

RENCI@ East Carolina University
Department of Public Health at Brody School of Medicine
Coastal Impact Public Health: At-Risk Populations (PHS)

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Delimiting Populations Vulnerable to Storm Surge

The Problem:

1. Develop an emergency management registry for the medically fragile defined by physicians
 - Level 1 (High Priority)
 - Patient requires uninterrupted health care
 - Medical services required within 24 hours
 - Level 2 (Moderate Priority)
 - Patient requires medical services within 48 hours
 - Level 3 (Lower Priority)
 - Patient requires medical services within 1 week
2. Determine the magnitude and scope of the registry population

Identify the Vulnerable:

1. Medically Fragile: determination based on literature review (8%)
2. Ages 65+ and 75+ years
3. Other groups (poverty, race, etc.), social vulnerability index (SoVI)

Event Example:

1. A slow moving hurricane: category 4/5

Definition of the Medically Fragile¹:

Insulin Diabetes Calculation

(National Diabetes Information Clearinghouse of National Institute of Diabetes and Digestive and Kidney Diseases)

Estimated **1.96%--in ENC 49,153**

Chronic Obstructive Pulmonary Disease (COPD) Calculation

(National Health Interview Surveys)

Estimated **3.89%--in ENC 97,484**

Long-term Treatment Calculation (LTOT) Calculation

(National Health Interview Surveys)

Estimated **0.33%--in ENC 8,377**

End-Stage Renal Disease (ESRD) Calculation

(Annual Data Report of the National Renal Data System)

Estimated **0.14%--in ENC 3,511**

Congestive Heart Failure Calculation

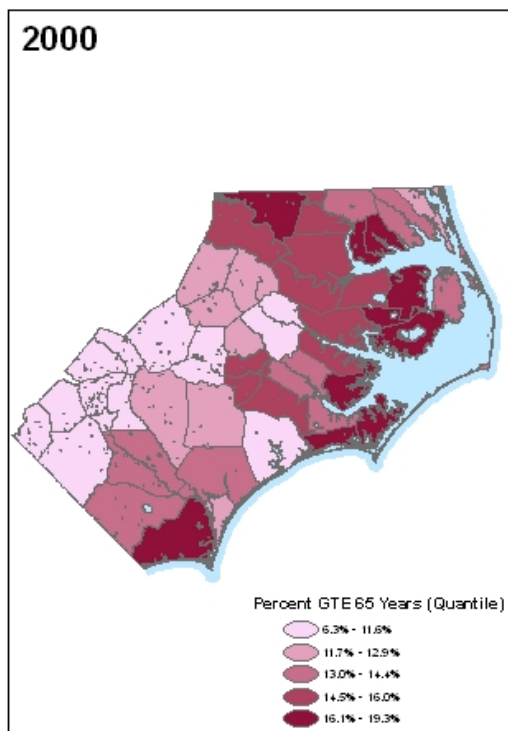
(National Health and Nutrition Examination Survey)

Estimated **1.76%--in ENC 44,138**

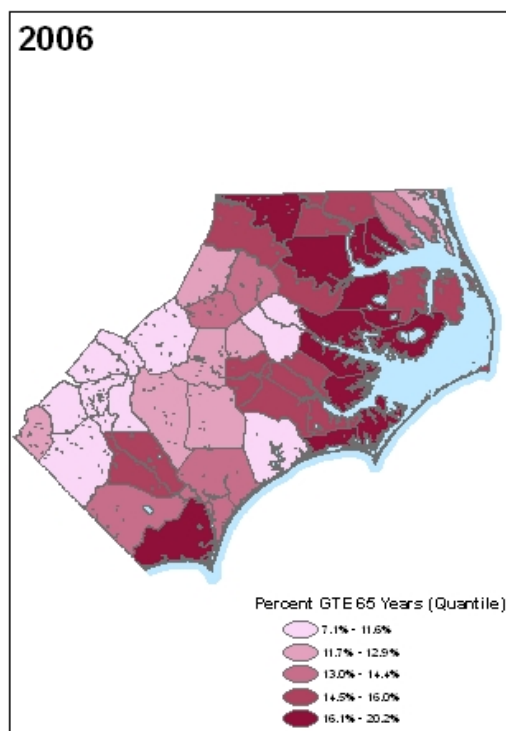
Estimated 8%--in ENC 202,663 using 2,507,844 as base ENC population²

¹Appendix 1 from RENCI Coastal Impact on Public Health: At Risk Populations
Regional Special Medical Needs Registry Proposal for Eastern North Carolina (12-18-07)

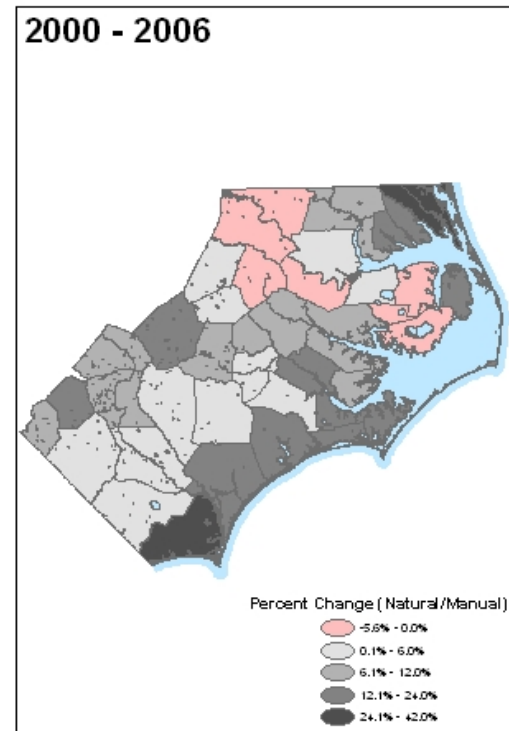
Eastern North Carolina Counties: Population Change 2000 to 2006 Percent of County Populations 65 Years and Older



ENC Population GTE 65: 281,381 (11.8%)

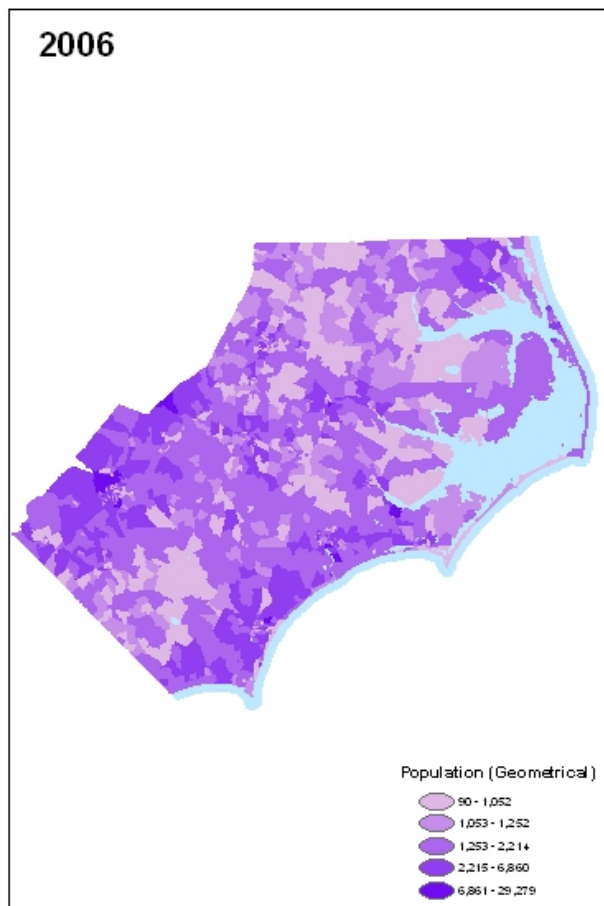


ENC Population GTE 65: 311,176 (12.1%)



ENC Pop. GTE 65 Change: 29,795 (+10.6%)

Eastern North Carolina Counties: Medically Fragile (0.08) Block Group Populations Affected by a Storm Surge Generated by a Slow Moving Category 4 or 5 Hurricane



ENC Population: 2,568,962
ENC Population Medically Fragile (0.08): 205,517

