![Georgia Department of Public Health - North Central Health District](logo)

Data Requested by Amber Erickson, Epidemiologist, North Central Health District

Latent Tuberculosis Infections, 2011-2014

North Central Health District

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Contents

Background

Tuberculosis

Tuberculosis (TB) is a disease caused by *Mycobacterium tuberculosis*. The bacterium normally affects the lungs; however, other parts of the body may also be attacked, including the kidneys, spine, and brain. If not treated, tuberculosis may be fatal. The disease is spread through droplets in the air when a person coughs, sneezes, speaks, or sings. People nearby may breathe in the bacteria and can become infected. Symptoms of TB include a bad cough persisting for longer than 3 weeks, chest pain, coughing up blood or sputum, weakness, weight loss, loss of appetite, chills, fever, and night sweats. Treatment is a regimen of drugs to be taken for 6-9 months. It is important to take the medication as prescribed to prevent relapse as well as antibiotic resistance.
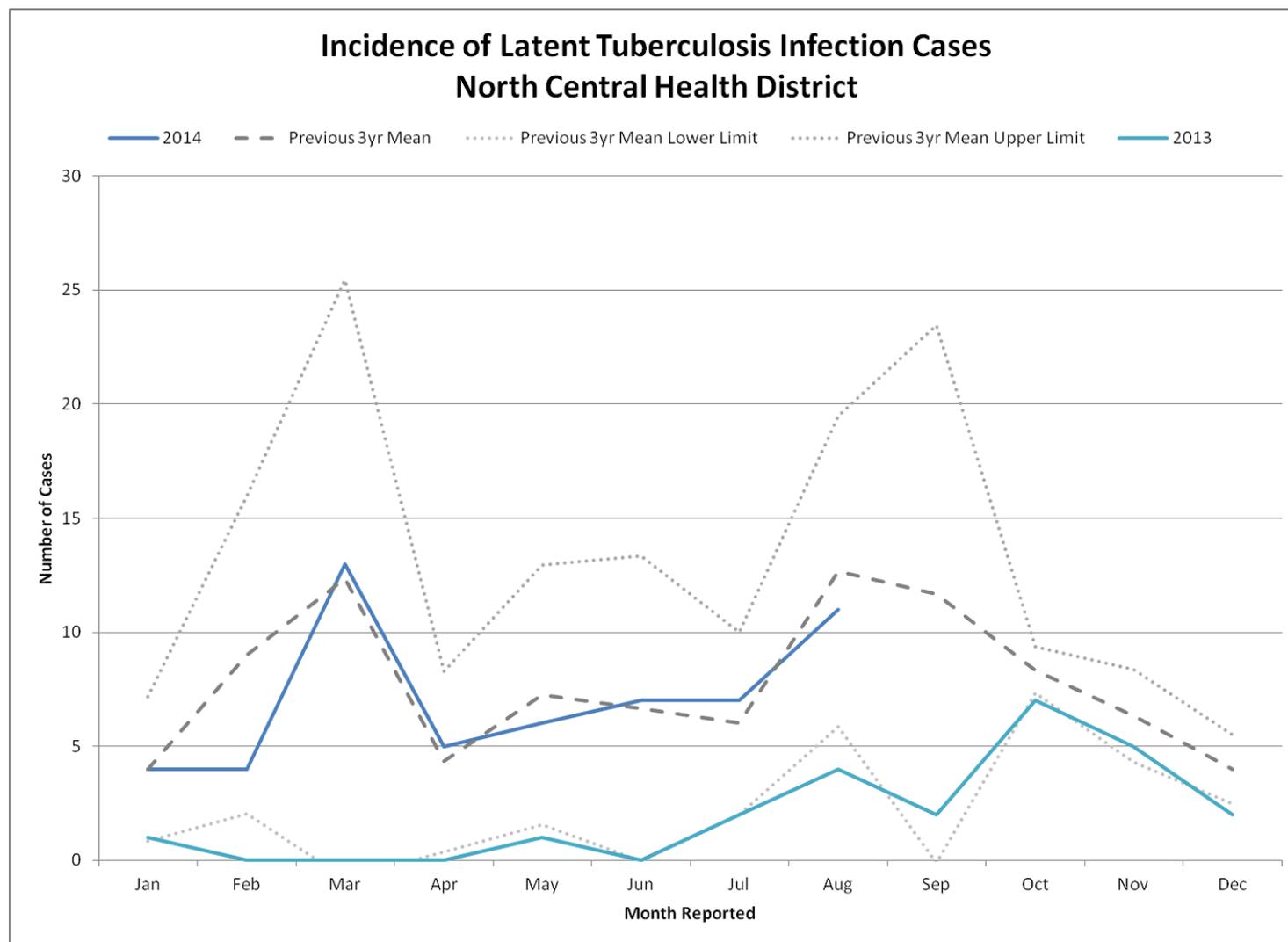
Latent Tuberculosis

Not everyone who is infected with *Mycobacterium tuberculosis* gets sick. Therefore, there are two types of tuberculosis (TB) infection - latent TB infection and TB disease. Latent TB infection (LTBI) occurs when a person breathes in tuberculosis bacteria, but the body is able to fight it and stop it from growing. The person will have no symptoms and will not feel sick. People with LTBI cannot spread the disease to other; however, if the bacteria ever become active, they will multiply and cause TB disease.

Methods

The data presented in this summary has been gathered by the North Central Health District Pharmacy and Tuberculosis Programs. Population statistics were retrieved from the Online Analytical Statistical Information System. Data was analyzed using EPI Info, Microsoft Access, and Microsoft Excel. The database was created in EPI Info from TB reporting forms. The database was transcribed into Access for tracking purposes, and Excel was used to group, stratify, and create graphs illustrating the data trends. 2014 data was pulled at mid year and only reflect information from January through August.

Survey of Latent Tuberculosis Infection

Incidence of Latent Tuberculosis Infection Cases
North Central Health District

Legend: 2014 — Previous 3yr Mean ⋯ Previous 3yr Mean Lower Limit ⋯ Previous 3yr Mean Upper Limit — 2013

Y-axis: Number of Cases (0–30)
X-axis: Month Reported (Jan–Dec)

The incidence of LTBI cases within the North Central Health District is 4.55 for 2013 and 10.82 for 2014*. The number of cases for 2014 has significantly increased compared to those documented in 2013.

Figure 1. Source: SendSS

* Incidence shown is per 100,000 residents

Age Distribution of Latent Tuberculosis Infection Cases
North Central Health District

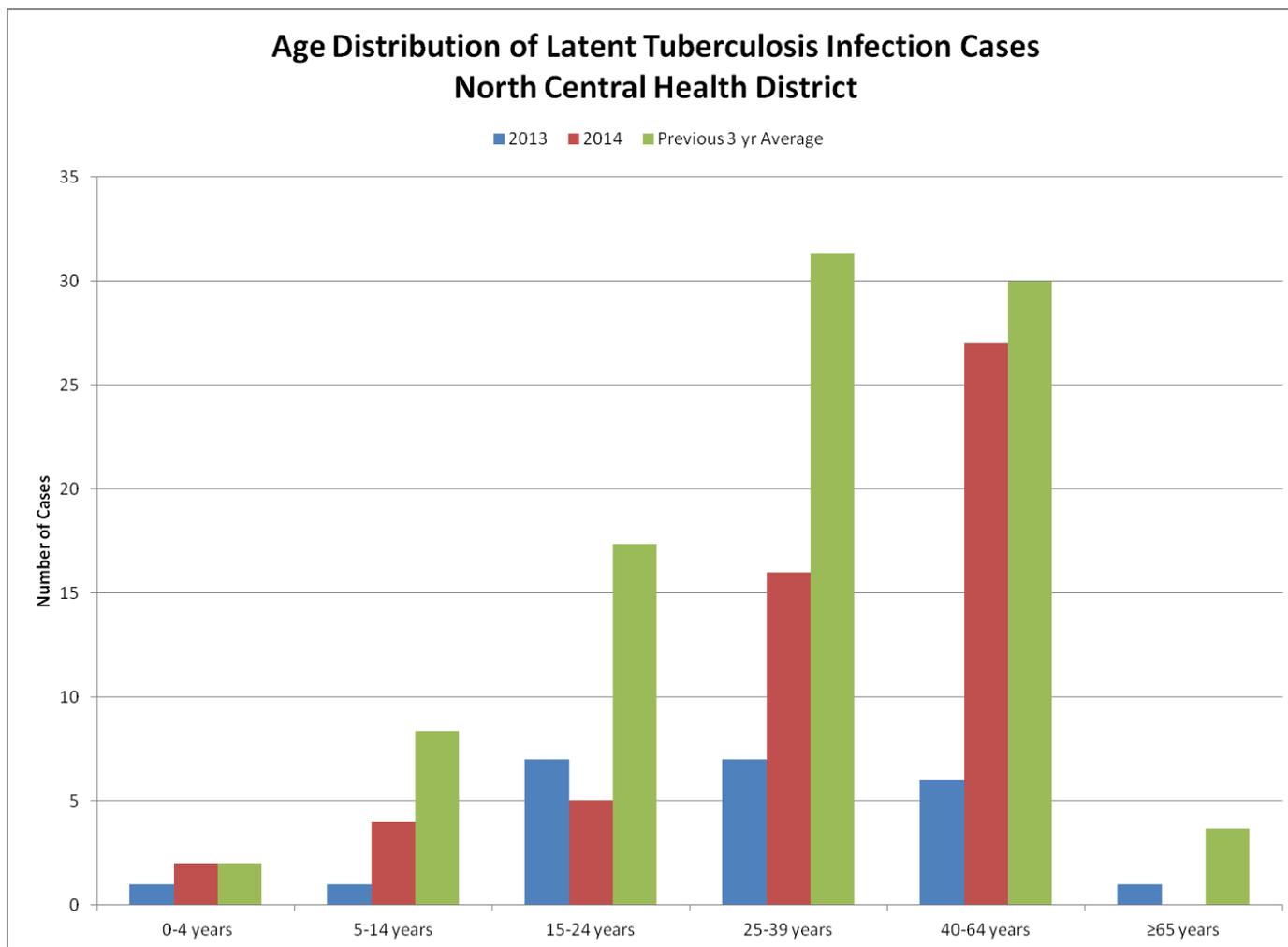■ 2013   ■ 2014   ■ Previous 3 yr Average

Figure 2. Source: SendSS

The chart above displays the age groups affected by LTBI. Most cases occur in the age groups of 25-39 and 40-64 years old. In 2014, a decrease of 48.4% from the 3 year average was seen in the age group of 25-39. Unfortunately, the age group of 25-39 has seen a 128.6% increase in the number of cases from 2013 to 2014. There was a 350% increase in the 40-64 group from 2013-2014. The age group of 15-24 also had a 70.6% decrease from the 3 year average in 2014.

County Distribution of Latent Tuberculosis Cases
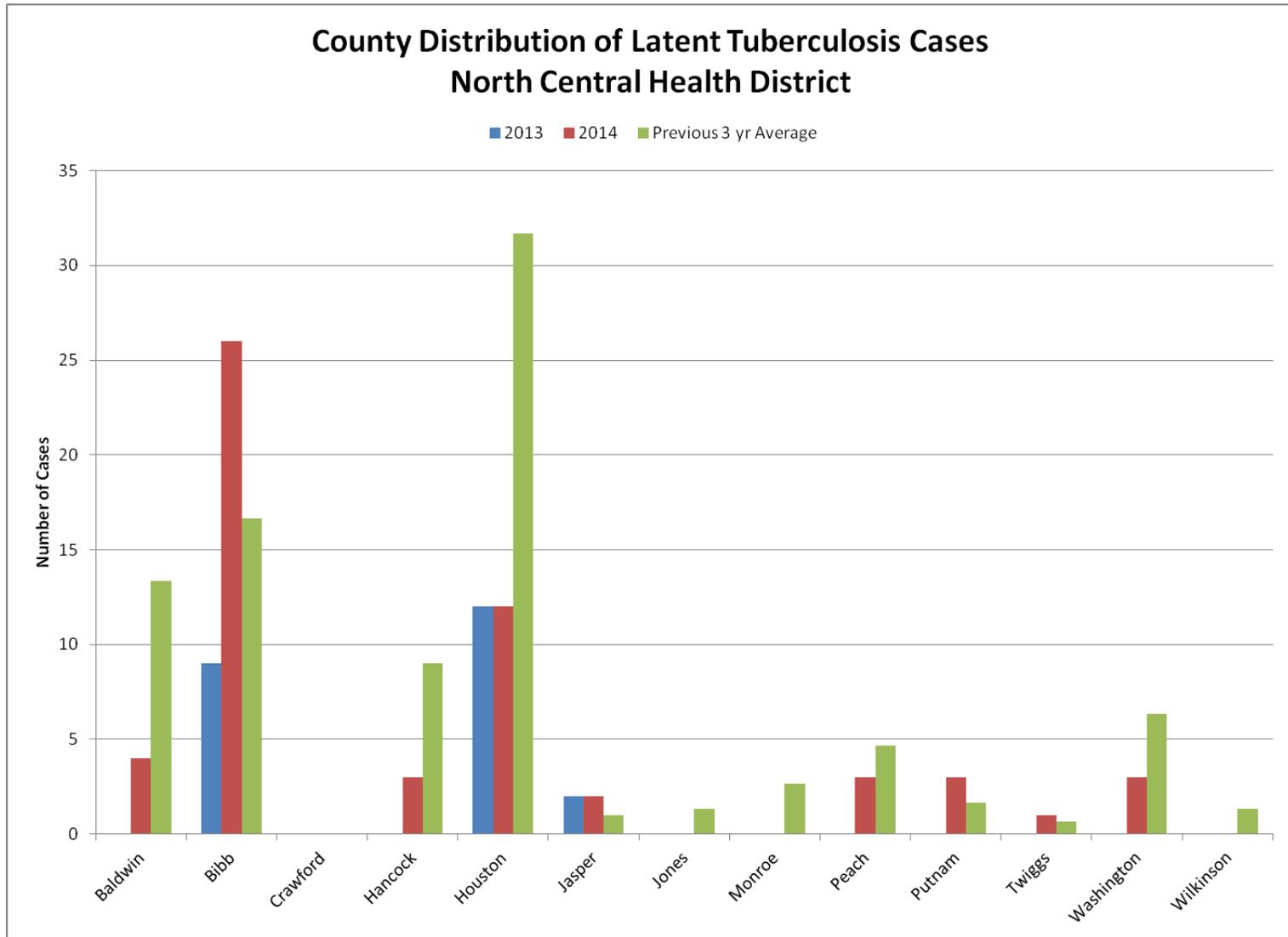## North Central Health District

Figure 3. Source: SendSS

The chart above shows the county distribution of latent TB cases in the North Central Health District. The counties most affected by latent TB infection are Bibb and Houston. Although the 3 year average for Houston County was twice that of Bibb's, Bibb County has a higher incidence rate in 2014 than Houston County.

Conclusion

Although some age groups have seen significant improvements in incidence of LTBI, the incidence rate in Bibb County in 2014 has increased 56% from the previous 3 year average. Therefore, screening and TB prevention efforts need to continue in the district, and special attention must be given to Bibb County due to its dramatic increase in latent TB incidence.

References:

Center for Disease Control and Prevention (2014). *Tuberculosis (TB)*. Retrieved from http://www.cdc.gov/TB/TOPIC/basics/default.htm

OASIS. (2014). *Population web query*. Retrieved from http://oasis.state.ga.us/oasis/oasis/qryPopulation.aspx