

Tuberculosis Epidemiology

Bob Martinez, MPH
Communicable Disease Manager
Health Service Region 1

TB Updates for the Community: Partnering to Eliminate TB July 21, 2009

Learning Objectives

- Tuberculosis (TB) Epidemiology
- TB in the World
- TB in the United States
- TB in Texas and Region 1

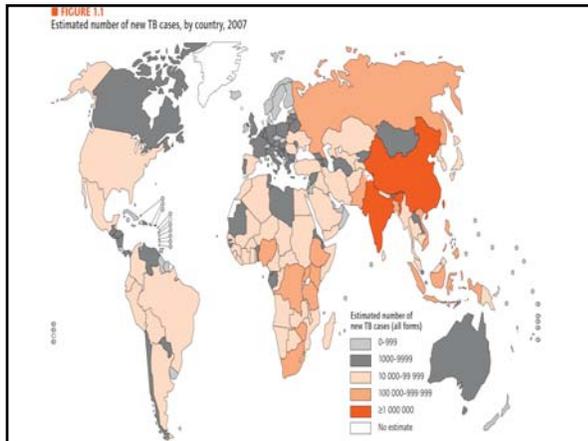
World Tuberculosis

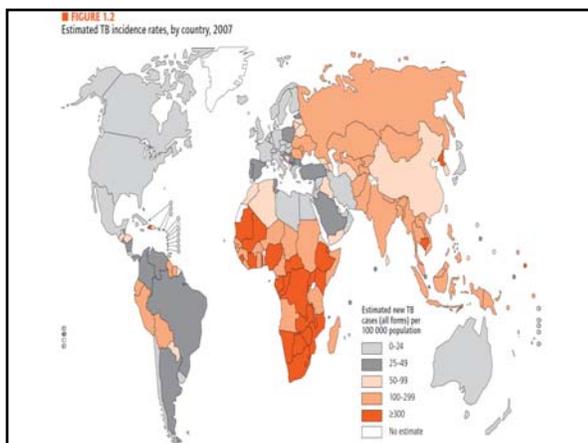
- One third of the world's population infected with TB
- Each year, over 9 million people around the world become sick with TB
- There are 2 million TB related deaths worldwide each year
- TB is a leading killer of HIV infected people

World TB Epidemiology

■ WHO, Estimate 9.27 million new cases of TB 2007

Country	Cases X 1000
India	1962
China	1306
Indonesia	528
Nigeria	460
South Africa	461

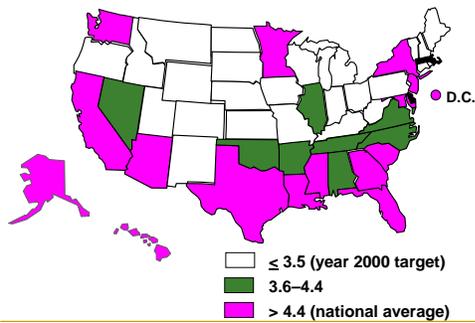




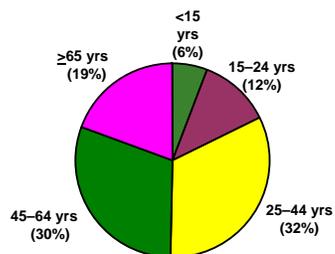
Tuberculosis in the United States

- In the United States 13,299 TB cases reported.
- The number of TB cases decreased from 15,056 in 2002 to 13,299 in 2007.
- The TB rate declined from 5.2 in 2002 to 4.4 in 2007.

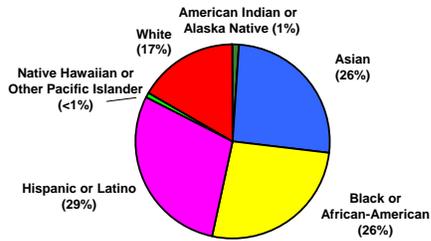
TB Case Rates,* United States, 2007



Reported TB Cases by Age Group, United States, 2007

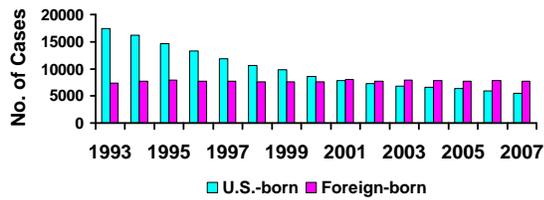


Reported TB Cases by Race/Ethnicity*
United States, 2007



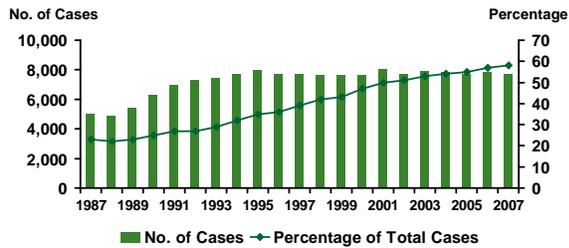
*All races are non-Hispanic. Persons reporting two or more races accounted for less than 1% of all cases.

Number of TB Cases in
U.S.-born vs. Foreign-born Persons
United States, 1993–2007*



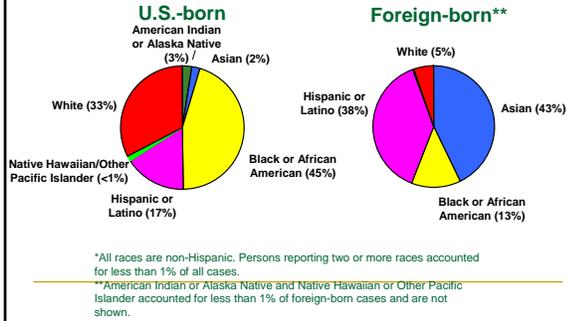
*Updated as of April 23, 2008.

Trends in TB Cases in Foreign-born Persons,
United States, 1987–2007*



*Updated as of April 23, 2008.

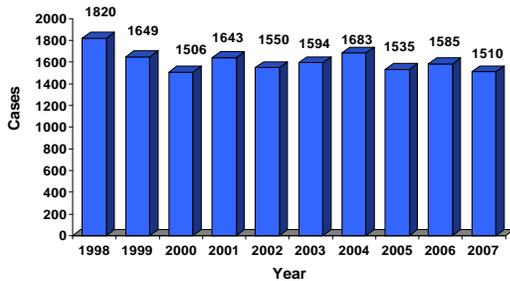
Reported TB Cases by Origin and Race/Ethnicity,* United States, 2007



Tuberculosis in Texas

- In 2007, 1510 TB cases reported in Texas
- Ranked 2nd in the US
- Texas had a 3.3% increase in the number of cases
- The majority of TB cases (67%) come from the 10 counties with the largest urban areas

Number of TB Cases Texas 1998-2007



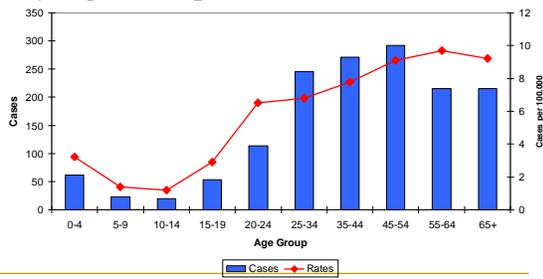
There was a 4.7% decrease in the number of cases from 2006 to 2007.



Top 10 Counties for Cases, 2007

- Harris 397
- Dallas 219
- Tarrant 106
- Hidalgo 76
- Cameron 74
- Bexar 72
- Travis 55
- El Paso 40
- Webb 40
- Fort Bend 40
- Total 1119 (74.1%)

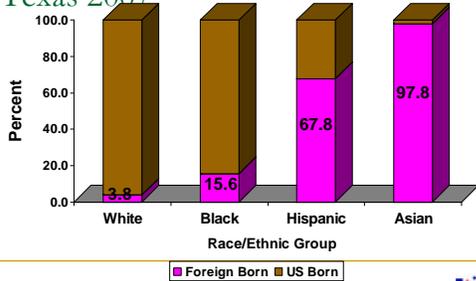
Tuberculosis Cases and Rates by Age Group, Texas 2007



Predominant Site of TB Disease, 2007

- Pulmonary – 1238 (82%)
- Lymphatic – 87 (5.8%)
- Pleural – 47 (3.1%)
- Miliary – 42 (2.8%)
- Bone & Joint – 28 (1.9%)
- Meningeal – 19 (1.3%)
- Genitourinary- 12 (0.8%)
- Peritoneal – 11 (0.7%)
- Other – 26 (1.7%)

Percent of TB Cases in Each Race/Ethnic Group by Origin, Texas 2007



Affected Populations

- Male or Female?
Males 66% of cases
- Age group?
Majority 25-54 years of age
- Race/Ethnic Group?
Minorities
Hispanic largest percent of cases (48%)
Highest rate- Others (23.5), followed by Black (11.8), Hispanic (8.3)

What Are the Most Common Risk Factors?

- Foreign birth (51%)
- Low Income (45%)
- Diabetes (17%)
- Alcohol abuse (12%)
- Prison/Jail Inmate (9%)
- HIV/AIDS (8%)

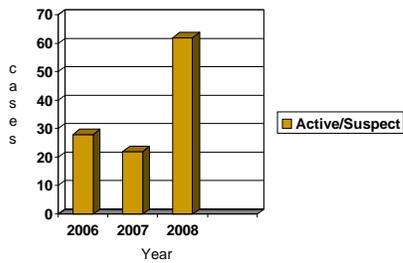
**Risk Factors will vary by region:

- HIV/AIDS more common in larger urban areas
- Diabetes more common along border

Region 1

- Health Service Region 1 serves 41 counties, within 41,000 square mile area in the Panhandle and South Plains.
- The majority of the region is rural and frontier.
- Large number of migrant/seasonal workers from Mexico and the Valley.
- An increase in the number of refugees from Southern Asia and Africa.

Active/Suspect TB in Region 1



Socioeconomic Characteristics of TB in Region 1

- Poverty and unemployment
- Homelessness
- Resident of long-term care facility
- Incarceration
- Alcoholism and drug abuse
- Resident in a correctional facility
- HIV co-infection
- Refugee

Conclusion

- Region 1 has a lower TB rate than the other areas of Texas.
- We face our own challenges of being a rural and frontier area

Acknowledgments

- Thank Dr. Gary Woo for use of this presentation.
