Healthy People 2020 Progress Review: The Burden of Tuberculosis and Infectious Diseases in the U.S and Abroad

July 30, 2013

Healthy People 2020

Office of Disease Prevention and Health Promotion

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Progress Review Overview

- Summarize the burden of Tuberculosis and infectious diseases in the U.S. and abroad
- Provide an update on the progress of Healthy People 2020 objectives
- Examine what is being done to achieve the Healthy People 2020 objectives

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Evolution of Healthy People

Target Year	1990	2000	2010	2020
Overarching Goals	•Decrease mortality: infants–adults •Increase independence among older adults	•Increase span of healthy life •Reduce health disparities •Achieve access to preventive services for all	•Increase quality and years of healthy life •Eliminate health disparities	•Attain high-quality, longer lives free of preventable disease •Achieve health equity; eliminate disparities •Create social and physical environments that promote good health •Promote quality of life, healthy development, healthy behaviors across life stages
# Topic Areas	15	22	28	42
# Objectives/ Measures	226/NA	312/NA	467/1,000	1,200/1200

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Healthy People 2020 Remains Relevant

HEALTHY PEOPLE

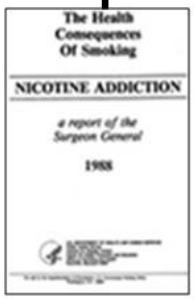
HEALTHY PEOPLE 2000

HEALTHY PEOPLE 2010

Healthy People 2020

1979 **1990** **2000** **2010**

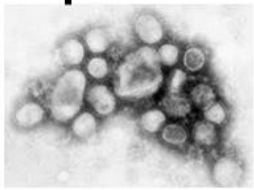
1979 Small Pox Eradicated



1988 SG Declares Nicotine Addictive

1990 Human Genome Project Begins

2000s Obesity and Chronic Disease



2009 H1N1 Flu

1970 Clean Air Act

1982 AIDS is infectious

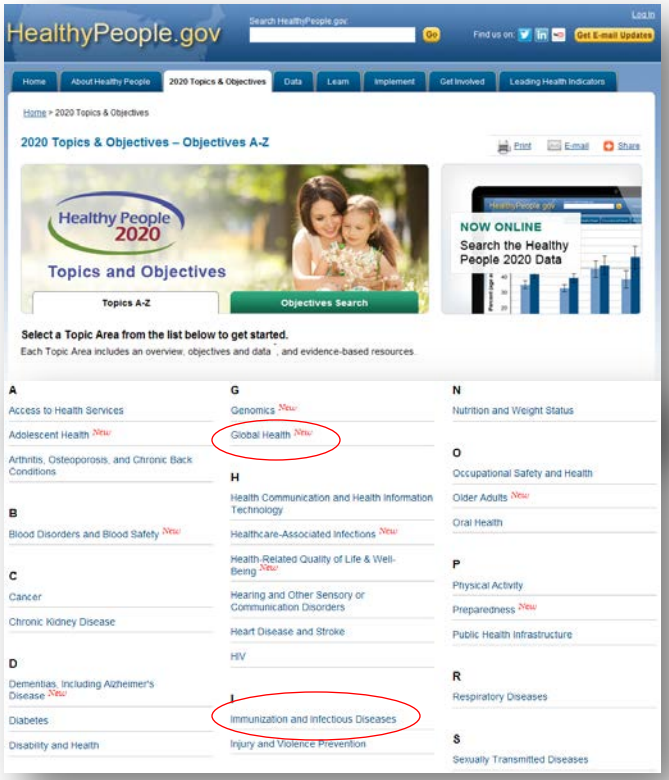
1990s Drinking Water Fluoridation

September 11, 2001

2005 Hurricane Katrina

Healthy People 2020

- 42 topic area and 1200 objectives
- Source for reliable, science-based, public health measures
- Can be customized to meet needs of diverse users
- Guided by collaborative stakeholder-driven process



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Immunizations and Infectious Diseases

- Vaccinations are the greatest U.S. public health achievement of the 20th Century
- Immunizations increased U.S. life expectancy during the 20th century
- Vaccines are among the most cost-effective clinical preventive services

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Cost Savings Attributed to Vaccines

Reduces direct health care costs by $14 billion.

Saves $69 billion in total societal costs.

Prevents 20 million cases of disease.

Saves 42,000 lives.

SOURCE: CDC. Ten Great Public Health Achievements --- United States, 2001--2010. MMWR, May 20, 2011 / 60(19);619-623.

Global Health

- **Plays an increasingly important role in global and U.S Security**
  - Corona Viruses: SARS (2003), MERS (2012)
  - H1N1 Influenza (2009)
  - H7N9 Influenza (2013)

- **Rapid identification of infectious diseases helps:**
  - Promote health abroad
  - Prevent the international spread of disease
  - Protect the health of the U.S. population

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SOURCE: HealthyPeople.gov

Presenters

Chair

- Howard K. Koh, MD, MPH
  Assistant Secretary for Health, HHS

Data Presentation

- Irma Aripse, PhD
  Associate Director, National Center for Health Statistics, CDC

Immunization and Infectious Diseases

- Rear Admiral Kenneth Castro, MD
  Director, Division of Tuberculosis Elimination, CDC

Global Health

- Tom Kenyon, MD, MPH
  Director, Center for Global Health, CDC
- Craig Shapiro, MD
  Director, Office of the Americas, Office of Global Affairs, HHS

Community Highlight

- Ed Zuroweste, MD
  Chief Medical Officer, Migrant Clinician Network

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Irma Arispe, PhD

Associate Director, National Center for Health Statistics
Centers for Disease Control and Prevention

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U.S. Leading Causes of Death

	1900	1950	2010
1	Pneumonia and influenza	Heart disease	Heart disease
2	Tuberculosis	Cancer	Cancer
3	Diarrhea and enteritis	Stroke	Chronic lung disease
4	Heart disease	Injuries	Stroke
5	Stroke	Infant mortality	Injuries
6	Kidney disease	Pneumonia and influenza	Alzheimer's disease
7	Injuries	Tuberculosis	Diabetes
8	Cancer	Arteriosclerosis	Kidney disease
9	Senility	Kidney disease	Pneumonia and influenza
10	Diphtheria	Diabetes	Suicide

SOURCE: National Vital Statistics System-Mortality (NVSS-M), CDC/NCHS.

Data Presentation Outline

- Vaccination coverage
  - Child
  - Adolescent
- Vaccine-preventable diseases
- Global health
- Tuberculosis (TB): U.S. and abroad

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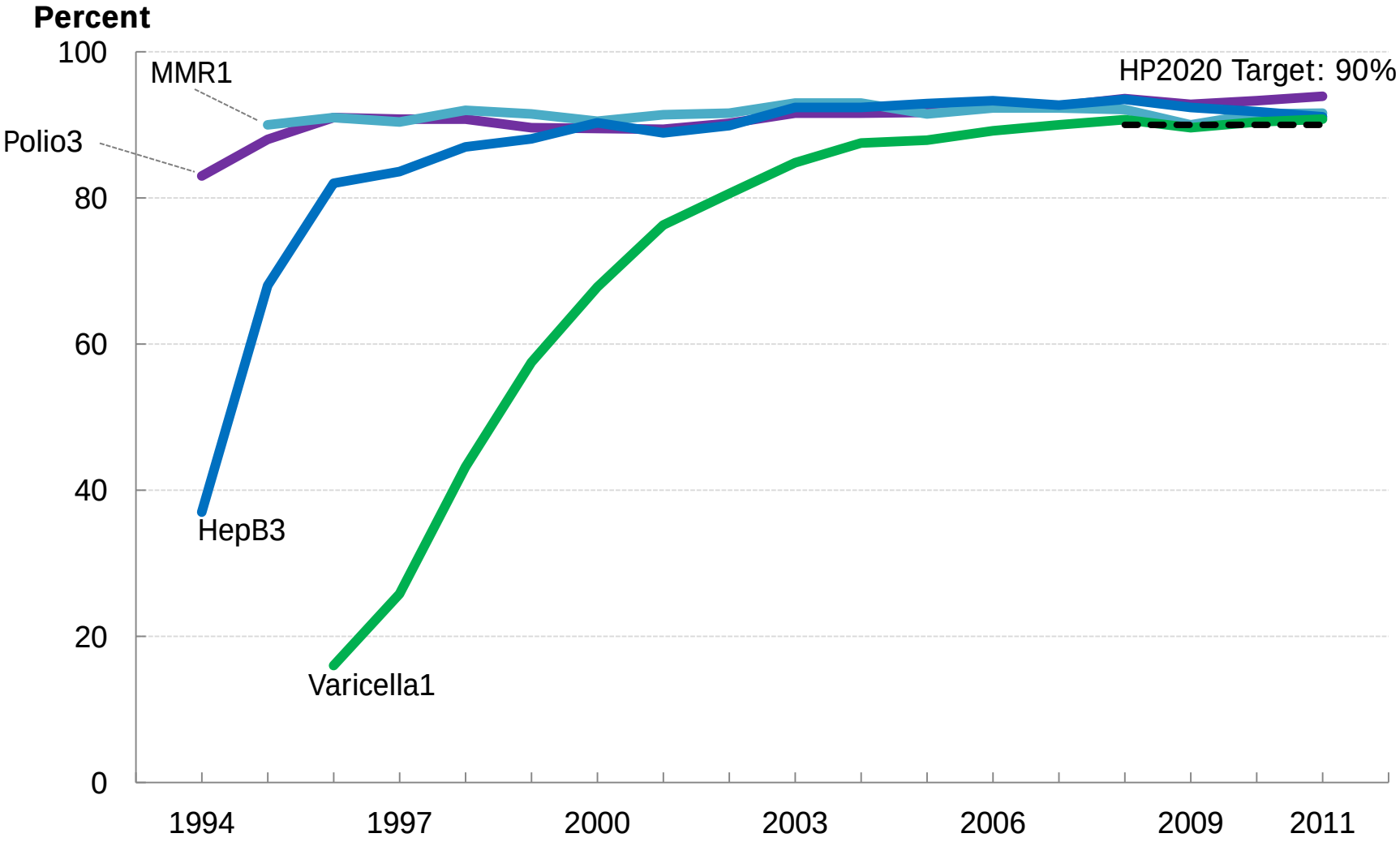
Vaccination Coverage
Children 19-35 months, 1994-2011

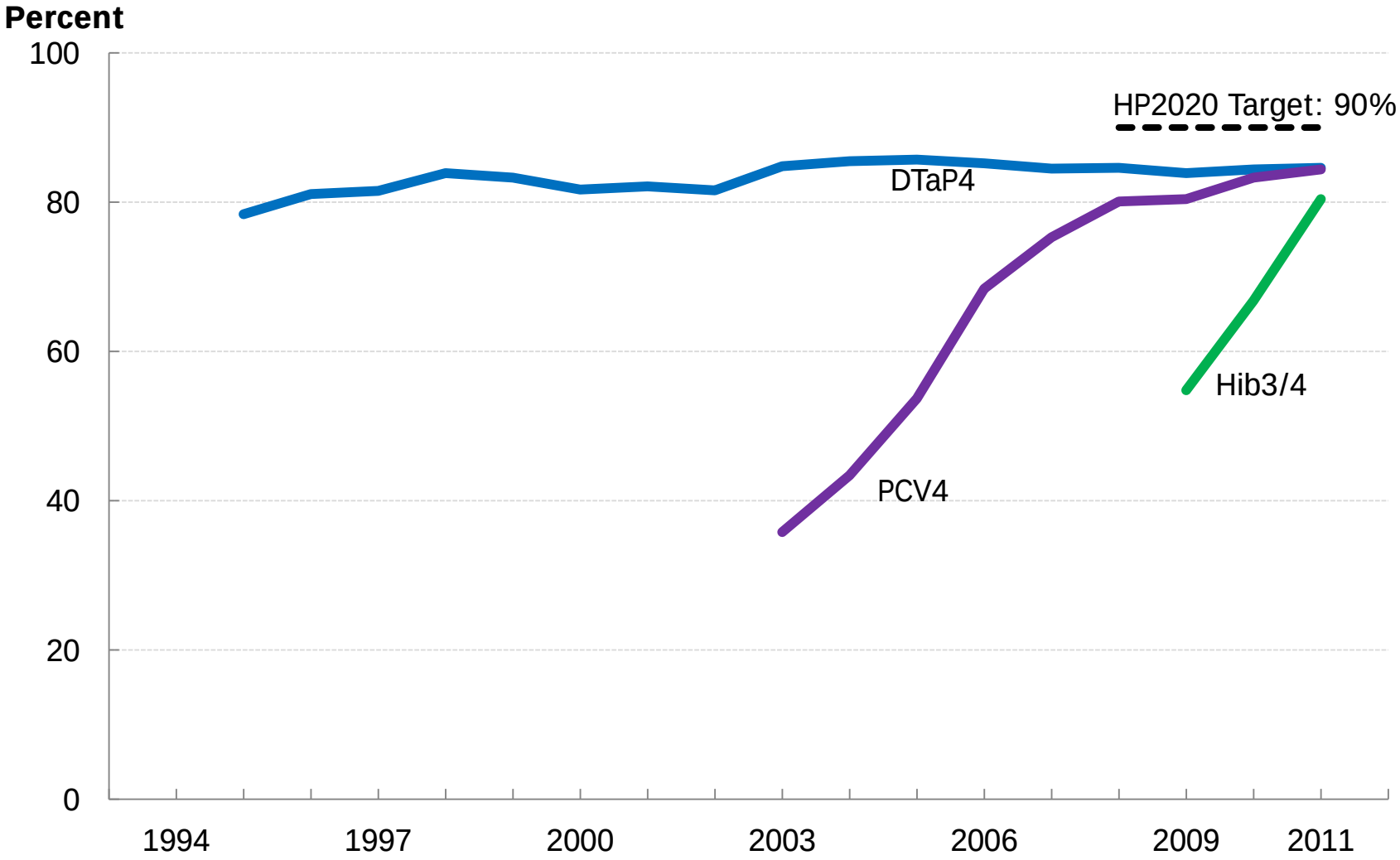


NOTE: 1994 data are from Apr-Dec 1994.

SOURCE: National Immunization Survey (NIS), CDC/NCIRD and CDC/NCHS.

Obj. IID-7.1 through 7.10
Increase desired

Vaccination Coverage
Children 19-35 months, 1994-2011



NOTE: 1994 data are from Apr-Dec 1994.

SOURCE: National Immunization Survey (NIS), CDC/NCIRD and CDC/NCHS.

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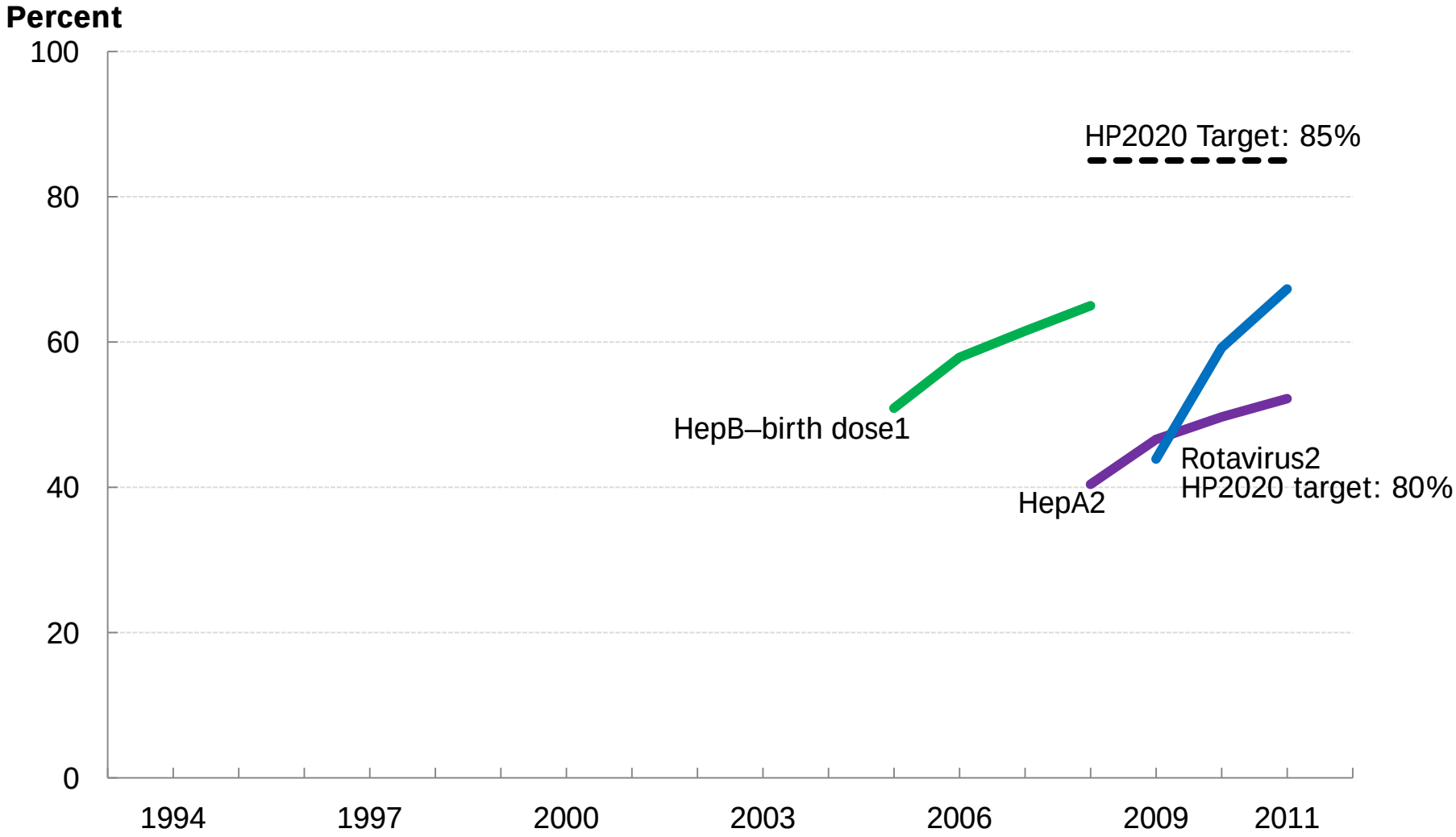
Increase desired

Vaccination Coverage
Children 19-35 months, 1994-2011

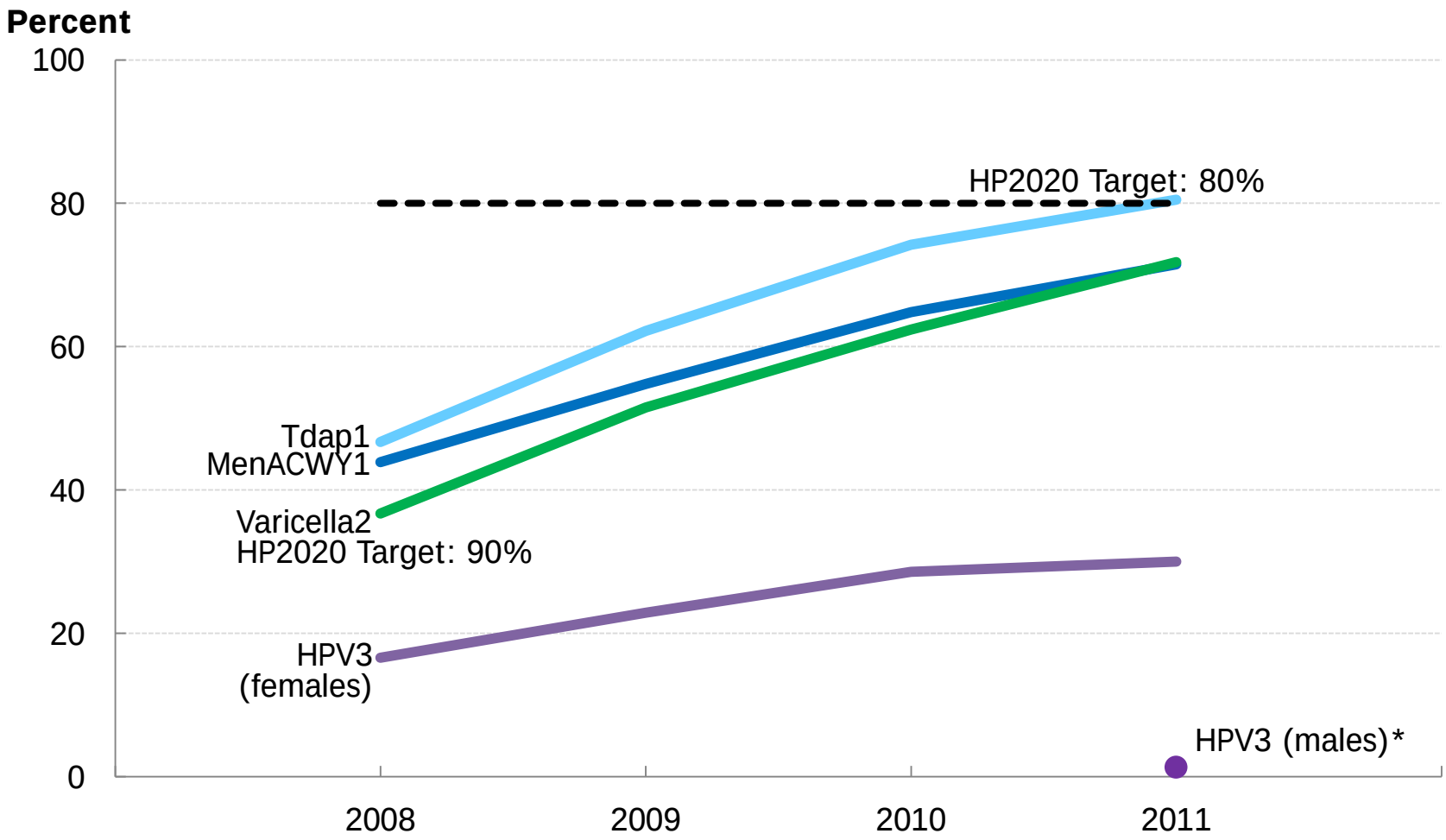


NOTE: Data are presented by birth cohort for HepB-birth dose and by data year for HepA and Rotavirus vaccines.

SOURCE: National Immunization Survey (NIS), CDC/NCIRD and CDC/NCHS.

Obj. IID-7.1 through 7.10
Increase desired

Vaccination Coverage
Adolescents 13–15 years, 2009-2011

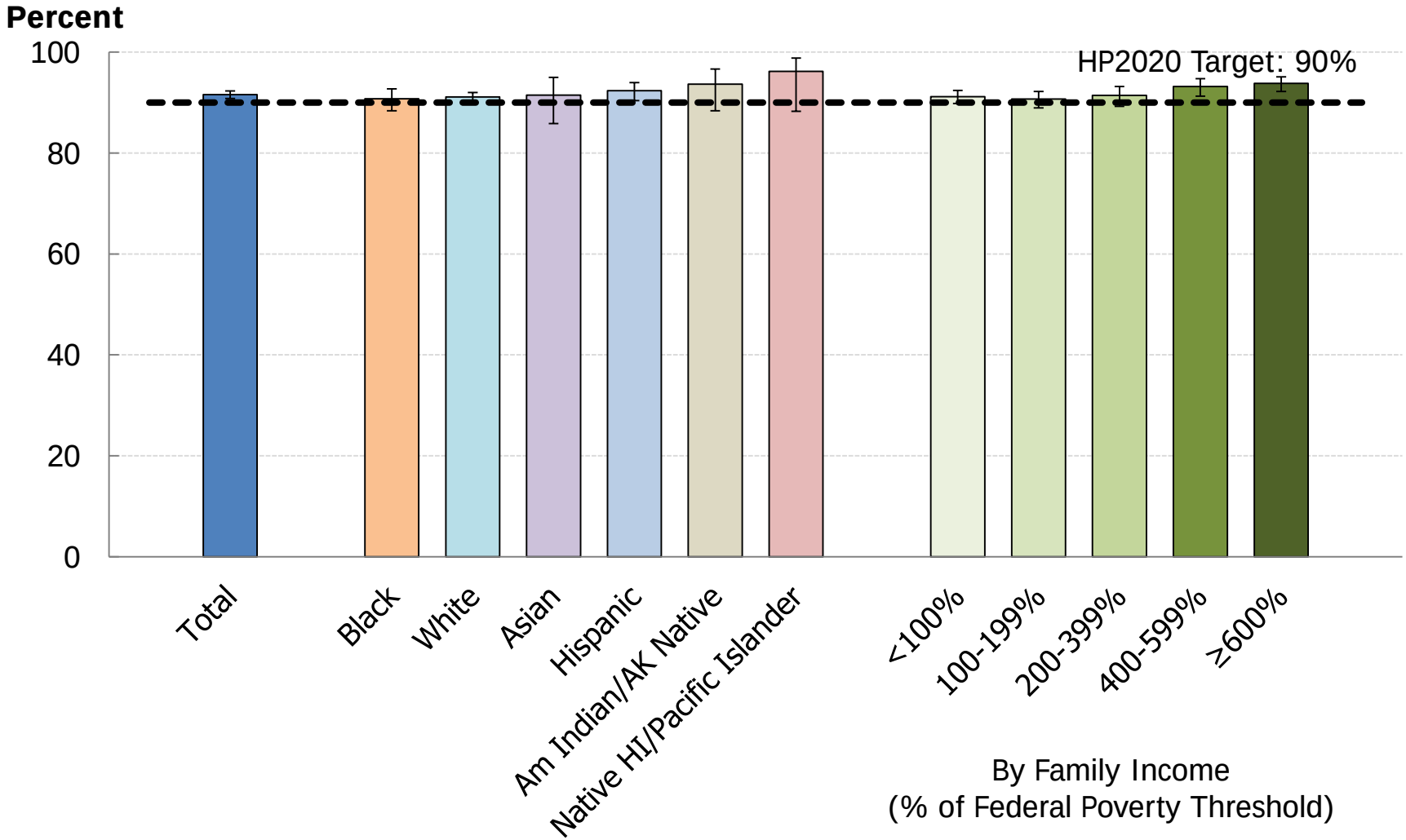


NOTES: *aged 13-17 years, not a HP2020 objective

SOURCE: National Immunization Survey (NIS)-Teen, CDC/NCIRD and CDC/NCHS.

Obj. IID-11.1 through 11.4
Increase desired

MMR Vaccine Coverage
Children 19-35 months, 2011

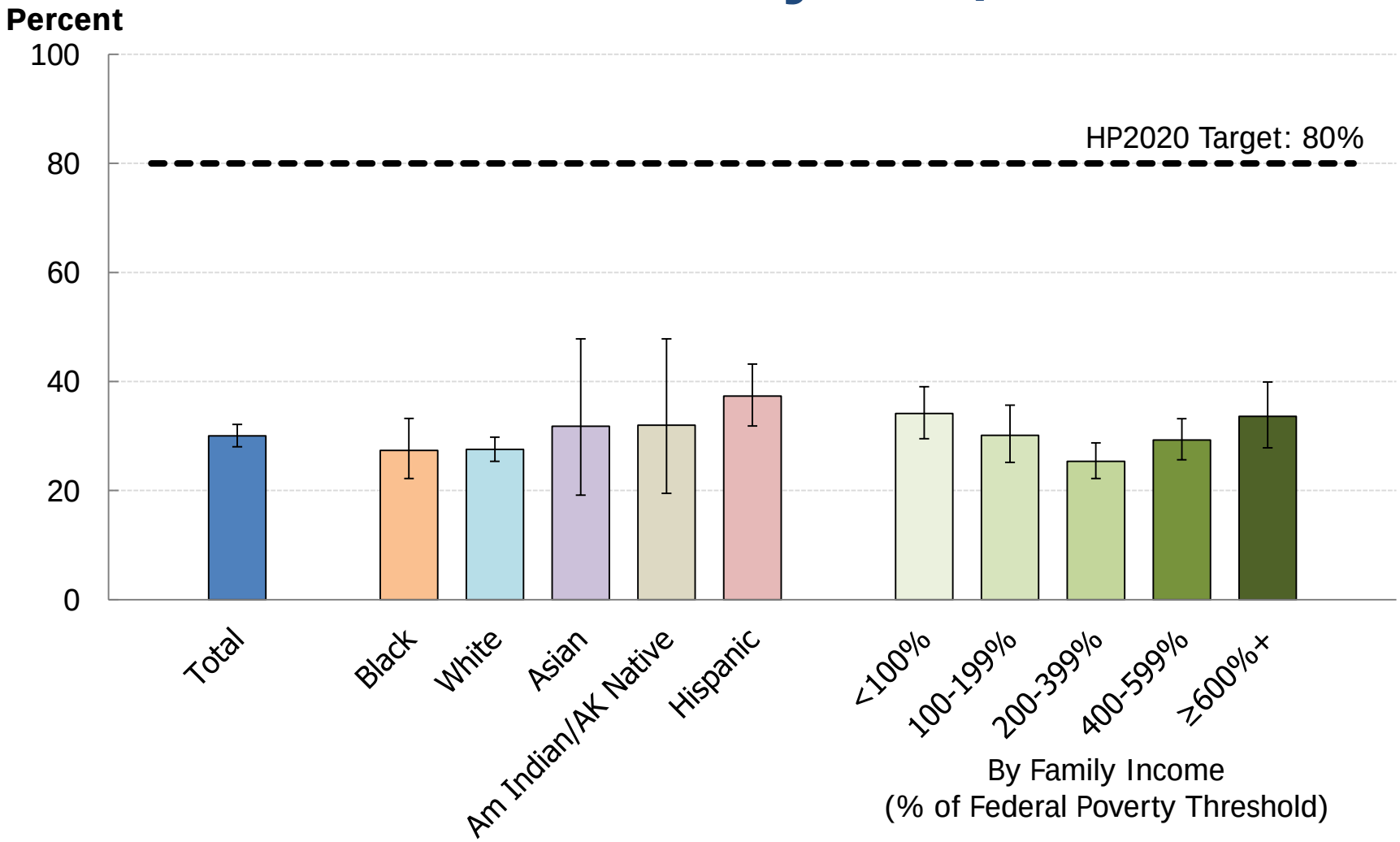


NOTES: I = 95% confidence interval. Children identified as white, black, Asian, or American Indian/Alaska Native are non-Hispanic. Persons identified as Hispanic can be of any race.

SOURCE: National Immunization Survey (NIS), CDC/NCIRD and CDC/NCHS.

Obj. IID-7.4
Increase desired

HPV Vaccine Coverage
Females 13-15 years, 2011



NOTES: I = 95% confidence interval. Adolescents reported as Hispanics can be of any race. Adolescents who were reported by the adult as white, black, Asian, or American Indian/Alaska Native all were considered non-Hispanic.

SOURCE: National Immunization Survey (NIS)-Teen, CDC/NCIRD and CDC/NCHS.

Obj. IID-11.4
Increase desired

Data Presentation Outline

- Vaccination coverage
- Vaccine-preventable diseases
  - Polio
  - Measles
  - Influenza
- Global Health
- Tuberculosis (TB): U.S. and abroad

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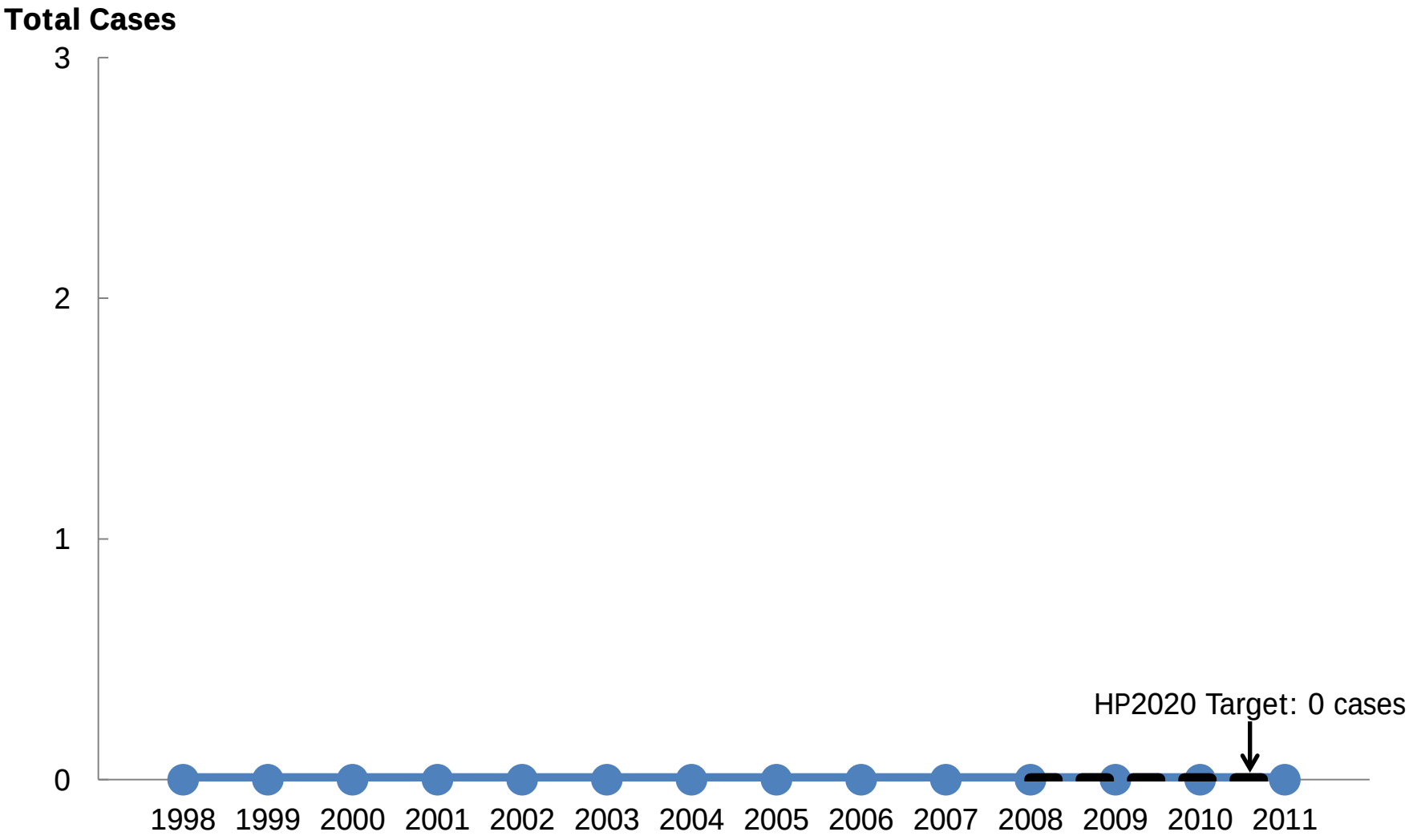
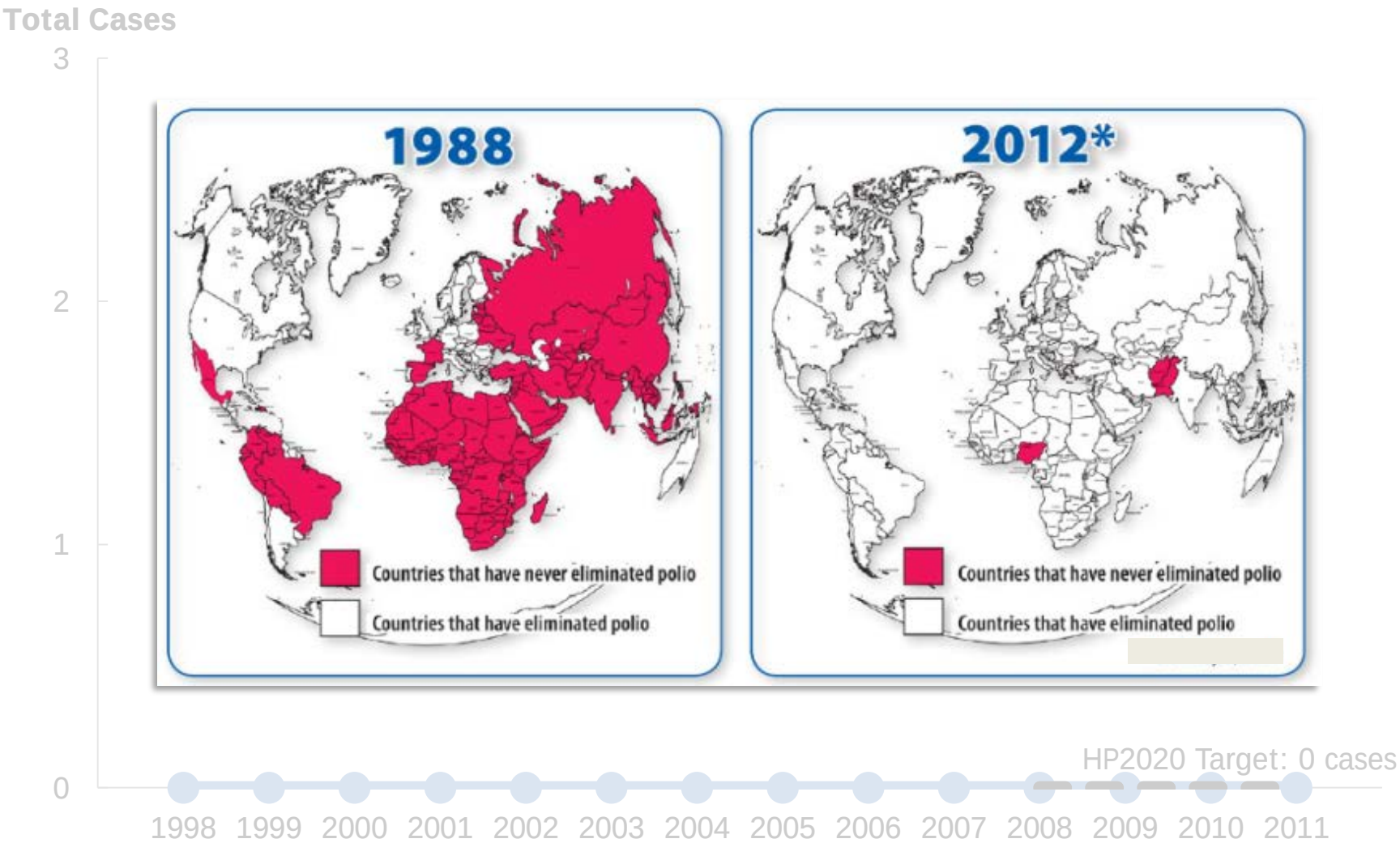
Polio – U.S. Acquired Cases



Obj. IID-1.8
Maintain elimination

SOURCE: National Notifiable Disease Surveillance System (NNDSS), CDC/NCIRD.

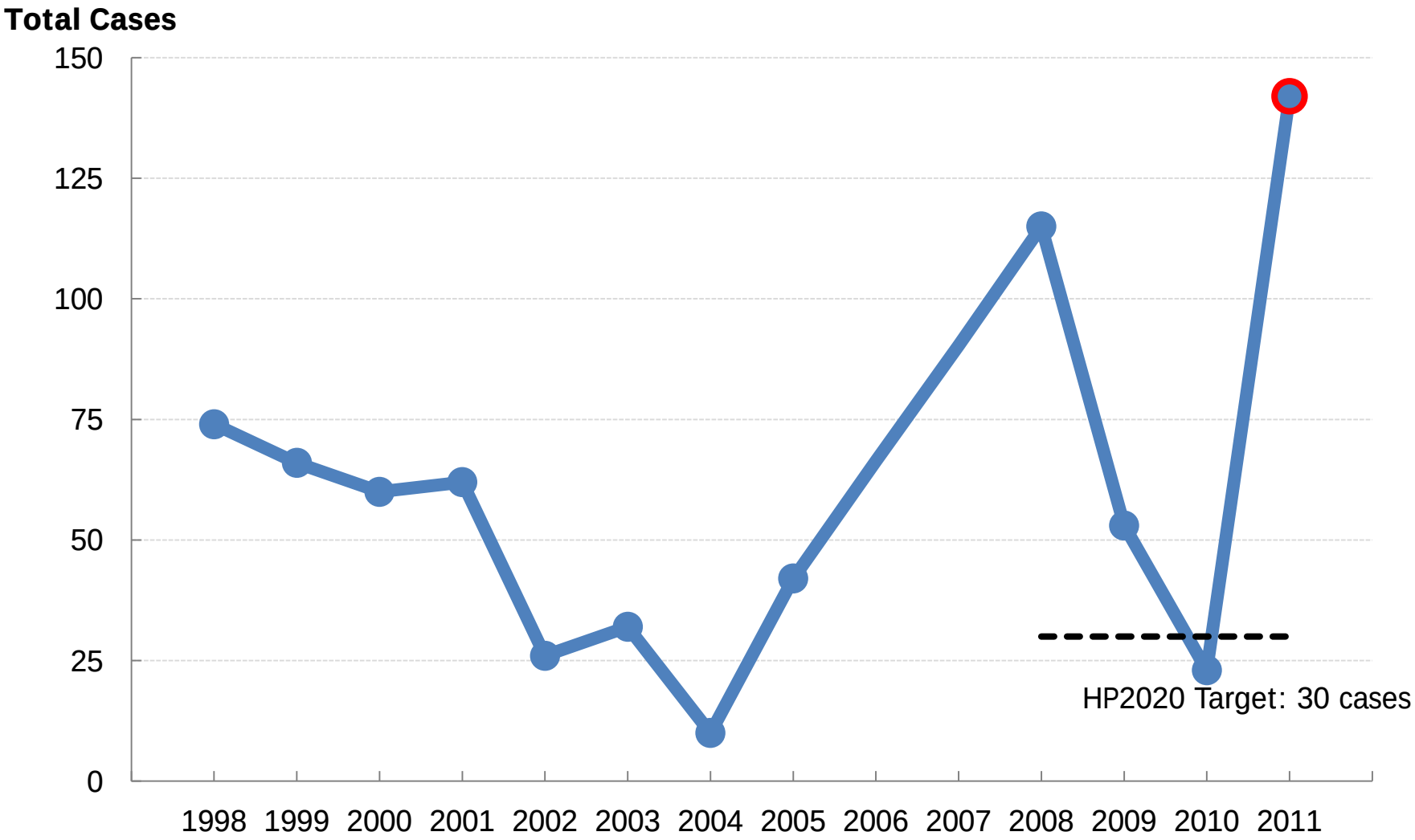
Polio – Global



NOTE: *As of May 3, 2012

SOURCE: http://www.cdc.gov/polio/progress/

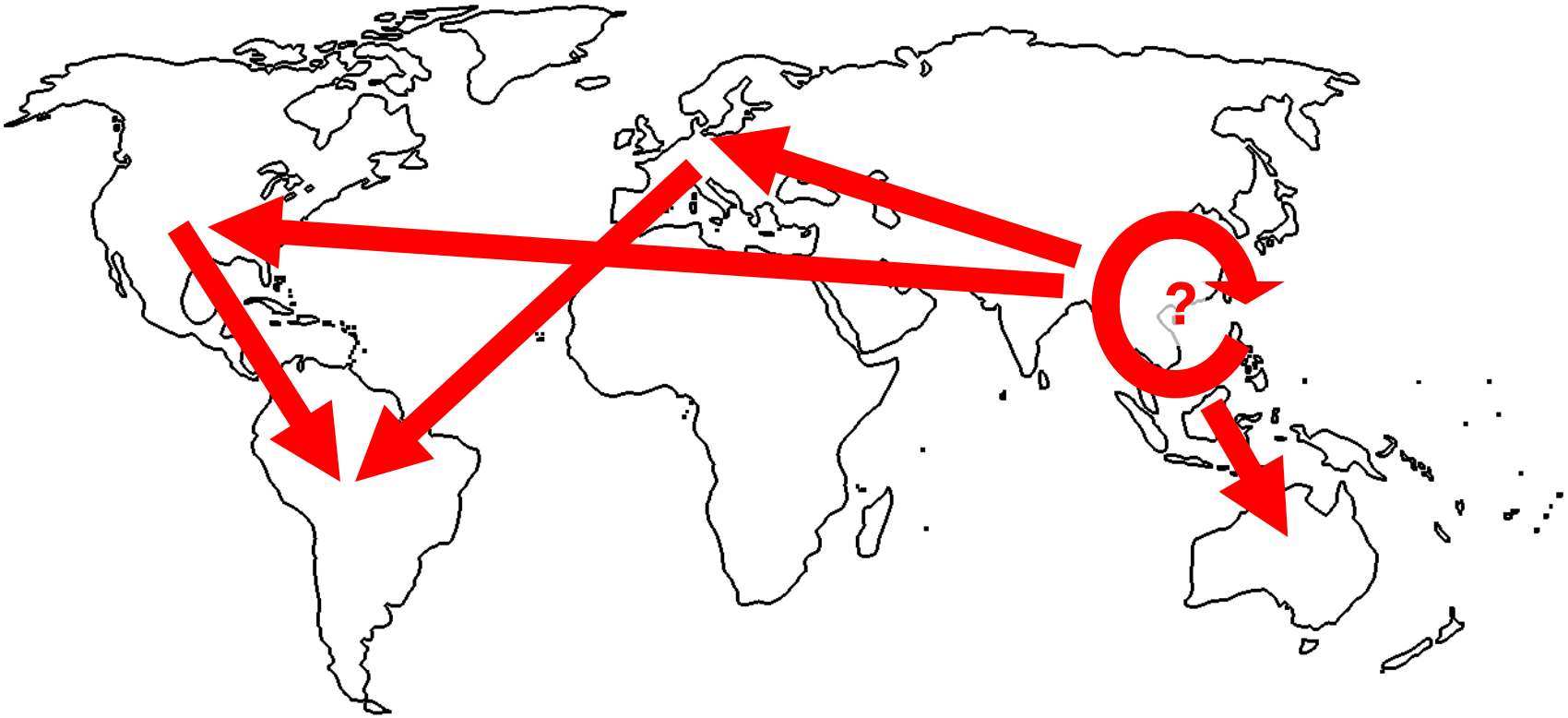
Measles – U.S. Acquired Cases



Obj. IID-1.4
Decrease desired

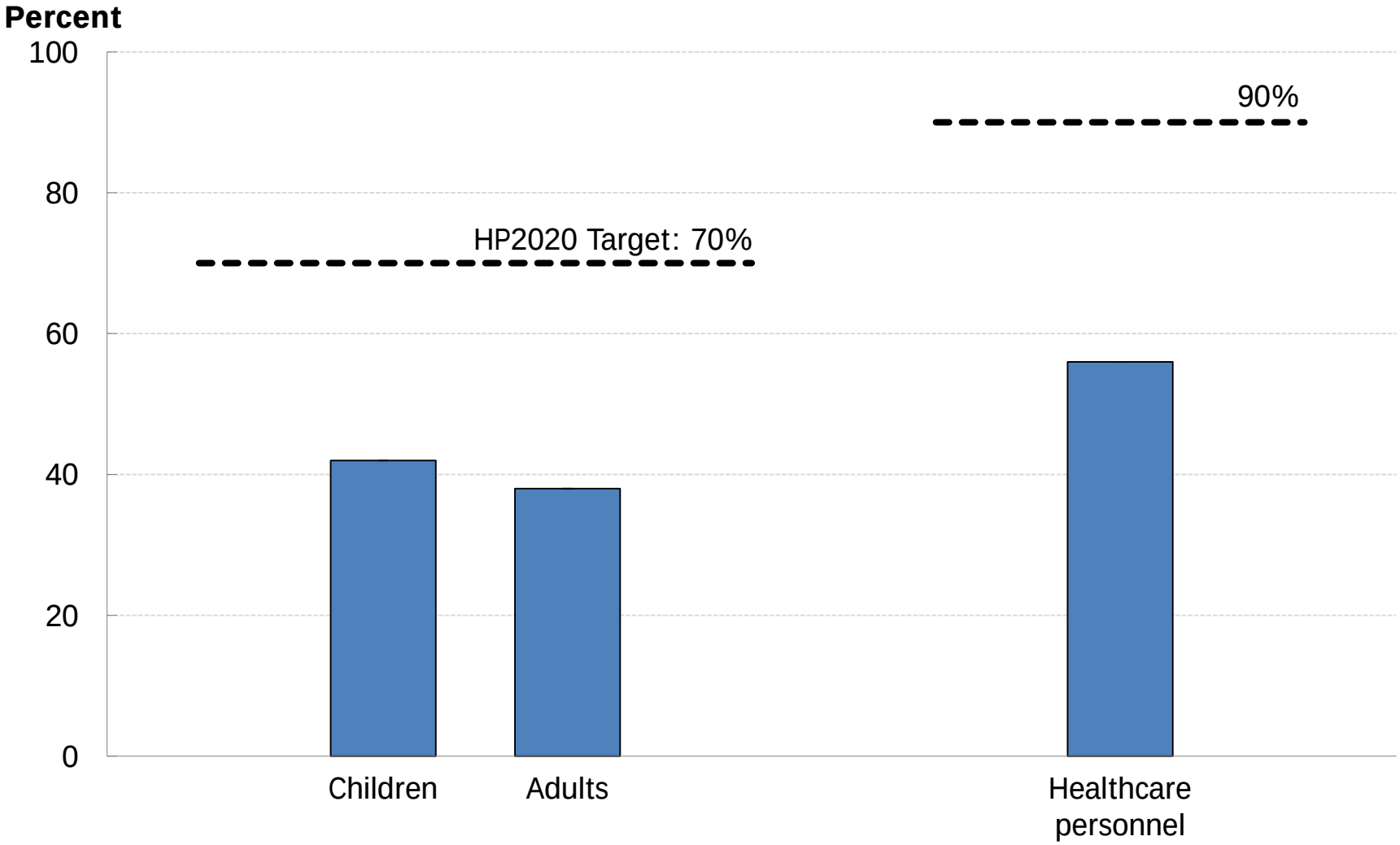
SOURCE: National Notifiable Disease Surveillance System (NNDSS), CDC/NCIRD.

Global Circulation of Seasonal Influenza



SOURCE: C A Russell et al. Science 2008;320:340-346

Flu Vaccine Coverage 2010-2011 Influenza Season



NOTES: Data are for children age 6 months to 17 years and adults age 18 and older. Data are for the total US population.

SOURCE: National Health Interview Survey (NHIS), CDC/NCHS.

Obj. IID-12.11 through 12.13
Increase desired

Data Presentation Outline

- Vaccination coverage
- Vaccine-preventable diseases
- Global Health
- Tuberculosis (TB): U.S. and abroad

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Global Health

- Plays an increasingly crucial role in global security and the security of the U.S. population.
- Rapid identification and control of emerging infectious diseases helps:
  - Promote health abroad
  - Prevent the international spread of disease
  - Protect the health of the U.S. population

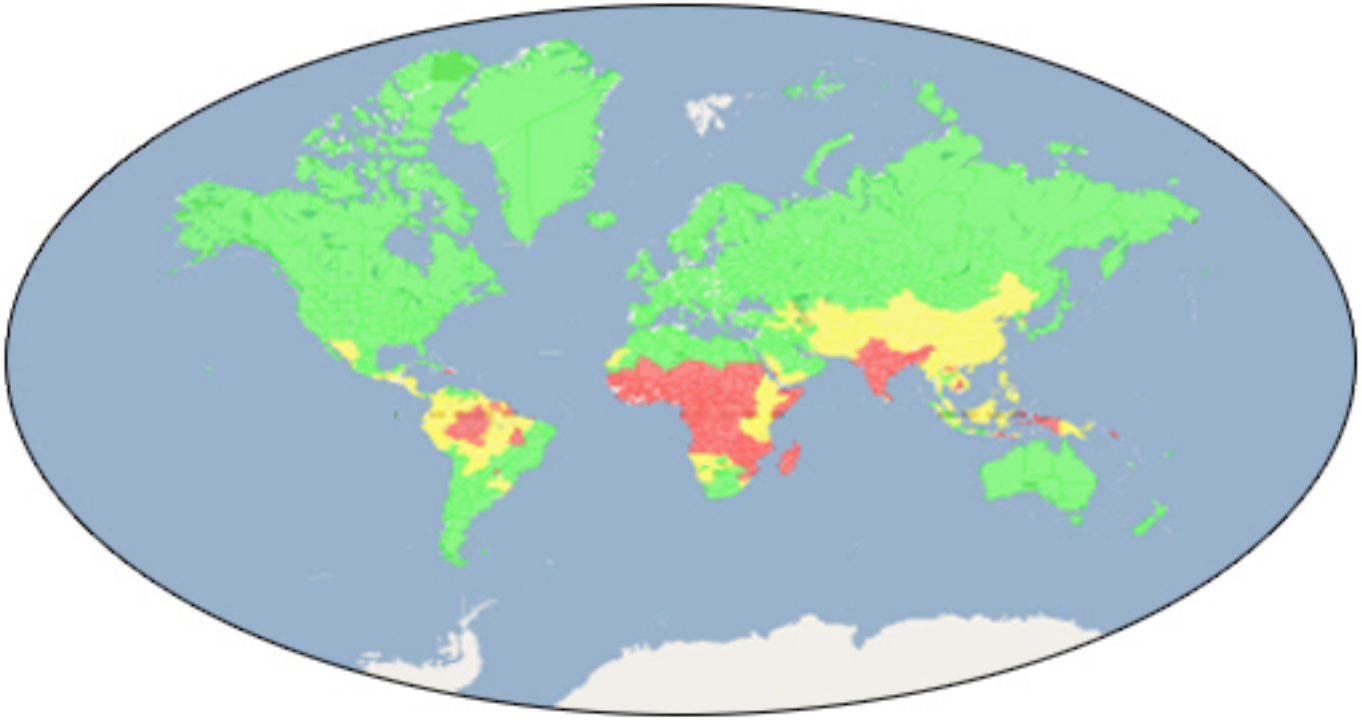
SOURCE: HealthyPeople.gov

Global Public Health Impact: Malaria

- A leading cause of death and disease in many developing countries.
- About 3.3 billion people live in areas at risk of malaria transmission in 106 countries and territories.
- In 2010 malaria caused 216 million clinical episodes and 655,000 deaths worldwide.
- Direct costs are estimated to be at least $12 billion per year (in US dollars).

SOURCE: http://www.cdc.gov/malaria/malaria_worldwide/impact.html

Malaria Transmission Worldwide



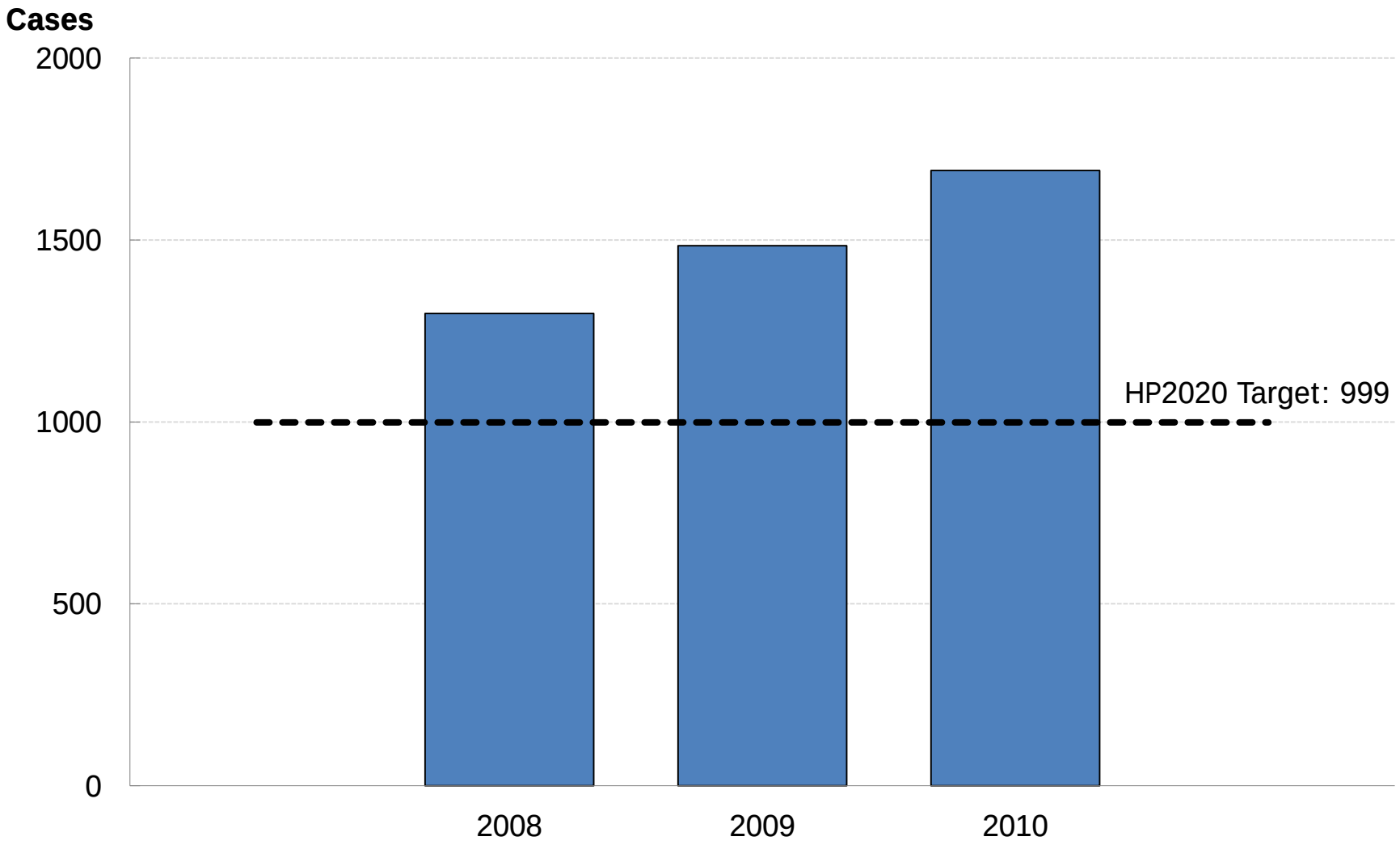
Malaria transmission occurs throughout

Malaria transmission occurs in some parts

Malaria transmission is not known to occur

SOURCE: http://www.cdc.gov/malaria/malaria_worldwide/impact.html

Malaria in the U.S., 2008-2010



NOTE: Data for this objective are an aggregate of cases reported to CDC by the data systems.

SOURCE: National Notifiable Diseases Surveillance System (NNDSS), CDC/PHSPO; National Malaria Surveillance System (NMSS), CDC/CGH

Obj. GH-1
Decrease desired

Data Presentation Outline

- Vaccination coverage
- Vaccine-preventable diseases
- Global Health
- Tuberculosis (TB): U.S. and abroad

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Global Leading Causes of Death, 2008

	Global	Low-Income Countries	Middle-Income Countries	High-Income Countries
1	Heart disease	Pneumonia	Heart disease	Heart disease
2	Stroke	Diarrheal diseases	Stroke	Stroke
3	Pneumonia	HIV/AIDS	Chronic lung disease	Lung cancer
4	Chronic lung disease	Heart disease	Pneumonia	Alzheimer's disease
5	Diarrheal diseases	Malaria	Diarrheal diseases	Pneumonia
6	HIV/AIDS	Stroke	HIV/AIDS	Chronic lung disease
7	Lung cancer	Tuberculosis	Road traffic accidents	Colon cancer
8	Tuberculosis	Premature birth	Tuberculosis	Diabetes
9	Diabetes	Birth trauma	Diabetes	Heart failure
10	Road traffic accidents	Neonatal infections	Heart failure	Breast cancer

SOURCE: http://who.int/mediacentre/factsheets/fs310/en/

Global TB Burden

- **Progress in reducing TB globally**
  - New cases decreased by 2.2% between 2010 and 2011.
  - Mortality decreased by 41% between 1990 and 2011

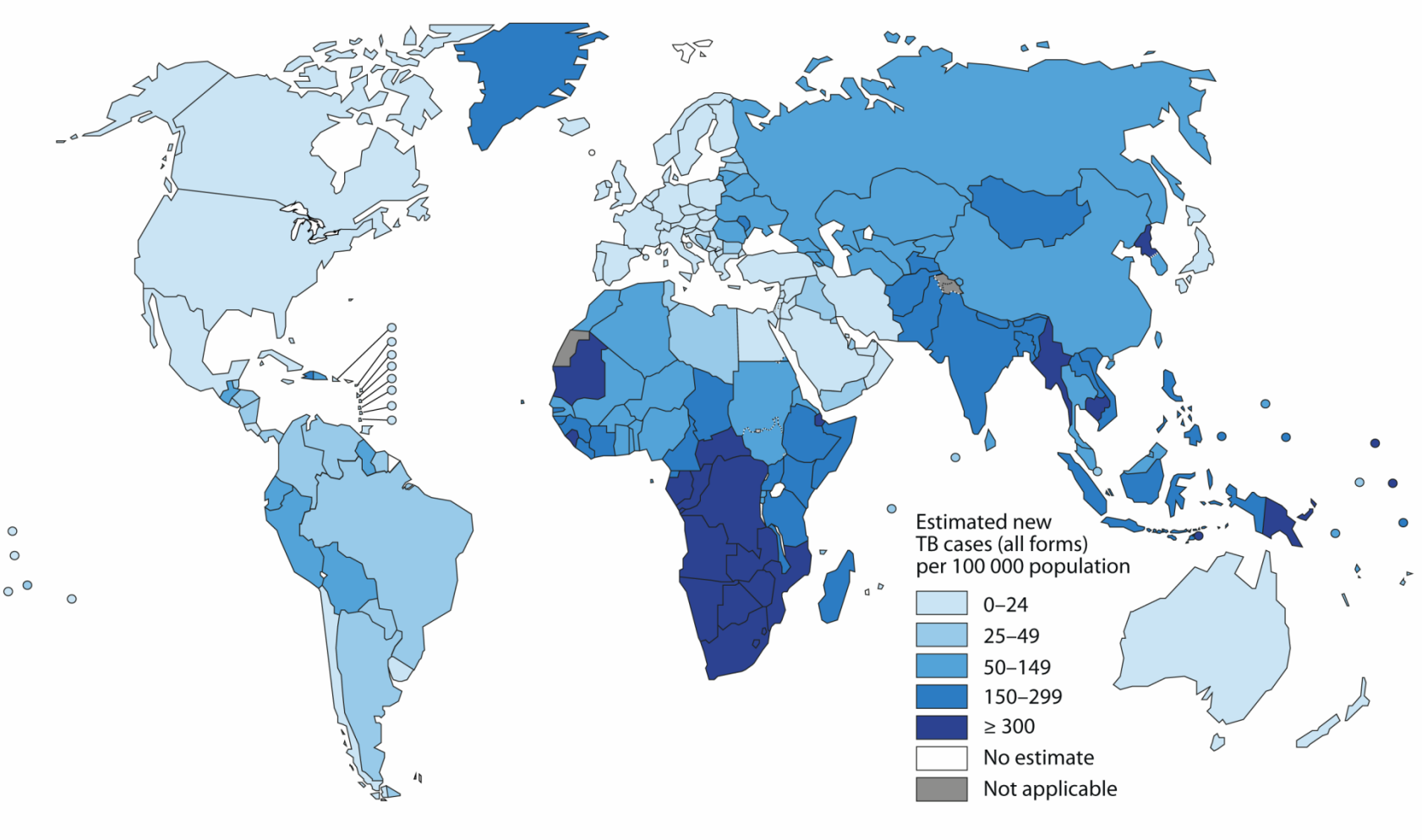
- **Global burden of TB remains high**
  - In 2011
    - 8.7 million people fell ill with TB (1.1 million cases among people with HIV)
    - 1.4 million deaths (430,000 among people with HIV)
    - 10 million children orphaned by TB
    - 500,000 cases of multi-drug resistant TB

- **Leading cause of death among people with HIV**

- **Second leading cause of death from a single infectious agent**

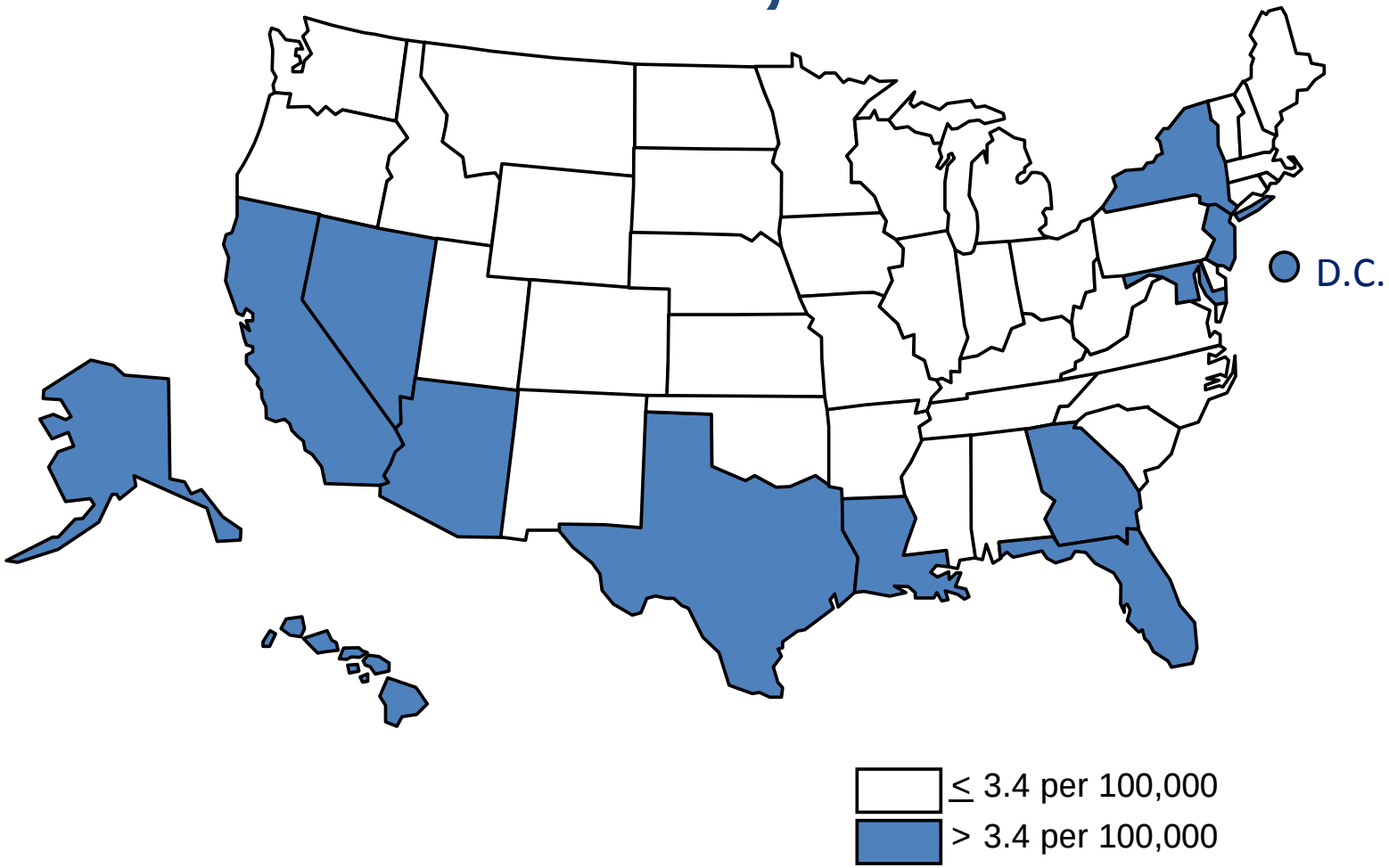
SOURCE: WHO.int

New TB Cases per 100,000: Global, 2011



SOURCE: Global Tuberculosis Report 2012. WHO, 2012.

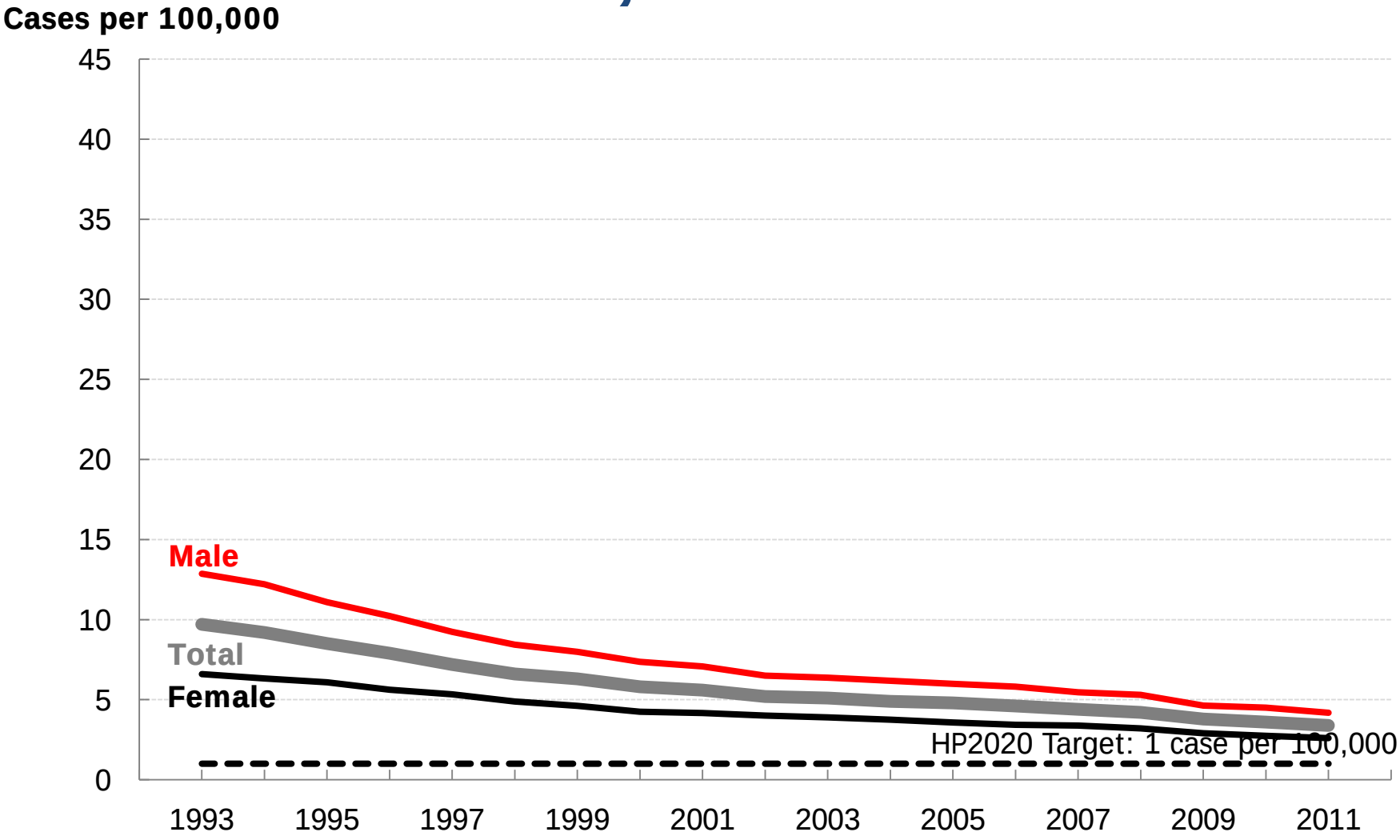
New TB Cases per 100,000: U.S., 2011



NOTE: The national average in 2011 was 3.4 cases per 100,000.

SOURCE: National Tuberculosis Surveillance System Highlights From 2011, CDC/NCHHSTP.

New TB Cases per 100,000: U.S., 1993-2011



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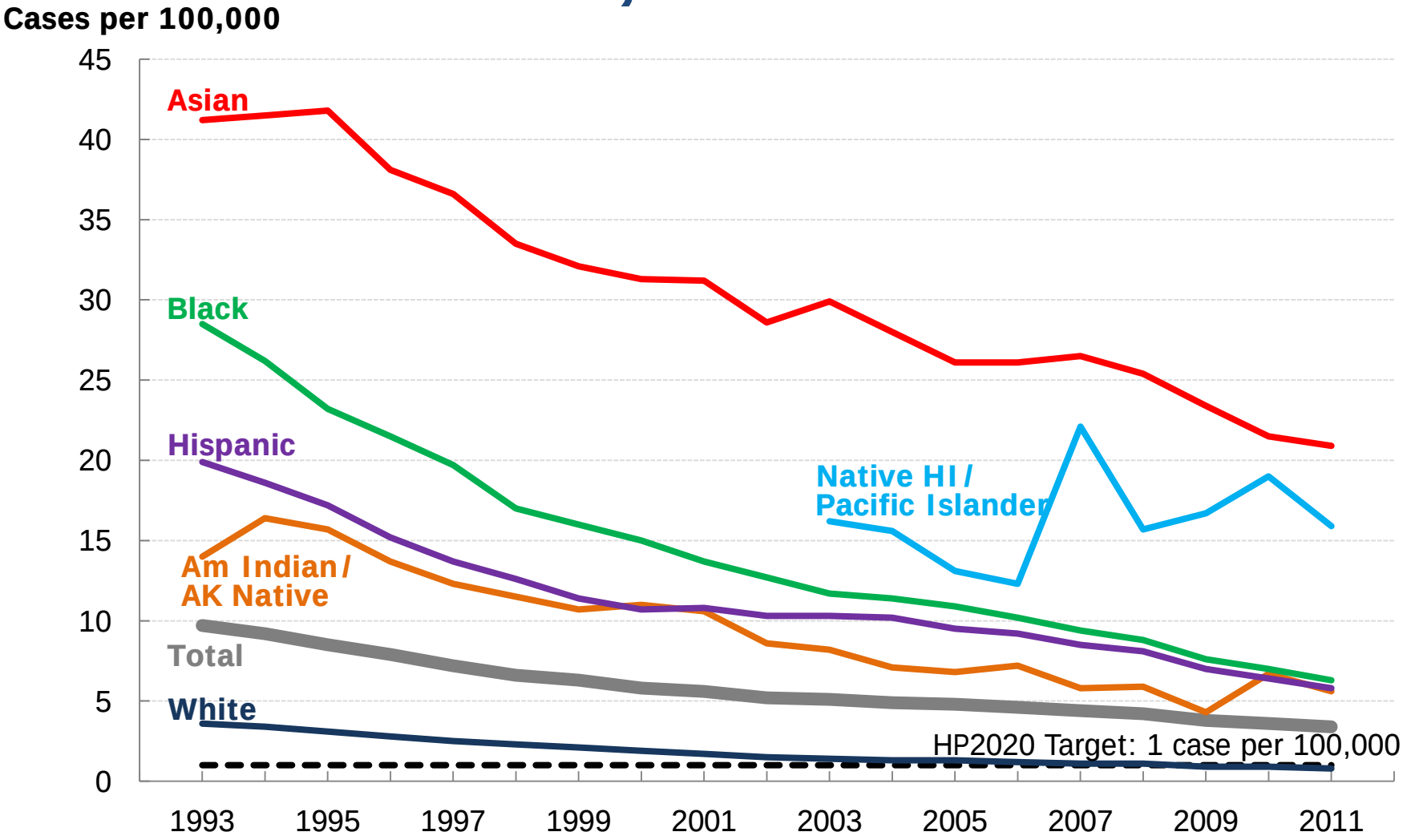
SOURCE: National Tuberculosis Surveillance System (NTSS), CDC/NCHHSTP.

New TB Cases per 100,000: U.S., 1993-2011



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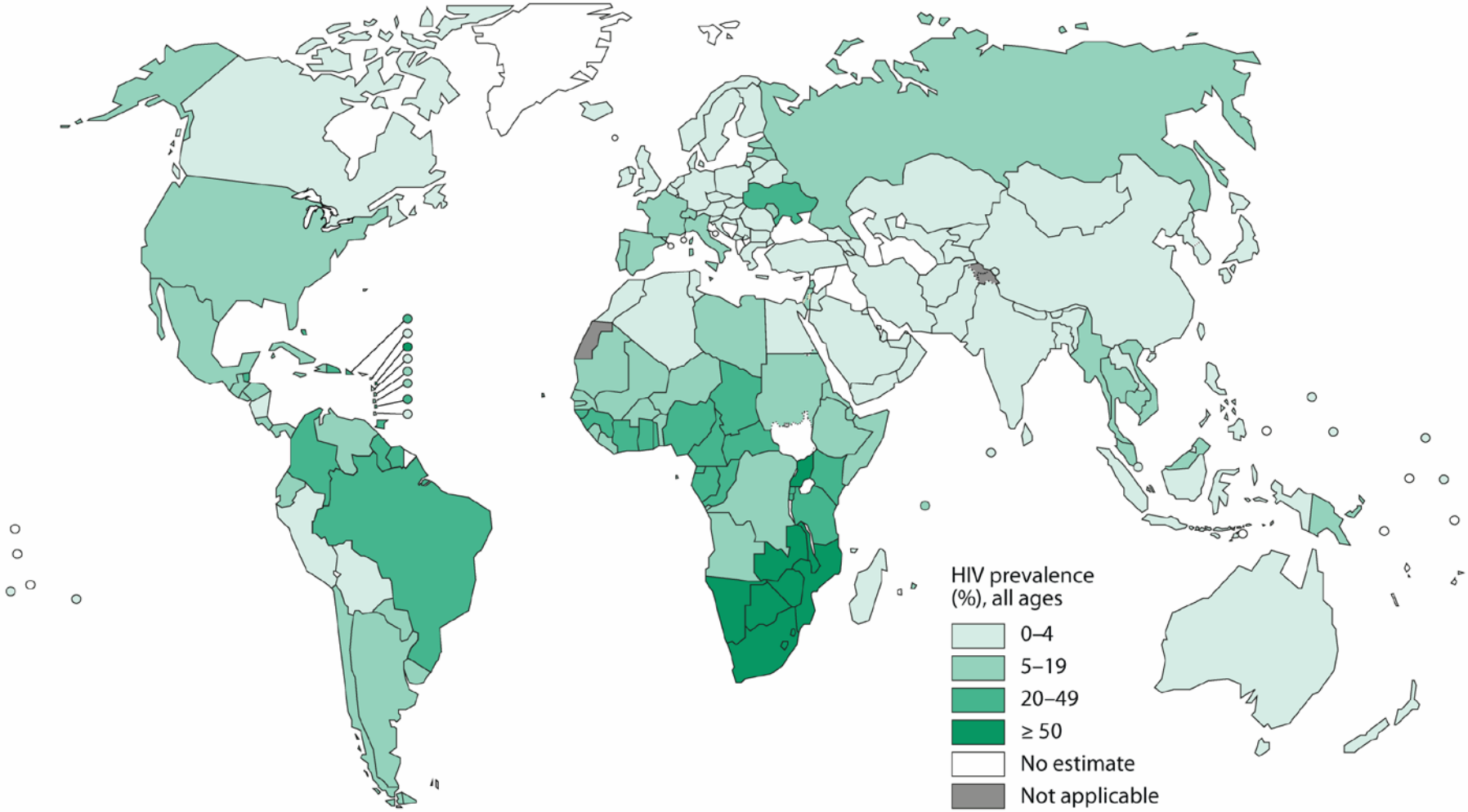
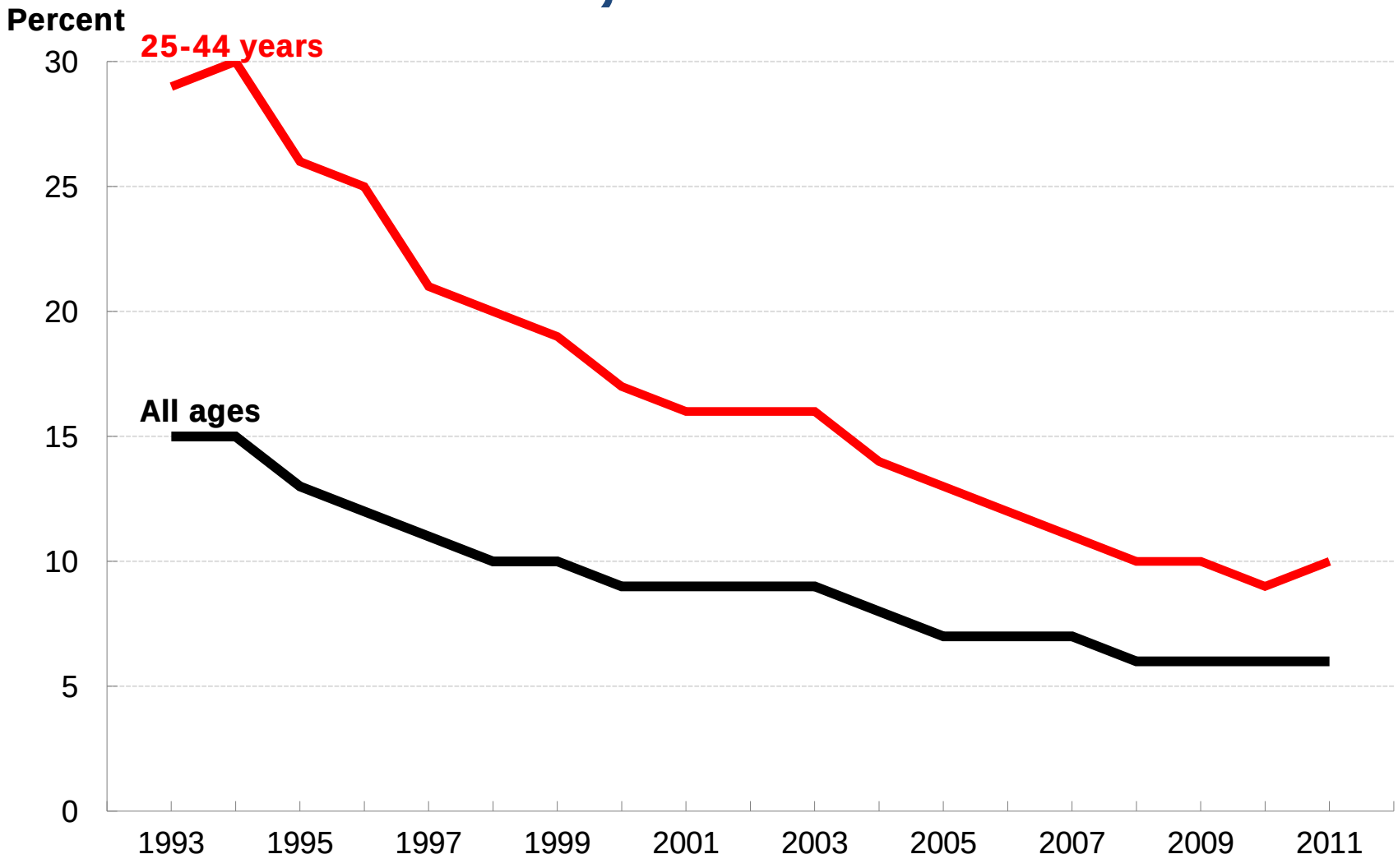
SOURCE: National Tuberculosis Surveillance System (NTSS), CDC/NCHHSTP.

HIV Co-infection Among New TB Cases: Global, 2011



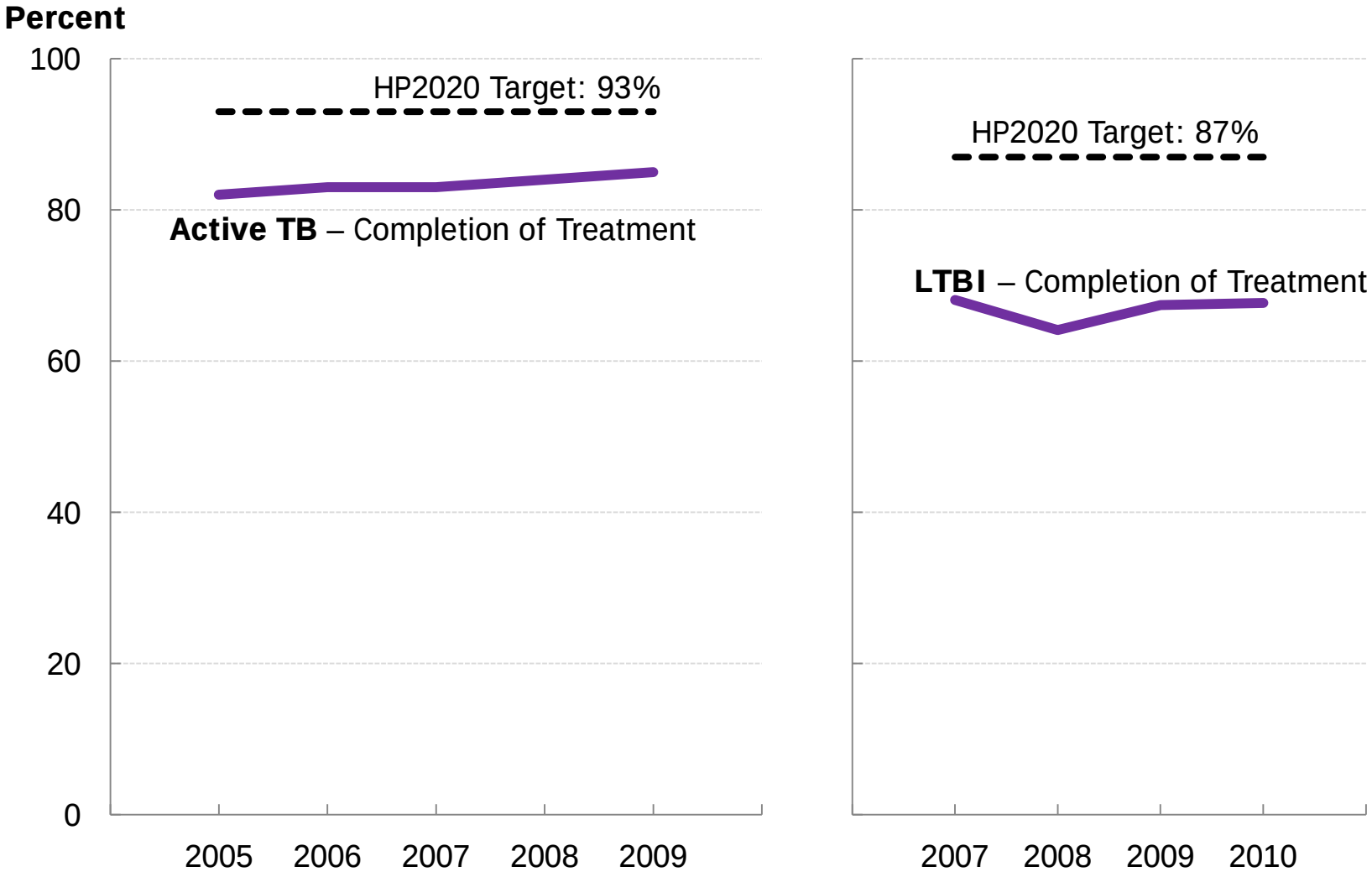
SOURCE: Global Tuberculosis Report 2012. WHO, 2012.

HIV Co-infection Among TB Patients: U.S., 1993-2011



SOURCE: National Tuberculosis Surveillance System Highlights from 2011, CDC/NCHHSTP.

Completion of Treatment: Active and Latent TB U.S., 2005-2010



NOTE: LTBI, Latent Tuberculosis Infection

SOURCE: National Tuberculosis Indicators Project, CDC/NCHHSTP.

Obj. IID-30 and 31
Increase desired

Key Takeaways

- Overall, U.S. TB rates are decreasing.
- However, disparities persist for racial and ethnic minorities and those born outside the U.S.
- TB remains an urgent public health problem in Asia and Africa.
- Health issues abroad – TB, flu, and measles – can directly impact the health of the U.S.

Healthy People 2020 Progress Review slides can be accessed on the web at:

www.cdc.gov/nchs/healthy_people.htm

Healthy People 2020

Kenneth G. Castro, MD

RADM, U.S. Public Health Service
Director, Division of Tuberculosis Elimination
Centers for Disease Control and Prevention

Healthy People 2020

Office of Disease Prevention and Health Promotion

Presentation Outline

- Domestic Tuberculosis Overview
  - Program details, then and now
  - Data
  - Projections
- Global Tuberculosis Overview
  - Return on investment in global TB control
  - CDC partners & resources
  - Paradox of programmatic success
- Challenges and Successes

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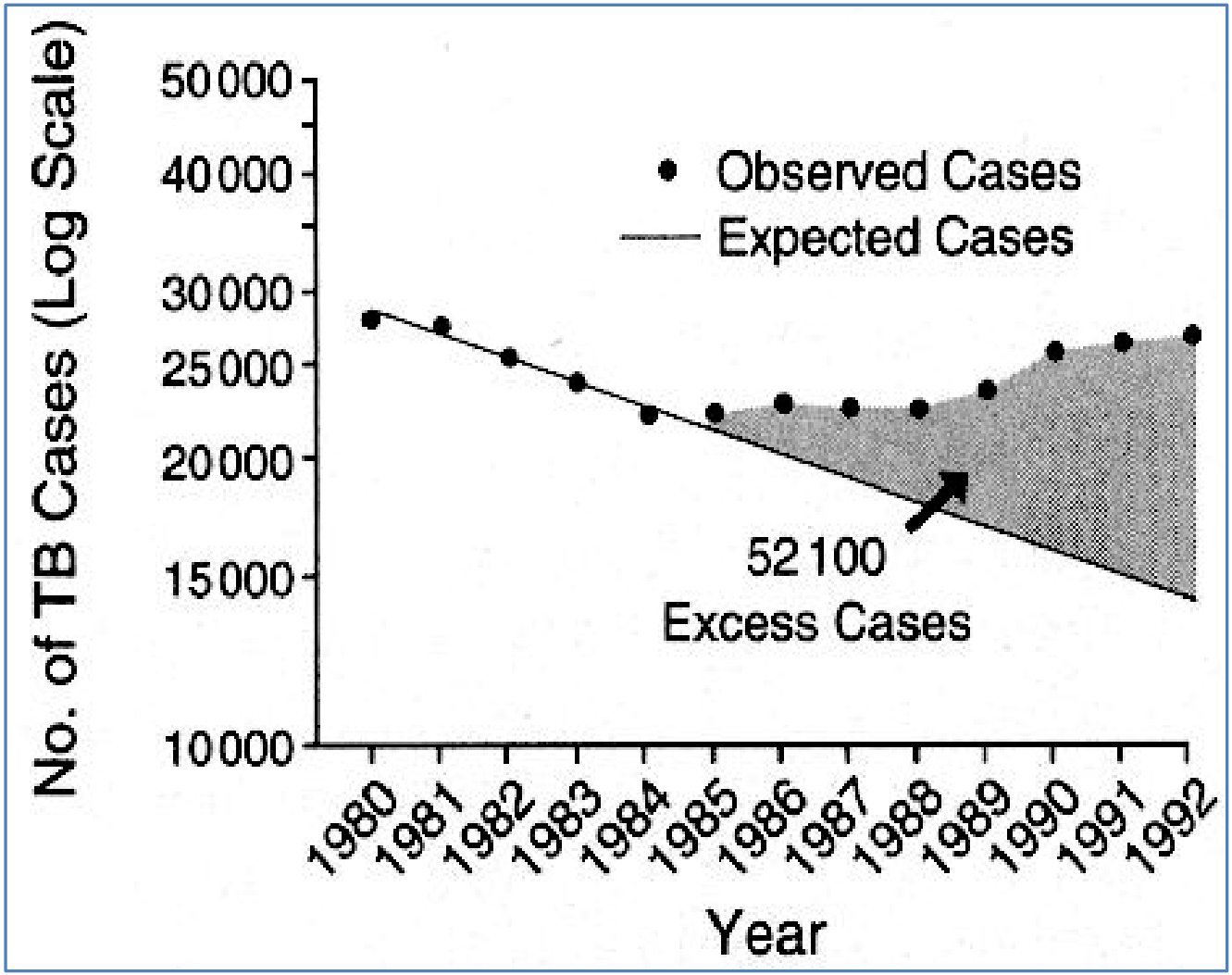
TB Elimination Overview

PROGRAM	PRIORITIES
• 50 states, 10 big cities, and 8 territories – FY 2012 $140 million • 22 countries, in partnership with USAID, WHO, and others – FY 2012 $8.6 million from USAID; $6m from CDC • 2 consortia for program-relevant research (TBTC, TBESC)	• Interrupt transmission • Reduce TB in foreign-born persons • Reduce TB in U.S. racial/ethnic minority populations. • Reduce multidrug resistant (MDR) & extensively drug resistant (XDR) TB • Reduce HIV-associated TB

Excess TB Cases, U.S. 1985-1992

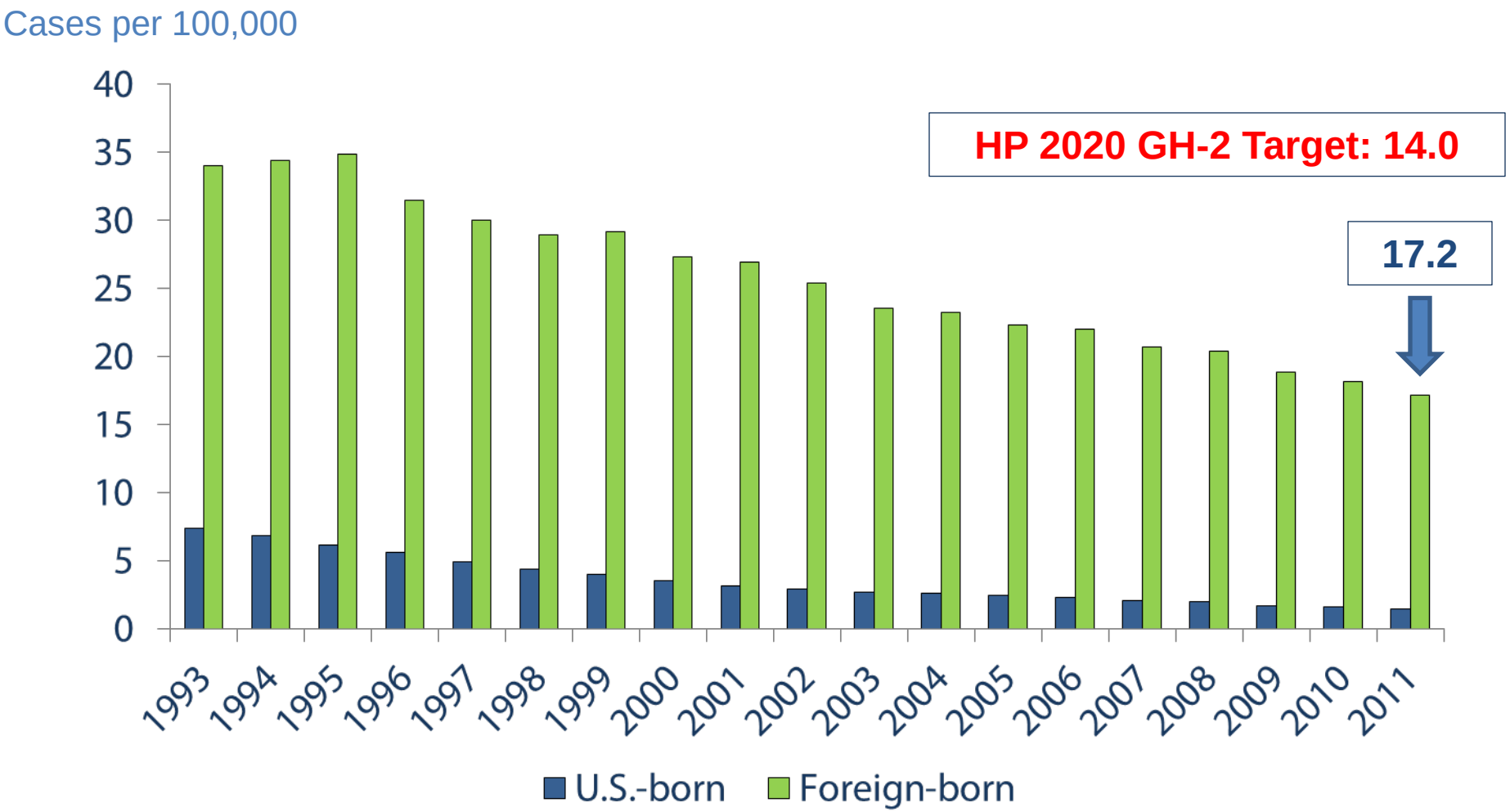


Conditions

- **Weakened infrastructure**
- **HIV epidemic**
- **Immigration**
- **Institutional transmission**
- **MDR-TB**

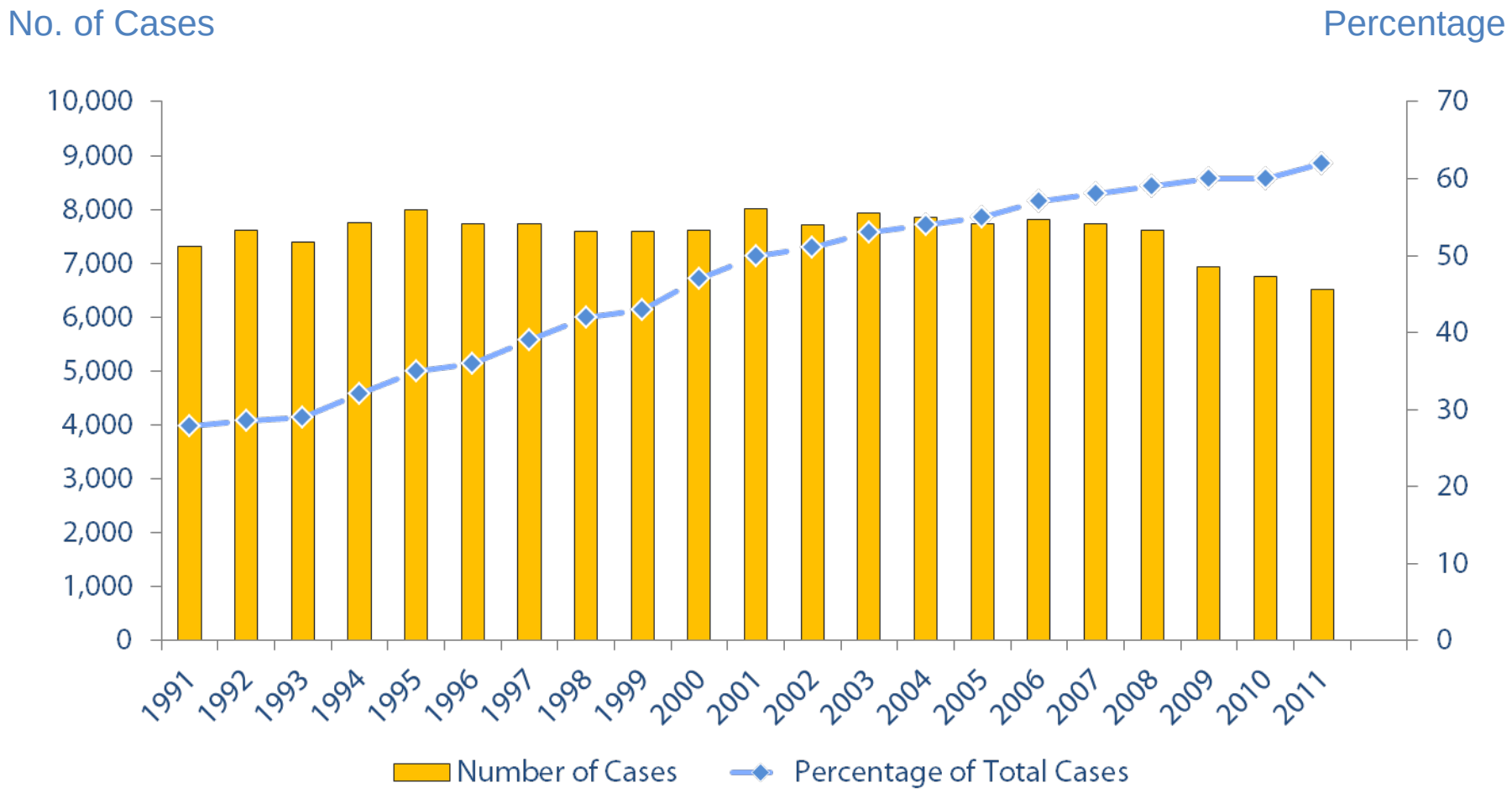
JAMA 1994; 272:536

TB Case Rates in U.S.-born vs. Foreign-born Persons United States, 1993–2011*



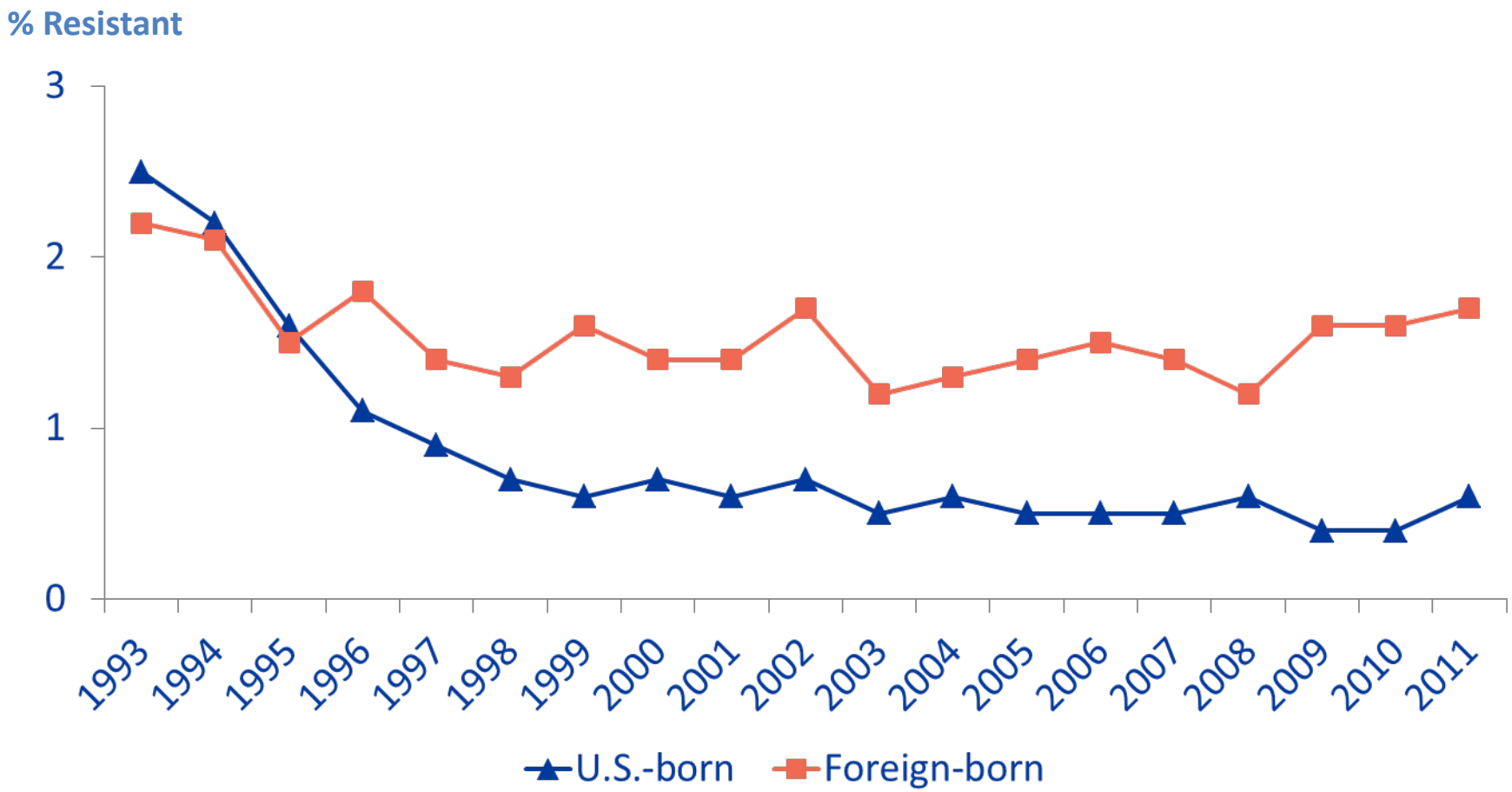
National Tuberculosis Surveillance System, data updated as of June 25, 2012.

Trends in TB Cases in Foreign-born Persons United States, 1991 – 2011



National Tuberculosis Surveillance System, data updated as of June 25, 2012.

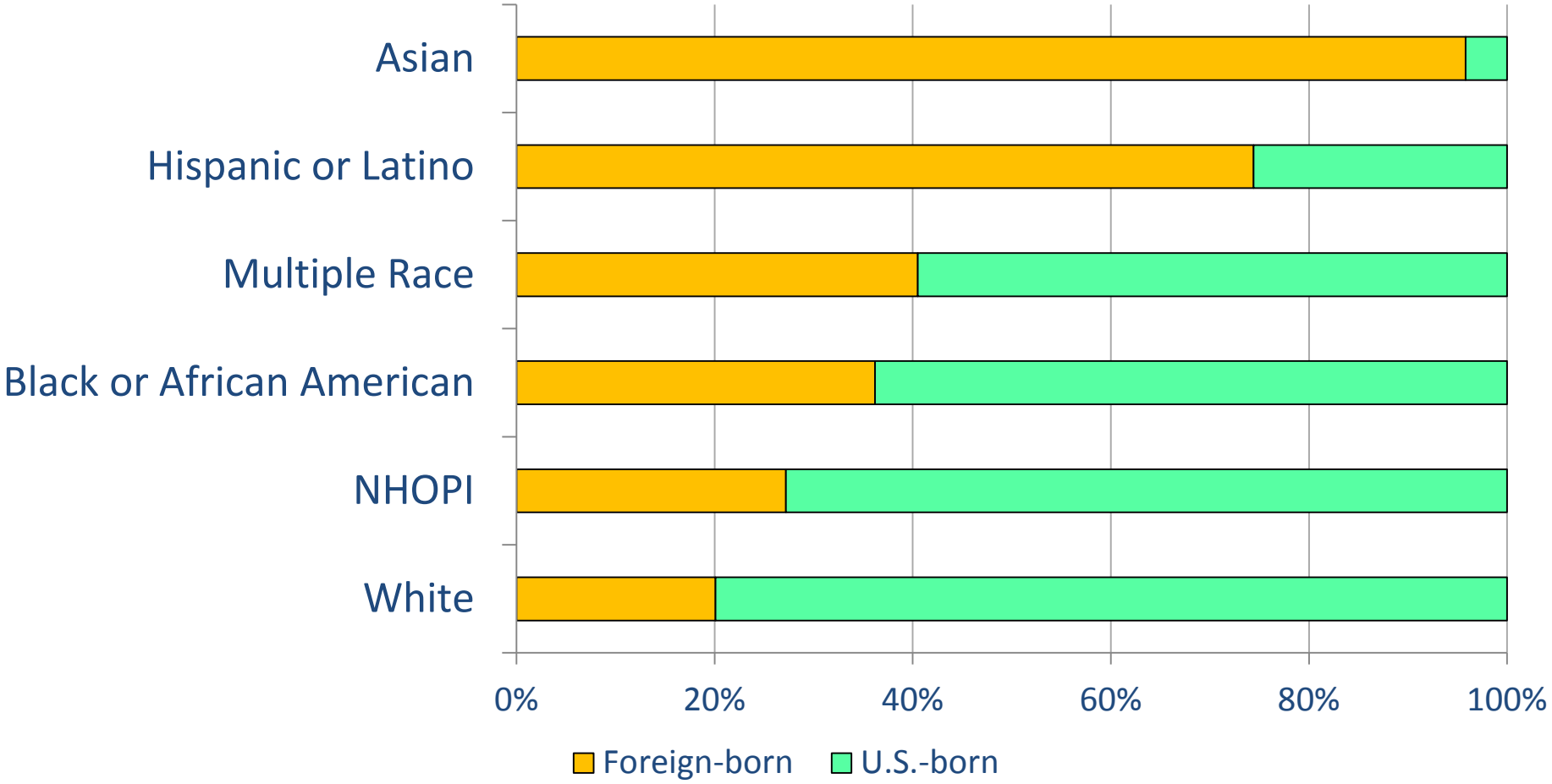
Primary MDR TB in U.S.-born vs. Foreign-born Persons United States, 1993 – 2011



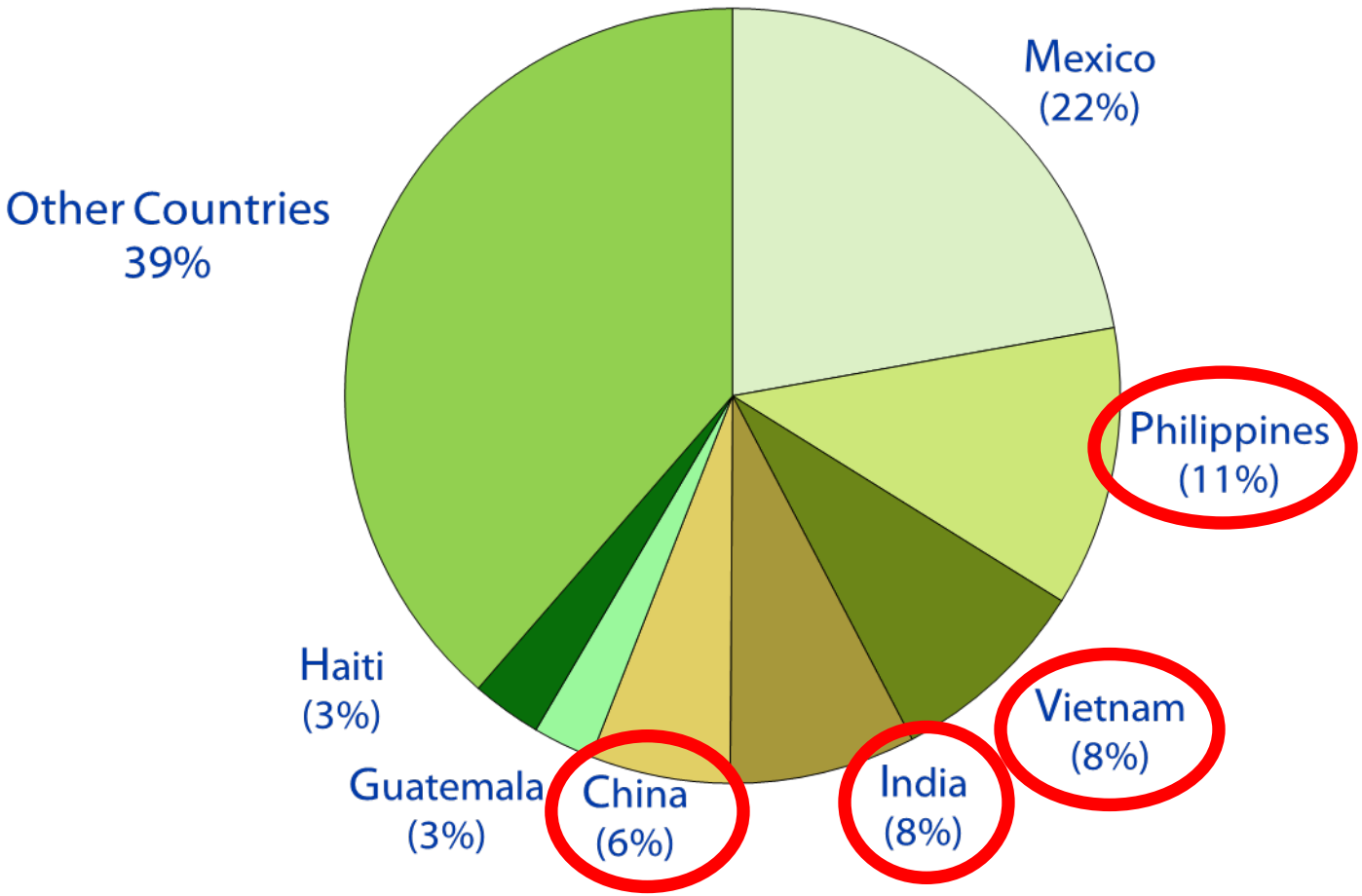
Based on initial isolates from persons with no prior history of TB. MDR TB defined as resistance to at least isoniazid and rifampin.

National Tuberculosis Surveillance System, data updated as of June 25, 2012.

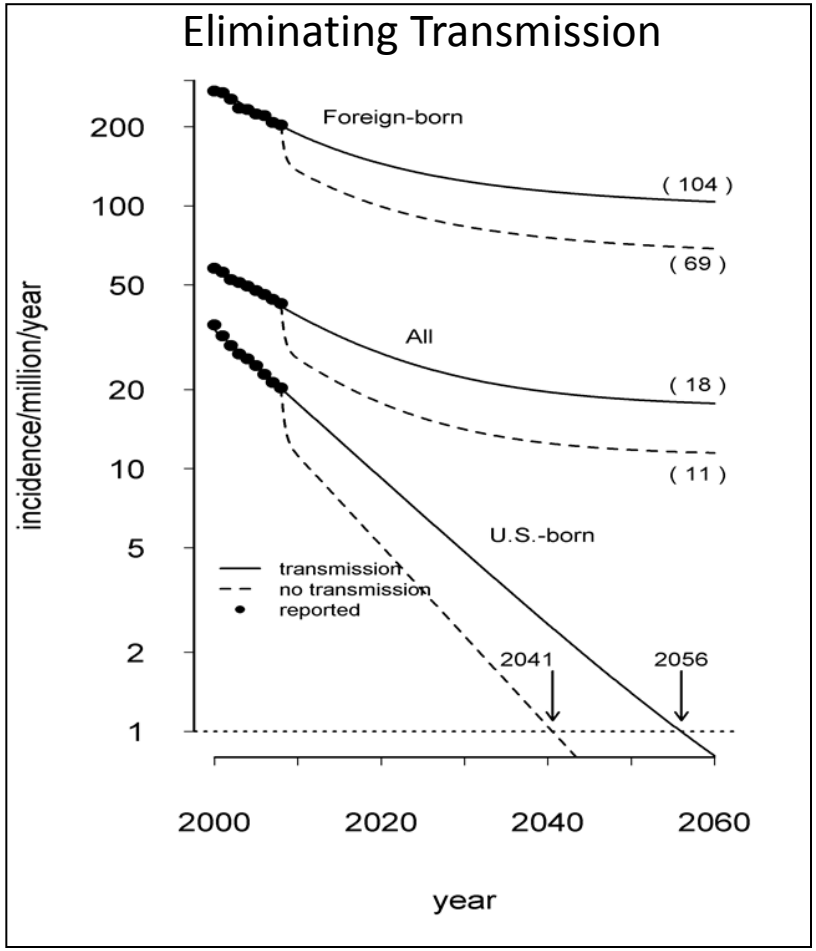
Percent of TB Cases by Race/Ethnicity and Origin of Birth, United States, 2011



Countries of Birth of Foreign-born Persons Reported with TB, United States, 2011



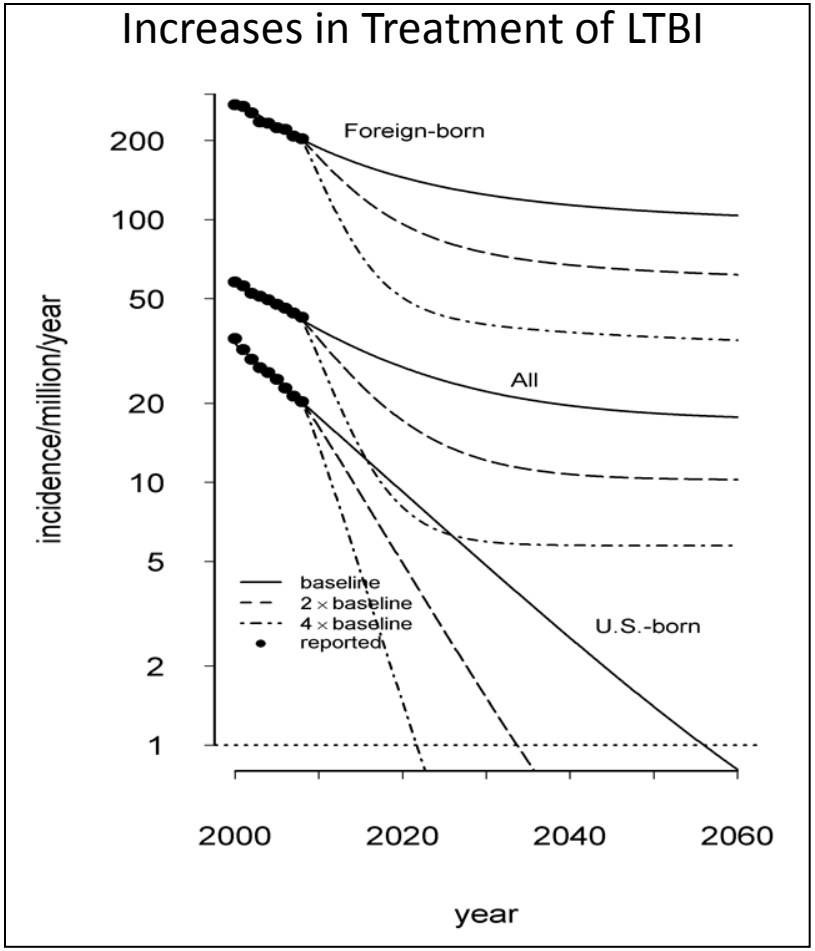
TB Incidence Projections



- Cutting transmission does not block progression to disease
- Latent TB infection (LTBI) continues to be imported into the foreign-born population

Hill AN, et al. , Modelling TB Trends in the USA. Epidemiology and Infection, 2012 Oct;140(10)

TB Incidence Projections



- A substantial proportion of foreign-born individuals arriving in the USA each year are latently infected
- Targeting LTBI allows focus on individuals who are at risk of reactivation

Hill AN, et al. , Modelling TB Trends in the USA. Epidemiology and Infection, 2012 Oct;140(10)

Investment Upfront Leads to Big Dividends for TB Control

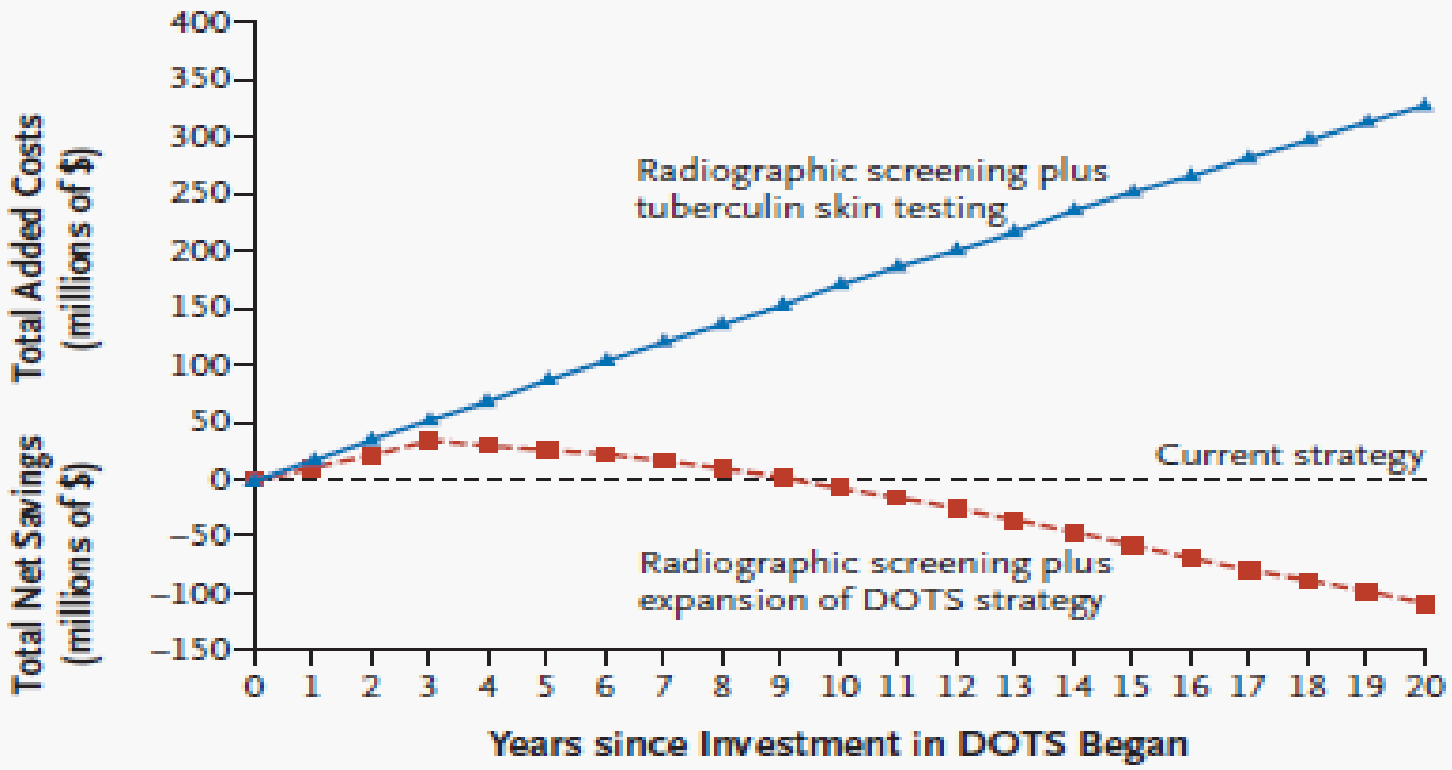
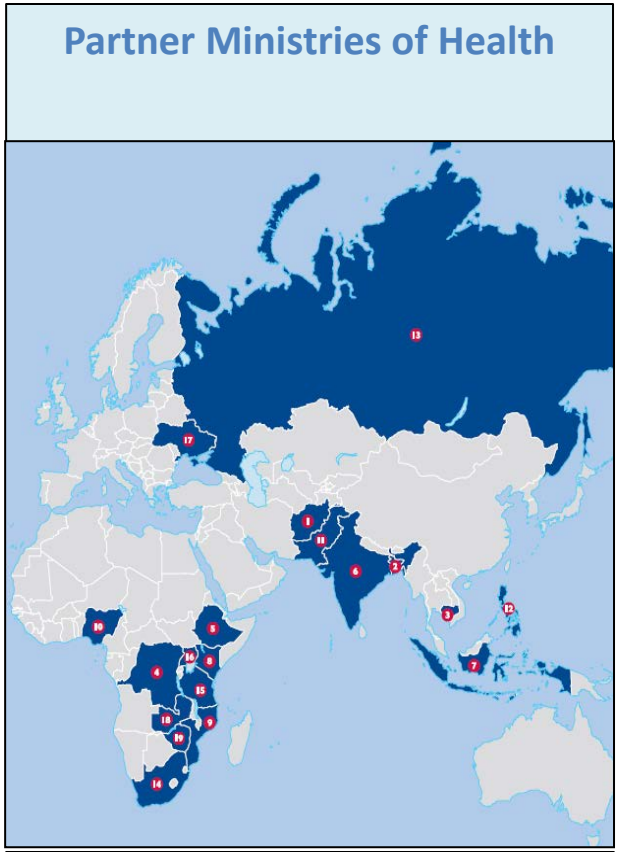


Figure 1. Net Savings or Added Costs of Implementing a Strategy of Radiographic Screening plus Either Expansion of the DOTS Program or Tuberculin Skin Testing over a 20-Year Period among Migrants from Mexico to the United States.

NEJM 2005; 353:1008-20

USG TB Program:
A Global Collaboration

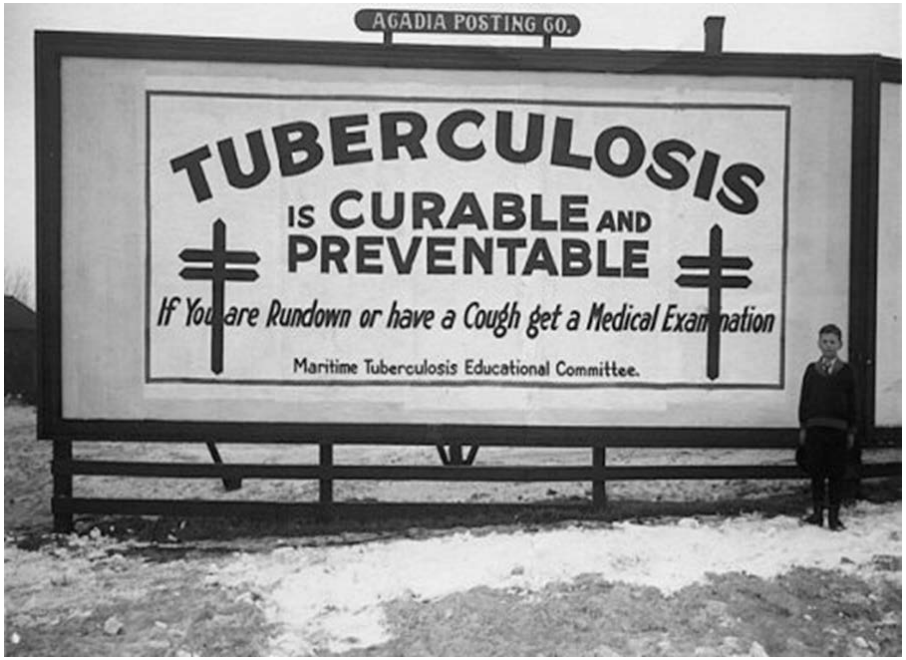


Global TB Work and Coordination at CDC

Strategic Approach	Priority Areas	Technical Resources
Provide technical support and strengthen in-country capacity	Strengthen surveillance and laboratory systems	Division of TB Elimination
Build evidence base for implementation of effective TB control and prevention strategies	Conduct programmatically relevant research	Division of Global HIV/AIDS
	Strengthen capacity to address TB/HIV, drug-resistant TB, infection control, and pediatric TB	Division of Global Disease Detection and Emergency Response
Translate research into practice		Division of Global Migration and Quarantine

Low TB Incidence Paradox

- Misperception of need
- Loss of medical proficiency and expertise
- Outbreaks



Key Takeaways

CHALLENGES

- Funding gaps in supporting scale-up
- TB among foreign-born persons
- Rise of multidrug-resistant TB
- HIV-associated TB
- Complacency in low burden settings

SUCCESSES

- Decrease in overall counts and rates
- Building international partnerships to meet domestic needs
- Recent research developments and opportunities for scale-up

Healthy People 2020

Tom Kenyon, MD, MPH

Director, Center for Global Health
Centers for Disease Control and Prevention

Healthy People 2020

Office of Disease Prevention and Health Promotion

Healthy People 2020 Global Health Objectives

- GH-1: Malaria in the United States
- GH-2: Tuberculosis in foreign-born persons
- GH-3: Global disease detection centers worldwide
- GH-4: Global disease detection training for public health professionals
- GH-5: Global disease detection diagnostic testing capacity

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CDC GLOBAL HEALTH STRATEGY

- Goal 1: Health Impact: Improve the Health and Well-being of People around the World
- Goal 2: Health Security: Improve Capabilities to Prepare and Respond to Infectious Diseases, Other Emerging Health Threats, and Public
- Goal 3: Health Capacity: Build Country Public Health Capacity Health Emergencies
- Goal 4: Organizational Capacity: Maximize Potential of CDC's Global Programs to Achieve Impact

http://www.cdc.gov/globalhealth/strategy/pdf/CDC-GlobalHealthStrategy.pdf

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Global Health Security

- Global health risks are increasing
- Weak surveillance in any country is a risk to all
- Strengthening Ministries of Health capabilities is critical
- Supporting implementation of International Health Regulations will help to manage serious health threats

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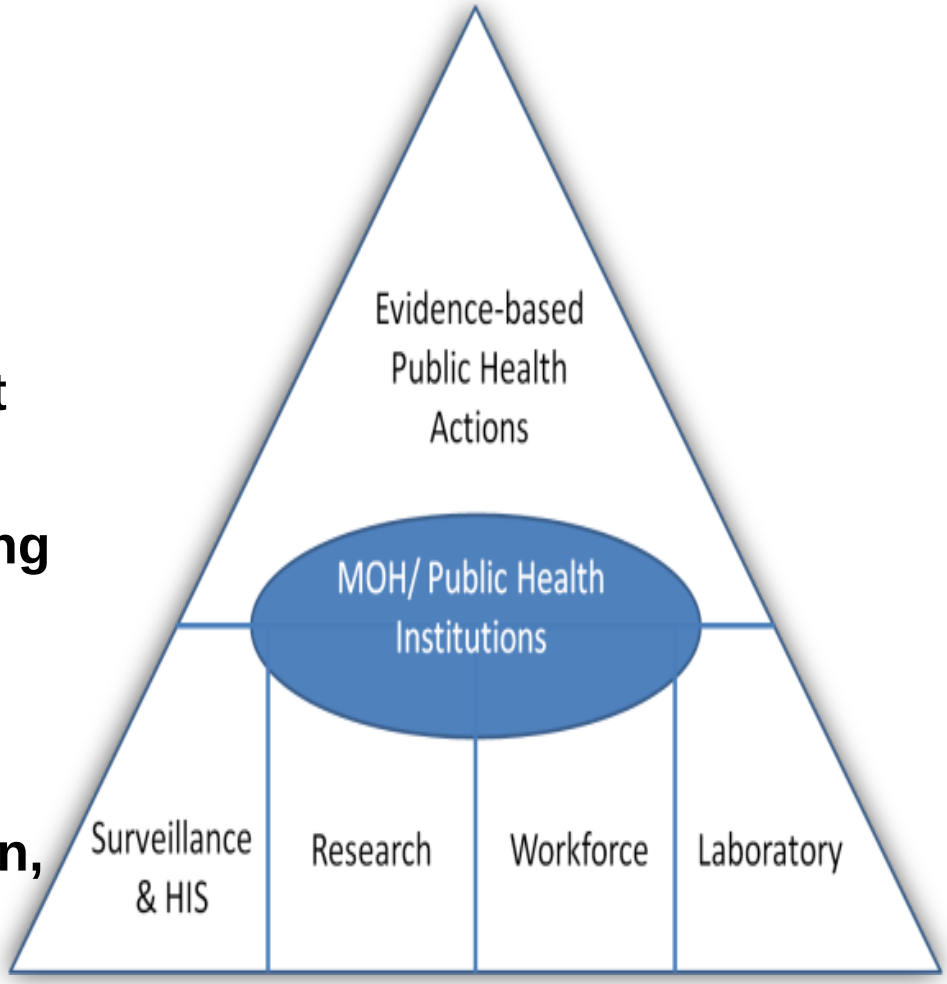
Framework for Public Health System Strengthening

- **Surveillance and health information systems**
- **Research**
- **Workforce development**
- **Laboratory strengthening**
- **Health infrastructure**
- **Program implementation, emergency response**



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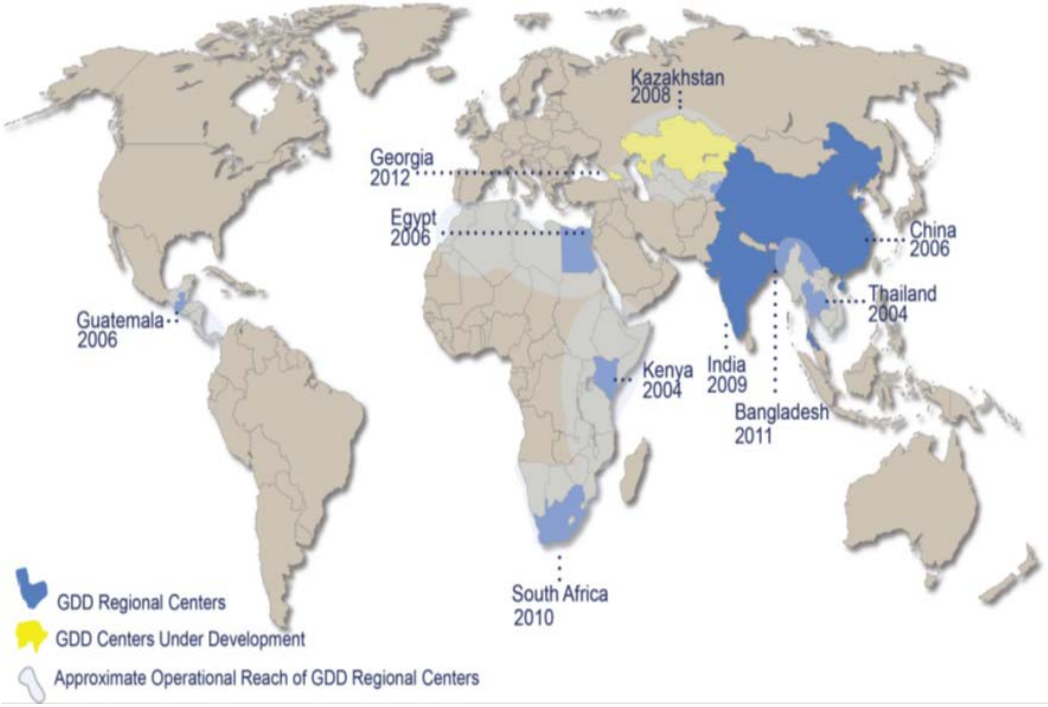
Global Disease Detection (GDD) Centers

- Located in each of the WHO regions
- Work closely with ministries of health to identify, control and combat infectious diseases



HP2020 Goal: 18 GDD Centers

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Global Disease Detection Capacity and Growth

Increased Capacity

Reduced Geographic Vulnerability

GDD Centers	International Emerging Infections	Field Epidemiology and Laboratory Training	Pandemic Influenza	Risk Communication and Emergency Response	Strengthening Laboratory Capacity	One Health
Kenya (2004)						
Thailand (2004)						
China (2006)						
Egypt (2006)						
Guatemala (2006)						
India (2009)						
South Africa (2010)						
Bangladesh (2011)						
GDD Centers Under Development						
Kazakhstan (2008)						
Rep. of Georgia (2012)						

- Comprehensive and sustained activities with dedicated staff
- Comprehensive activities with dedicated staff (existing or expected within 12 mos)
- Initial activities underway
- No activities currently underway

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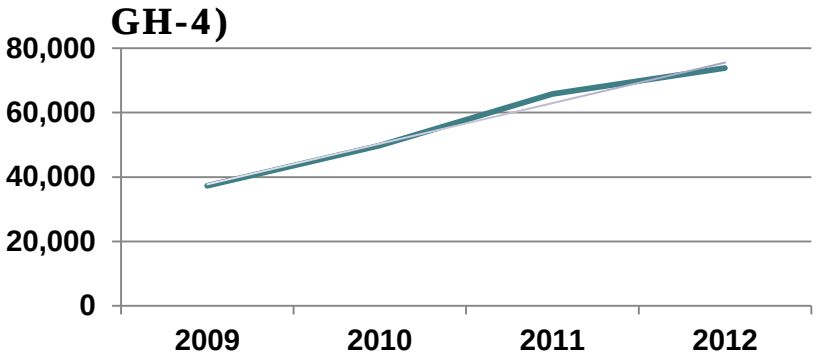
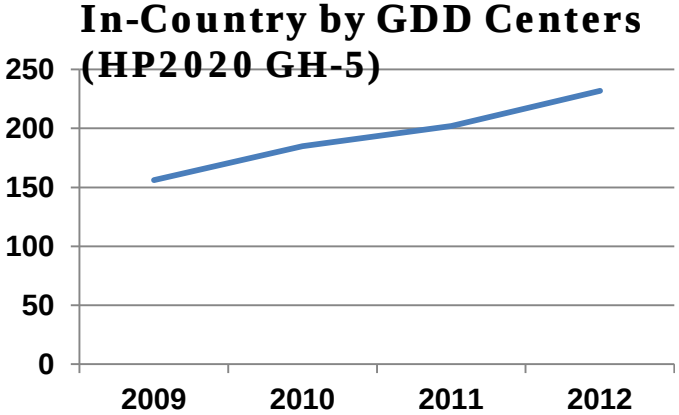
Increased Capacity through GDD Centers





Field Epidemiology Training Programs (FETPs)

- 2-year, full-time postgraduate programs
  - Modeled after CDC's Epidemic Intelligence Service
- Since 1980, 41 FETPs trained >2,600 epidemiologists
  - Residents assigned to positions that provide epidemiologic service to MOH
  - >80% stay in-country after graduating
- Over the last six years 485 doctoral level epidemiologists have been trained in GDD Centers

Global TB Capacity-Building through FETPs

- Evaluation of national or regional tuberculosis surveillance systems
- Evaluation of TB control programs
- Investigation of TB outbreaks
- Conduct studies of clinical management and TB diagnosis

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Global TB Capacity-Building Through GDD Centers

- TB projects are carried out in several GDD Centers, including those under development

- TB-related prevention and control activities include:
  - Surveillance
  - Case finding, reporting, and treatment
  - Outbreak response
  - Infection control
  - Laboratory diagnostics

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Key Takeaways

- There is a continuing need to strengthen public health systems worldwide and assure global health security
- The challenges of TB are not unique
- Efforts to address global TB control are underway but need to be enhanced
- TB elimination in the U.S. is not possible without addressing TB among the foreign-born

Healthy People 2020

Craig N. Shapiro, M.D.

Director, Office of the Americas, Office of Global Affairs
Department of Health and Human Services

Healthy People 2020

Office of Disease Prevention and Health Promotion

U.S.-Mexico Border Region

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TB in U.S. and Mexico Border States, 2010

	Cases	Rate (per 100,000)
United States overall	**11,171**	**3.6**
– California	2,324	6.2*
– Texas	1,385	5.5*
– Arizona	282	4.4*
– New Mexico	50	2.4
Mexico overall	**18,848**	**16.8**
– Baja California	1,707	54.1*
– Tamaulipas	1,175	35.9*
– Sonora	832	31.2*
– Nuevo Leon	1,126	24.2*
– Chihuahua	719	21.1*
– Coahuila	506	18.4*

Source: CDC (US); DGE SSA (Mexico)

*Exceeds national rate

Challenges Addressing TB along the U.S.-Mexico Border

- **Highly mobile population**
- **Limitations in access to care**
- **Treatment issues**
- **Data issues**

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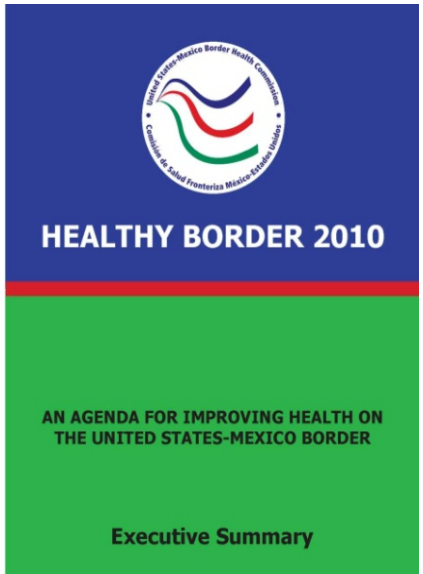
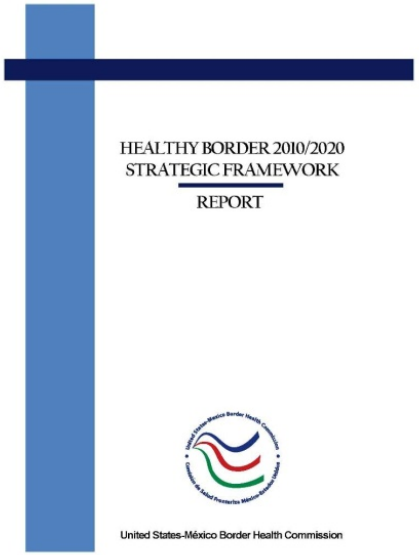
U.S.-Mexico Border Health Commission





U.S.-Mexico Border Tuberculosis Consortium

- **Objective**
  - Convene experts to address binational response to TB issues
- **Partners**
  - U.S. Federal Government (including CDC, U.S. Customs and Border Protection, U.S. Immigration and Customs Enforcement, Bureau of Prisons, U.S. Marshals Service)
  - Mexican Federal Government (including Secretariat of Health, Mexican Consulates, National Institute of Migration)
  - State and local health departments
  - NGOs: Migrant Clinicians Network, Cure TB, Heartland National TB Center
  - Pan American Health Organization

U.S.-Mexico Border Tuberculosis Consortium (cont.)

- **Continuity of Care**
  - Identify barriers to completion of treatment
  - Develop standards for Meet and Greet program
- **Legal Issues**
  - Guide to be developed on practical applications of public health law, including patients' rights and physician obligations
  - Increase providers' awareness of legal issues
- **Coordination of binational efforts on MDR-TB**
  - Establish binational network of experts
  - Educate and train physicians
  - Analyze treatment strategies

New Mexico-Chihuahua TB Pilot Project

- **Overview**
  - Binational project to enhance surveillance and treatment to prevent TB, including MDR-TB
- **Partners**
  - New Mexico Department of Health Office of Border Health
  - Chihuahua State Services Health Jurisdiction
  - Migrant Clinicians Network
- **Methods**
  - Promote TB testing
  - Provide education to providers and patients
  - Implement adherence strategies
- **Outcomes (2010-2012)**
  - Training completed for 150 physicians and nurses
  - Active case management (>2,000 home visits)
  - Improved understanding of border TB management issues

Key Takeaways

- TB rates higher in the U.S.-Mexico border region
- Major challenges include continuity of care and harmonizing treatment protocols across state and national lines
- Efforts of the U.S.-Mexico Border Health Commission are aimed to promote:
  - Binational collaboration (federal, state and local levels)
  - Cross-border sharing of information and resources for prevention and treatment

Achieving Healthy People 2020 Goals of TB Elimination in Hard to Reach Populations

July 30, 2013

Ed Zuroweste, MD

Chief Medical Officer

MCN

Migrant Clinicians Network

OUR MISSION

To be a force for justice in healthcare for the mobile poor

MCN

About Migrant Clinicians Network

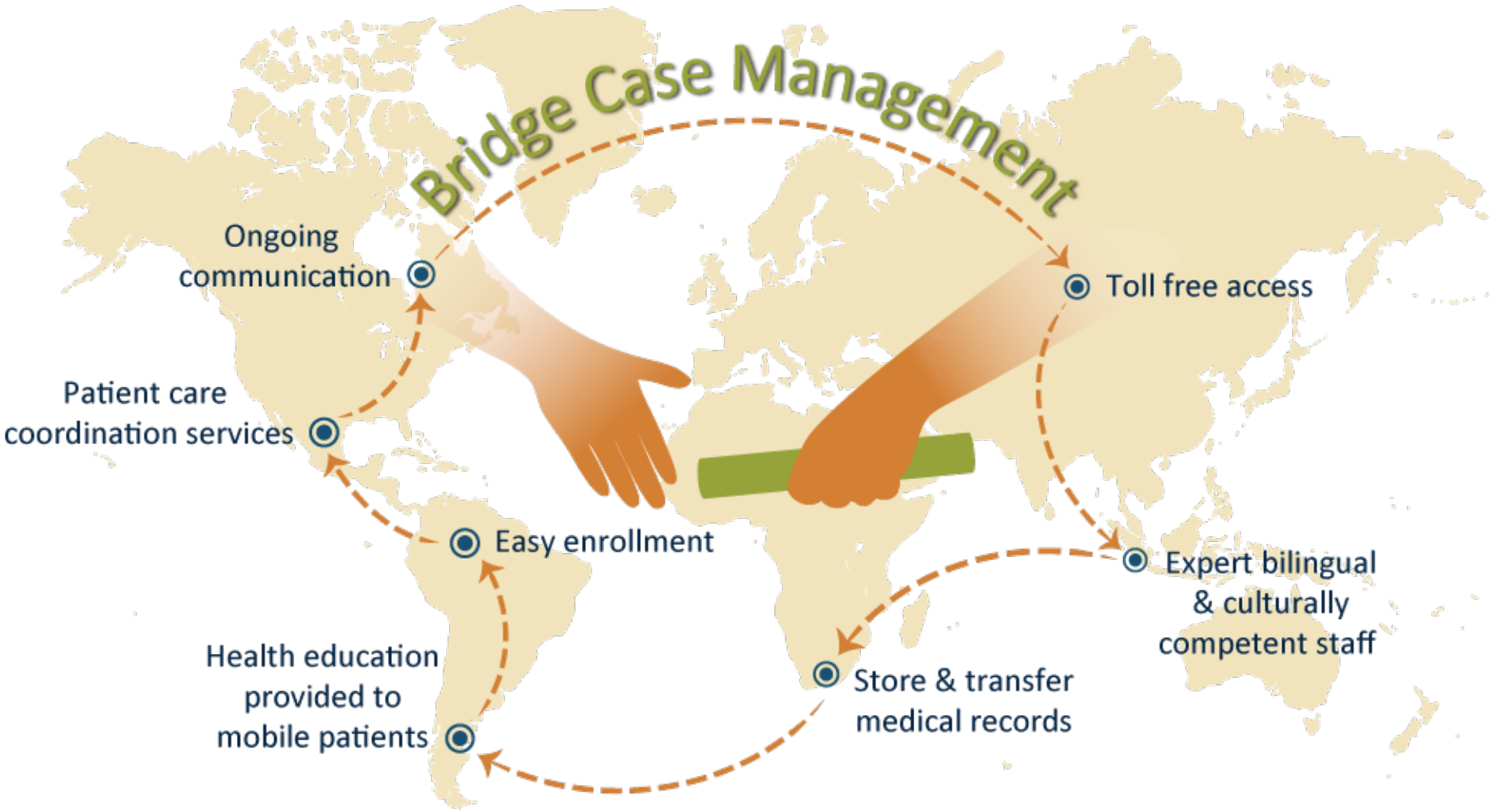
- 10,000 constituents
- Founded in 1984
- Oldest clinical network serving the mobile poor
- MCN's primary constituents
  - Federally funded Migrant & Community Health Centers
  - State and local health departments

Photo © Alan Pogue

Tuberculosis Disproportionately Affects the Foreign Born and Recent Immigrants

- Federally funded M/CHC are often “medical home” for FB
- To achieve TB elimination will require partners outside of public health to identify/treat TB Infection
- Front line primary care providers need continued education and reminders to “think TB”
- Continuity of care often significant barrier to completion of treatment for active TB and TB infection.

MCN's Health Network provides continuity of care to mobile patients and their providers



TBNet Bridge Case Management

- An innovative approach for over 17 years
- 5,190 total TB enrollments
- 2,951 total clinics in U.S. and over 70 countries

TBNet's International Reach

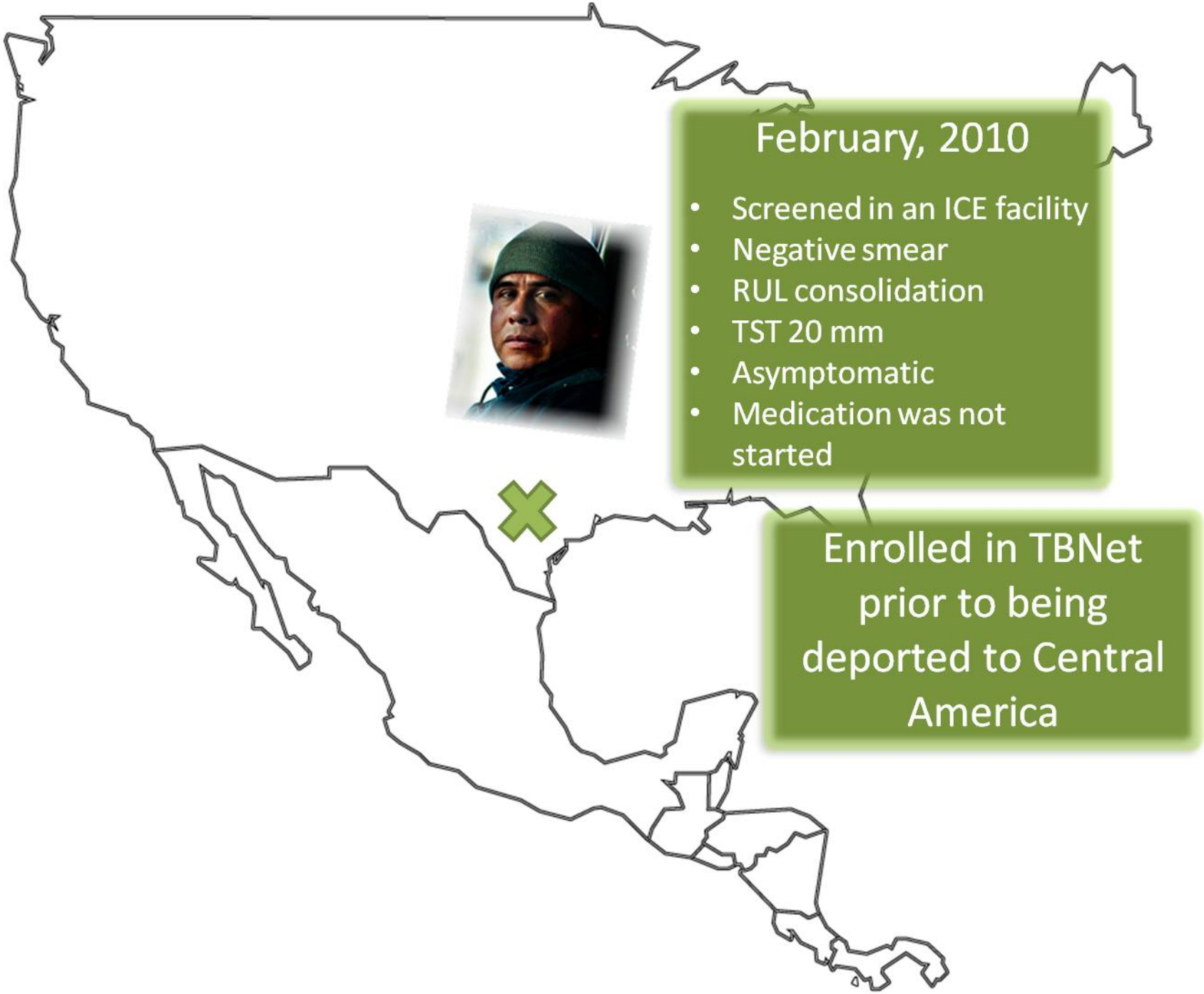
Class 3 Active TB: TBNet Treatment Success (2005-2011)

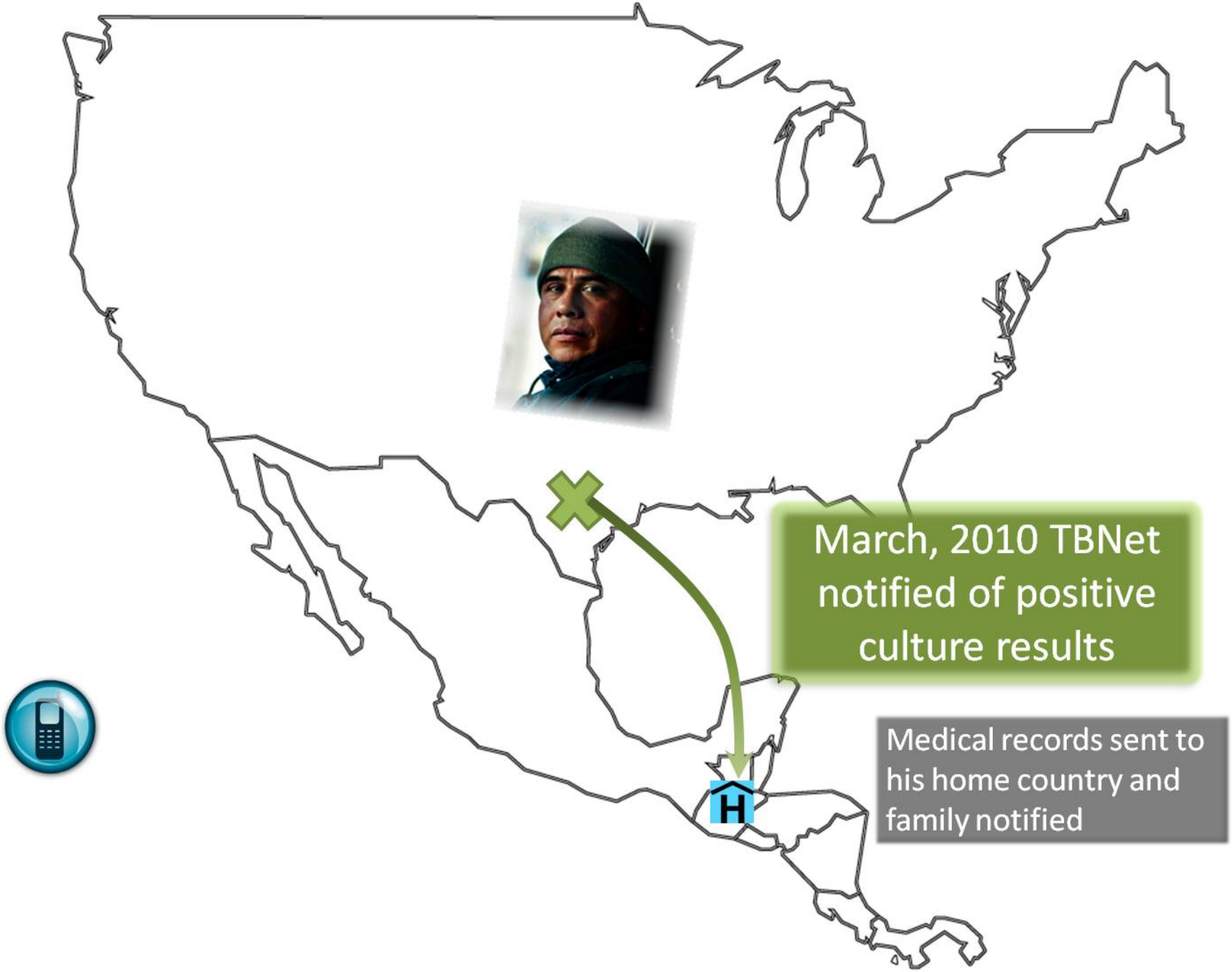
- ✓ 1,145 Class 3 Active TB Cases Referred
  - *34 treatment not recommended by destination country*
- ✓ 1,111 Treatment Recommended
  - *13 deceased*
- ✓ 1,098 Followed by TBNet for Active TB
  - *112 lost to follow up*
  - *64 refused treatment*

922 Complete Treatment = **84.0%**

TBNet 2005-2011

TBNet Patient and Clinic Contacts: 2005-2011						
Total Patients	Patient Contacts	Average Contacts per patient	Clinic contacts	Average Contacts per patient	Total contacts	Total contacts per patient
2,238	19,623 (2.41 hrs)	8.8	45,211 (5.65 hrs)	20.2	64,834	29.0 (8.06 hrs)

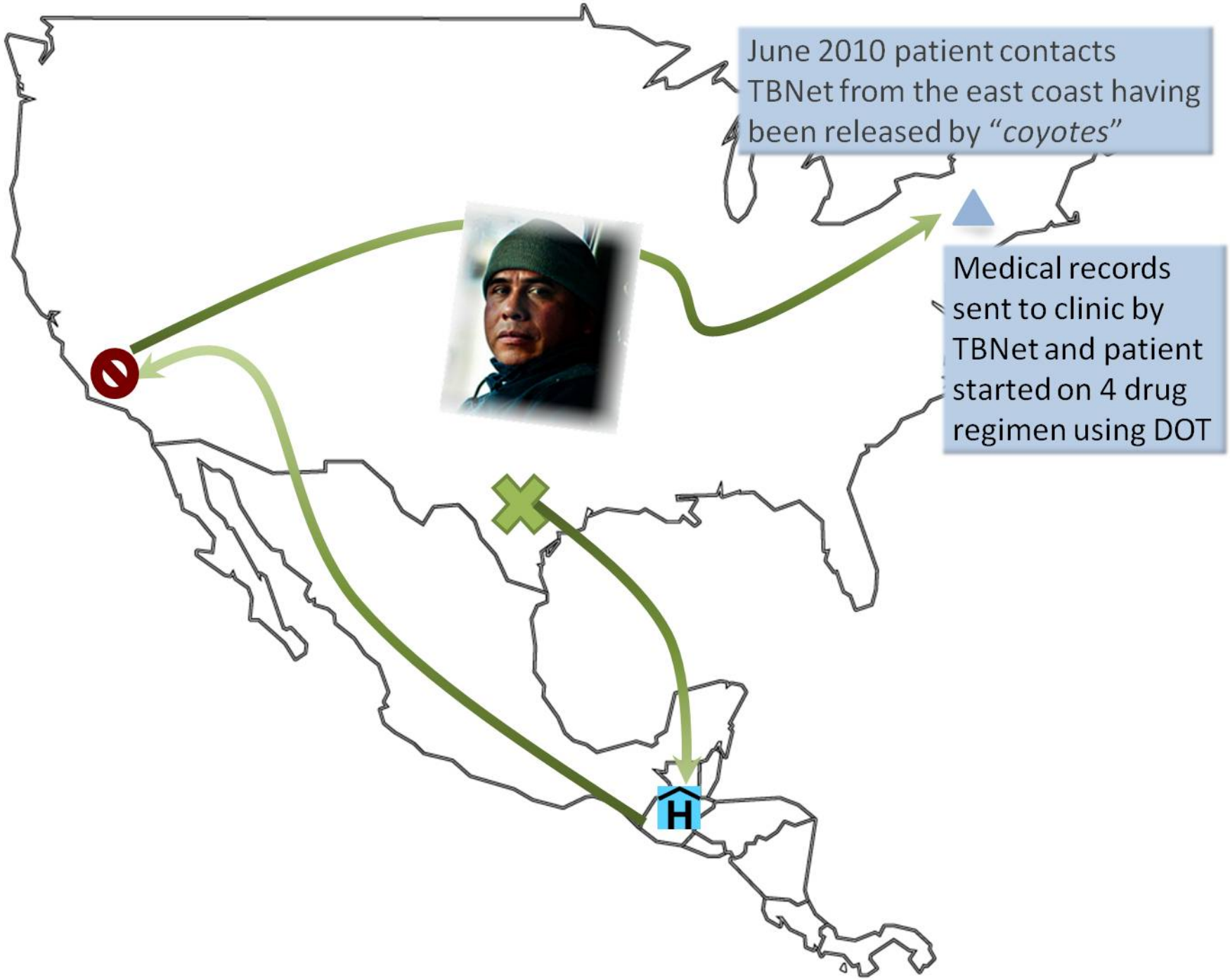

February, 2010
Screened in an ICE facility
Negative smear
RUL consolidation
TST 20 mm
Asymptomatic
Medication was not started
Enrolled in TBNet prior to being deported to Central America


March, 2010 TBNet notified of positive culture results
H
Medical records sent to his home country and family notified

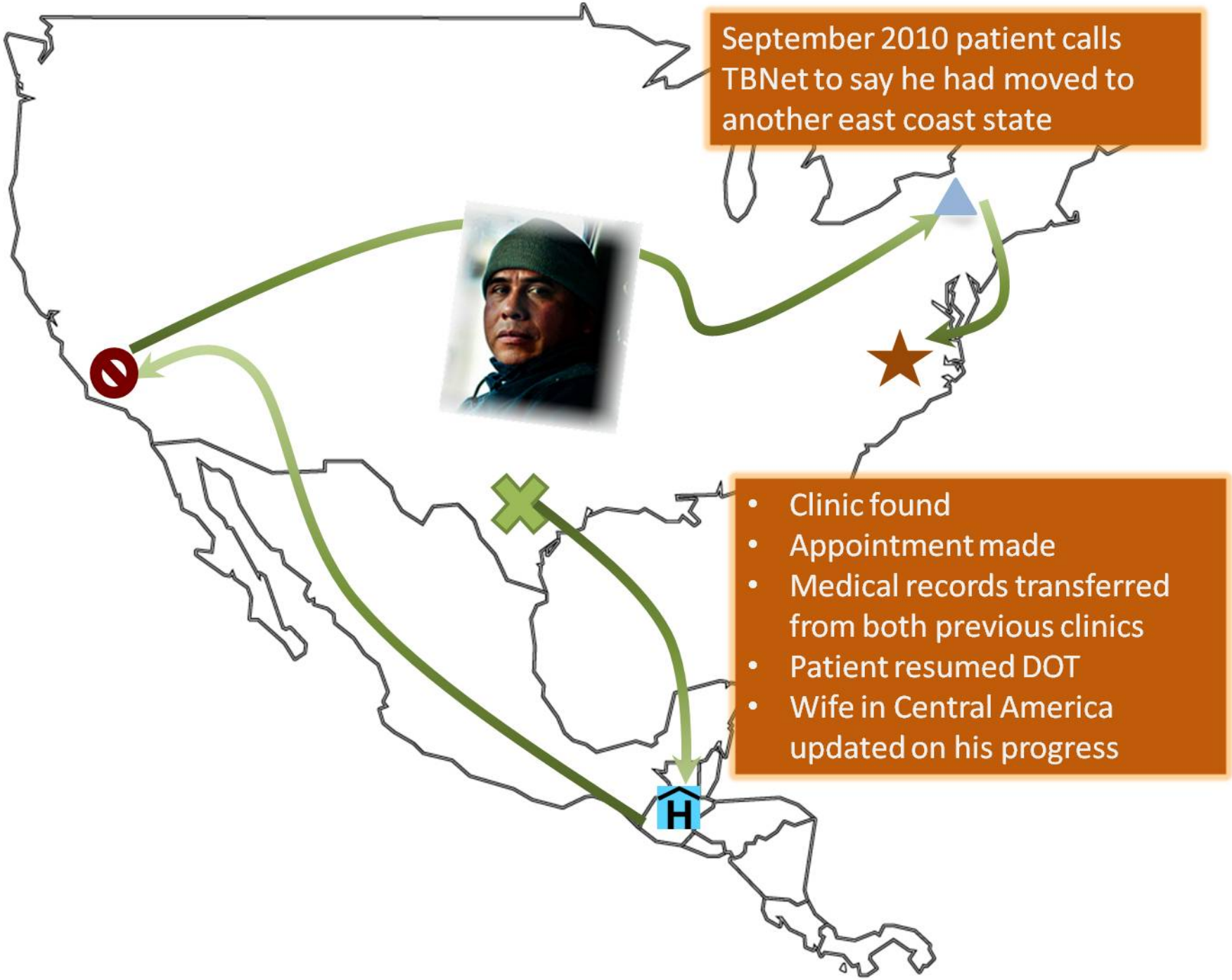
May 2010, wife calls TBNet to say that her husband is being held by "*coyotes*" on the west coast of the United States.

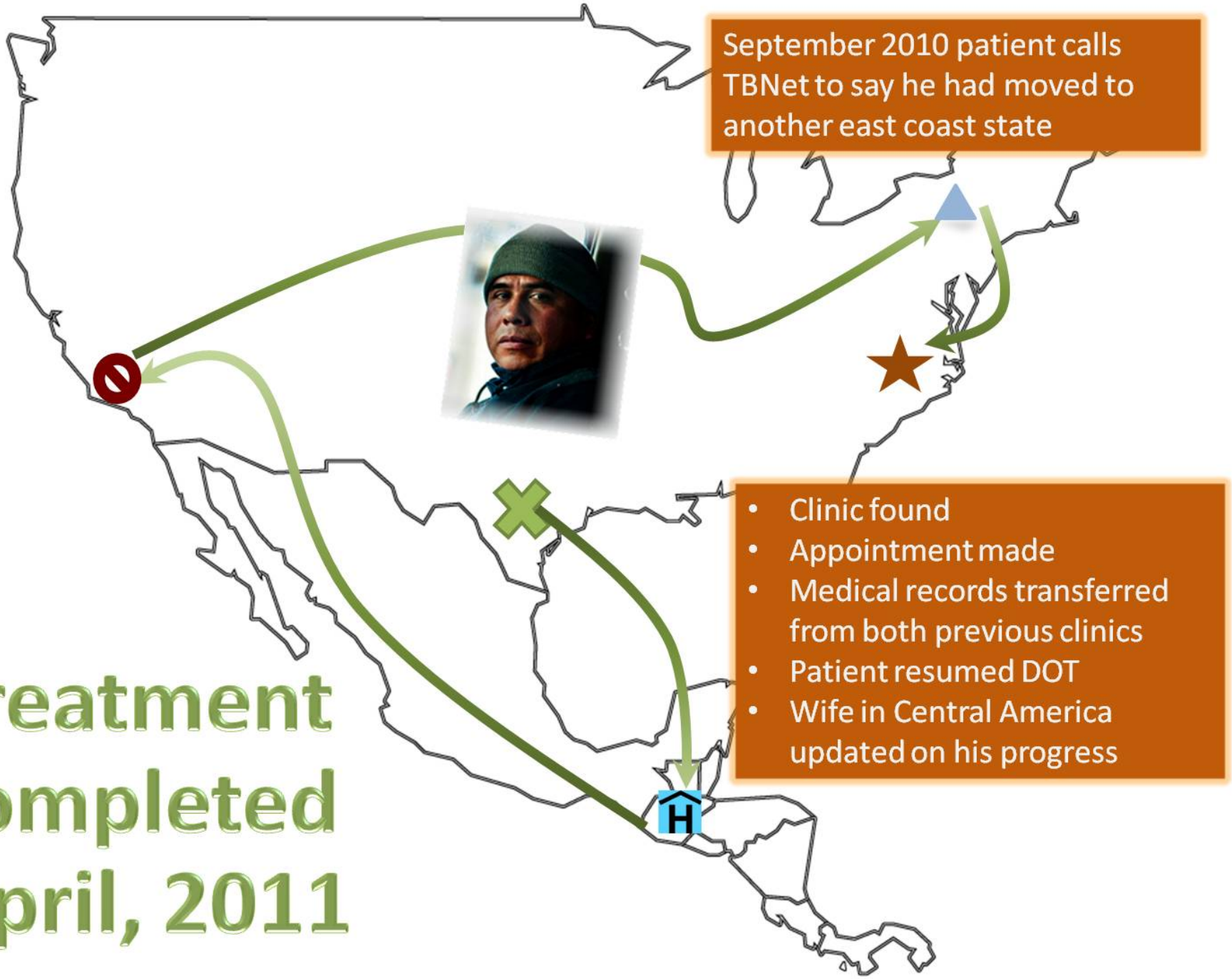
TBNet case manager calls and is able to speak to the patient to explain the need for treatment

TBNet staff then initiates a human trafficking investigation via ICE


June 2010 patient contacts TBNet from the east coast having been released by "*coyotes*"
Medical records sent to clinic by TBNet and patient started on 4 drug regimen using DOT
H

September 2010 patient calls TBNet to say he had moved to another east coast state
H


September 2010 patient calls TBNet to say he had moved to another east coast state
Clinic found
Appointment made
Medical records transferred from both previous clinics
Patient resumed DOT
Wife in Central America updated on his progress
H


September 2010 patient calls TBNet to say he had moved to another east coast state
Clinic found
Appointment made
Medical records transferred from both previous clinics
Patient resumed DOT
Wife in Central America updated on his progress
H
Treatment completed April, 2011

Contact

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Please submit your questions through the Q&A function

Healthy People 2020 Team

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Online Resources and Tools

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LinkedIn	Healthy People 2020
YouTube	ODPHP (search “healthy people”)

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