# **Asthma and COPD Health Disparities**

13<sup>th</sup> Annual ACCP Community Asthma and COPD Coalitions Symposium

October 25, 2011

Honolulu, HI





### **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



### **Overview**

- ► Health disparities: HP2020 perspective
- Asthma Health Disparities in North Carolina
- COPD Health Disparities in North Carolina
- Uses of CLRD surveillance data
- Health disparities: National Prevention Strategy perspective



# **Health Disparities**

### A view from **Healthy People 2020**

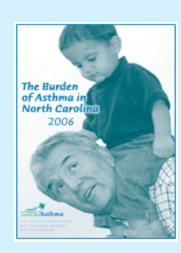
- Race and ethnicity
- Gender
- Sexual identity and orientation
- Disability status or special health care needs
- Geographic location (rural and urban)



# **Health Disparities: Asthma**

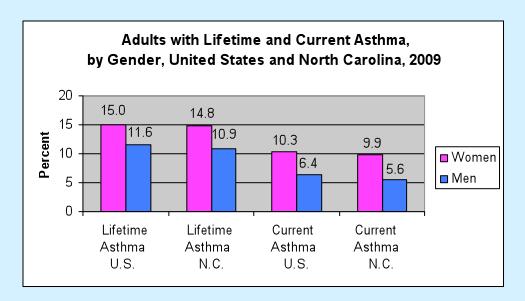
### A view from North Carolina

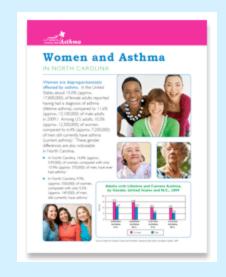
- Women
- Children under the age of 5
- Persons aged 65 and older
- African Americans
- Native Americans
- Adults living in households with income <\$15,000</p>





### Women & Asthma in NC

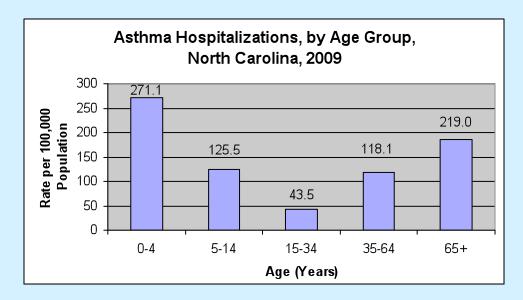




**Source:** Centers for Disease Control and Prevention. Behavioral Risk Factor Survey System, 2009



### Children & Asthma in NC



Children and Asthma

IN NORTH CAROLINA

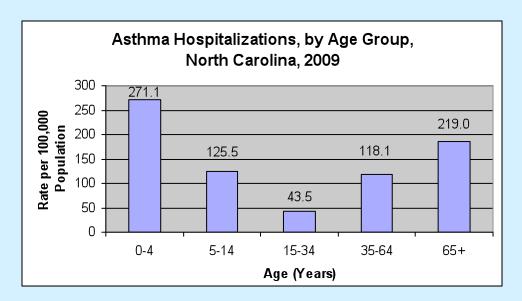
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Source: NC State Center for Health Statistics. Hospital

Discharge Data (provisional), 2009



### Older Adults & Asthma in NC



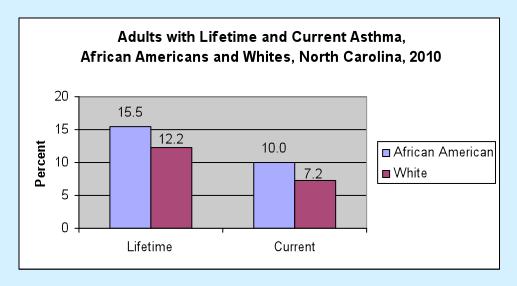


Source: NC State Center for Health Statistics. Hospital

Discharge Data (provisional), 2009



### **African Americans & Asthma in NC**

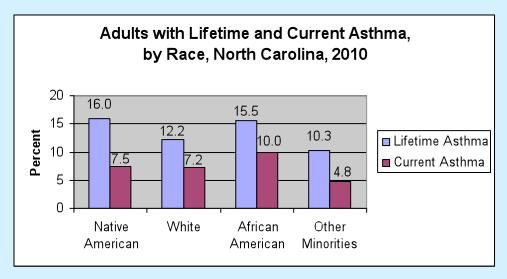


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### **Native Americans & Asthma in NC**

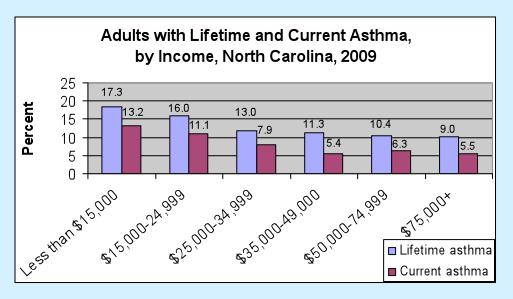


Native Americans and Asthma
IN NORTH CAROLINA

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### Low Income Households & Asthma in NC



Low Income Households and Asthma
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### **Health Disparities: COPD**

### A view from North Carolina

- Prevalence: gender, age, race, income, disability
- Co-morbidities: asthma, other chronic diseases
- Mortality: gender, age

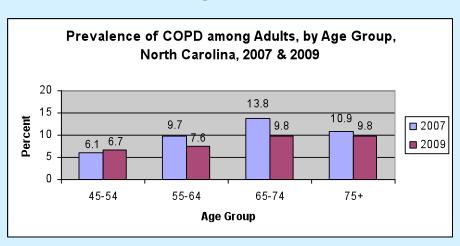


### **COPD** in North Carolina: Prevalence

### Gender

# Prevalence of COPD among Adults (18+ Years), by Gender, North Carolina, 2007 & 2009 8 4 2 0 Female Male

### Age



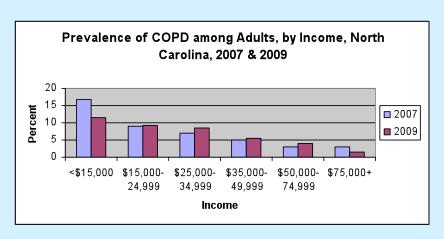


### **COPD** in North Carolina: Prevalence

### **Race**

# Prevalence of COPD among Adults, by Race, North Carolina, 2007 & 2009 12 9.8 4 0 Native American White African American Race

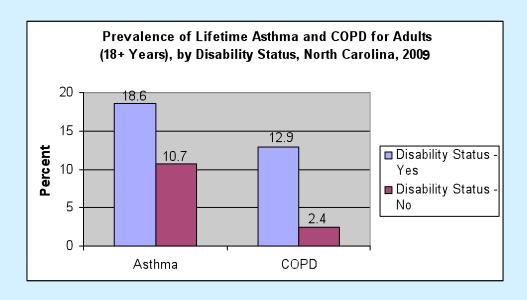
#### Income





# Disability Status & Asthma & COPD in NC







### **COPD Co-morbidities in NC**

	Prev	alence	Relative risk	
Chronic diseases	COPD	No COPD	aRR	95% C.I.
	%	%		
Arthritis	56.7	26.1	1.64*	1.46-1.84
Diabetes	21.9	9.1	1.76*	1.39-2.24
History of heart attack	14.6	3.8	2.58*	2.00-3.33
History of coronary heart disease	18	3.7	3.49*	2.50-4.88
History of stroke	7.9	2.5	2.04*	1.53-2.74
Kidney disease	5.9	1.7	2.85*	1.89-4.30
Current asthma	39.8	5.9	7.50*	6.24-9.02
Index of chronic diseases:				
3+ chronic diseases	21.5	2.8	4.95*	3.93-6.25

Abbreviations: COPD – chronic obstructive pulmonary disease; aRR – ageadjusted relative risk.



<sup>\*</sup>Statistically significant p < 0.05

# **Mortality in NC**

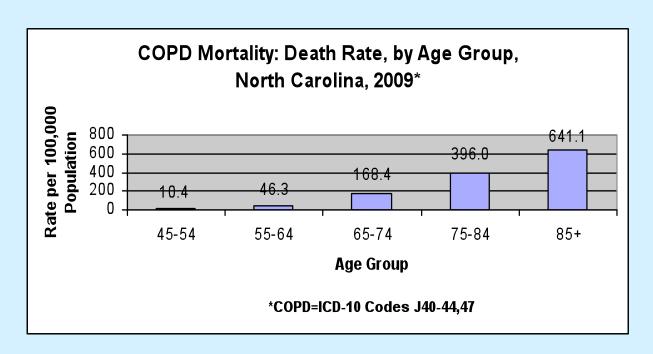
Leading Causes of Death: Number & Rate per 100,000 Pop.

0005.0					
2005-2 009			▶ 2009		
Diseases of the Heart	86,920	192.2	• Cancer	17,476	186.3
• Cancer	86,246	190.7	Diseases of the Heart	17,133	182.6
Cerebrovascular Disease	22,600	50.0	Cerebrovascular Disease	4,391	46.8
<ul> <li>Chronic Lower Respiratory Diseases</li> </ul>	21,228	46.9	<ul> <li>Chronic Lower Respiratory Diseases</li> </ul>	4,324	46.1

Source: NC State Center for Health Statistics. Vital Statistics, 2009 – Vol.2, November 2010



# **COPD Mortality in NC**





# Uses of Health Disparities Surveillance Data

- Understand and monitor health disparities
- Promote awareness and education
- Develop & implement evidence-based, community interventions & programs
- Conduct planning activities
- Support and drive policy



# **Health Disparities**

### A view from National Prevention Strategy





### Thanks to

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Cindy Haynes-Morgan, MSA-PA North Carolina Asthma Program



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