

## Respiratory Diseases

### Respiratory Disease Measures

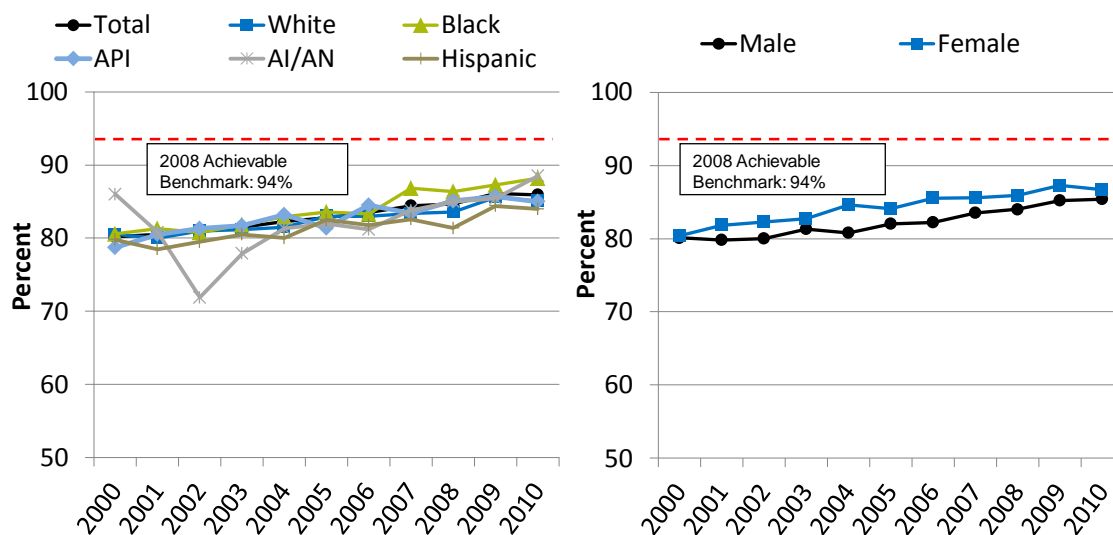
- Process:
  - Completion of tuberculosis therapy
  - Daily asthma medication
  - Written asthma management plans
- Outcome:
  - Emergency department visits for asthma

### Completion of Tuberculosis Therapy

- Incomplete tuberculosis therapy can lead to:
  - Increased risk of treatment failure,
  - Spread of infection to others, and
  - Development of drug-resistant strains of tuberculosis.
- The national goal for completion of treatment is:
  - By 2015, 93% completion of treatment within 12 months among patients eligible for 6- to 9-month regimens (CDC, 2010).

## Patients With Tuberculosis Who Completed Treatment

Patients with tuberculosis who completed a curative course of treatment within 1 year of initiation of treatment, by race/ethnicity and sex, 2000-2010



**Key:** API = Asian or Pacific Islander; AI/AN = American Indian or Alaska Native.

**Source:** Centers for Disease Control and Prevention, National Tuberculosis Surveillance System, 2000-2010.

**Denominator:** U.S. civilian noninstitutionalized population treated for tuberculosis.

**Note:** White, Black, and API are non-Hispanic. Hispanic includes all races.

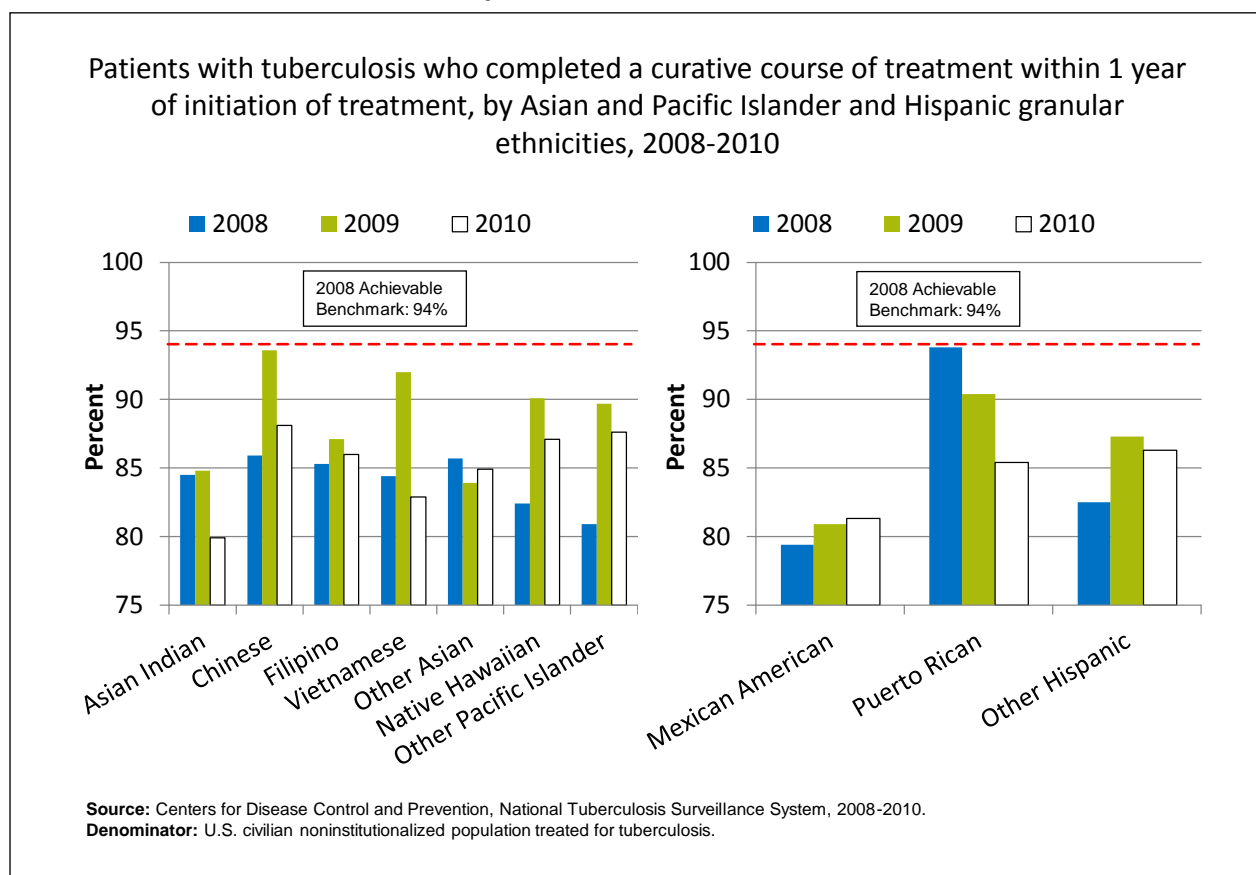
### • Trends:

- The percentage of patients who completed tuberculosis therapy within 1 year increased from 80.2% in 2000 to 85.9% in 2010. Improvements were observed among all racial/ethnic groups except American Indians and Alaska Natives (AI/ANs) and among both sexes.
- In 9 of 11 years, Hispanics were less likely than Whites to complete tuberculosis treatment.
- In 7 of 11 years, females were more likely than males to complete tuberculosis treatment.

### • Achievable Benchmark:

- The 2008 top 4 State achievable benchmark was 94%. The top 4 States that contributed to the achievable benchmark are Colorado, Kansas, Mississippi, and Oregon.
- At the current annual rate of increase, this benchmark could not be attained overall for about 13 years. Whites, Blacks, Asians and Pacific Islanders (APIs), and AI/ANs could achieve the benchmark in 16, 7, 14, and 7 years, respectively, while Hispanics would need about 19 years. Men and women would need about 14 and 11 years, respectively.

### Patients With Tuberculosis Who Completed Treatment



#### • Groups With Disparities:

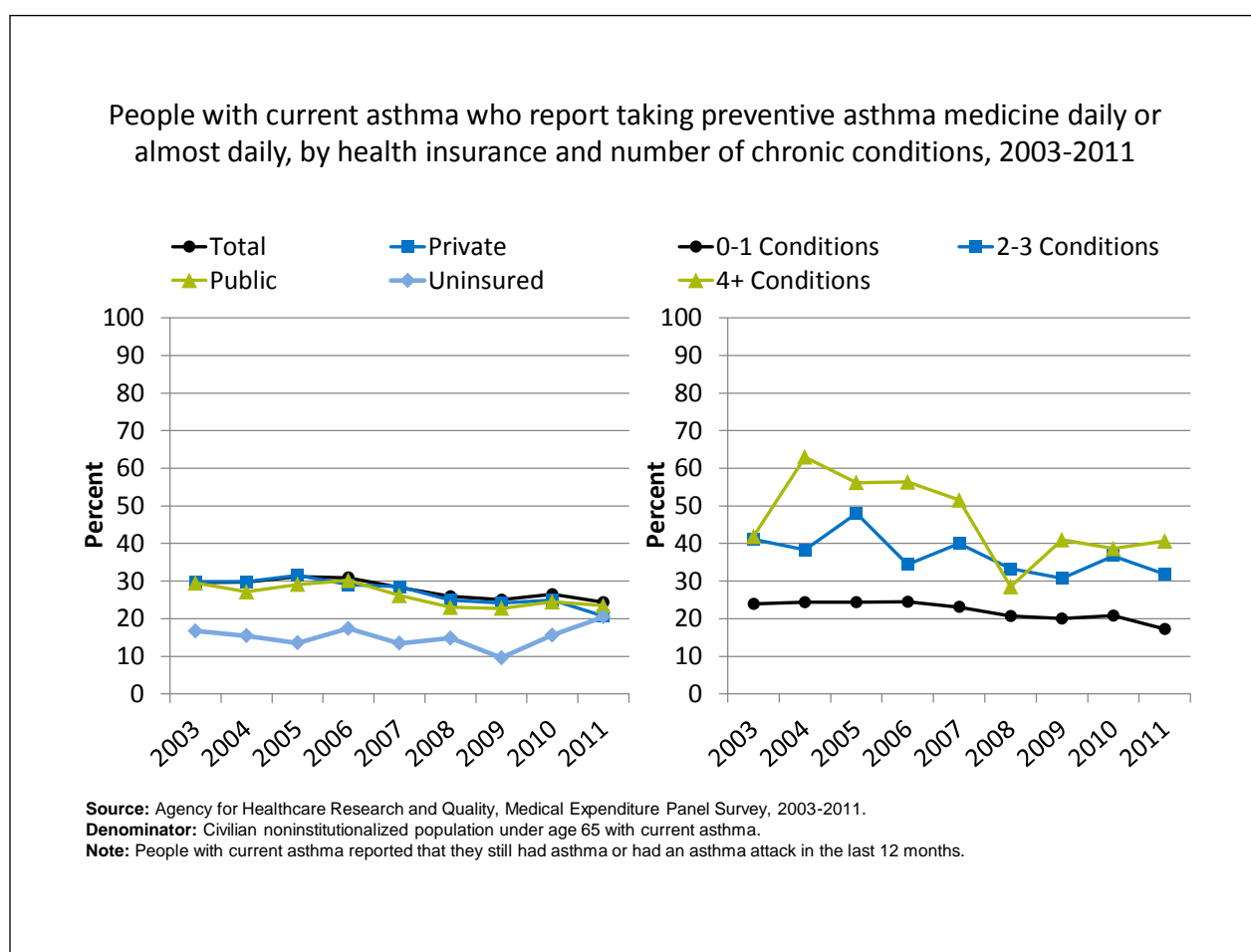
- There is considerable variation in completion of treatment for tuberculosis among API granular ethnicities and among Hispanic granular ethnicities.
- Most groups are far from the 2008 top 4 State achievable benchmark of 94%.

### Daily Asthma Medication

- Improving care for people with asthma can reduce the incidence of asthma attacks and hospitalizations.
- The National Asthma Education and Prevention Program develops and disseminates science-based guidelines for asthma diagnosis and management (NHLBI, 2007).
- The guidelines are built around four essential components of asthma management critical for effective long-term control:
  - Assessment and monitoring,
  - Control of factors contributing to symptom exacerbation,
  - Pharmacotherapy, and
  - Education for partnership in care.

- Some patients with asthma do not need medications.
- Patients with persistent asthma need daily long-term controller medication to prevent exacerbations and chronic symptoms.
- Preventive medications for people with persistent asthma include:
  - Inhaled corticosteroids,
  - Inhaled long-acting beta-2 agonists,
  - Cromolyn,
  - Theophylline, and
  - Leukotriene modifiers.

### People With Asthma Who Take Preventive Medicine Daily



- **Trends:**
  - From 2003 to 2011, the percentage of people with current asthma who reported taking preventive asthma medicine daily or almost daily decreased from 29.6% to 24.4%.

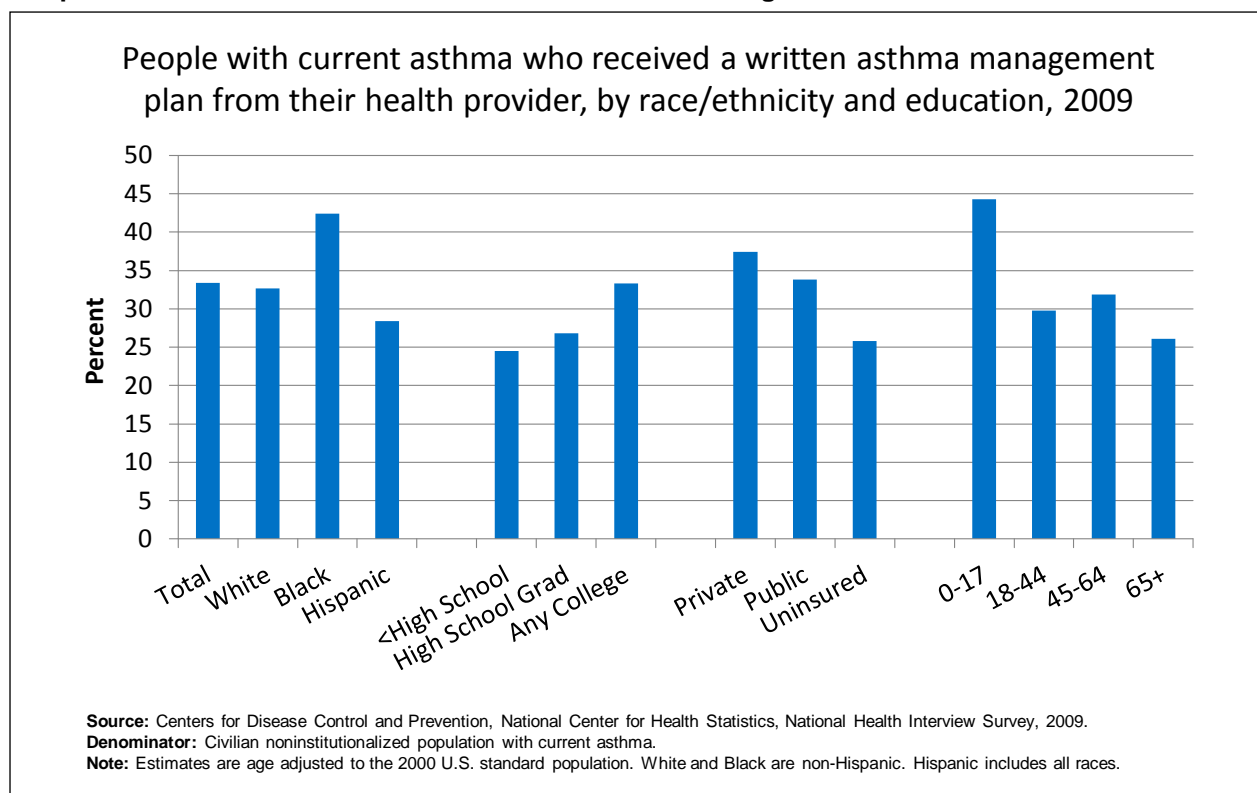
### • Groups With Disparities:

- In 8 of 9 years, among people under age 65, those who were uninsured were less likely than people with any private health insurance to take daily preventive asthma medicine.
- In all years except 2008, among people under age 65, people with 2-3 chronic conditions and 4+ chronic conditions were more likely to take daily preventive asthma medicine compared with people with 0-1 chronic conditions.
- From 2003 to 2011, the percentage of people under age 65 with current asthma who reported taking preventive asthma medicine daily decreased:
  - ◆ From 29.8% to 20.7% for those with private insurance.
  - ◆ From 29.5% to 23.5% for those with public insurance.
  - ◆ From 23.9% to 17.3% for those with 0-1 chronic conditions.
  - ◆ From 41.1% to 31.9% for those with 2-3 chronic conditions.

### Written Asthma Management Plans

- To effectively partner with asthma patients in their care, providers need to teach them about daily management and how to recognize and handle worsening asthma.
- Providers should develop written asthma management plans, especially for:
  - Patients with moderate or severe persistent asthma and
  - Patients with a history of severe exacerbation.

### People With Asthma Who Received a Written Asthma Management Plan



- **Overall Rate:**

- In 2009, only one-third of people with current asthma received a written asthma management plan from their provider.

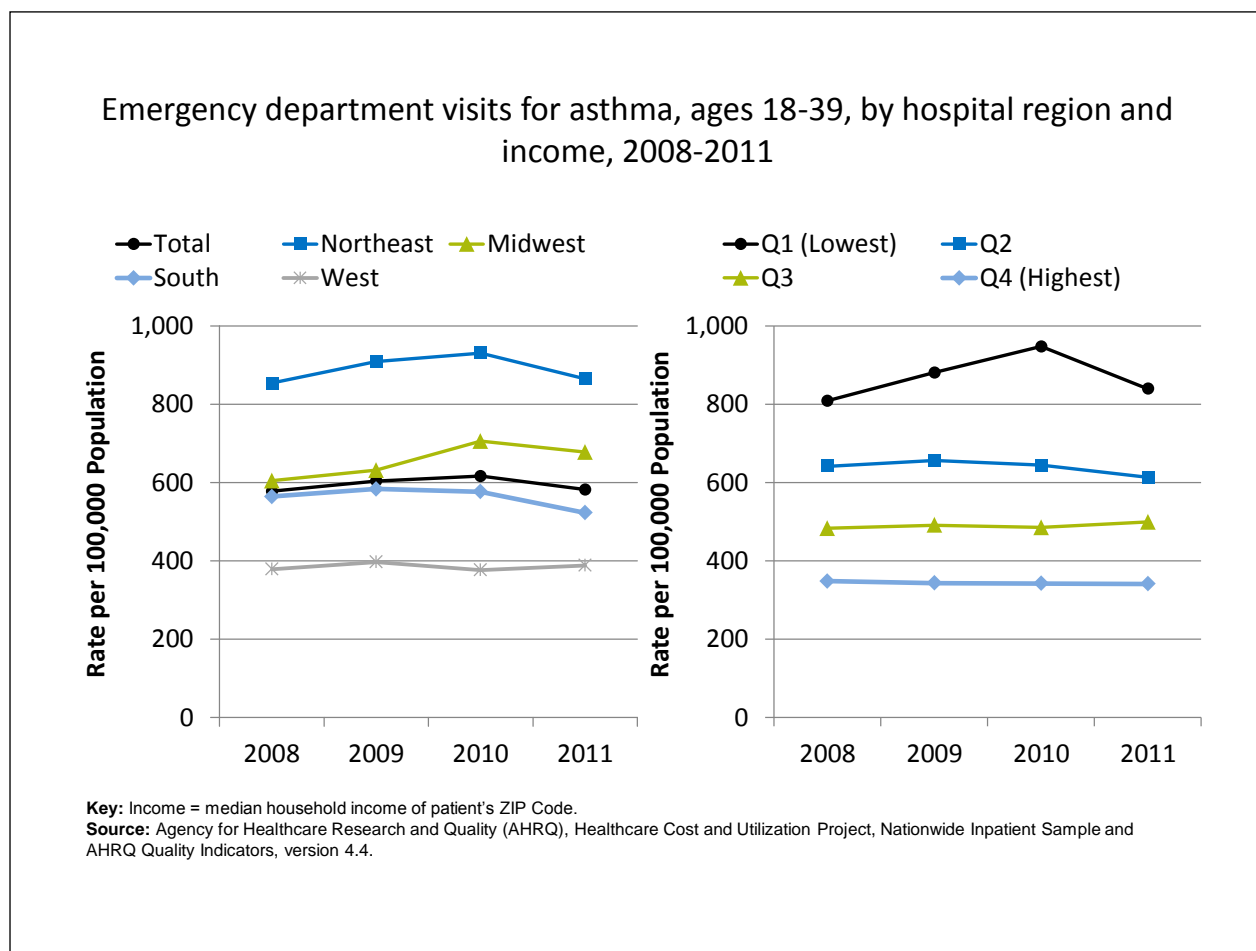
- **Groups With Disparities:**

- In 2009, Blacks were more likely than Whites to receive a written asthma management plan.
- In 2009, people with less than a high school education were less likely than those with any college education to receive a written asthma management plan.
- In 2009, people without insurance were less likely than people with private insurance to receive a written asthma management plan.
- In 2009, children ages 0-17 were more likely than adults ages 18-44 to receive a written asthma management plan from their provider.

### **Potentially Avoidable Emergency Department Visits**

- The burden of asthma in the United States is high:
  - 2 million emergency department (ED) visits
  - 504,000 hospitalizations
  - 13.6 million physician office visits
  - More than 4,200 deaths
  - About \$15 billion in direct medical costs
- Asthma is difficult to manage and is associated with disparities in health outcomes, poor treatment adherence, and high health care costs.
- Improving care delivery is important to advance patient outcomes, avoid ED visits and hospitalizations, and reduce health care costs (Tapp, et al., 2011).
- Care coordination for asthma usually involves practice-based approaches:
  - The care provider identifies and refers families to a care coordination program in the medical care facility.
  - A more effective approach is to place care coordinators in the community as a bridge between families and health care providers:
    - They can learn and better understand the contextual factors and issues that affect families, and
    - They can identify tailored support and services for optimal health care outcomes for asthma patients (Findley, et al., 2011).

## Emergency Department Visits for Asthma



### • Trends:

- From 2008 to 2011, rates of ED visits for asthma were highest in the Northeast and lowest in the West. In 2011, the rate of ED visits for asthma in the Northeast was 864.6 per 100,000 population, followed by the Midwest (677.9 per 100,000 population), South (522.6 per 100,000 population), and West (388.4 per 100,000 population).

### • Groups With Disparities:

- In all years, adults with the highest income were significantly less likely than all other income groups to have an ED visit for asthma.
- For more information on care coordination related to ED visits for asthma, go to <http://www.ahrq.gov/research/findings/nhqrdr/2014chartbooks/carecoordination/2014nhqdr-care.pdf>.

## References

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