

Lack of Health Insurance Coverage and Asthma Management Behavior

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Presenter Disclosures

Winston Liao

- (1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:**

No relationships to disclose

A Critical Chronic Disease

- ▶ 2008: **Over 41 million** American adults diagnosed with asthma
- ▶ 2010: Projected economic cost = **\$20.7 billion**
 - Direct cost = \$15.6 billion
 - ▶ Hospital care = \$5.5 bil.
 - ▶ Physician service = \$4.2 bil.
 - ▶ Prescription drugs = \$5.9 bil.
 - Morbidity = \$3.1 billion
 - Mortality = \$2.0 billion

NEWS

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F R O M T H E N A T I O N A L A C A D E M I E S

Date: Feb. 24, 2009

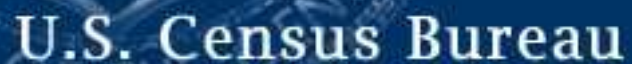
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FOR IMMEDIATE RELEASE

HEALTH INSURANCE ESSENTIAL FOR HEALTH AND WELL-BEING, REPORT SAYS;

ACTION URGENTLY NEEDED FROM PRESIDENT AND CONGRESS TO SOLVE CRISIS OF THE UNINSURED

WASHINGTON -- The evidence shows more clearly than ever that having health insurance is essential for people's health and well-being, and safety-net services are not enough to prevent avoidable illness, worse health outcomes, and premature death, says a new report from the Institute of Medicine. Moreover, new research suggests that when local rates of uninsurance are relatively high, even people with insurance are more likely to have difficulty obtaining needed care and to be less satisfied with the care they receive.



U.S. Census Bureau

Newsroom

FOR IMMEDIATE RELEASE: THURSDAY, SEPT. 16, 2010

Income, Poverty and Health Insurance Coverage in the United States: 2009

Summary of Key Findings

The U.S. Census Bureau announced today that real median household income in the United States in 2009 was \$49,777, not statistically different from the 2008 median.

The nation's official poverty rate in 2009 was 14.3 percent, up from 13.2 percent in 2008 — the second statistically significant annual increase in the poverty rate since 2004. There were 43.6 million people in poverty in 2009, up from 39.8 million in 2008 — the third consecutive annual increase.

Meanwhile, the number of people **without** health insurance coverage rose from 46.3 million in 2008 to 50.7 million in 2009, while the percentage increased from 15.4 percent to 16.7 percent over the same period.

These findings are contained in the report [*Income, Poverty, and Health Insurance Coverage in the United States: 2009*](#). The following results for the nation were compiled from information collected in the 2010 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC):

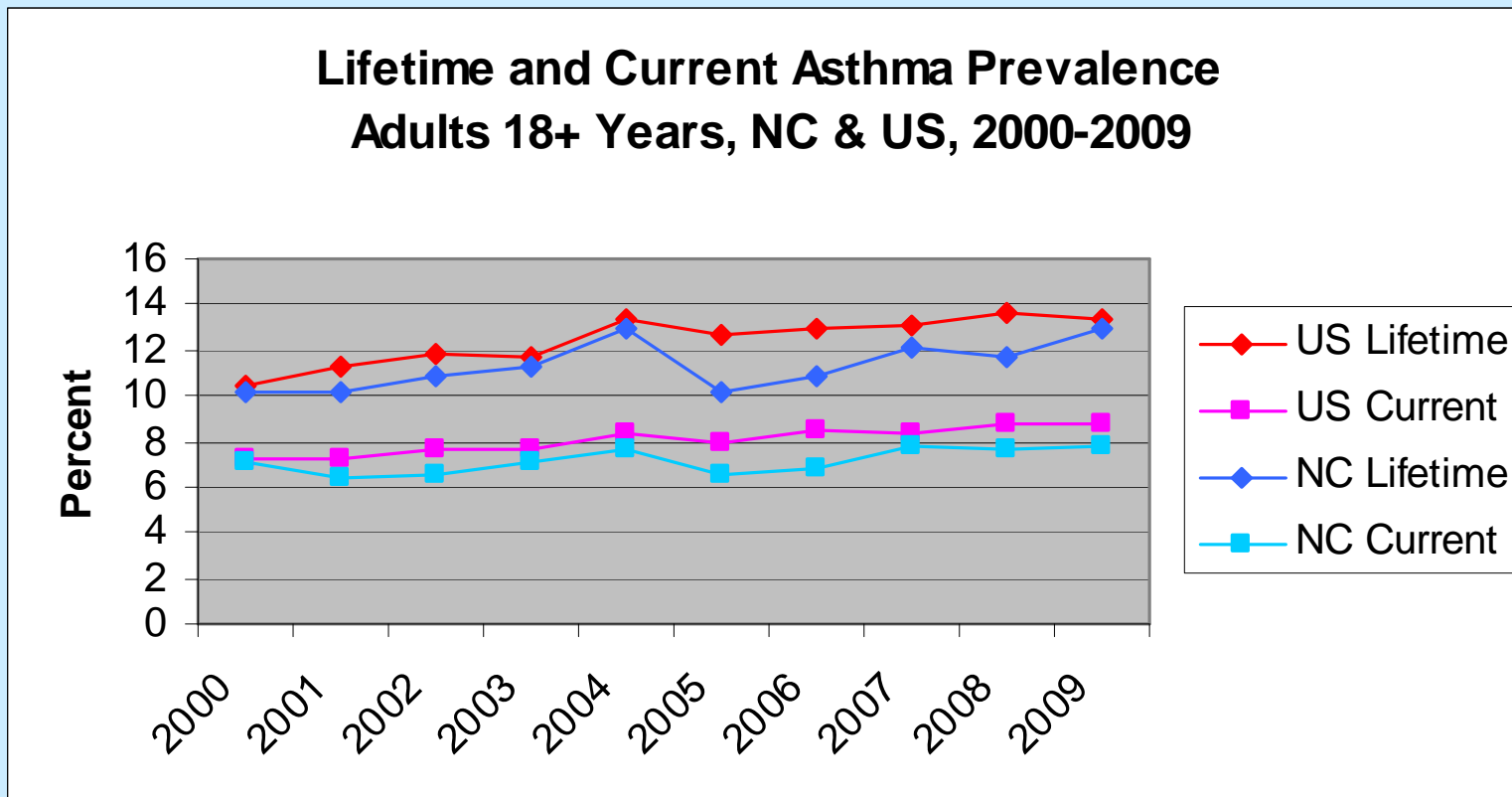
Objectives

- ▶ Describe the relationships between private, public, or no health insurance coverage and asthma management behaviors
- ▶ Discuss implications of no health insurance coverage on inadequate disease management and increased disease exacerbation

Methods

- ▶ Source of data: 2008 NC Behavioral Risk Factor Surveillance System (BRFSS)
- ▶ Study sample: Adults 18-64 with asthma
- ▶ Variables of interest: Health insurance coverage; asthma attacks/episodes; asthma medications; ED/urgent care visits; doctor/urgent treatment visits; inhaler usage
- ▶ Index cases: Adults 18-64 with current asthma and without insurance (n=901)
- ▶ Analyses: Bivariate and logistic regression

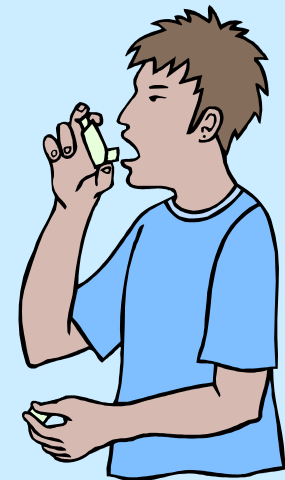
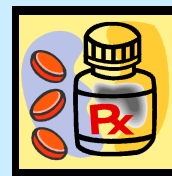
Asthma Prevalence Is Increasing



Source: CDC. Behavioral Risk Factor Surveillance System. Prevalence and trends data, 2000-2009
(<http://apps.nccd.cdc.gov/BRFSS/>)

Findings

- ▶ Health insurance coverage
- ▶ Asthma attacks/episodes
- ▶ ED/urgent care visits
- ▶ Doctor/urgent treatment visits
- ▶ Inhaler usage
- ▶ Asthma medications



Health Insurance Coverage

	Adjusted OR	95% CI	Prob.
No health insurance	1.00		
Public health insurance	1.97	1.46-2.65	<.001
Private health insurance	0.86	0.69-1.06	.165

Source: NC State Center for Health Statistics. 2008 NC BRFSS
(<http://www.schs.state.nc.us/SCHS/brfss/2008/>)

Asthma Attacks/Episodes

	Adjusted OR	95% CI	Prob.
No health insurance	1.00		
Public health insurance	2.20	1.17-4.13	.015
Private health insurance	1.21	0.74-1.98	.457

Source: NC State Center for Health Statistics. 2008 NC BRFSS
(<http://www.schs.state.nc.us/SCHS/brfss/2008/>)

ED/Urgent Care Visits

	Adjusted OR	95% CI	Prob.
No health insurance	1.00		
Public health insurance	1.58	0.70-3.70	.288
Private health insurance	0.59	0.30-1.14	.118

Source: NC State Center for Health Statistics. 2008 NC BRFSS
(<http://www.schs.state.nc.us/SCHS/brfss/2008/>)

AMLEs: Effect of race (African-American)

Doctor/Urgent Treatment Visits

	Adjusted OR	95% CI	Prob.
No health insurance	1.00		
Public health insurance	0.74	0.33-1.64	.453
Private health insurance	0.77	0.42-1.42	.406

Source: NC State Center for Health Statistics. 2008 NC BRFSS
(<http://www.schs.state.nc.us/SCHS/brfss/2008/>)

AMLEs: Effects of race (African American) and education (low educ.)

Inhaler Usage

	Adjusted OR	95% CI	Prob.
No health insurance	1.00		
Public health insurance	1.99	1.00-3.97	.051
Private health insurance	1.09	0.66-1.80	.732

Source: NC State Center for Health Statistics. 2008 NC BRFSS
(<http://www.schs.state.nc.us/SCHS/brfss/2008/>)

Asthma Medications

	Adjusted OR	95% CI	Prob.
No health insurance	1.00		
Public health insurance	3.60	1.69-7.64	<.001
Private health insurance	2.11	1.28-3.47	.003

Source: NC State Center for Health Statistics. 2008 NC BRFSS
(<http://www.schs.state.nc.us/SCHS/brfss/2008/>)

Summary: NC Adults with Asthma

- ▶ With private or public insurance: significantly more likely to report daily use of asthma medications
- ▶ With public insurance: more likely to report having an asthma attack and inhaler use
- ▶ No differences between insurance groups for ED/urgent care visits or doctor/urgent treatment visits
- ▶ Effects of race and education

Implications

- ▶ Without health insurance: less likely to have access to asthma medication
- ▶ Potential issues:
 - Inadequate asthma management
 - Increased disease exacerbation*
 - Subsequent impact on healthcare utilization

*Population-based finding also reported by Markowitz & Andresen, 2006.

Coverage Matters: Health Insurance Is Integral to Personal Well-Being and Health



Important new research has emerged since the IOM last studied the question of how health insurance affects health outcomes. This research clearly demonstrates that, despite the availability of care for the uninsured through safety net providers, insurance coverage makes a substantial difference in both access and outcomes... **Children with health insurance** have fewer avoidable hospitalizations, **improved asthma outcomes**, and fewer missed days of school.

Uninsured adults are much less likely to receive clinical preventive services that have the potential to reduce unnecessary morbidity and premature death. Chronically ill adults delay or forgo visits with physicians and clinically effective therapies, including prescription medications... **Uninsured adults with...** chronic obstructive pulmonary disease or **asthma exacerbation**,... are more likely to **suffer poorer health outcomes**, greater limitations in quality of life, and premature death. New evidence demonstrates that gaining health insurance ameliorates many of these deleterious effects, particularly for adults who are acutely or chronically ill.

The NATION'S HEALTH

The official newspaper of the American Public Health Association | www.thenationshealth.org

November/December 2010

Economy takes a toll on health coverage **Jump in uninsured signals need to implement health reform**

IN THE WAKE of the nation's economic downturn and its impact on access to health care, new Census Bureau figures show the U.S. uninsured rolls topped 50 million people in 2009 — the largest number of uninsured since federal officials began collecting such data.

In 2009, U.S. uninsured numbers rose to 50.7 million, up from 46.3 million in 2008 and translating to an uninsured rate of 16.7 percent, up from 15.4 percent in 2008, according to "Income, Poverty and Health Insurance Coverage in the United States: 2009," which the U.S. Census Bureau released Sept. 16.

The percentage of people with employer-based health coverage continued its downward trend to less than 56 percent in 2009, down from more than 58 percent in 2008 — a decline that puts the employer-based insurance rate at its

See **UNINSURANCE**,
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Hundreds of coal ash dumps, waste ponds may threaten health **EPA considers proposals to regulate coal ash**



Photo by Bob Fowler, courtesy Knoxville News Sentinel/AP Images

Sarah McCain, of Roane County, Tenn., looks over cleanup work near Kingston, Tenn., in September. In 2008, a coal ash pond breach spread 1 billion gallons of toxic sludge in the area.

INTONTOWN, ALA., is home to about

say. EPA estimates there are about 300 dry landfills and close to 600 coal ash waste ponds across 45 states. Additionally, coal ash has been deposited across the country as fill in hundreds of inactive dumps as well as in abandoned and active mines.

Despite the dangers posed by coal ash to human health and the environment, there are no federally enforceable regulations specific to coal ash. Environmental and health activists blame the lack of safeguards for a December 2008 accident in Kingston, Tenn., that sent more than 1 billion gallons of toxic

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