



Tuberculosis Control Program Annual Report 2009



**HAMILTON COUNTY
PUBLIC HEALTH**

PREVENT. PROMOTE. PROTECT.

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Program Overview

Hamilton County Public Health, Division of Disease Prevention, includes the TB Control and the Communicable Disease programs. The Hamilton County TB Control Program provides comprehensive services for the identification, treatment, control, reporting and elimination of TB in Hamilton County. The program serves all persons who live or work in Hamilton County.

Although fees are charged for screening those who are at low risk for TB disease (individuals who seek TB screening to fulfill employment or training requirements); services are free to anyone who is at risk for or has experienced TB exposure, infection or disease. In addition to medical, nursing, pharmaceutical and radiology services; directly observed therapy is administered. During directly observed therapy a nurse visits a patient's home or work daily to provide TB medications. This may also be to all suspect and confirmed TB cases for the duration of their prescribed treatment, typically for two to twelve months.

Hamilton County's TB clinic is equipped with a specialized HVAC system to ensure negative pressure in all clinical areas in order to protect staff and patients. The facility has a complete air exchange rate of 8 to 14 times per hour meeting OSHA standards.

History of TB in Hamilton County

In 1897, TB replaced smallpox as the leading cause of death in Hamilton County and Cincinnati. The 53 acre farm in Price Hill that had housed the smallpox hospital was remodeled and re-opened as the first municipally-owned tuberculosis hospital in the U.S. At that time, the annual TB mortality rate in Cincinnati was 350 cases per 100,000 population. Treatment consisted of prolonged bed rest, fresh air, sunshine and good nutrition. By 1951, after the introduction of streptomycin, the mortality rate had decreased to 30 per 100,000 population. As multi-drug treatments for TB were introduced, the mortality rate dropped precipitously. Dunham Hospital was closed in 1971 and the Hamilton County TB Control Program was created.

TB Incidence Today

Today, the U.S. has a TB mortality rate of 0.27 per 100,000, but many challenges remain. More than 20 countries still report mortality rates that exceed 20 per 100,000 population. TB is the leading cause of death among persons co-infected with HIV. Additionally, the emerging threat of drug-resistant TB strains is a growing concern worldwide.

Ohio is categorized as a “low-incidence state” and TB incidence (as the number of cases per 100,000 population) rather than mortality is reported. With the exception of 2008, for the last five years the TB incidence rate in Hamilton County exceeded the TB incidence rate for Ohio (**Table 1**). Local efforts and services are directed toward a continued reduction in the rate of TB in Hamilton County.

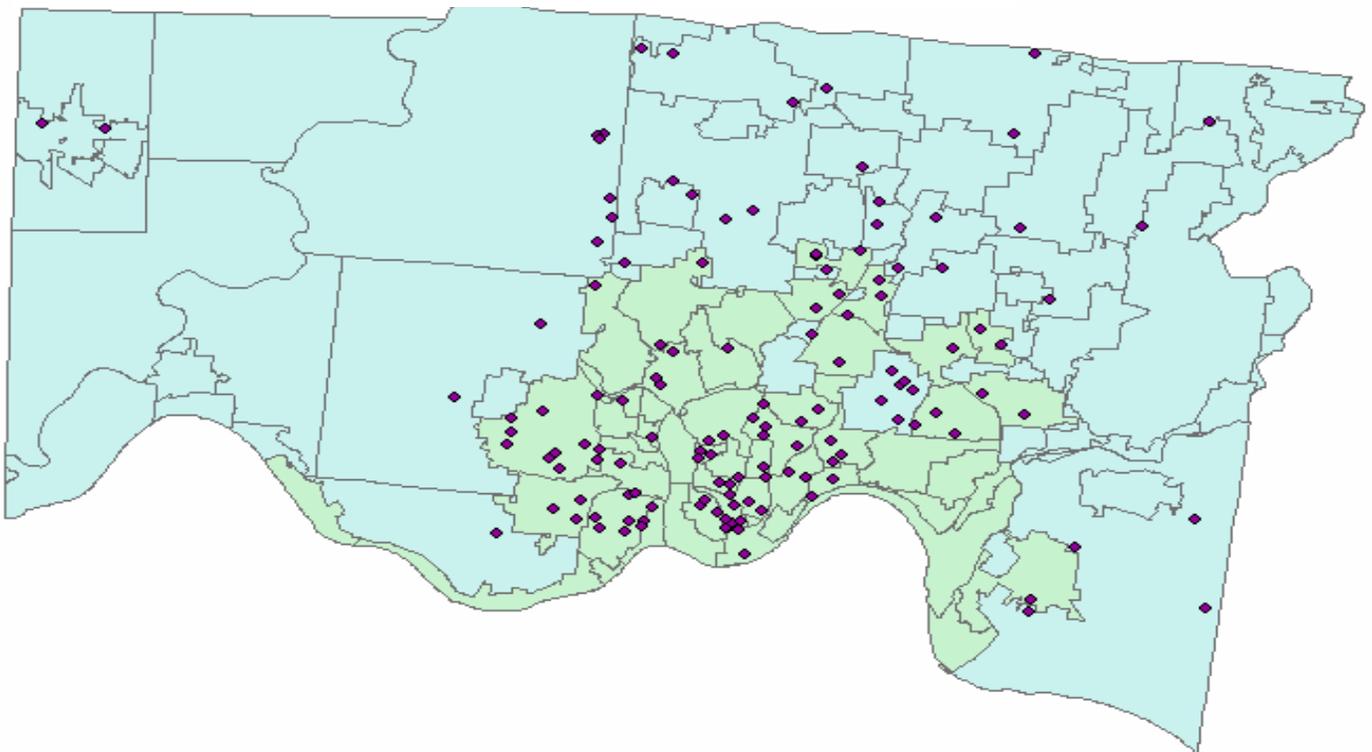
Table 1. TB Incidence and Rate per 100,000 in Hamilton County, Ohio, United States 2004 - 2009

Year	Hamilton County	Hamilton County per 100,000	Ohio	Ohio per 100,000	US	US per 100,000
2004	32	3.6	219	1.9	14,501	4.95
2005	29	3.2	260	2.3	14,065	4.75
2006	29	2.7	239	2.1	13,754	4.60
2007	25	2.9	252	2.2	13,299	4.41
2008	15	1.6	213	1.9	12,904	4.2
2009	24	2.4	180	1.6	*	*

* Figures unavailable

Figure 1 demonstrates that tuberculosis continues to afflict Hamilton County residents and diligence is still necessary. Improvements to the programmatic efforts that have historically enabled Hamilton County to meet or exceed state and national TB control objectives are expected to continue.

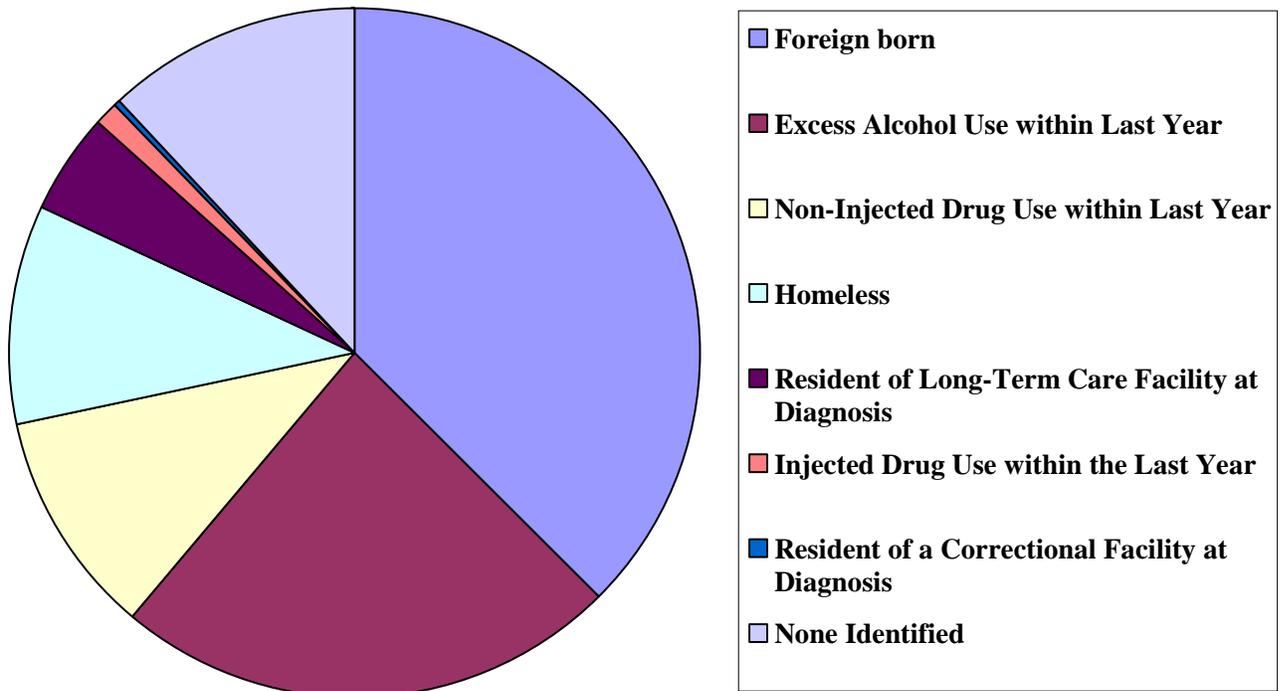
Figure 1. Distribution of Hamilton County TB Cases 2004 - 2009



High Risk Populations

In Hamilton County, screening efforts are focused on populations with identified risk factors for exposure to TB. **Figure 2** shows risk factors identified among the 154 TB cases reported in Hamilton County from 2004 to 2009.

Figure 2. Residential and Behavioral Risk Factors of TB cases



Hamilton County provides TB screening for all refugees and asylees from countries with high TB mortality rates. Limited English proficiency is a barrier to providing the necessary medical treatment. Three private agencies assist by providing translation services both in the clinic and in the community. On-site interpreters are scheduled in advance for all patients who are scheduled to see the physicians. Telephonic interpreters are utilized for community-based services and for walk-in patients. During 2009, the TB program provided more than 550 hours of on-site interpreters and nearly 75 hours of telephonic interpreter services in at least eleven languages.

An active outreach program coordinates with agencies that serve high-risk populations; such as those who are foreign-born, homeless or those with a history of substance abuse. Hamilton County's TB program provides on-site screening and consultation to correctional facilities and other congregate settings. Technical assistance and consultation is also available to schools, agencies and businesses regarding TB testing and screening recommendations.