



CDInfo



Richard M. Daley, Mayor

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Terry Mason, MD, FACS, Commissioner

www.cityofchicago.org/health/

West Side Center
For Disease Control
2160 West Ogden Avenue
Chicago, IL 60612

Communicable
Disease Program
312-746-5387
312-743-1059 FAX

Immunization Program
312-746-5380
312-746-6144 FAX

Tuberculosis Program
312-746-5983
312-746-5134 FAX

CDInfo is a surveillance newsletter intended to promote prevention of morbidity and mortality by providing useful data and practical recommendations for clinicians, laboratorians and infection control personnel who diagnose, treat and/or report infectious diseases in Chicago.

Tuberculosis incidence in Chicago reaches new low

Cases decrease among U.S.-born non-Hispanic blacks, but disparities remain

The 214 incident Tuberculosis (TB) cases that were reported in Chicago in 2008 represent an all-time low. Annual incidence rates have declined by 74% from nearly 29 per 100,000 city residents in 1993 to just over 7 per 100,000 in 2008 (figure 1).

Although the reasons for the decrease are multi-factorial, TB control innovations first implemented nationally and locally in the 1990s are often cited. These practices include the creation of a team of health care providers and support staff focused on the control of TB; nurse case management, an approach in which each patient with active TB and each person who has been in contact with and infected by a person known to have TB is followed by a nurse case manager whose job is to help overcome barriers that prevent administration of a full course of appropriate therapy; and Directly Observed Therapy (DOT) – the observation by a health care worker of the ingestion of each dose of medication.

The decreasing TB incidence rates observed locally in the past five years have not occurred across all population groups. While rates among the U.S.-

born population declined by half from 2004 to 2008 (from approximately 9 per 100,000 city residents to 4), the rate among foreign born residents has remained statistically stable at 16-18 per 100,000 over the same span ($p=0.59$). Molecular studies of TB in the United States suggest that TB among foreign-born persons typically occurs because of activation of latent TB infection (LTBI), for which infection was likely acquired before US arrival. To help address this, CDC issued revised technical instructions for TB screening and treatment among persons applying for immigration to the United States, which now includes more intensive TB

diagnostics and full treatment of active TB before emigration. In addition, CDC continues to work with international partners, including the Stop TB Partnership, to strengthen TB control in countries with high TB incidence.

Racial disparities in TB incidence have long been a problem throughout the U.S., but are improving. In 2003, the TB incidence rate among black Chicago residents was 16 per 100,000 as compared to almost 2 per 100,000 among non-Hispanic white Chicago residents. At that time, the Chicago Department of Public Health (CDPH) TB Control Program set a goal of reducing the TB incidence rate in U.S.-born non-Hispanic blacks to 12 per 100,000 city residents by 2009 (a 25% decrease in the incidence rate). This target was met in 2006, and the incidence rate among U.S.-born non-Hispanic blacks has continued a statistically significant decline from 14 to 7 per 100,000 between 2004 and 2008 ($p=0.04$, figure 2). The rate for U.S.-born Hispanics declined during this period, though less dramatically (8 to 2 per 100,000, $p=0.17$) and other U.S.-born racial-ethnic groups' rates have not changed substantially. However, despite declines in incidence rates, non-Hispanic blacks still comprise the largest proportion (74%) of the U.S.-born TB cases among Chicago residents; the 2008 incidence rate of 7 per 100,000 is about 3.5 times the rate for non-Hispanic U.S.-born whites.

Despite the availability of highly effective treatment and prevention measures that have led to declines in the disease incidence, TB continues to be a significant public health problem in Chicago. Incidence rates in Chicago remain about twice as high as rates reported in Illinois and the United States as a whole, and CDPH still devotes significant resources to providing clinical care, nurse case management, and DOT services to City residents.

For additional information regarding the TB trends in Chicago, please refer to the Annual Morbidity Reports. The report can be accessed via the web by visiting www.cityofchicago.org/health. Click **Infectious Disease**, click **Tuberculosis (TB)**, then click **Tuberculosis Morbidity Reports**.

FIGURE 1. Incidence Rate of Tuberculosis Cases: Chicago, 1993-2008

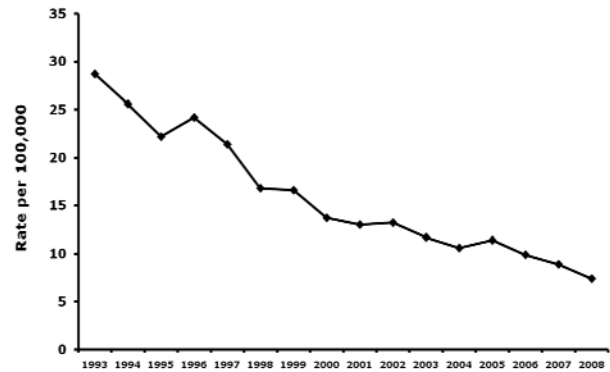


FIGURE 2. Trends in Tuberculosis Case Rates in U.S.-Born Persons and Foreign-Born Persons: Chicago, 2004-2008

