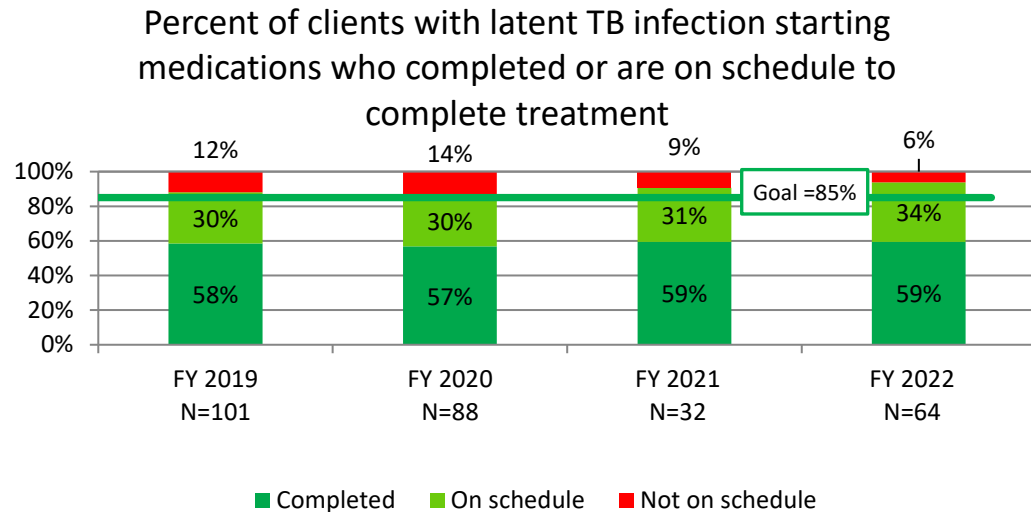
- In FY 2023, treatment completion rates are expected to remain the same.

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Tuberculosis (TB) Control and Prevention Program

Measure	3.2	Clients with latent TB infection starting medications who completed or are on schedule to complete treatment according to protocol
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Data



Data Summary

- LTBI treatment may cross fiscal years and as such, clients may be duplicated across fiscal years.
- CDC has a goal of 83% for LTBI treatment completion. Because Arlington data includes clients who completed or are on schedule to complete, a higher goal of 85% has been set.
- Data on clients with LTBI is maintained in a local database.

What is the story behind the data?

- There are multiple LTBI treatment options depending on the type of medication. New treatment options are offered as they become available.
- LTBI clients are case managed in Arlington County. LTBI can vary in length from 3 months to 9 months depending on the type of medication given. Clients have visits at a minimum monthly to check for side effects and monitor adherence. High-risk clients, including children under 5 who are close contacts to an active case and clients on intermittent dosing, receive directly observed therapy (DOT).
- VDH currently provides all medications free of charge.

Recommendations

- Continue offering telehealth for treating new LTBI clients.
- Continue direct VDH mail order pharmacy for clients who prefer.

Target Dates

- On-going

Forecast

- In FY 2023, completion rates are expected to remain approximately the same.