



**Indiana**  
**Department**  
**of**  
**Health**

# LTBI IN THOSE 65 AND OLDER IN INDIANA

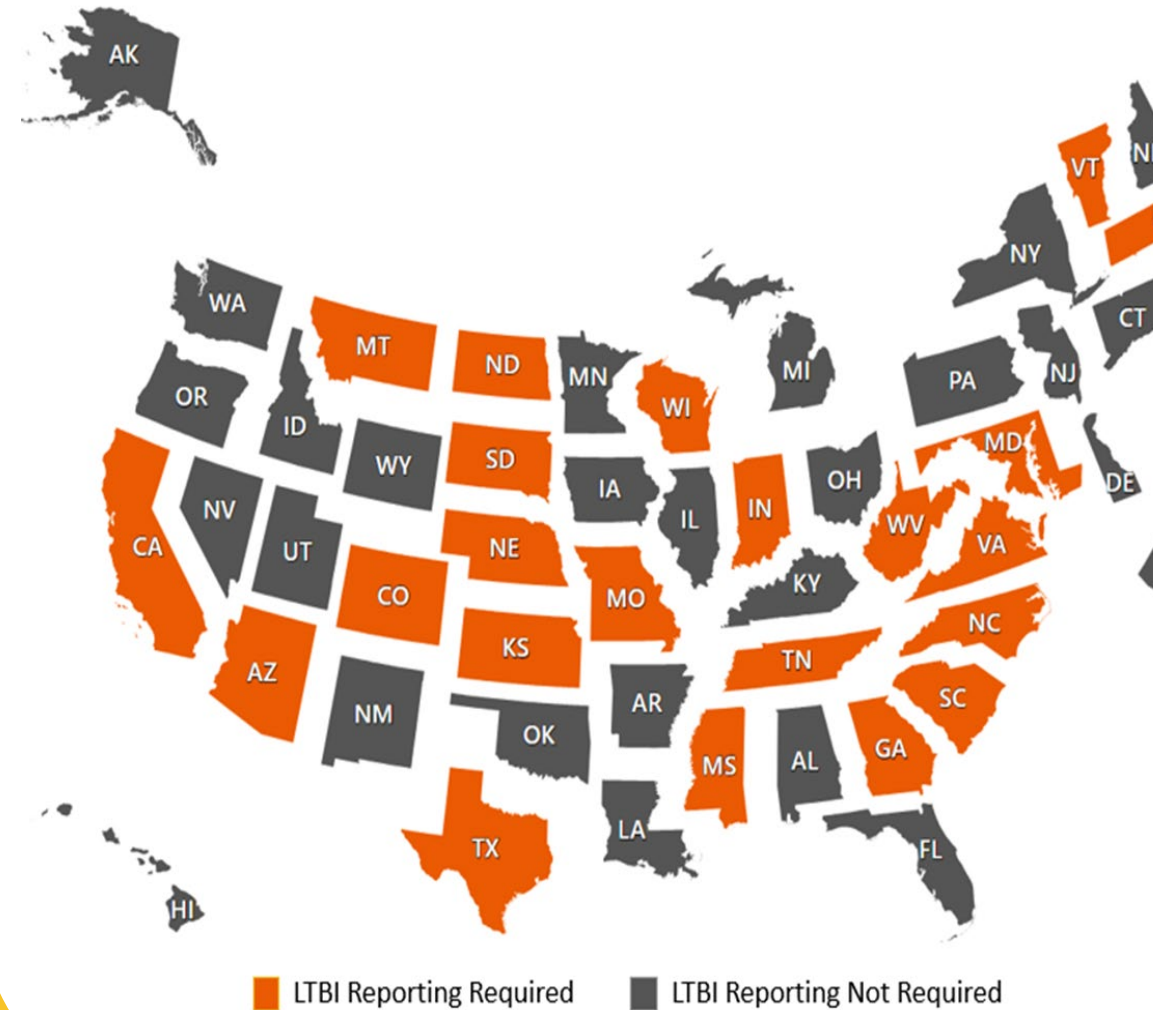
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# Background

- In Indiana, state code mandates the reporting of latent tuberculosis infection identified by a positive IGRA or TST (IDOH, 2024)
- From Jan 2019 to Dec 2022, 49.6% of the LTBI patients (N = 3,760) reported to the Indiana Department of Health completed LTBI treatment to prevent progression to active disease
- In the Indiana 65+ population only 35.5% reported LTBI patients (n = 332) completed treatment during this same timeframe



(CDC, 2024)

# Background

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- Immune systems begin to weaken as we age, increasing the risk of progression to active TB (Caraux-Paz et al., 2021)
- Those 65 and older are more likely to have complex chronic health conditions which can increase the progression to active TB and can further complicate treatment (Caraux-Paz et al., 2021)
- Those who are 65 and older are more likely to live in congregate care settings or are planning to enter congregate care centers in the next few decades
- With patients older than age 65 having the lowest rate of treatment completion in Indiana, we must encourage testing and treatment in patients when clinically appropriate, by using the tools that we have as public health and healthcare professionals, to prevent outbreaks of tuberculosis

# Overview of LTCF Screening Regulation

- Upon admission to a long-term care facility (LTCF), in the state of Indiana, patients should be screened for TB with either an IGRA or TST (IDOH, 2023)
  - Patients with a recorded history of a positive screening test must be clinically evaluated for TB, but they do not need to engage in repeat testing (IDOH, 2023)
- The recommended method of screening test is based on the patient's individual risk factors (IDOH, 2023)



**Purpose: What Does  
LTBI Look Like in  
Indiana for those 65+?**



## Methods:

- **Data Source: All patients with LTBI reported to the Indiana Department of Health from Jan 2019 – Dec 2022 pulled from Indiana's NEDSS Base System (NBS)**
- **Variables analyzed were: Reported medication, reason medication was stopped, race, ethnicity, and congregate care status**



# Patients in Indiana, 65+, Diagnosed with LTBI by Race, 2019-2022

	Count of Persons with Reported LTBI	Percent Who Completed LTBI Treatment
Asian	35	45.7%
Black or African American	63	41.3%
White	149	40.9%
Multi-Race	30	33.3%
Unknown	21	14.3%
Other Race	34	5.9%
<b>Total</b>	<b>332</b>	<b>35.5%</b>

# Patients in Indiana, 65+, Diagnosed with LTBI by Ethnicity, 2019-2022

Ethnicity	Count of Persons with Reported LTBI	Percent Who Completed LTBI Treatment
Not Hispanic or Latino	229	40.1%
Hispanic or Latino	39	33.3%
Unknown	64	20.7%
<b>Total</b>	<b>332</b>	<b>35.5%</b>

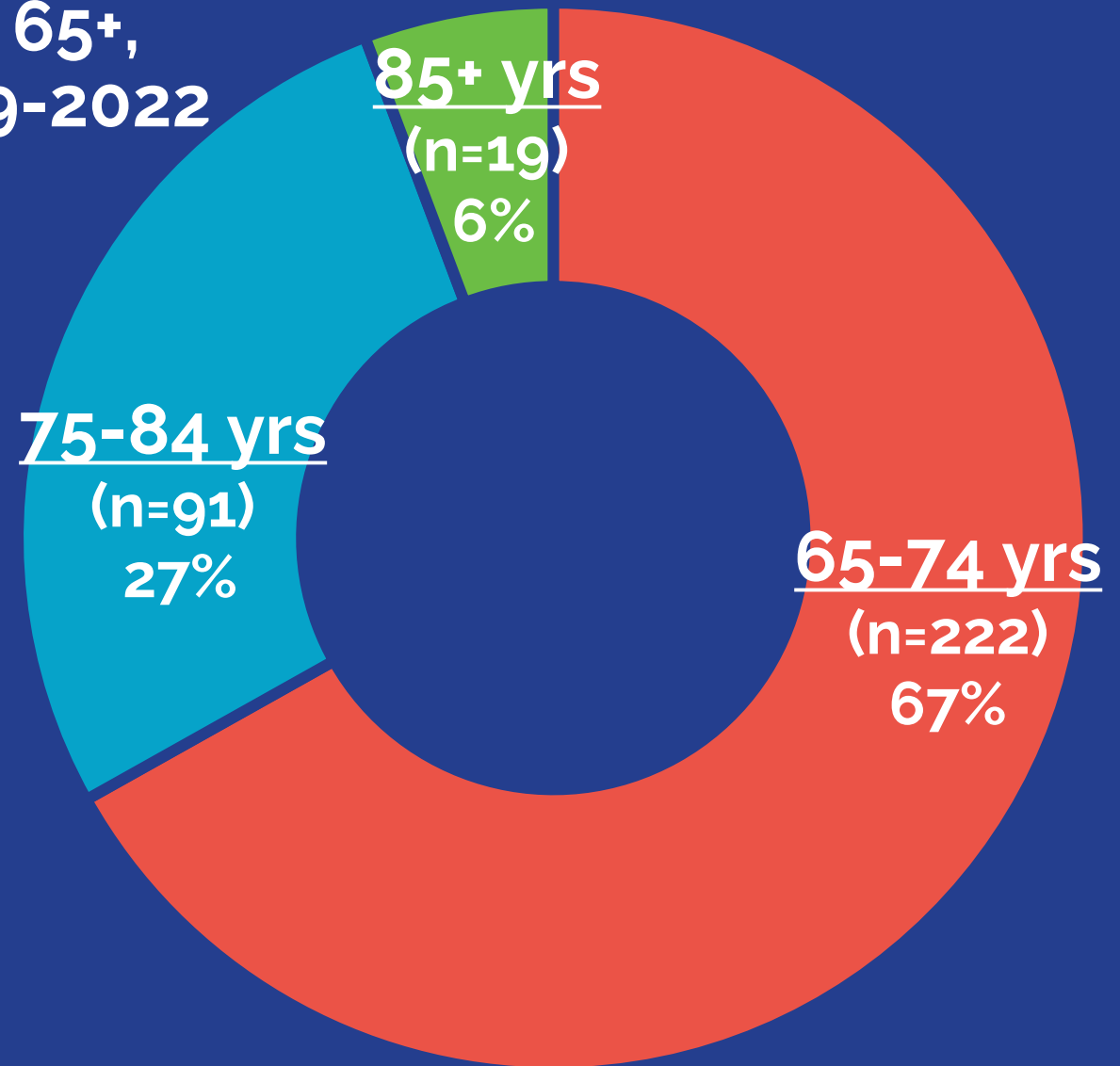


# Congregate Care Status of Patients, 65+, Diagnosed with LTBI in Indiana, 2019-2022

Resident of LTCF	Count of Persons with Reported LTBI	Percent Who Completed LTBI Treatment
No	214	48.6%
Yes	11	36.4%
Unknown	107	9.3%
<b>Total</b>	<b>332</b>	<b>35.5%</b>

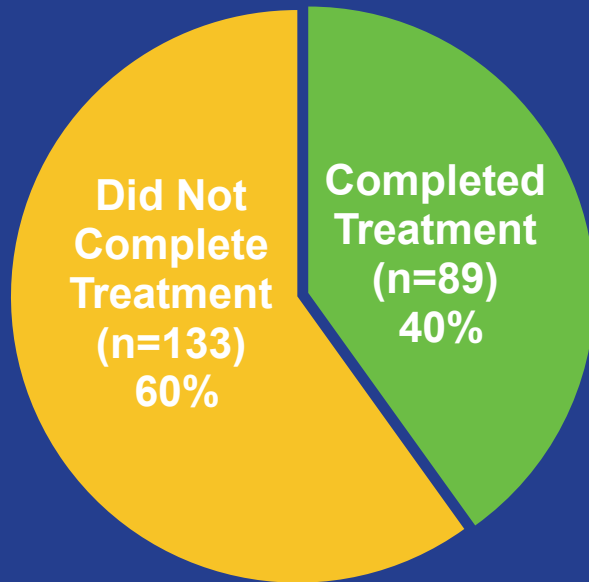
# Nine Year Age Groups for Patients, 65+, with Reported LTBI in Indiana, 2019-2022

**67% of reported  
LTBI cases were  
in the 65-74 age  
group**

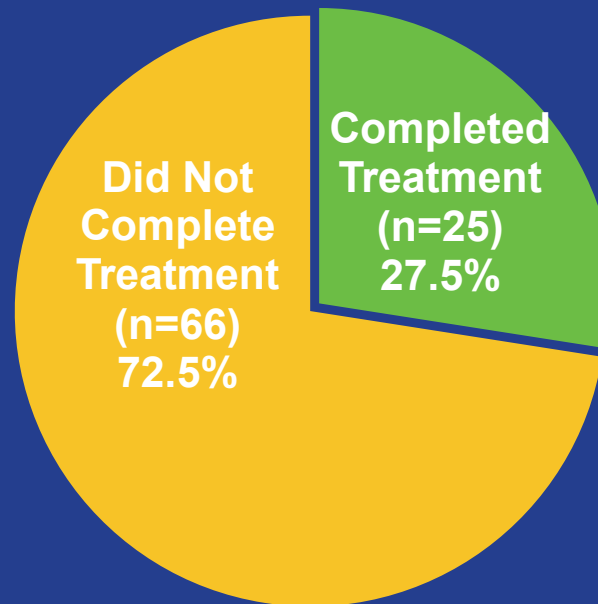


# Nine Year Age Groups for Patients, 65+, with Reported LTBI in Indiana, 2019-2022

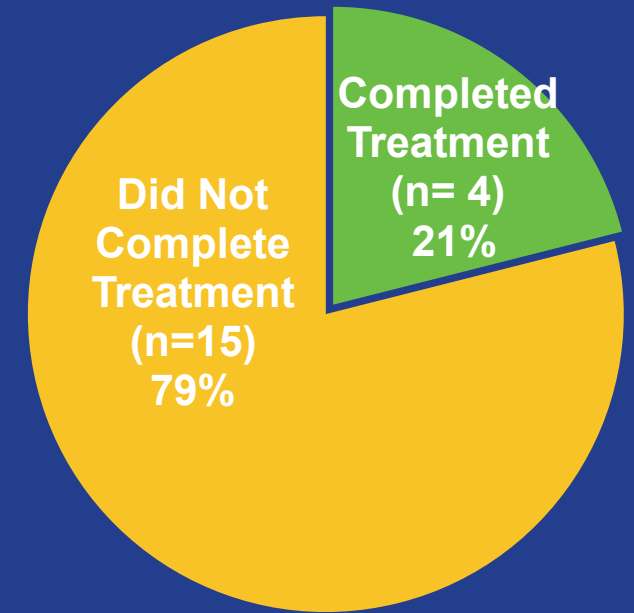
## 65-74 Years



## 75-84 Years



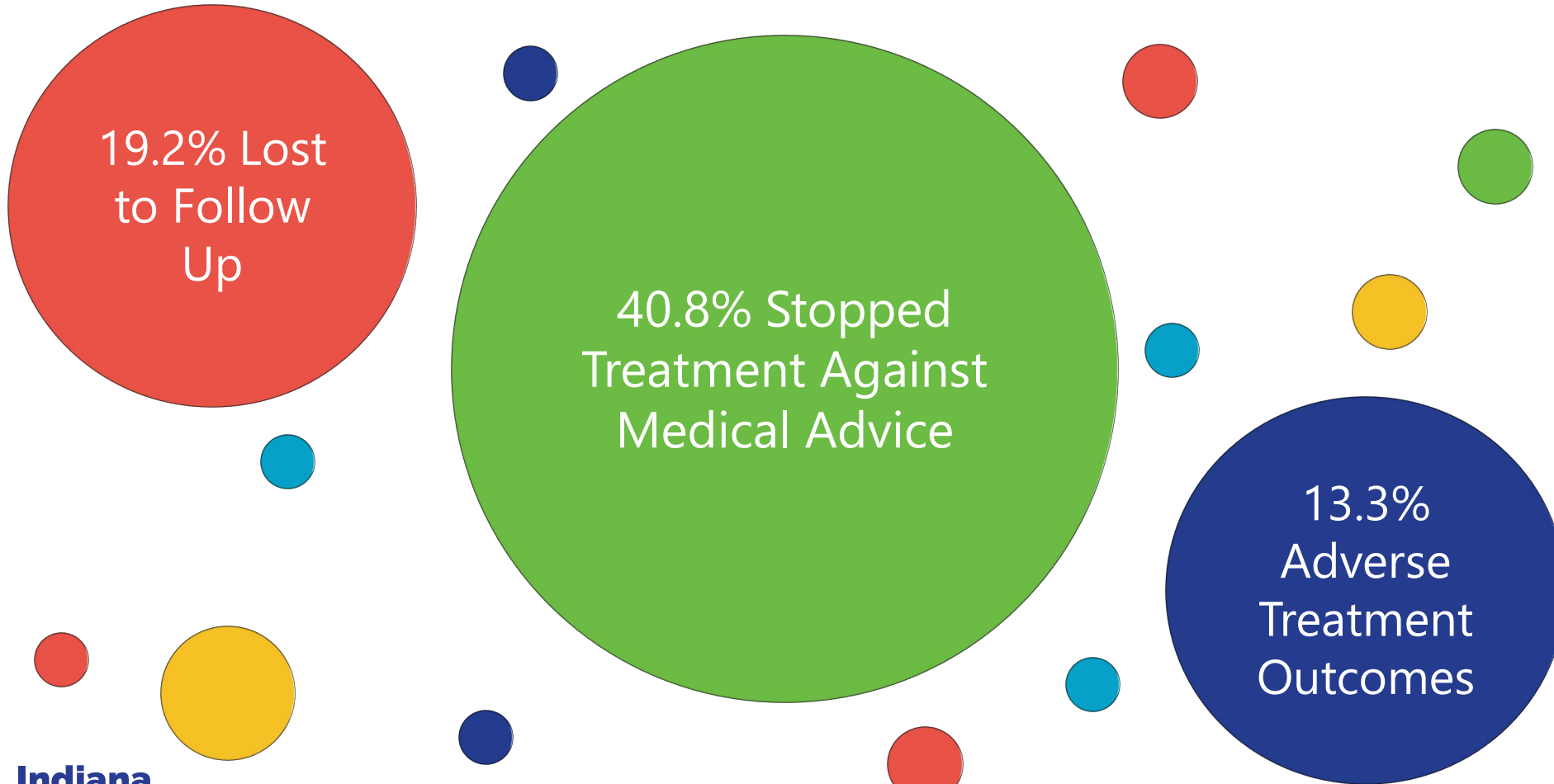
## 85 + Years



# Why Do Patients Not Complete Treatment?



# Reported Reasons Why Treatment Was Stopped Among Those 65+



# Limitations

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- LTBI is likely underreported in the state of Indiana
- The accuracy of reported treatment data cannot be confirmed
- LTBI treatment takes 3-9 months depending on the treatment regimen. After this length of time, providers may be less likely to report the outcome of treatment. This could potentially affect our reported treatment completion rates
- This data is provisional and there is a limited capacity for quality assurance efforts

**It is imperative that we work with older adults to engage them in LTBI treatment when clinically appropriate.**

**So, What Can We Do?**



# CDC Maximizing Adherence Fact Sheet

- Provides a patient centered approach to increasing LTBI Adherence (CDC, 2016)
- Works very well with Motivational Interviewing Strategies (**O**pen questioning, **A**ffirming, **R**eflecting, and **S**ummarizing)
- 3 Main Topics (CDC, 2016)
  - Communicating Value of LTBI Treatment
  - Identifying Barriers to Adherence
  - Strategies for Maximizing Adherence



## TB Elimination *Treatment of Latent Tuberculosis Infection: Maximizing Adherence*

### Introduction

Latent tuberculosis infection (LTBI) is the presence of *M. tuberculosis* organisms (tubercle bacilli) without symptoms or radiographic or bacteriologic evidence of TB disease. Approximately 90-95% of those infected are able to mount an immune response that halts the progression from LTBI to TB disease. However, because prevention of TB has major public health implications, the Centers for Disease Control and Prevention (CDC) and the United States Preventive Services Task Force (USPSTF) recommend testing populations that are at increased risk for TB infection and treating those for whom TB disease has been ruled out. Health care providers must communicate the risks and benefits of treatment to their patients and encourage adherence and treatment completion.

### Communicating the Value of Latent TB Infection Treatment

A patient's acceptance of LTBI treatment is often influenced by the initial approach of the health care provider. When discussing the risks and benefits of treatment it is important to explain that

- As long as TB germs are in the body, they can begin to multiply and cause disease

Certain groups such as the homeless, the elderly, substance abusers, the foreign-born, and migrant workers present unique challenges and have needs that require special consideration.

### Identifying Barriers to Adherence

Many variables affect a patient's adherence to the recommended treatment regimen, including

- Appointment hours that conflict with patient's schedule
- Misinformation about TB
- Health beliefs and practices
- Limited financial resources
- Co-existing medical conditions
- Medication side effects
- Language barriers
- Real or perceived stigma related to latent TB infection treatment

### Strategies for Maximizing Adherence

#### Collaboration with community agencies

Partner with local health departments and



# Communicating Value

- “Completing treatment for LTBI can reduce the risk of TB disease by 90%” (CDC, 2016)
- “TB infection is treated with one or two drugs, whereas TB initially requires four drugs” (CDC, 2016)
- While completing treatment for LTBI you do not have to isolate, so you can still see your kids and grandkids



# Barriers to Adherence

- Appointment conflicts (CDC, 2016)
- Misinformation about LTBI/TB treatment (CDC, 2016)
- Health Beliefs and Practices (CDC, 2016)
- Limited Financial Resources (CDC, 2016)
- Co-existing Medical Conditions (CDC, 2016)
- Medication Side Effects (CDC, 2016)
- Language Barriers (CDC, 2016)
- Real or Perceived Stigma (CDC, 2016)
- Access to Transportation
- Lack of a Support System
- Lack of Stable Address



# IDOH Resources

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- Treatment for LTBI is FREE through your local county health department
- The Indiana Department of Health is always willing to assist with education and barriers to treatment for patients
- The Indiana Department of Health can provide expert medical consultation for your patients

**Please contact your local health department or IDOH  
as you need access to these resources.**

# Conclusions

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- From Jan 2019 to Dec 2022, 49.6% of the LTBI patients (N = 3,760) reported to the Indiana Department of Health completed LTBI treatment, but only 35.5% of the reported LTBI patients who were 65 and older (n = 332) completed treatment
- Only 33.3% of patients who identified as Hispanic or Latino engaged in LTBI treatment, but 40.1% of patients who identified as Not Hispanic or Latino engaged in LTBI treatment
- As patients get older, findings show that they are less likely to engage in LTBI treatment. With only 40% of patients 65-74 completing LTBI treatment, it is important that we provide our older populations with the resources that they need to complete treatment

# Questions?

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# References

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