

# Tuberculosis Epidemiology

Global, USA and Michigan

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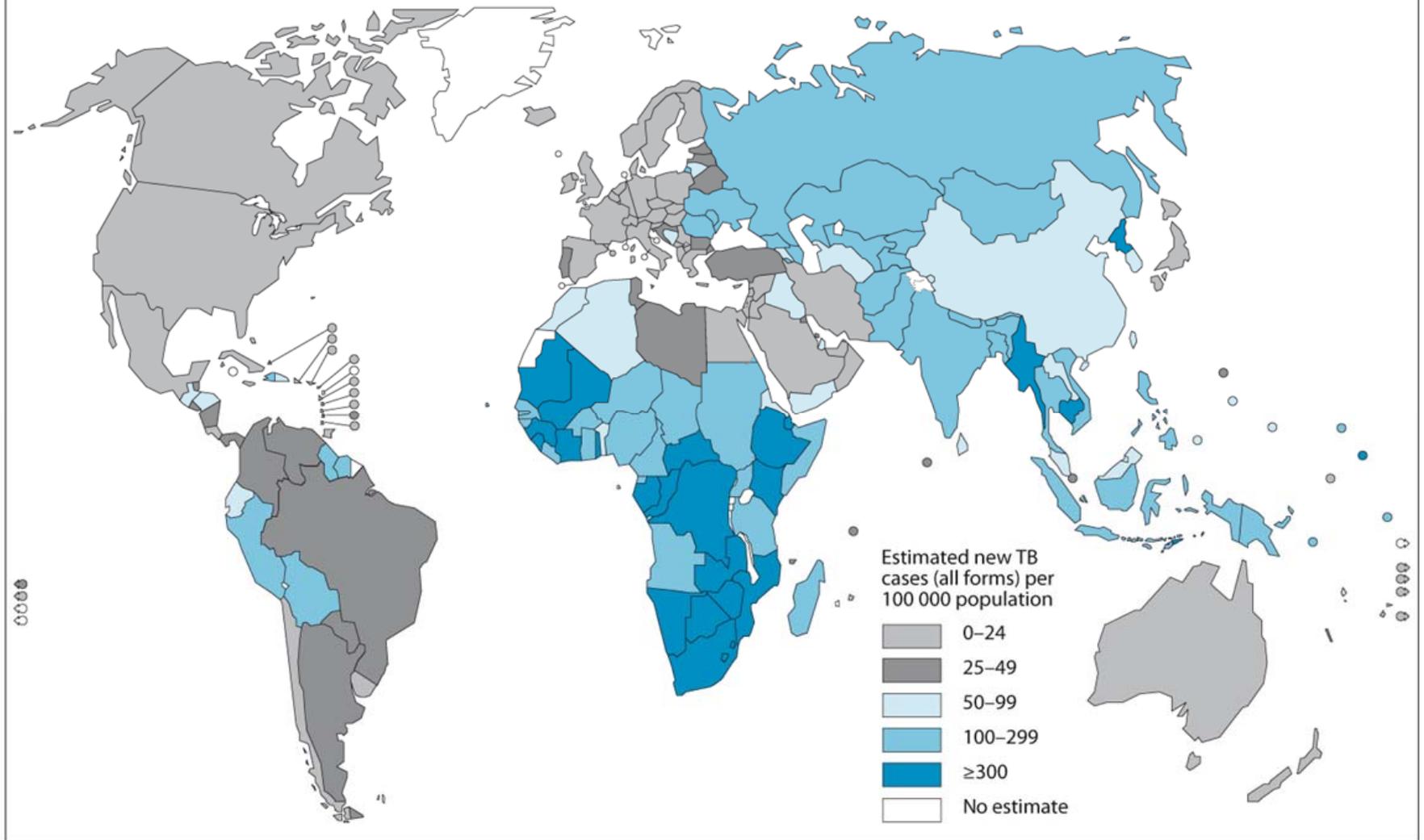
# TB around the World (2009)

- **There were 9.4 million new TB cases, including 1.1 million cases among people with HIV**
- **1.7 million people died from TB, including 380,000 people with HIV, equal to 4700 deaths a day**

# TB around the World

- **The estimated global incidence rate fell to 137 cases per 100,000 population in 2009, after peaking in 2004 at 142 cases per 100,000.**
- **Globally, the percentage of people successfully treated reached the highest level at 86% in 2008**

## Estimated TB incidence rates, by country, 2009



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Source: *Global Tuberculosis Control 2010*. WHO, 2010.

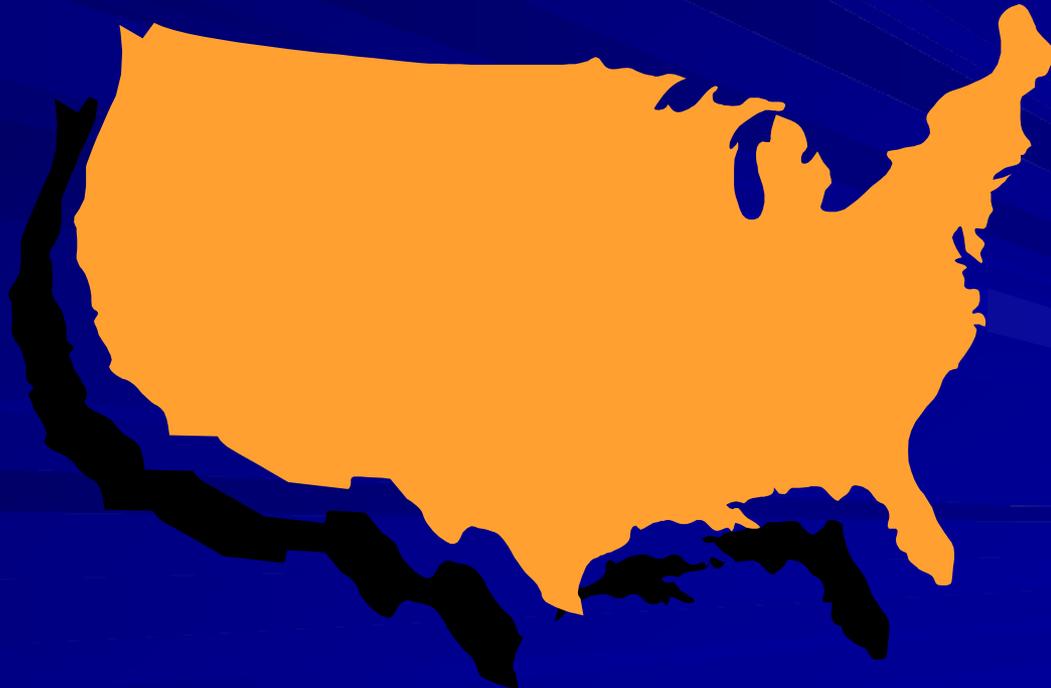


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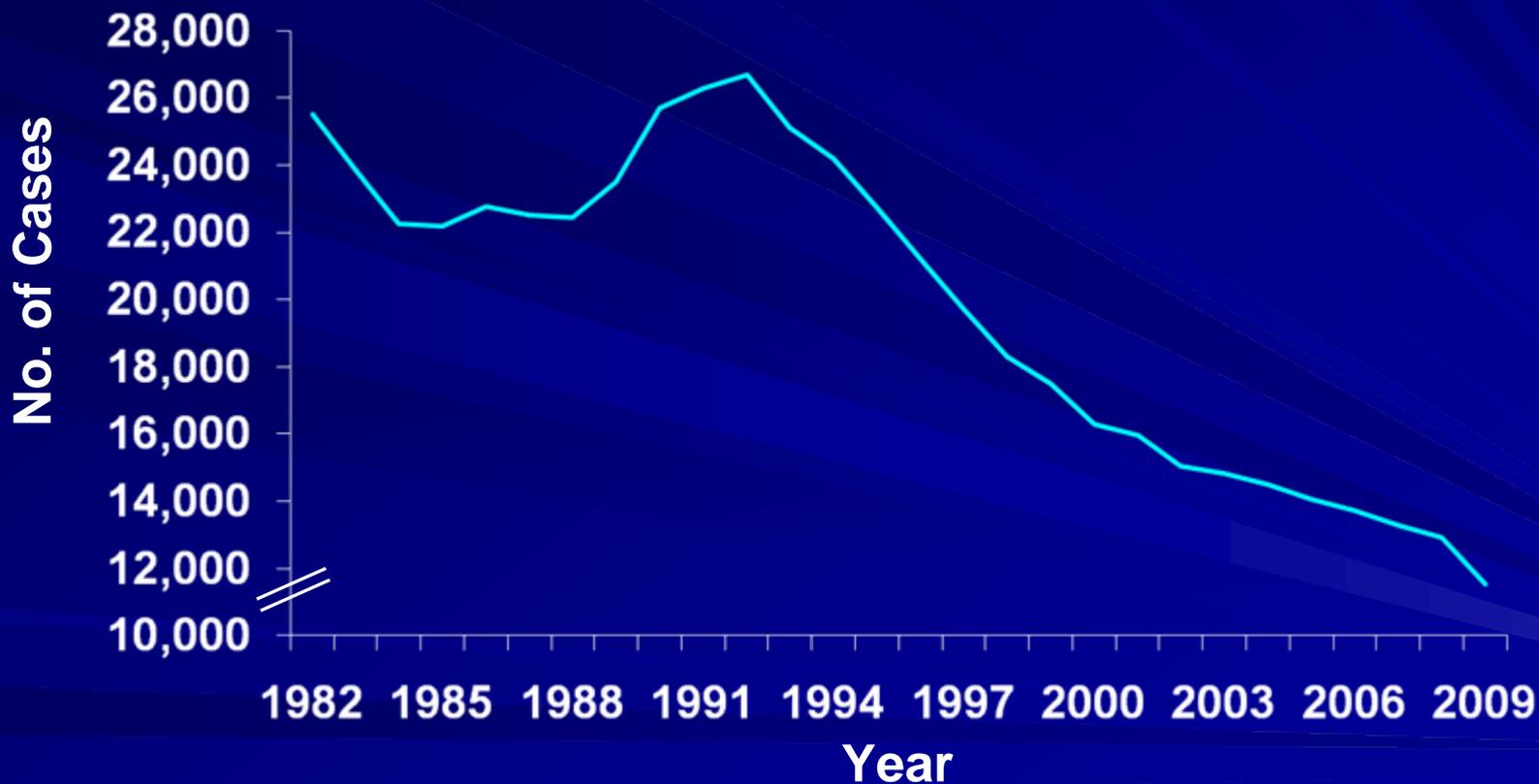
# High Burden Countries (WHO)

- Afghanistan
- Bangladesh
- Brazil
- Cambodia
- China
- Democratic Republic  
of the Congo
- Ethiopia
- India
- Indonesia
- Kenya
- Mozambique
- Myanmar
- Nigeria
- Pakistan
- Philippines
- Russian Federation
- South Africa
- Thailand
- Uganda
- United Republic of  
Tanzania
- Viet Nam
- Zimbabwe

# Tuberculosis in the USA



# Reported TB Cases\* United States, 1982–2009



\*Updated as of July 1, 2010. Source: CDC

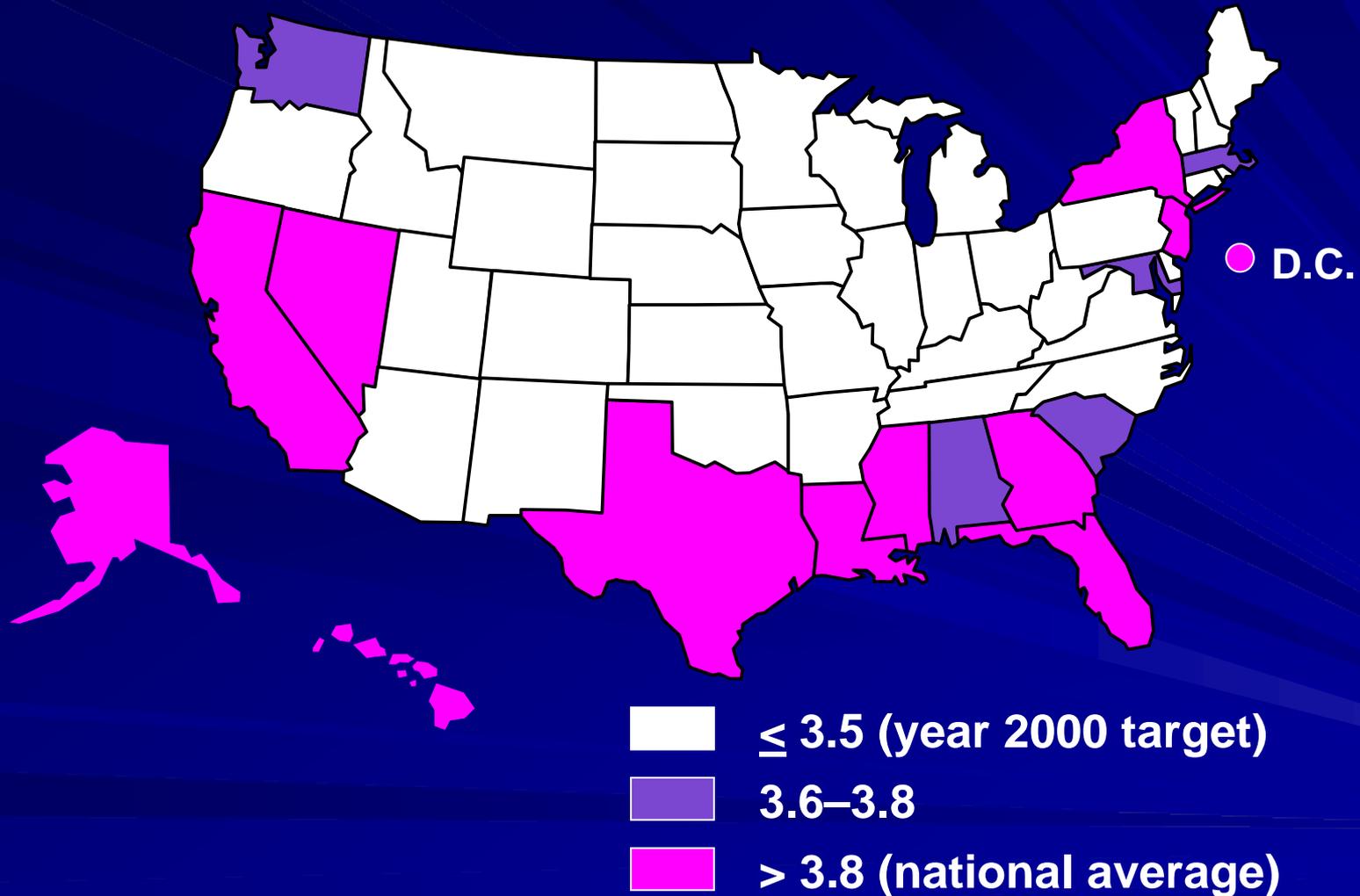
# TB Morbidity

## United States, 2003–2009

<b>Year</b>	<b>No.</b>	<b>Rate*</b>
2003	14,836	5.1
2004	14,499	4.9
2005	14,064	4.8
2006	13,734	4.6
2007	13,280	4.4
2008	12,906	4.2
2009	11,545	3.8

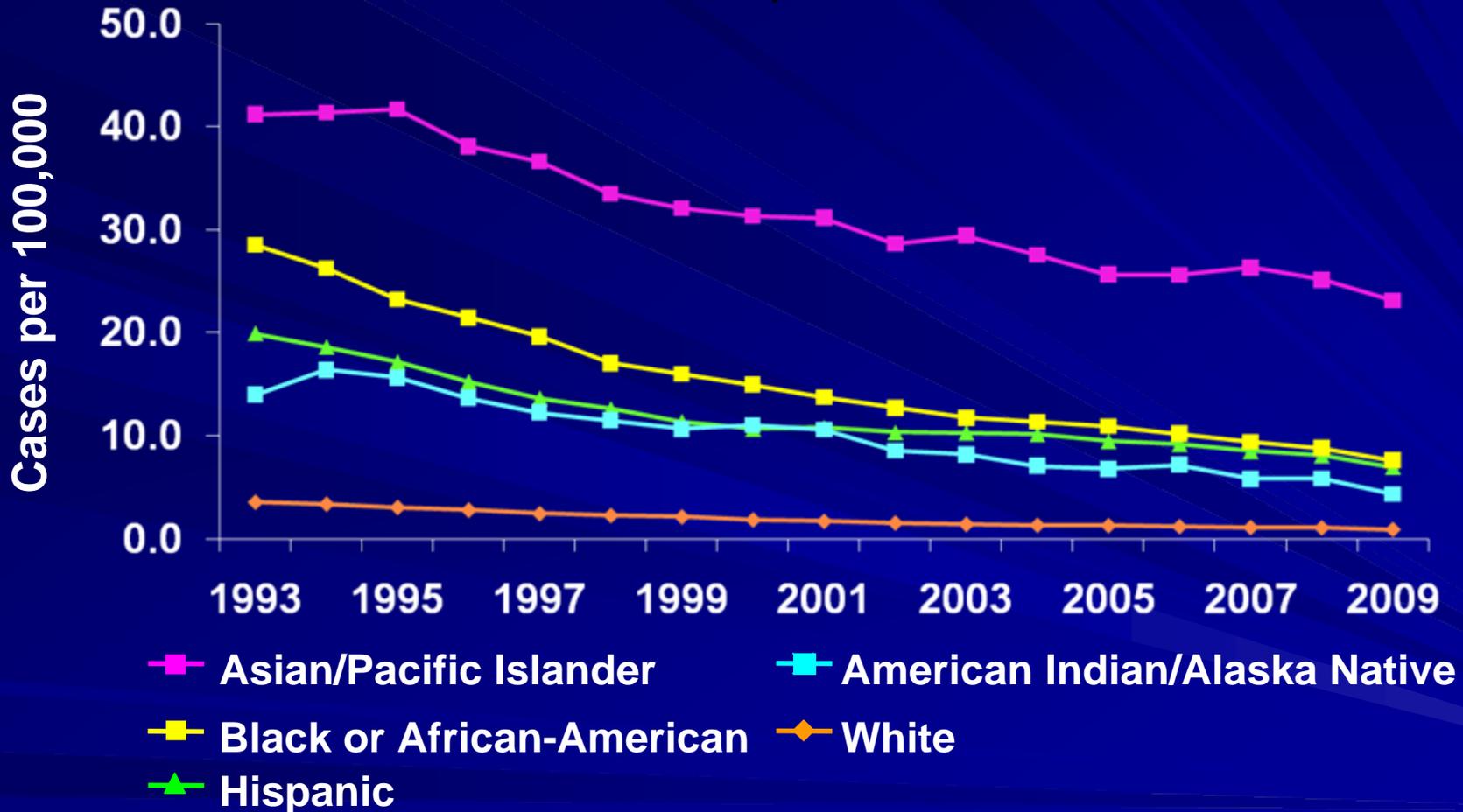
\*Cases per 100,000, updated as of July 1, 2010. Source: CDC

# TB Case Rates,\* United States, 2009



\*Cases per 100,000. Source: CDC

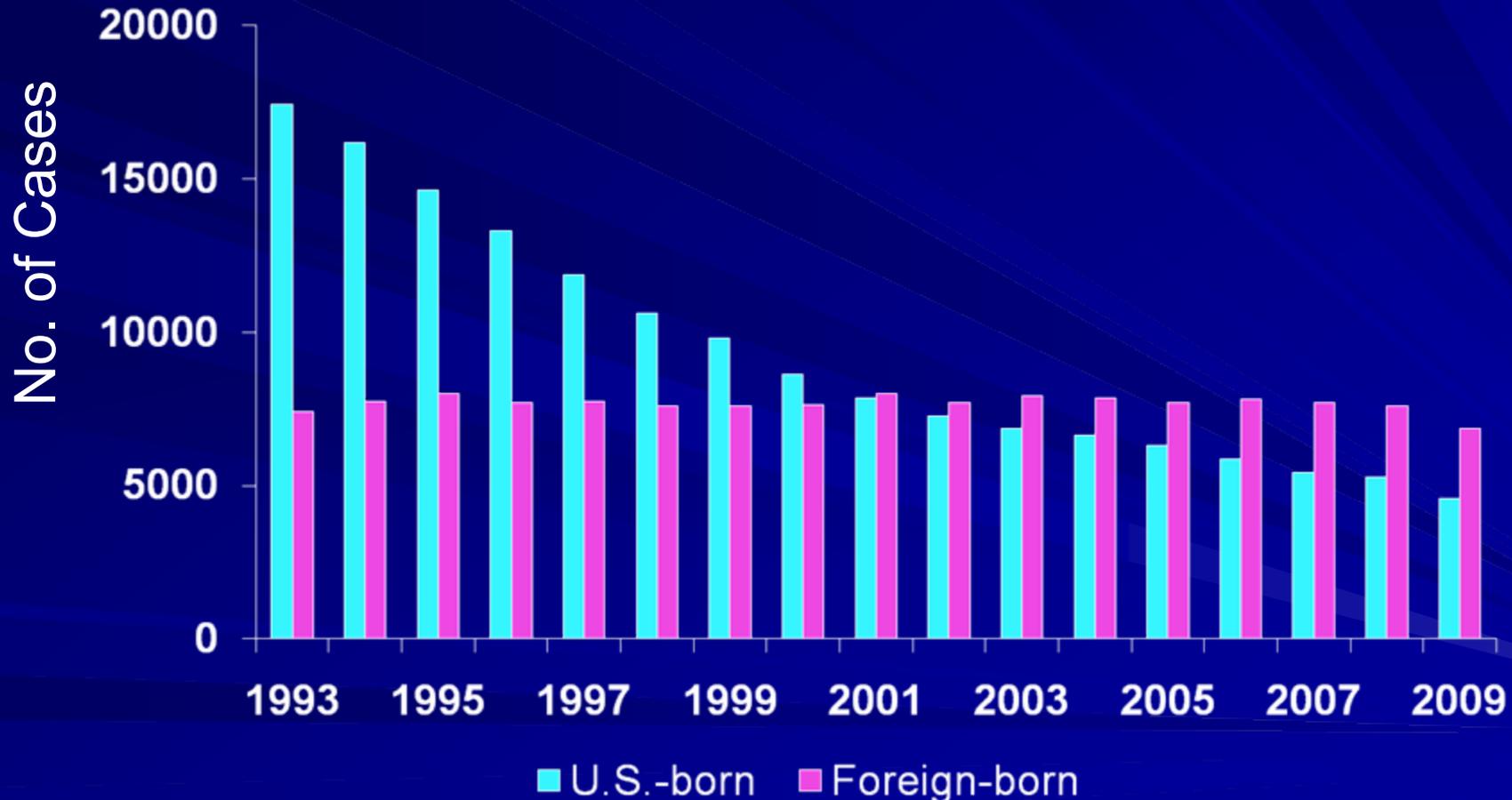
# TB Case Rates by Race/Ethnicity\* United States, 1993–2009\*\*



\*All races are non-Hispanic. In 2003, Asian/Pacific Islander category includes persons who reported race as Asian only and/or Native Hawaiian or Other Pacific Islander only.

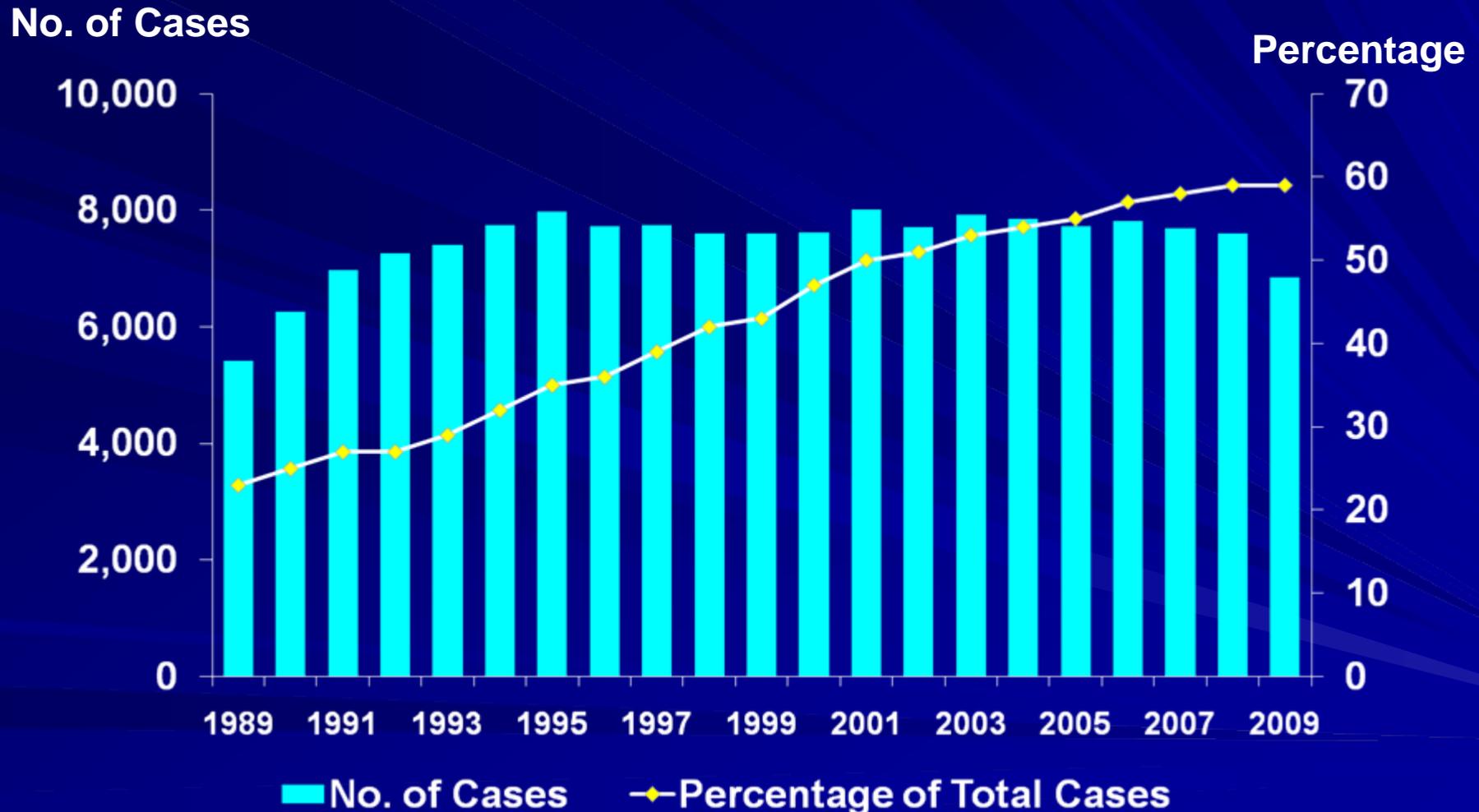
\*\*Updated as of July 1, 2010. Source CDC

# Number of TB Cases in U.S.-born vs. Foreign-born Persons United States, 1993–2009\*



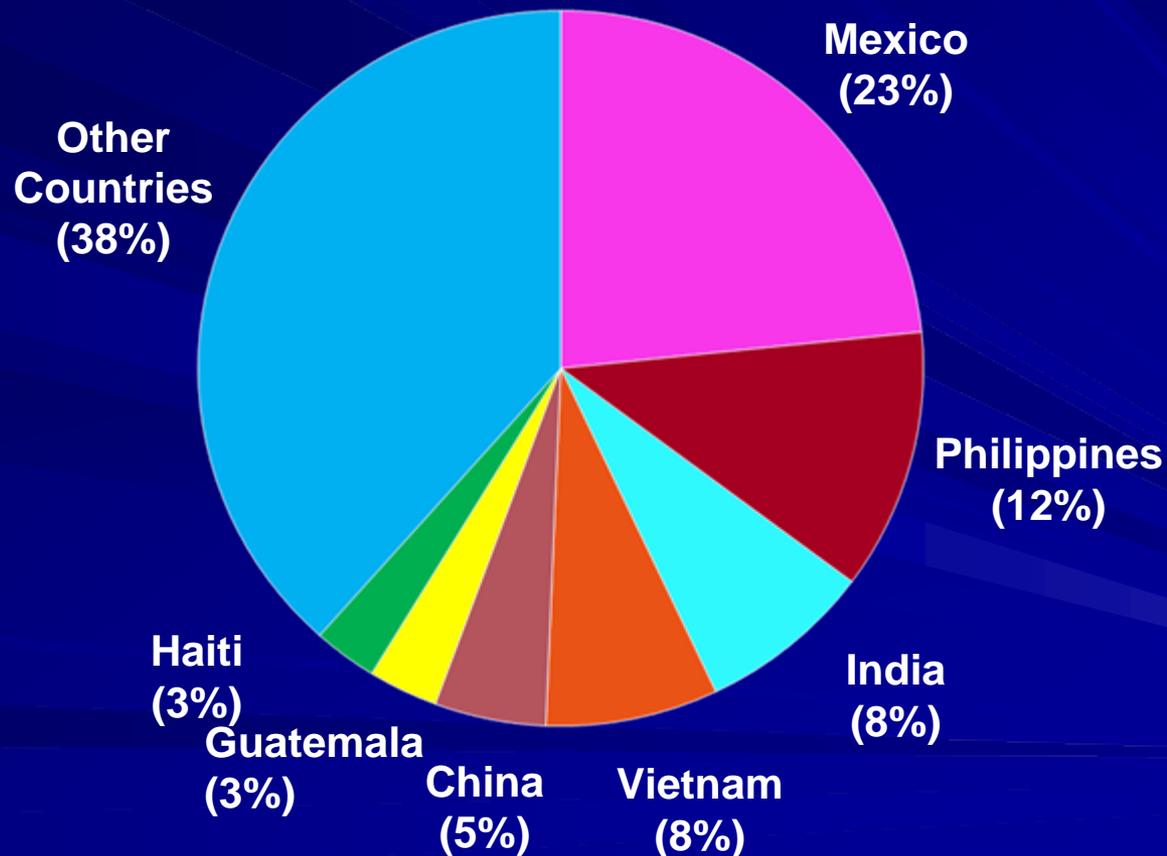
\*Updated as of July 1, 2010  
Source: CDC

# Trends in TB Cases in Foreign-born Persons, United States, 1989–2009\*



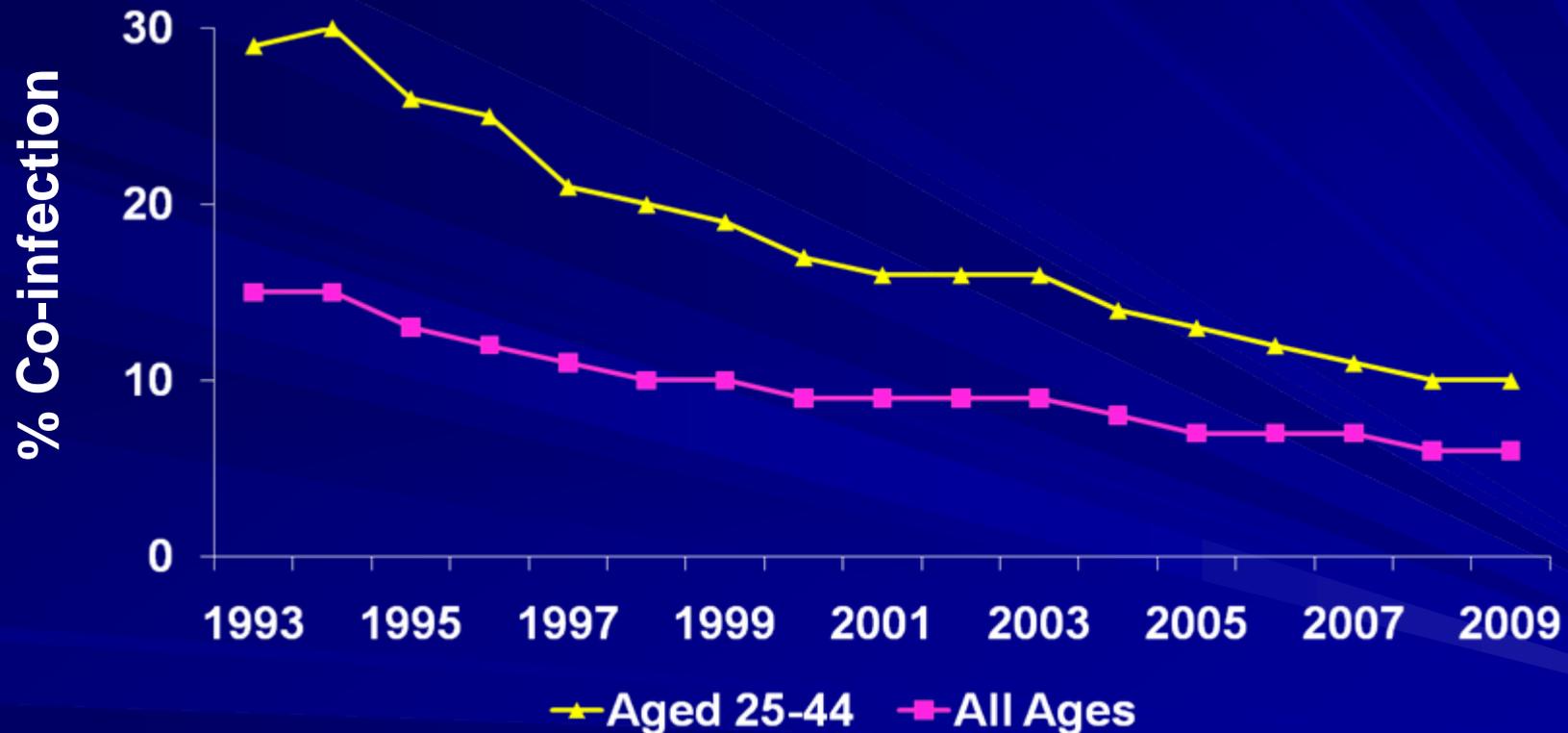
\*Updated as of July 1, 2010. Source: CDC

# Countries of Birth of Foreign-born Persons Reported with TB United States, 2009



Source: CDC

# Estimated HIV Co-infection in Persons Reported with TB, United States, 1993–2009\*



\*Updated as of July 1, 2010. Source: CDC

Note: Minimum estimates based on reported HIV-positive status among all TB cases in the age group.

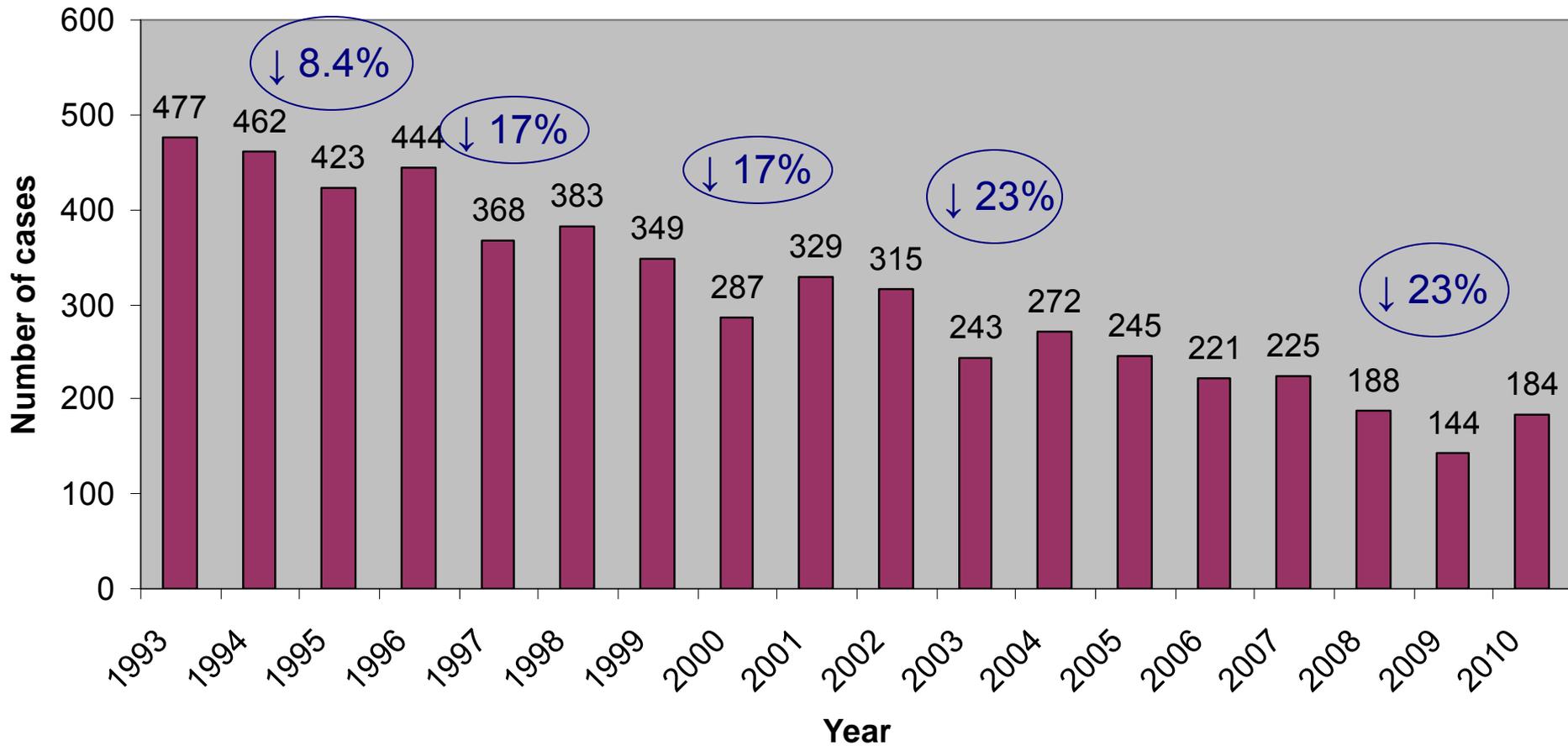
# Michigan



# Tuberculosis in Michigan- 2010

- 184 cases reported → rate of 1.8/100,000
  - 27.8% increase from 2009
- Foreign-born cases increased to 58.3% from 50% in 2009
- 58.2% of cases are located in Metro Detroit (Wayne, Oakland and Macomb)
- 8.2% were homeless within the last year
- 18.5% abused alcohol, injection or non-injection drugs within the last year

# Number of TB cases in MI 1993-2010



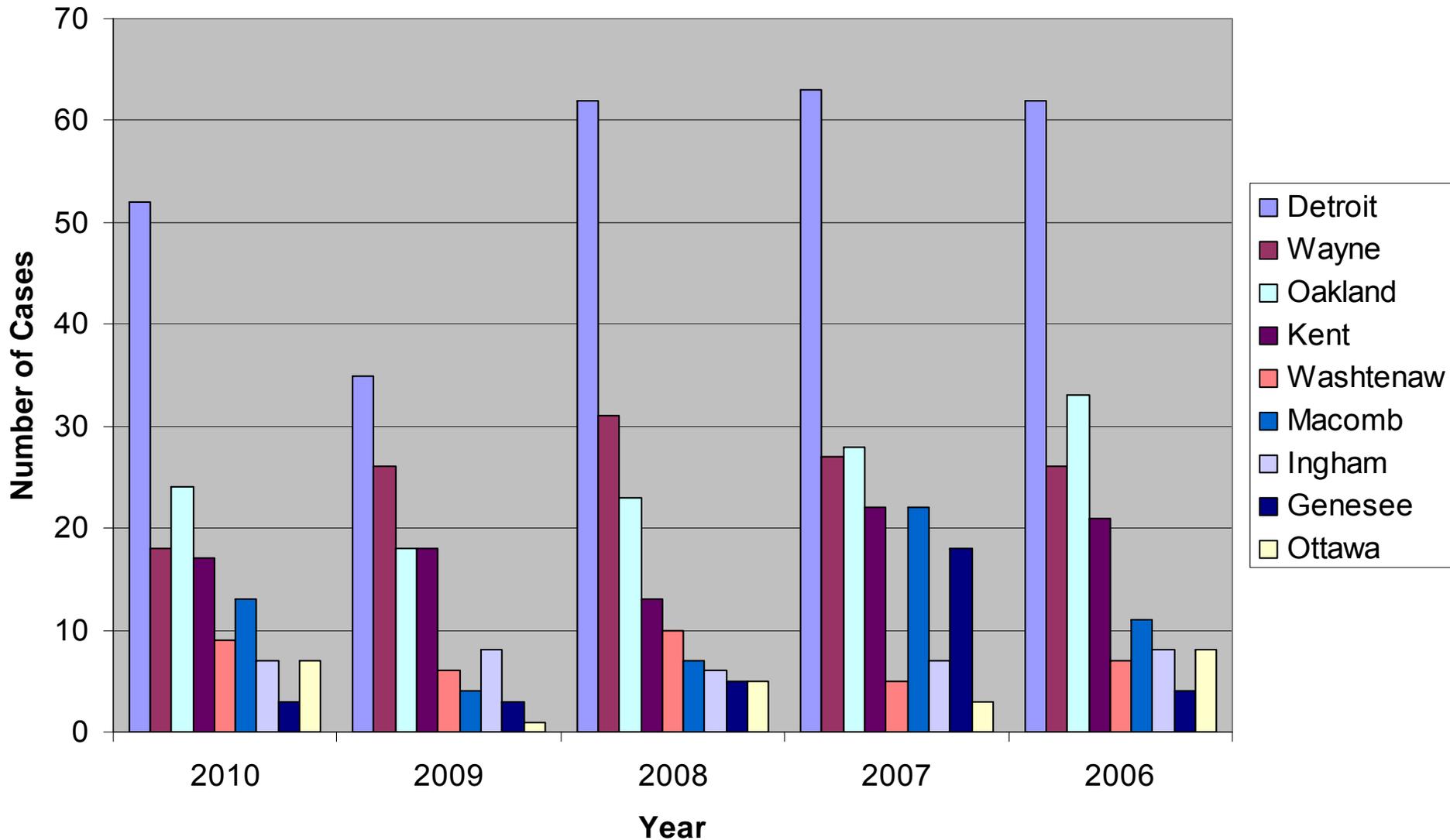
# 5 year summary on TB cases and incidence rates\* for the State of Michigan (2006-2010)

Year	2006	2007	2008	2009	2010	5 year average
Number of cases	221	226	188	144	184	193
Incident rates	2.2	2.3	1.9	1.4	1.9	1.9

\*Rate per 100,000 population



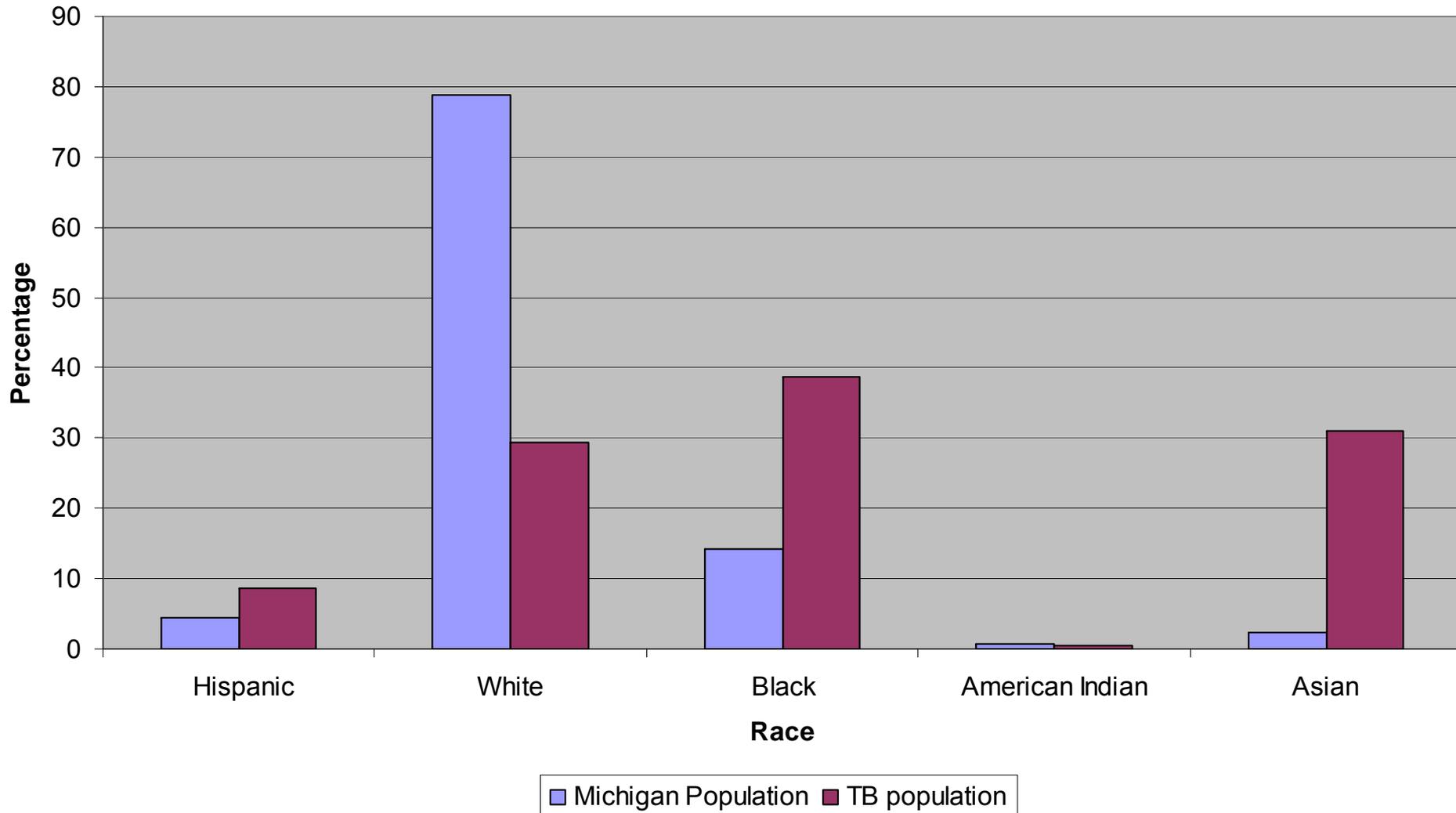
# Incidence of TB in High-Burden Areas, Michigan, 2006-2010



# TB in Children

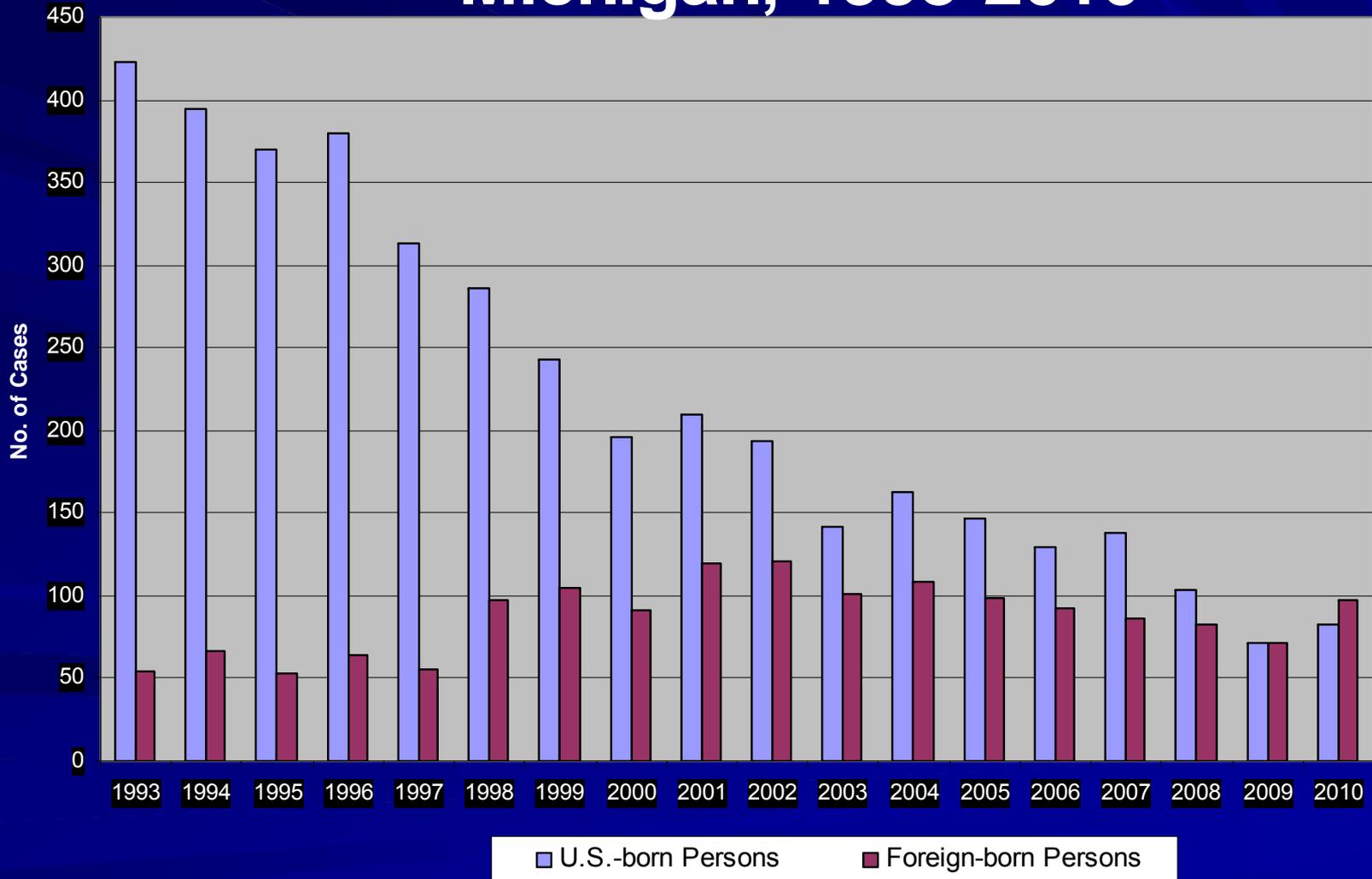
<b>Age</b>	<b>2009</b>	<b>2010</b>	<b>Percent Change</b>
<5 years	3	9	200%
5-14 years	0	2	200%
15-19 years	11	5	-54.50%
Total	14	16	

# Racial and Ethnic Disparities, TB patients in MI, 2010 \*

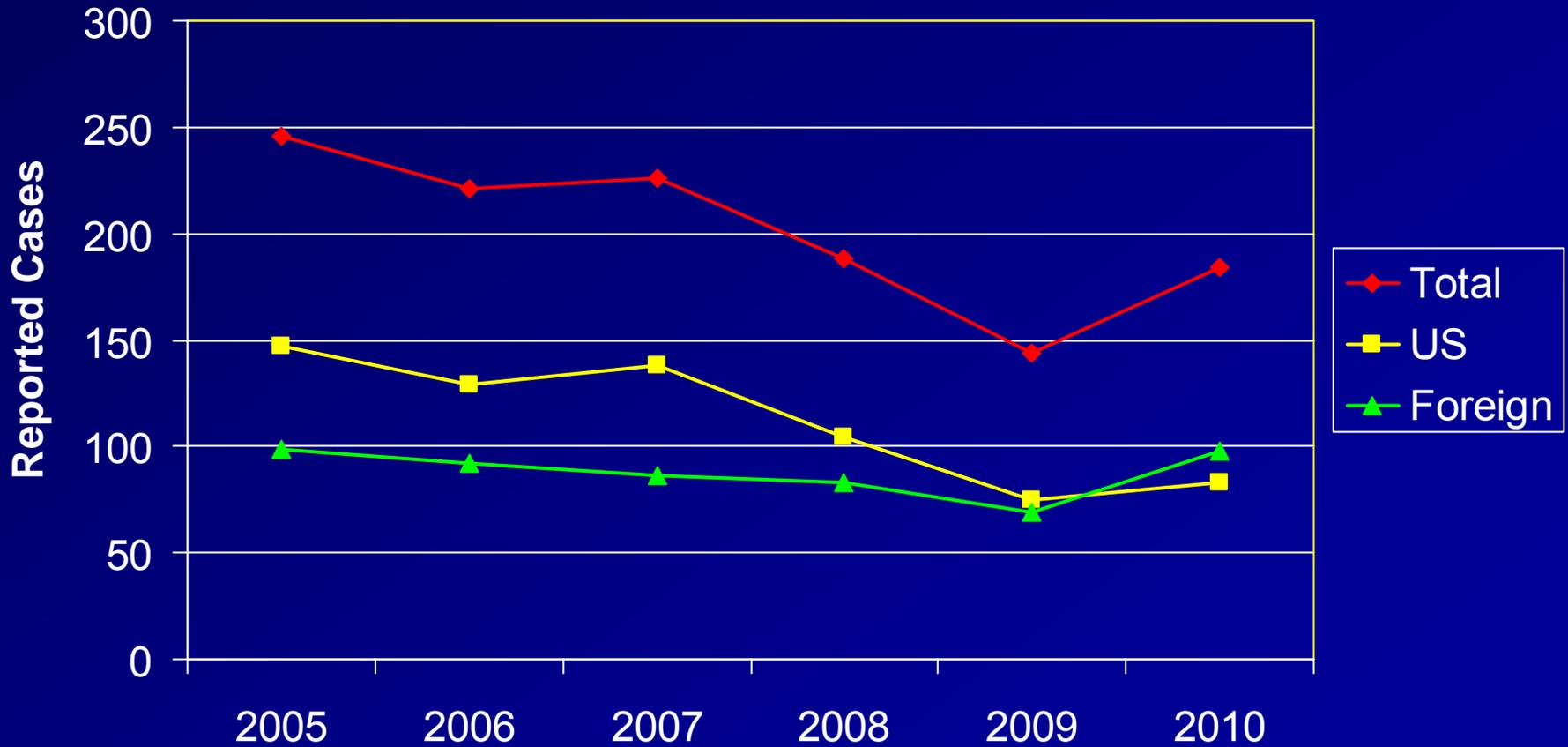


\* Based on 2010 Census Data.

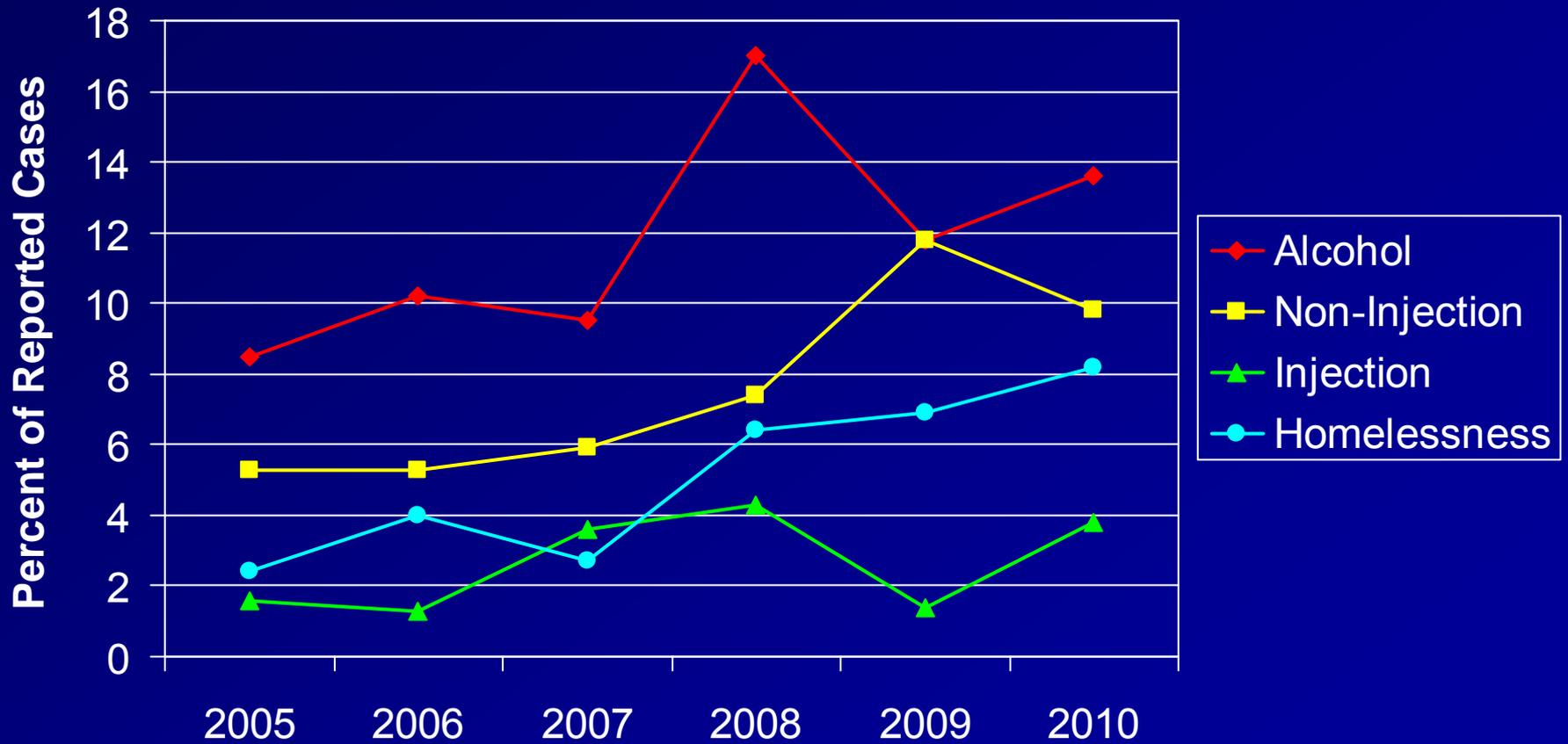
# Number of TB Cases in US-Born vs. Foreign-Born Persons, Michigan, 1993-2010



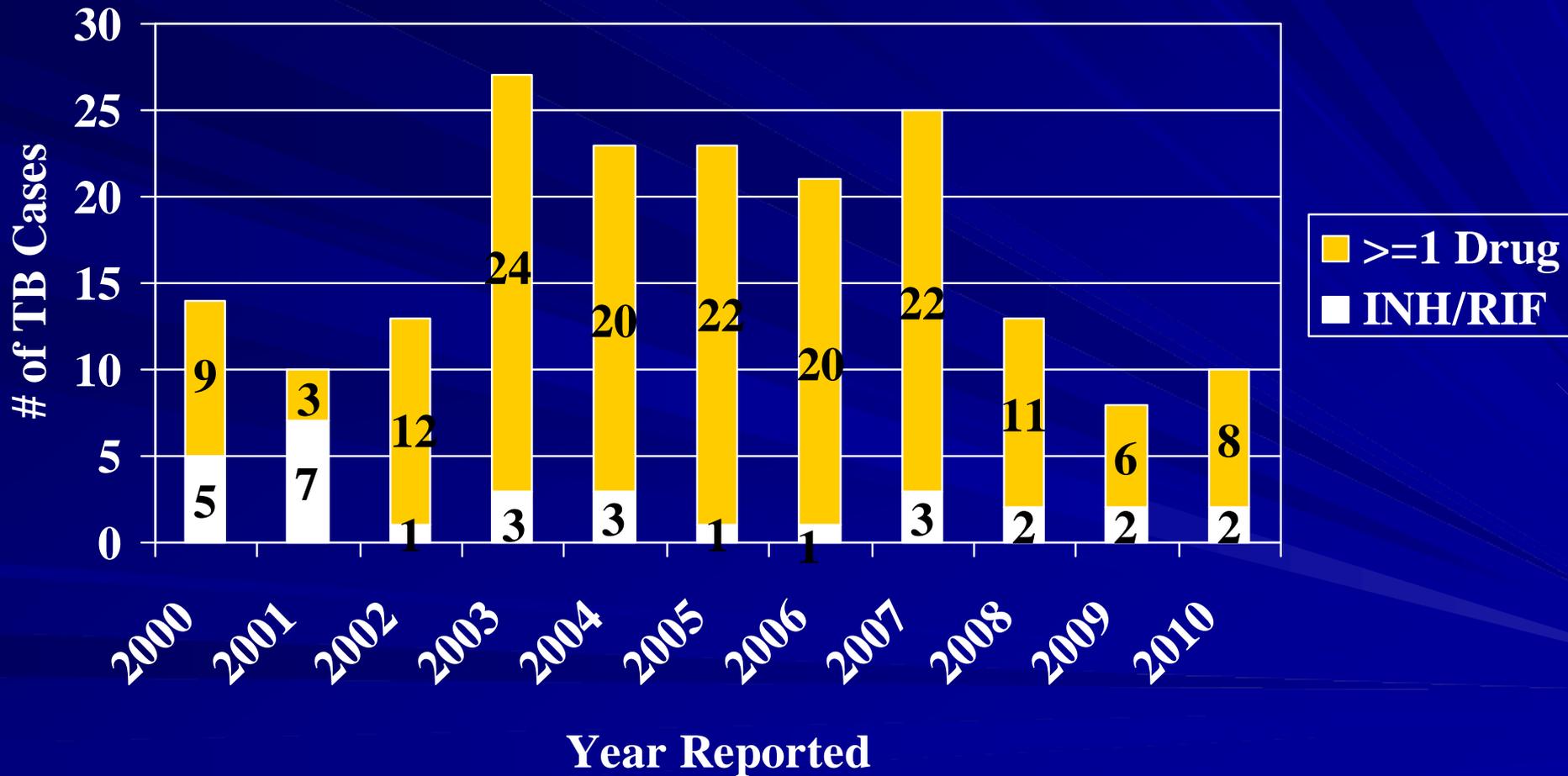
# Reported TB Cases Among US-born vs. Foreign-Born Persons, Michigan, 2005 - 2010



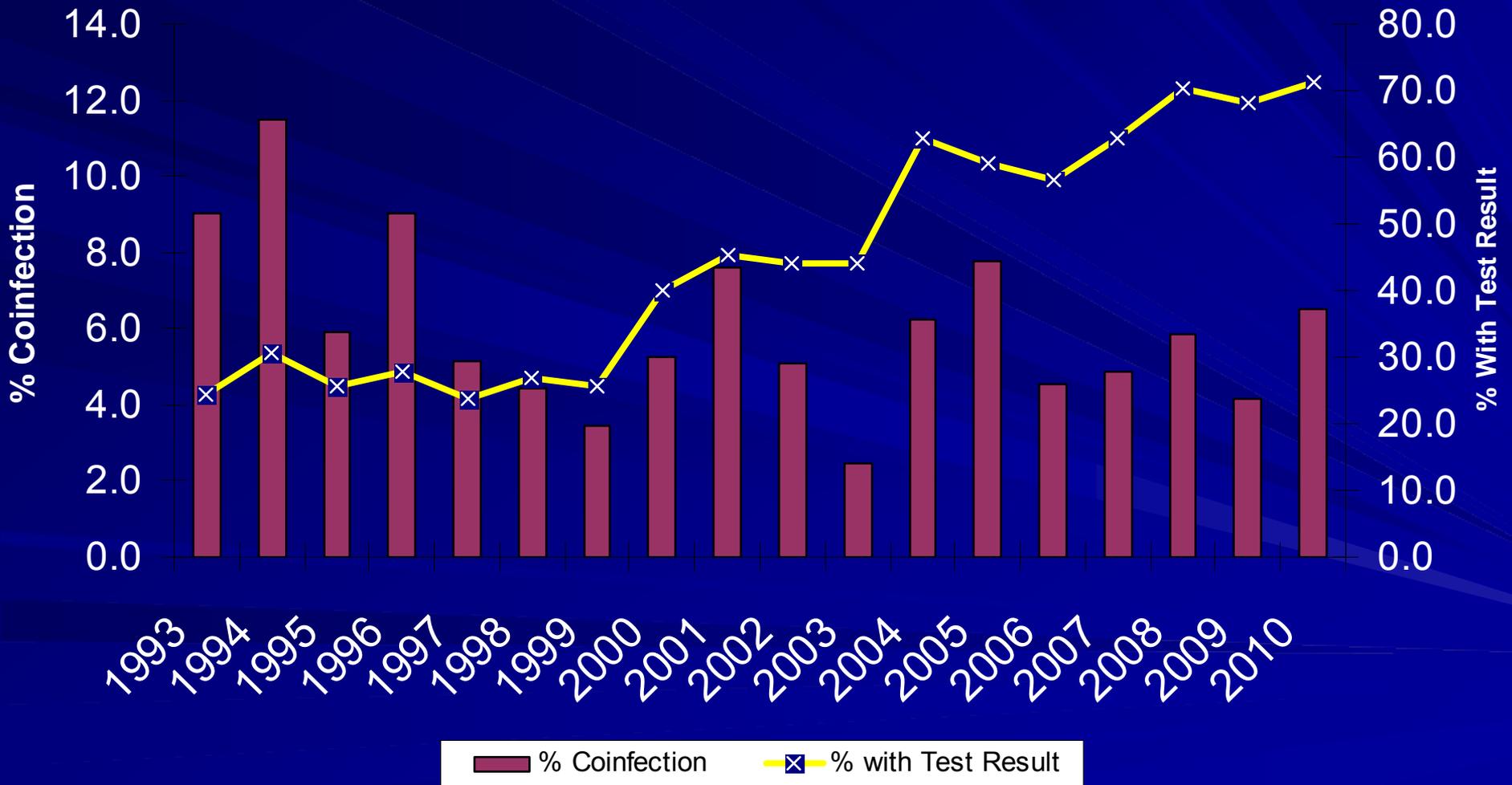
# Substance Abuse and Homelessness Among Reported TB Cases, Michigan, 2005 – 2010



# TB Drug Resistant Trends, Michigan, 2000 – 2010



# Trends in HIV-TB Coinfection, Michigan, 1993-2010



# Questions?

## Thank you!

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