**Epidemiologic Analysis of Latent Tuberculosis Infection in Maine: An Opportunity to Strengthen Cultural and Linguistic Awareness**

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**BACKGROUND**

- Tuberculosis (TB) is caused by the bacteria *Mycobacterium tuberculosis*.
- Persons with latent TB infection (LTBI) are infected with *M. tuberculosis*, but do not have active TB disease and are not symptomatic.
- Without treatment, \(^*\) 5 to 10% of persons with LTBI will develop active disease at some time in their lives\(^1\).
- LTBI is not a reportable condition in Maine.
- Providers are encouraged to refer LTBI cases so treatment can be covered and high-risk individuals can receive Public Health Nursing services.

**Maine Snapshot**

- Low active-TB incidence state.
- Relatively homogenous population.
- Low numbers of racial and ethnic minorities.
- Highest percentage of non-Hispanic White residents in the US.
- Older population with a large number of baby boomers and relatively few children.
- Oldest median age in the US - 42.7 years in 2010.
- Population growth is projected to come from migration from other states and abroad\(^2\).
- Will influence the growing percentage of non-White residents.

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**RESULTS**

- A total of 483 cases of LTBI were captured in 2013, compared to 398 in 2012.
- The most common age group is 25-44 at 46%, followed by 15-24 at 20.5%.
- Figure 2 and Table 1 indicate the TB Program serves a significantly more diverse population of individuals with LTBI than makes up the general population of Maine.
- 23 different languages and 68 countries (excluding the US) are represented.

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**METHODS**

- All cases of LTBI are reported by a provider through a referral form to TB Control.
- Basic investigative data and medication information are recorded, including:
  - Basic demographic information.
  - Applicable risk factors.
  - Prescribed treatment regimen.
- Results from applicable TB diagnostics, chest x-rays, and liver function tests.
- The TB Control Program expanded surveillance and began documenting complete LTBI reports in Maine’s electronic surveillance NEDSS Base System (NBS) in January 2012.
- SAS 9.3 was used for descriptive analysis of Maine’s LTBI data for years 2012-2013.

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**CONCLUSIONS**

- The country of birth and language results highlight a need for a more culturally competent response to tuberculosis prevention, such as:
  - Target and create appropriate educational materials.
  - Increase provider understanding of core cultural values.
  - As more data is collected in the Maine NBS, it will be possible to better characterize the burden of LTBI in Maine.
  - Additional opportunities to explore associations in the data include:
    - If there is a correlation between languages spoken and treatment completion.
    - Whether a certain treatment regimen is associated with higher completion rates (i.e. INH vs. Rifampin).

**LIMITATIONS**

- Data collected is limited to reports submitted by providers since it is not a reportable condition.
- Populations who do not undergo TB testing may be overlooked (testing is generally targeted to high risk populations and special situations including contact investigations, employee screenings, and all primary referees).

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**SOURCES**


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**MAP**

- Figure 2. Countries of Birth of Reported LTBI Cases – Maine, 2012-2013
- Top 5 Countries\(^*\)

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**TABLES**

- Table 1. Languages of Reported LTBI Cases – Maine, 2012-2013

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**CHARTS**

- Figure 3. Annual Number of Cases of LTBI and Percent Foreign-born – Maine, 2008-2013
- = Reported country of birth for LTBI in Maine