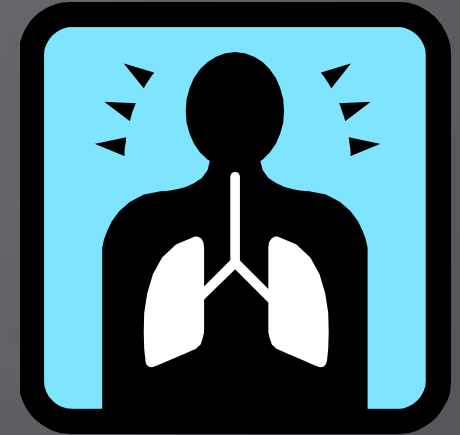


# TB UPDATE, 2011

Communicable Disease Program

January 24, 2011

# TB 101: WHAT IS TUBERCULOSIS



- ▣ A disease caused by bacteria (*Mycobacterium tuberculosis*)
- ▣ Can affect any part of the body, but usually goes into the lungs
- ▣ Spread when a person with active TB coughs, sneezes, shouts, or sings

# 2000 Year History of TB In 20 Seconds

Mummies from 2400 BC show signs of tubercular decay

460 BC, Hippocrates identified "phthisis" (I waste away ) as most common disease of the day

Names for TB through the ages:  
Consumption, White Death, Great White Plague, Captain of the Men of Death

Became epidemic in Europe during the 1600's through the 1800's

Epidemic in United States, late 1700's through 1800's

1800's through mid 1900's: Age of Sanitariums; Illinois sanitariums constructed in Mount Vernon (1951) and Chicago (1953)

McHenry County:

"At the turn of the century, tuberculosis was running rampant in both city and rural areas and was a leading cause of death"

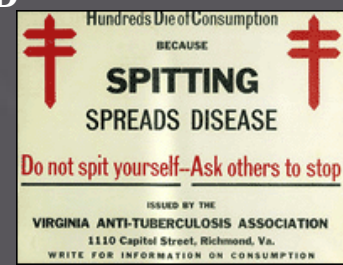
1920: McHenry County Tuberculosis Association formed

1922: Mabel Hobbs, RN, employed by TB Association

- "She became known from one end of the county to the other ...until her retirement in 1953."

1959: McHenry County Tuberculosis Care and Treatment Board organized

1992: Health department started to provide services to the TB Board; clinic moved to Annex B



# TB Infection vs. TB Disease

## TB Infection:

- ▣ TB Bacilli in body
- ▣ TST usually positive
- ▣ CXR usually normal
- ▣ culture negative
- ▣ No symptoms
- ▣ Not infectious
- ▣ Not a case of TB

## TB Disease:

- ▣ TB Bacilli in body
- ▣ TST usually positive
- ▣ CXR usually abnormal
- ▣ culture positive
- ▣ Symptoms
- ▣ Infectious
- ▣ A Case of TB

# Symptoms of Active TB

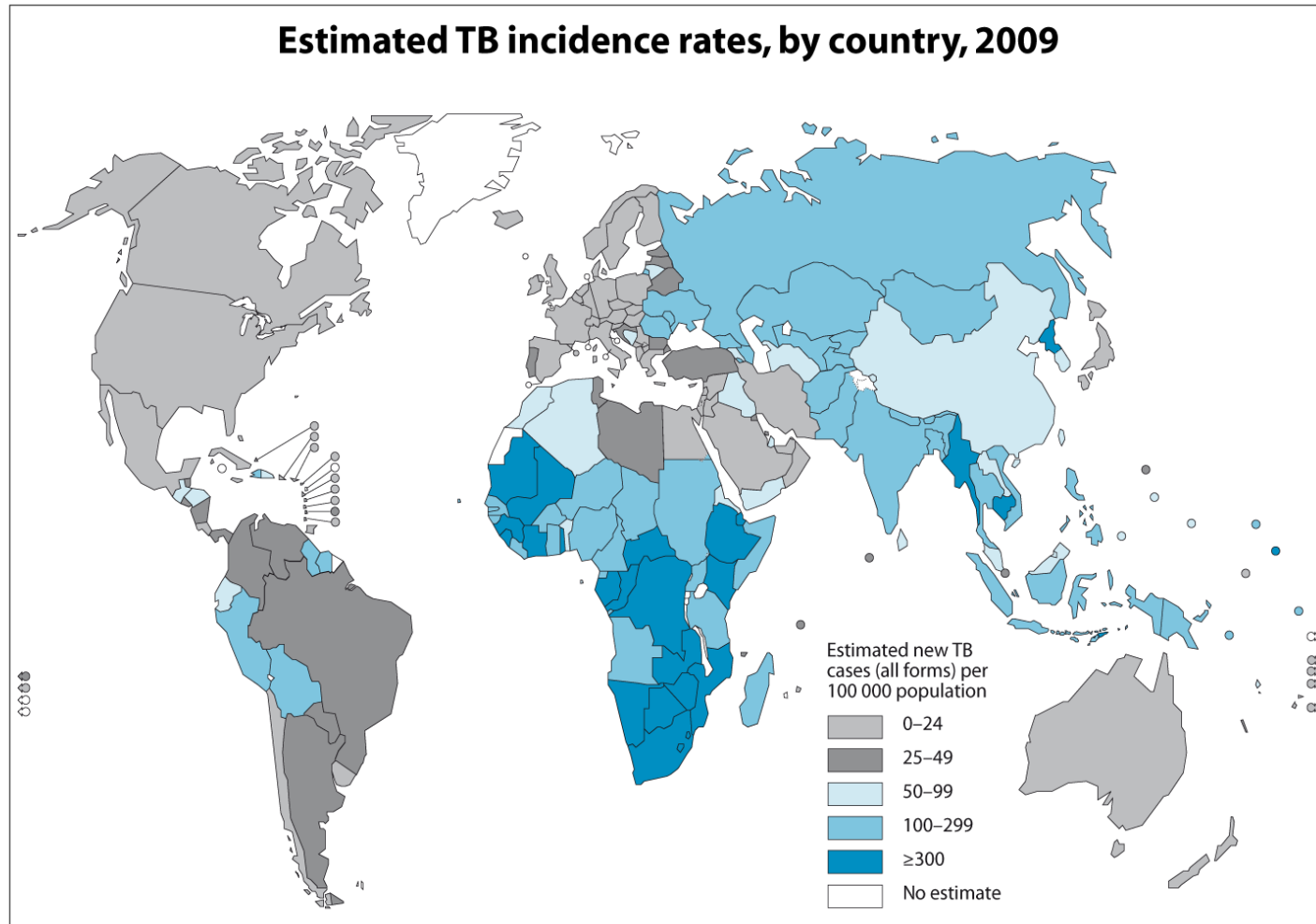
- ▣ Cough lasting longer than 3 weeks
- ▣ Chest pain or tightness
- ▣ Coughing up Blood
- ▣ Lack of Appetite
- ▣ Weight loss
- ▣ fatigue
- ▣ Fever, chills
- ▣ Night sweats

# TB Worldwide\*

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

\*World Health Organization,2010

# 2009 Worldwide TB rates



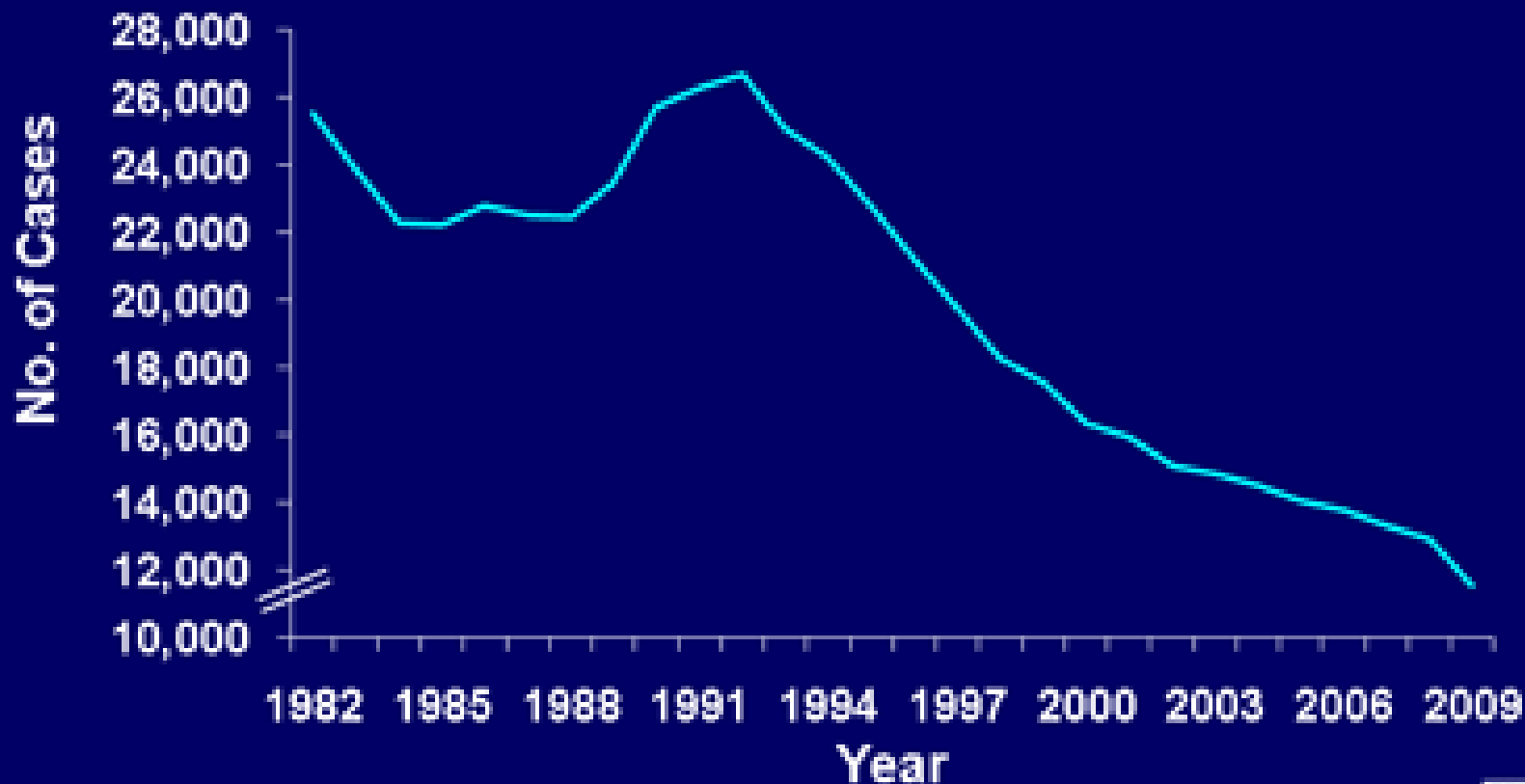
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers 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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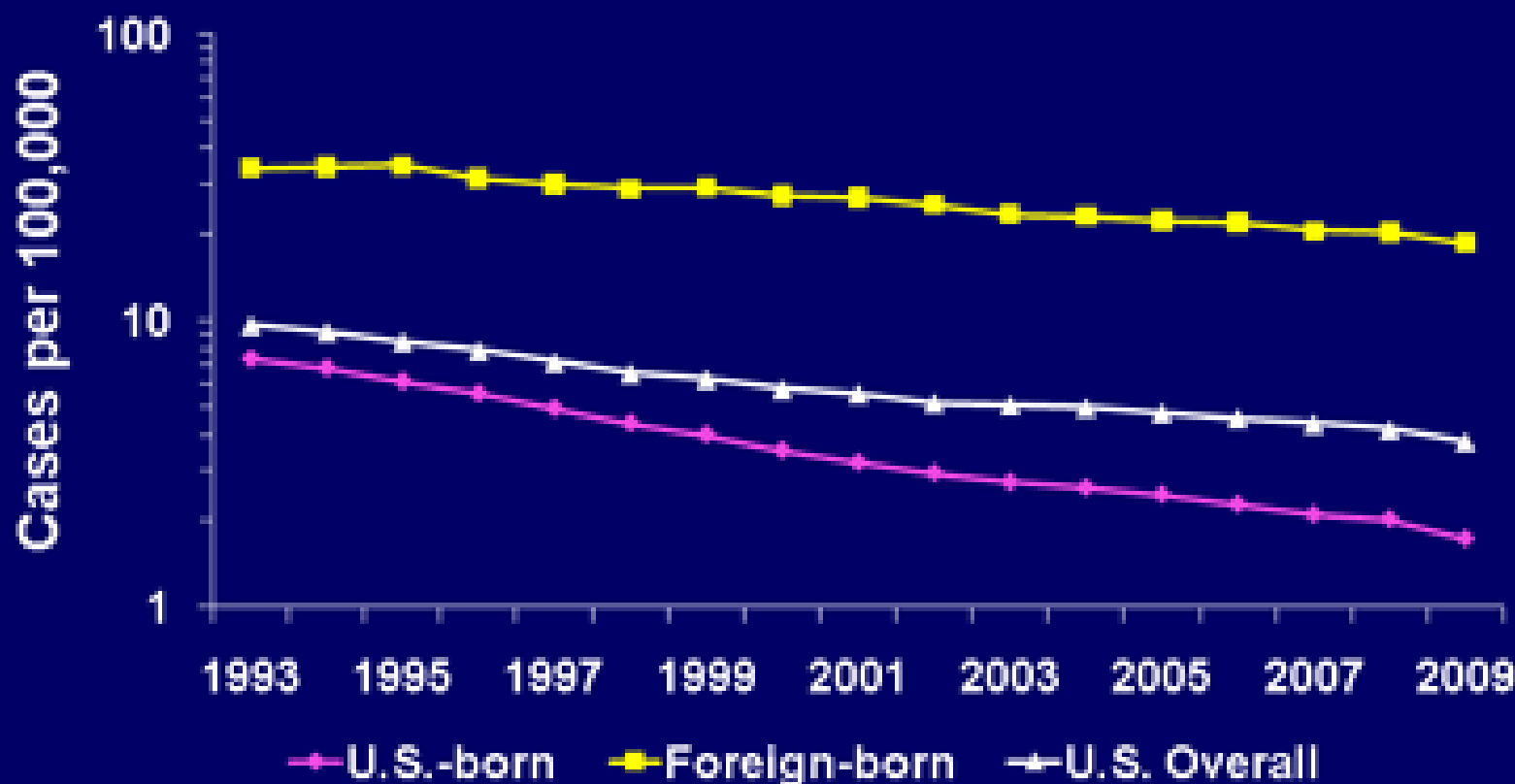
# Reported TB Cases\* United States, 1982–2009



\*Updated as of July 1, 2010.



# TB Case Rates in U.S.-born vs. Foreign-born Persons United States,\* 1993–2009\*\*



\*Includes the same data as slide 15, but rates presented on a logarithmic scale.

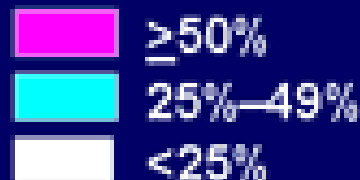
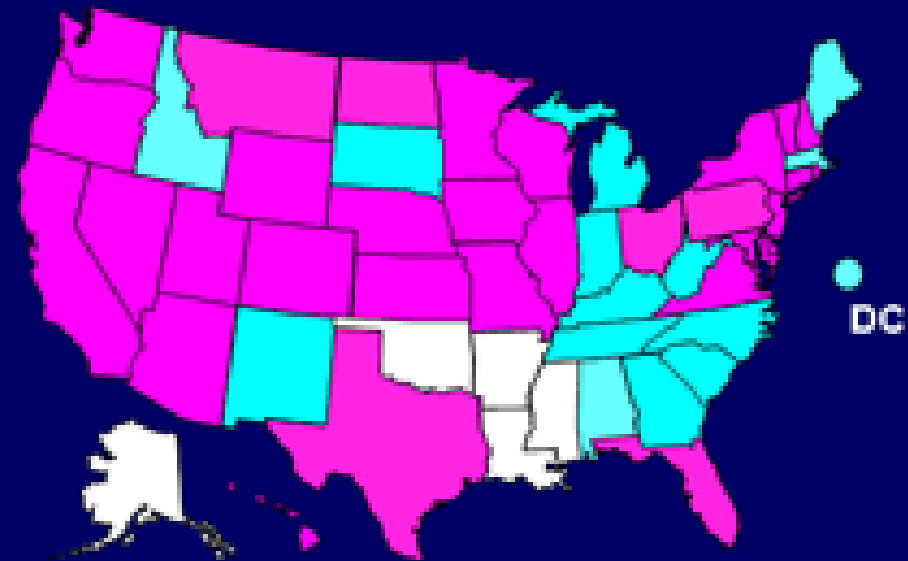
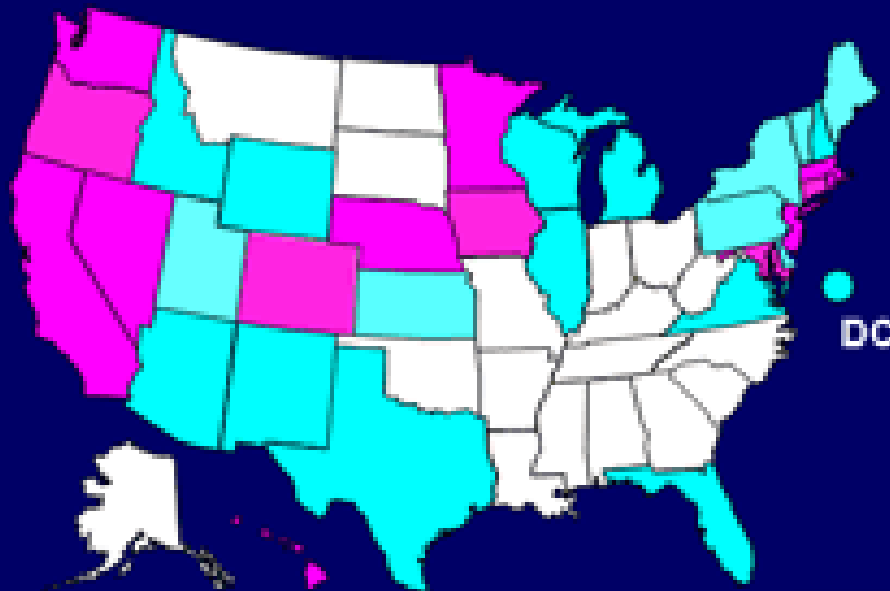
\*\*Updated as of July 1, 2010.



# Percentage of TB Cases Among Foreign-born Persons, United States\*

1999

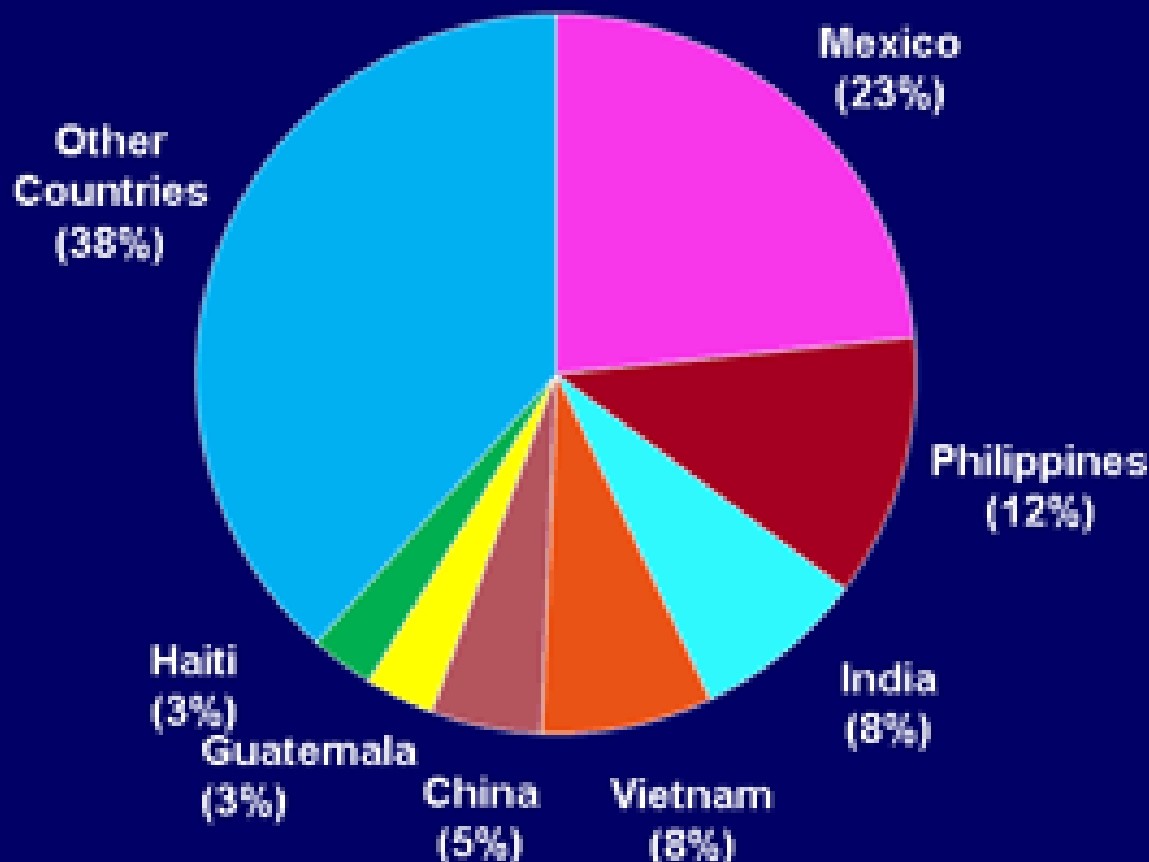
2009



\*Updated as of July 1, 2010.

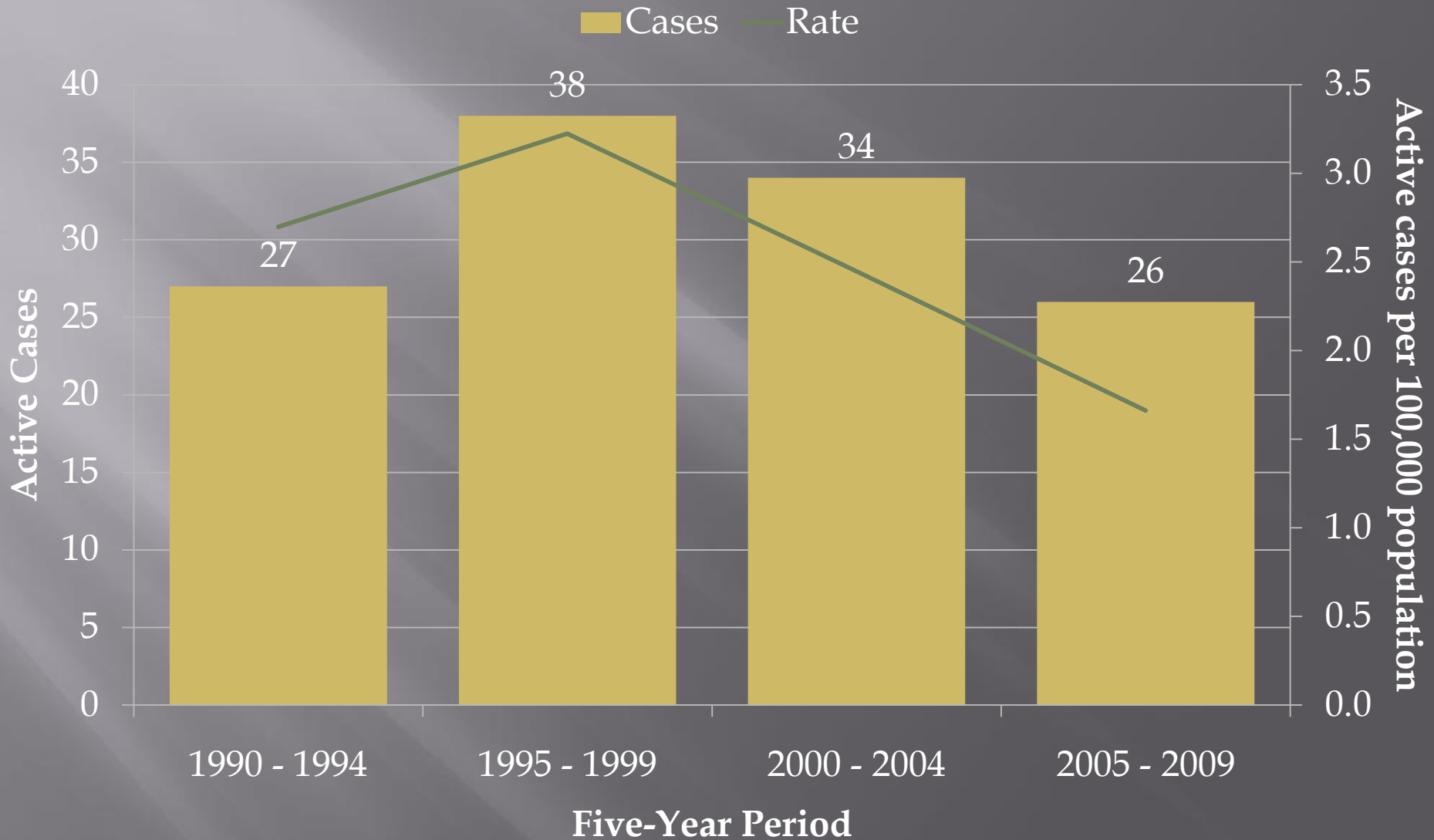


# Countries of Birth of Foreign-born Persons Reported with TB United States, 2009

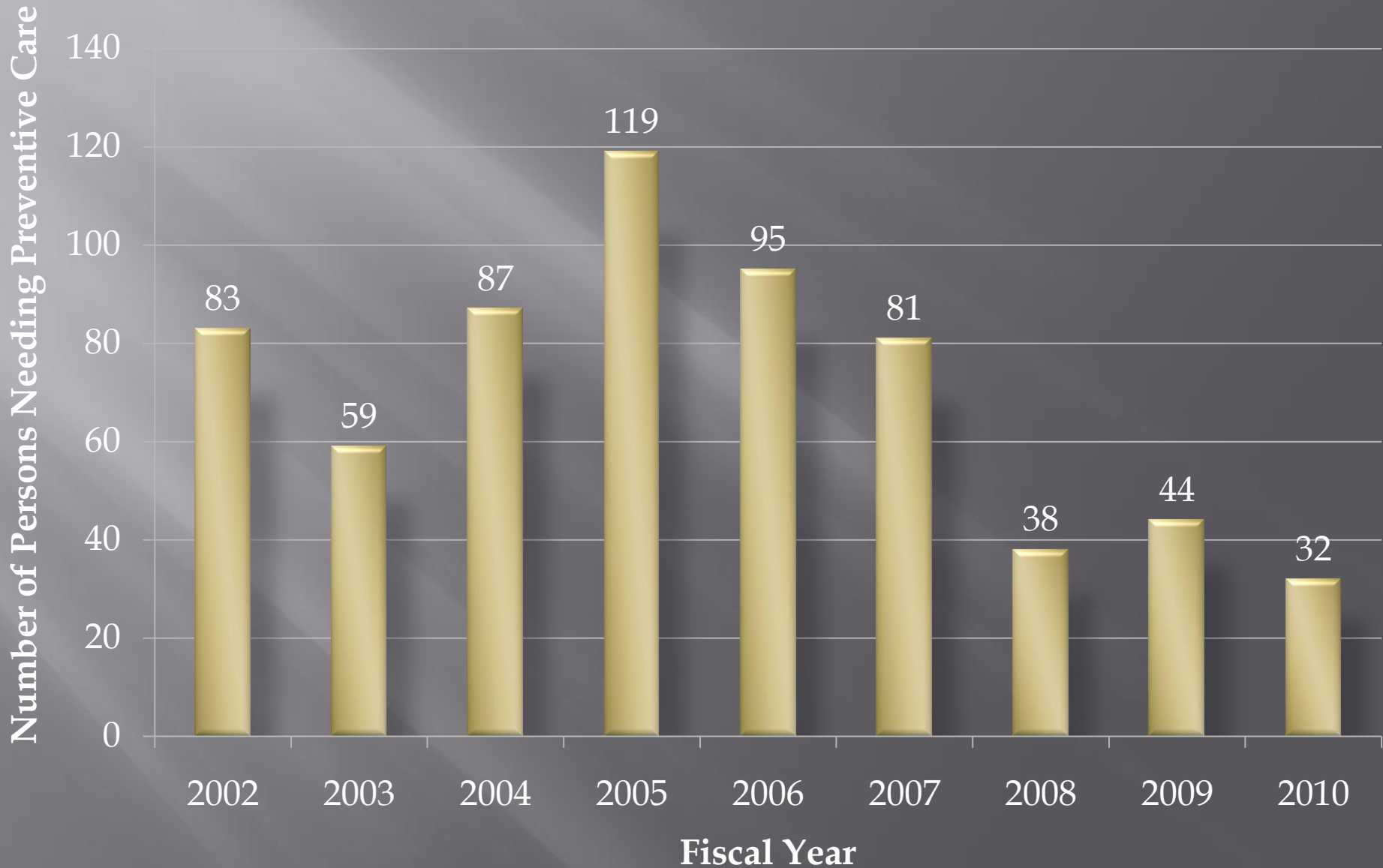




# McHenry County Reported Active Tuberculosis Cases by Five-Year Period 1990 - 2009



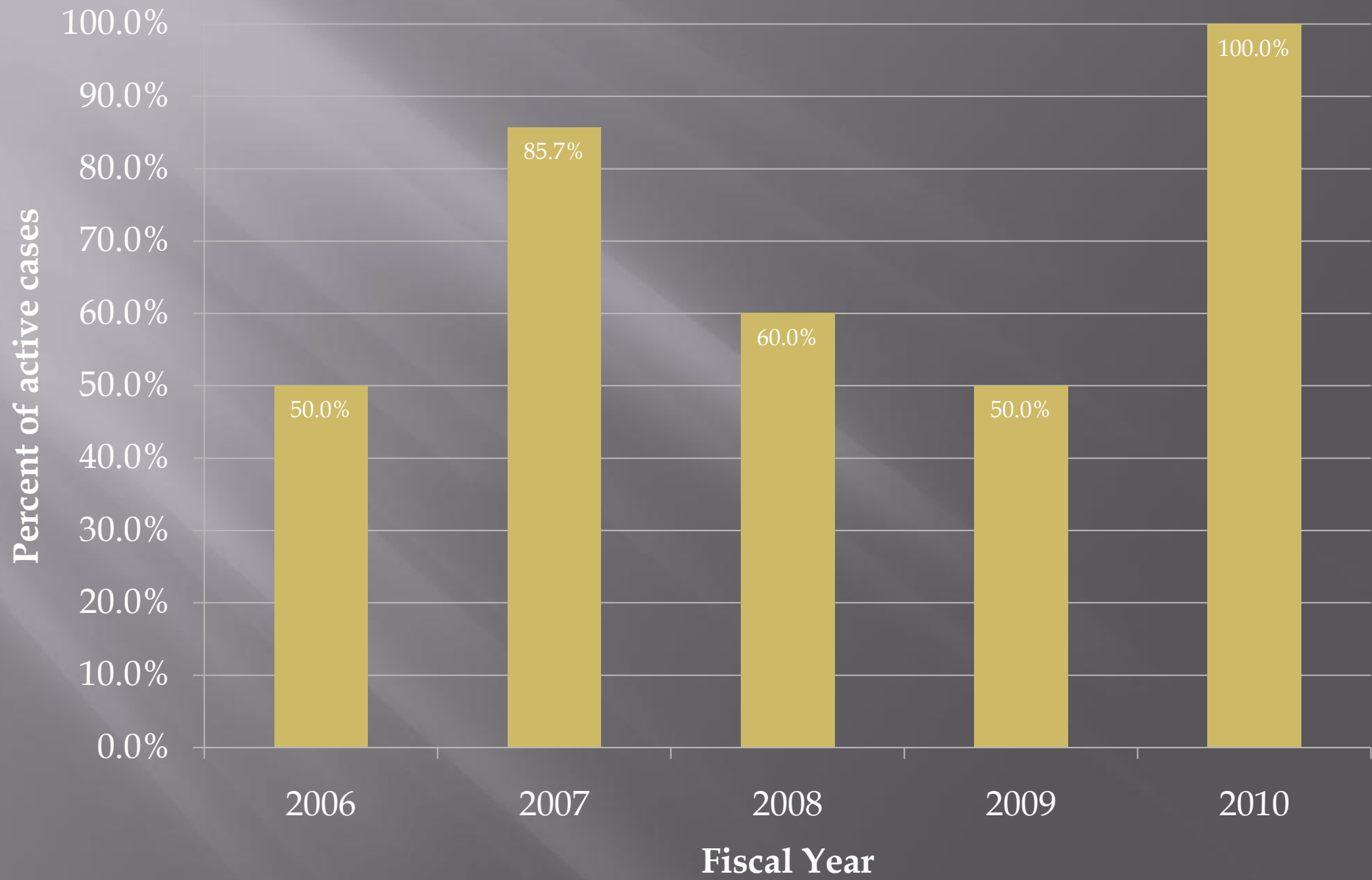
# Number of Persons Starting Preventive Treatment Through the McHenry County Department of Health Tuberculosis Clinic



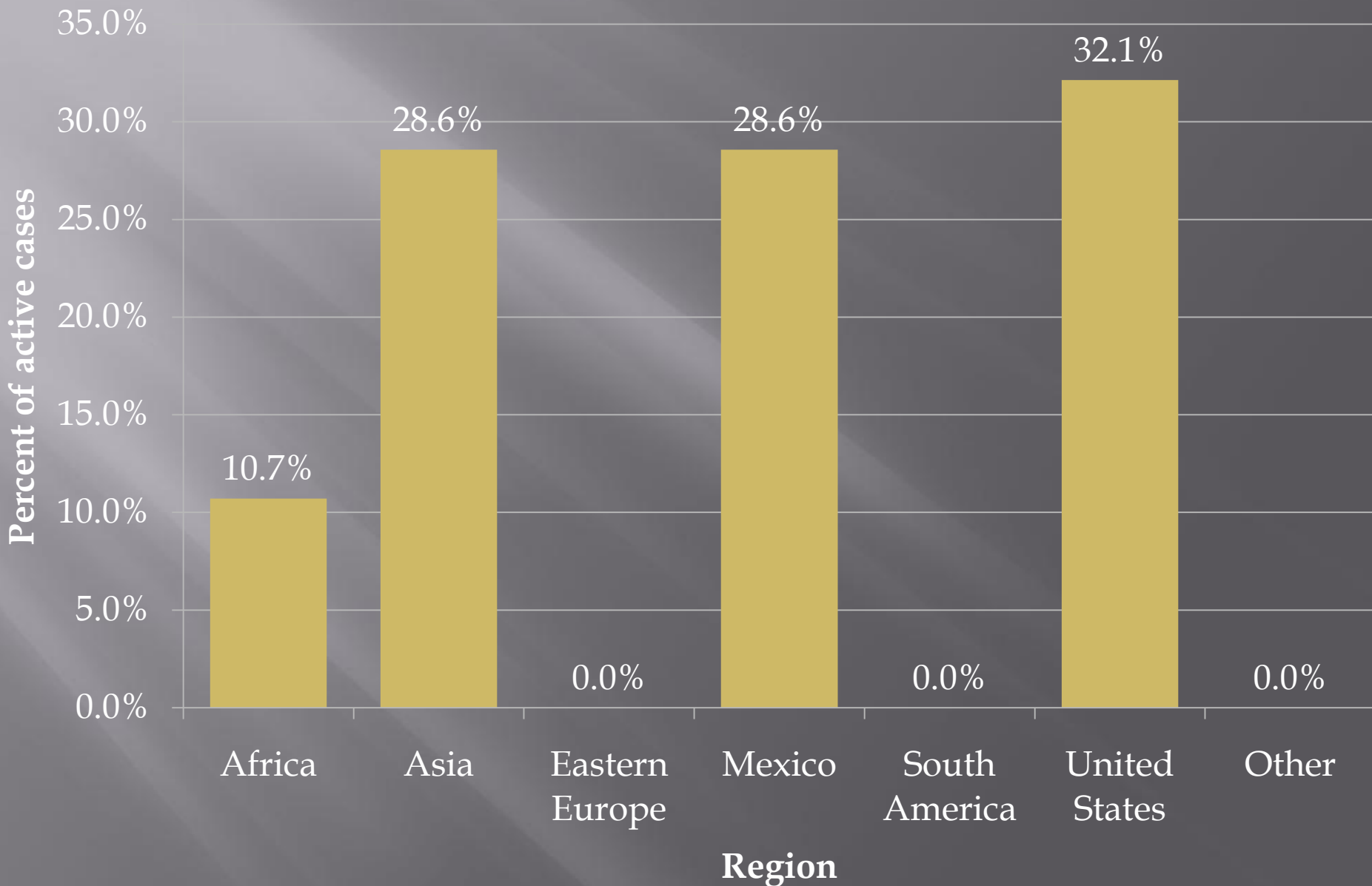
# McHenry County

## Percent of Active Reported Tuberculosis Cases Who are Foreign Born

### 2006 - 2010

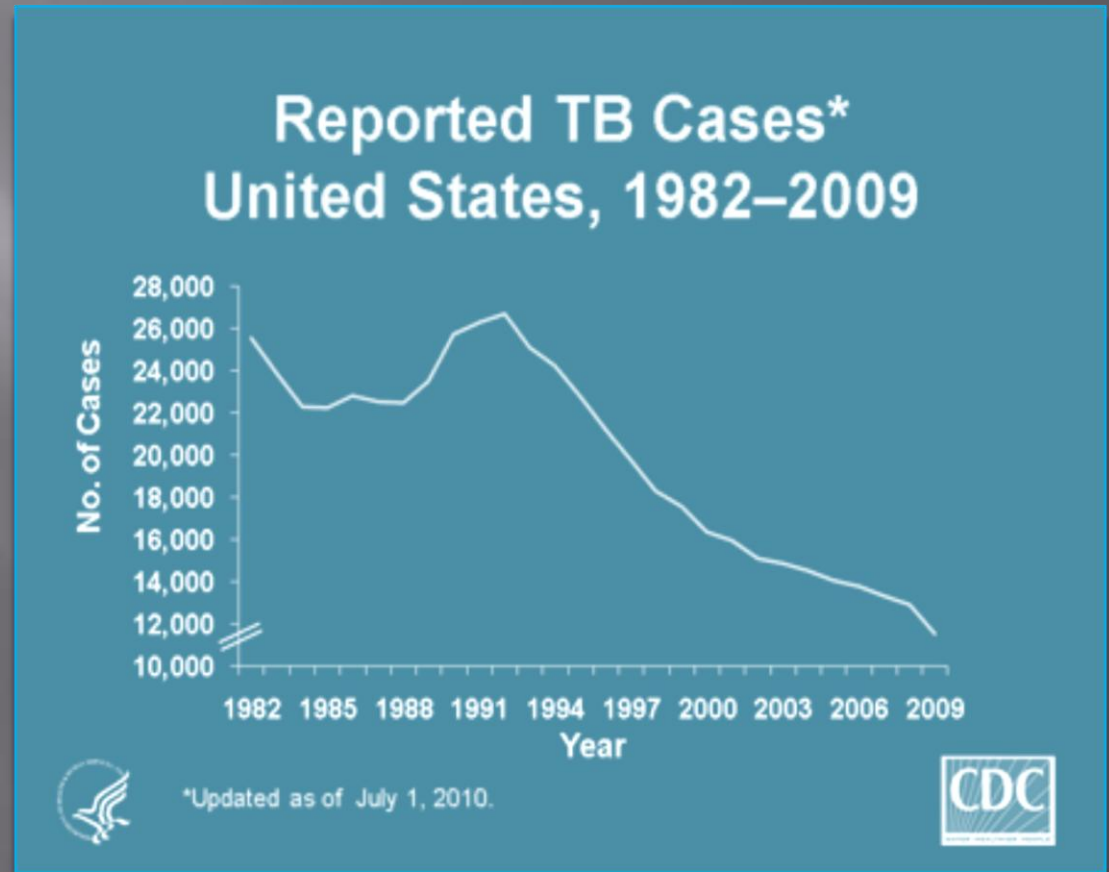


**McHenry County**  
**Percent of Reported Active Tuberculosis Cases by Region of Birth**  
**2006 – 2010 Five-Year Period**



# Why is a TB Program Still Important ?

- ❖ It's a small world
- ❖ It only takes one active case to create an outbreak (Kane County Outbreak)
- ❖ Need to continue screening to continue to identify latent cases and provide treatment; every latent case is a potential active case
- ❖ Note peak in 1992-1995
- ❖ The Goal is to eliminate TB in the US. This is supported by States, and the Institute of Medicine (IOM) the American Thoracic Society (ATS), CDC, and the Infectious Diseases Society of America (IDSA).
- ❖ To meet this goal, TB programs must continue to exist to maintain and improve skills for testing, diagnosis, treatment and outbreak investigations



# Kane County Homeless Shelter Outbreak

- ❖ The largest TB outbreak in Illinois in the last 10 years.
- ❖ Incident Command System was activated.
- ❖ All of Kane County Nursing and Environmental Health Divisions became involved
- ❖ Index case was diagnosed in April 2007.
- ❖ In 2009, additional cases identified in November and December.
- ❖ Presently there are 19 active cases (all receiving treatment) and 138 latent cases, 38 of which received treatment



# Kane County Homeless Shelter Outbreak

- ▣ Took more man hours and expense than H1N1
- ▣ 2 staff members from CDC assisted for 1 week.
- ▣ Mass testing and screenings were conducted at Shelter beginning at 5 AM
- ▣ Screenings will be done at the shelter every two months for at least two years
- ▣ Positive homeless clients were placed in motels
- ▣ Directly Observed Therapy (DOT) is conducted on all active Tuberculosis cases.

# Kane County Homeless Shelter Outbreak

- Estimated budget for the next two years, which will cover housing, incentive cards, staff and other costs for this outbreak, is \$800,000 per year.
- \$240,000 was provided for DOT by IDPH
- There is no total cost for the Kane County outbreak at present.



# PADS

## PUBLIC ACTION TO DELIVER SHELTER

A Division of Pioneer Center for Human Services

- ▣ Includes a Day Center, Transitional Housing Center, and 10 Emergency Church Shelters.
- ▣ In 2010, the Day Center served 591 existing and non-duplicating clients.
- ▣ In 2010, 178 people were provided assistance at the Emergency Church Sites.



# McHenry County PADS Testing

- September 2010 to present, 5 testing dates have been completed for the Day Center.
- December 2010, 4 church site testing dates have been completed.
- A total of 101 staff and clients have been tested.
- 2 latent cases found.



# McHenry County PADS TB Testing

- ▣ Education and Buy-In by staff
- ▣ Development of Policies
- ▣ Use of photo ID and sticker to assure testing
- ▣ Use of incentive cards

