

BRACING FOR THE SILVER TSUNAMI



James H. Johnson, Jr.
Frank Hawkins Kenan Institute of Private Enterprise
Kenan-Flagler Business School
University of North Carolina at Chapel Hill

June 2015

OVERVIEW

- Global Aging & The Greying of America
- Key Drivers
- Challenges & Opportunities
- The UNC-CH Elder Care Economy Innovations Hub
- Economic Impact of Dementia & Other Central Neurologic Disorders
- Discussion

Snapshots of Global Aging

- In 2005, the ratio of children to seniors was 3:1; by 2050, the ratio will be 1:1.
- In 2000, close to one quarter of the population in Japan, Spain, and Italy was elderly.
- Close to one-half of their populations will be 65 or older in 2040.

Snapshots of Global Aging

Cont'd

- Japan sells more adult diapers than baby diapers
- China has the 4:2:1 problem
- Today, 9% of the Chinese population is elderly (129 million)
- By 2050, the Chinese elderly population will total 330 million (25% of the total)—larger than the entire U.S. population today

Snapshots of Global Aging, Cont'd

- For the first time in 100 years, deaths exceeded births among U.S. non-Hispanic whites in 2011
- Today, 16% of the U.S. population is 65+; 26% will be elderly by 2040.
- Close to 40 million people in the U.S. provided unpaid eldercare in 2011 and 2012-- at an estimated cost of \$30 billion in loss work productivity.

THE GREYING OF AMERICA

Key Drivers

- **Changes in Longevity**
- **Declining Fertility**
- **Aging of Boomer Cohort**

U.S. LIFE EXPECTANCY AT BIRTH

YEAR

AGE

1900

47.3

1930

59.7

1960

69.7

1997

76.5

2007

77.9

2010

78.3

2030

101.0

Centenarians in the U.S.

Year	Number
1950	2,300
2010	79,000
2050	601,000

TOTAL FERTILITY RATES FOR U.S. WOMEN BY RACE/ETHNICITY, 2012

Race/Ethnicity	Total Fertility Rate
All Races	1.88
Hispanic	2.18
Non-Hispanic White	1.76
Blacks	1.90
Asian	1.77
Native American	1.35

U.S. POPULATION CHANGE BY AGE, 2000-2010

Age	2010	Absolute Change 2000 - 2010	Percentage Change 2000 - 2010
<25	104,853,555	5,416,289	5.4%
25-44	82,134,554	-2,905,697	-3.4%
45-64	81,489,445	19,536,809	31.5%
65+	40,267,984	5,276,231	15.1%
TOTAL	308,745,538	27,323,632	9.7%

THE BIG CHALLENGE

And The Big Opportunity

AUGUST 2013



AGING IN PLACE IN THE CAROLINAS

DEMOGRAPHIC HIGHLIGHTS,
PROGRAMMATIC CHALLENGES
& OPPORTUNITIES

JAMES H. JOHNSON JR., PH.D. AND ALLAN PARNELL, PH.D.
FRANK HAWKINS KENAN INSTITUTE OF PRIVATE ENTERPRISE

James B. Duke
THE DUKE ENDOWMENT



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL
KENAN-FLAGLER
BUSINESS SCHOOL

Elderly Share of Net Population Change, 2000-2010

Area	Total Population Change	Elderly Population Change	Elderly Share of Net Change
United States	26,884,972	3,737,660	13.9%
South Region	14,318,924	2,455,718	17.2%
The Carolinas	2,099,702	411,572	19.6%
North Carolina	1,486,170	265,031	17.8%
South Carolina	613,532	146,541	23.9%

POPULATION CHANGE BY AGE IN THE SOUTH, 2000-2010

Age	2010 Population	Absolute Change 2000-2010	Percent Change 2000-2010
Total	114,555,744	14,318,924	14.3
<10 (Gen Z)	15,346,300	1,284,900	9.1
10-29 (Gen Y)	31,624,788	3,247,518	11.4
30-44 (Gen X)	22,820,248	-401,156	-1.7
45-64 (Boomers)	29,870,423	7,731,944	34.9
65+ (Pre- Boomers)	14,893,985	2,455,718	19.7

Balance of Population Change Equation

- **Population Change = In-Flows – Out-Flows**

where

In-flows = [Births + In-Migrants]

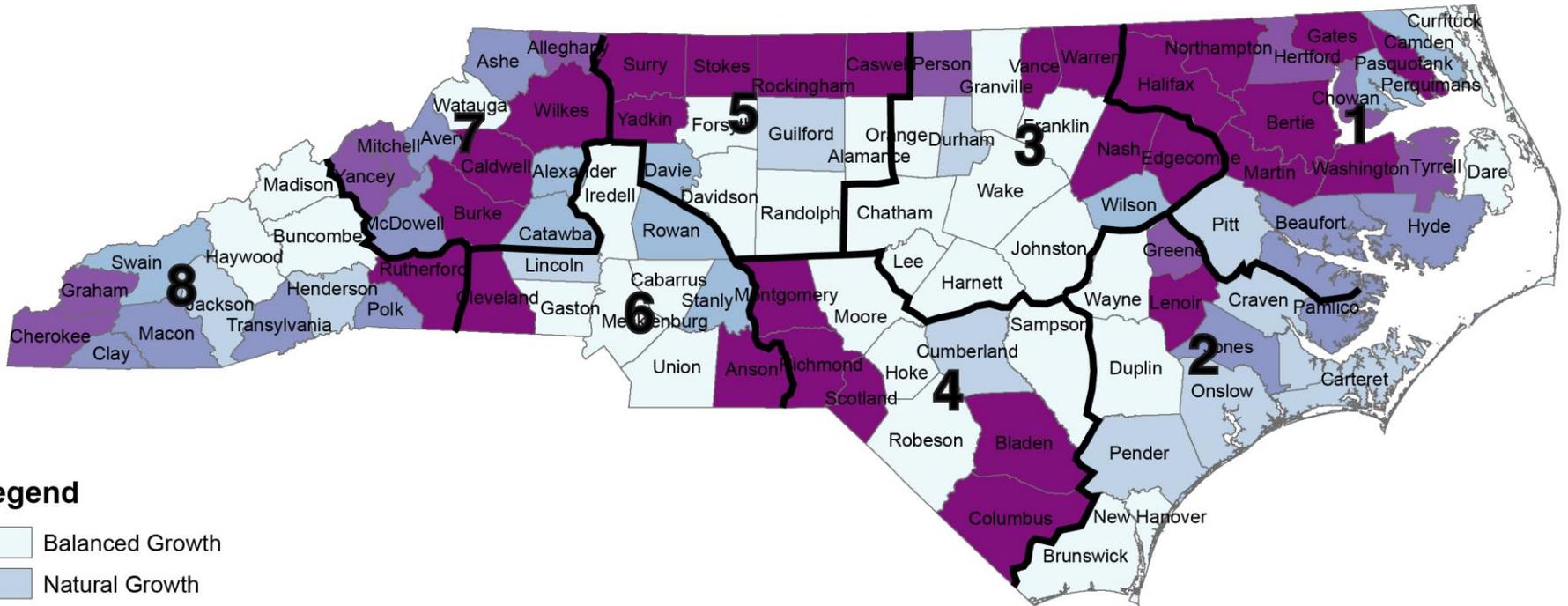
&

Out-Flows = [Deaths + Out-Migrants]

Typology of Communities

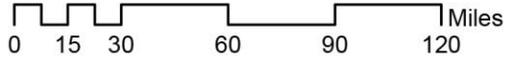
Demographic Experience	Drivers
Balanced Growth	Births exceed deaths and in-migration exceeds out-migration.
Natural Growth	Out-migration exceeds in-migration but this population loss is offset by an excess of births over deaths.
Migration Magnets	Deaths exceed births but population loss is averted because in-migration exceeds out-migration.
Dying	Deaths exceed births and out-migration exceeds in-migration, resulting in population loss.
Biologically Declining	In-migration exceeds out-migration but his net migration is not substantial enough to offset an excess of deaths over births
Emptying Out	Births exceed deaths but out-migration exceeds in-migration, resulting in net population loss

County Typologies, 2010 - 2014



Legend

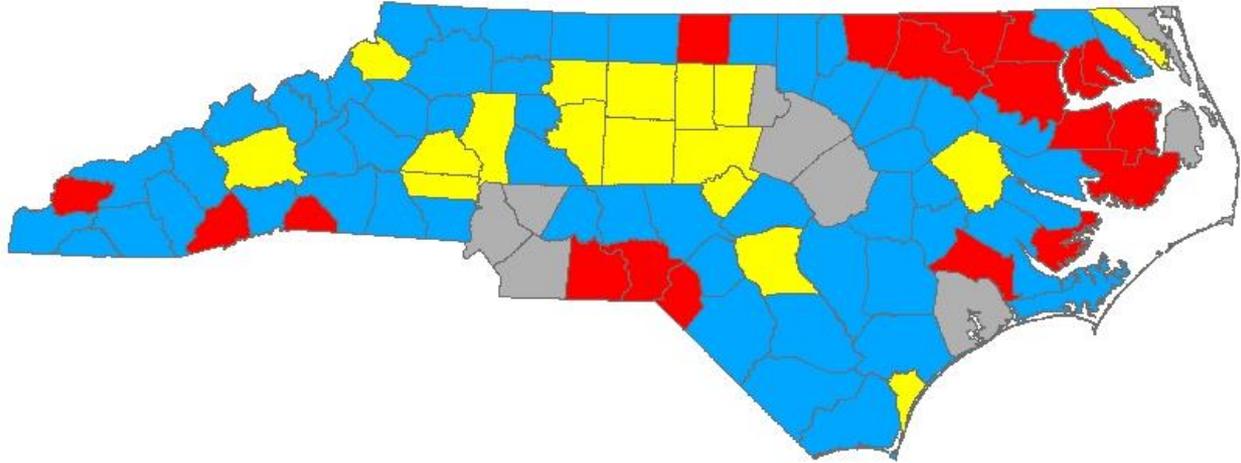
- Balanced Growth
- Natural Growth
- Migration Magnets
- Emptying Out
- Biologically Declining
- Dying



GROWING DEPENDENCY

A Train Wreck in the Making

North Carolina Dependency Ratios, 2010



0 46,500 93,000 186,000 Meters

Source: Census 2010, STF1

- Dependents per 100 workers**
- Low < 60
 - Moderate 60-69
 - High 70-99
 - Extremely High 100 or more

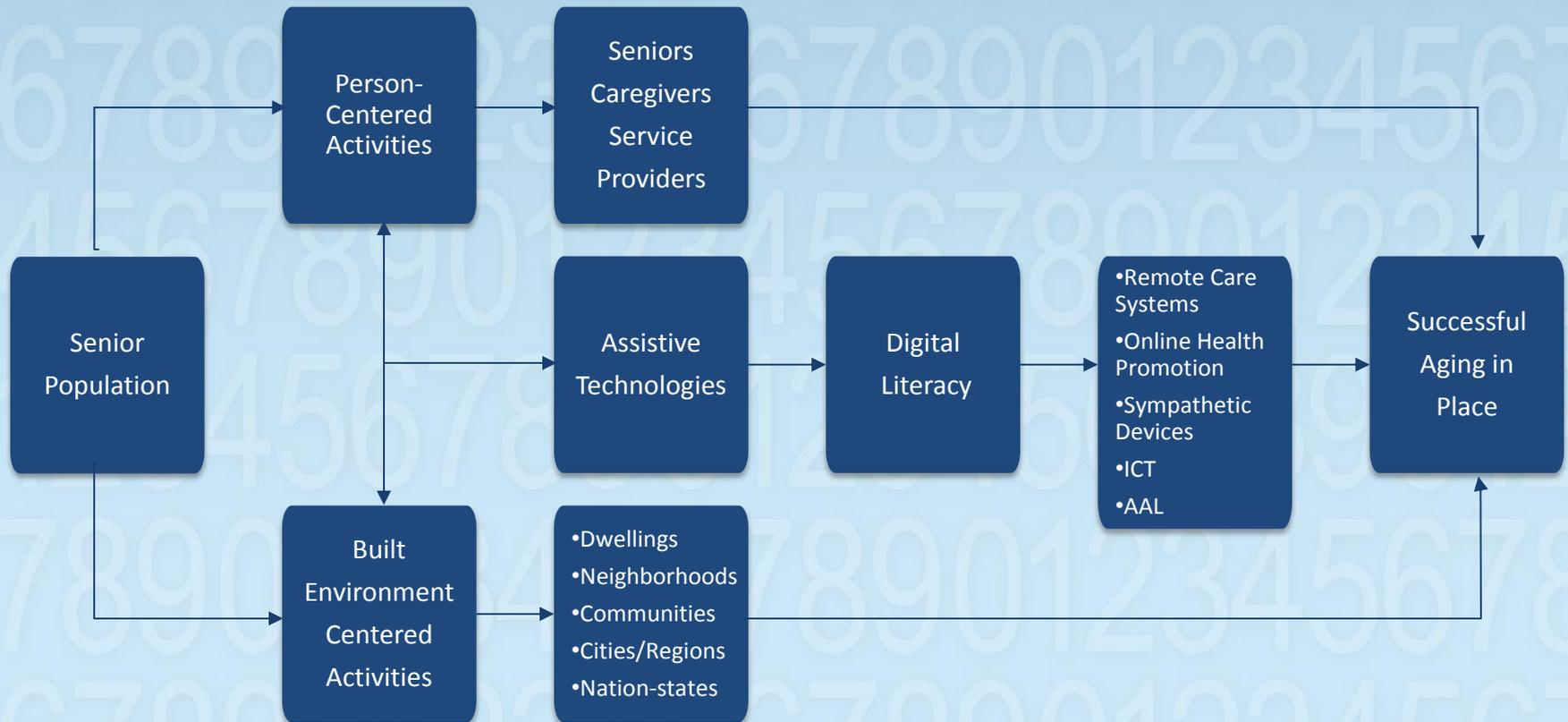
Age-Related Challenges

- Mobility Limitations
- Hearing Loss
- Vision Impairments
- Mental Disorders
- Substance Abuse Issues
- Chronic Disabilities
- Economic Constraints

The Triple Whammy

- Aging Boomers Face Mortality
- Elder Care Responsibilities
- Raising Grandchildren

AGING IN PLACE RESEARCH FRAMEWORK



THE KFBS/GILLINGS ELDER CARE ECONOMY INNOVATIONS HUB

Fostering & Facilitating Success Aging in Place Ventures

- Person- Centered
- Built-Environment Centered
- Data Analytics

Scholar & Practitioner Network

- Noel Greis
- Rick Wysk
- Helen Huang
- Gregory Sawicki
- Monica Nogueira

Aging in Place Clearinghouse

- White Papers
- Policy Briefs
- Business Plans
- Workshops
- Conferences

UNC Kenan Institute for Private Enterprise	UNC Institute on Aging Center for Aging & Health Center for Health Equity	UNC Biomedical Engineering Nursing Audiology Pharmacy Social Work	University of Cambridge Newcastle University	AARP NC LeadingAge NC NC Division of Aging & Adult Services	MIT AgeLab Universal Design Institute Active Living by Design
--	---	---	--	---	---

Leadership Team

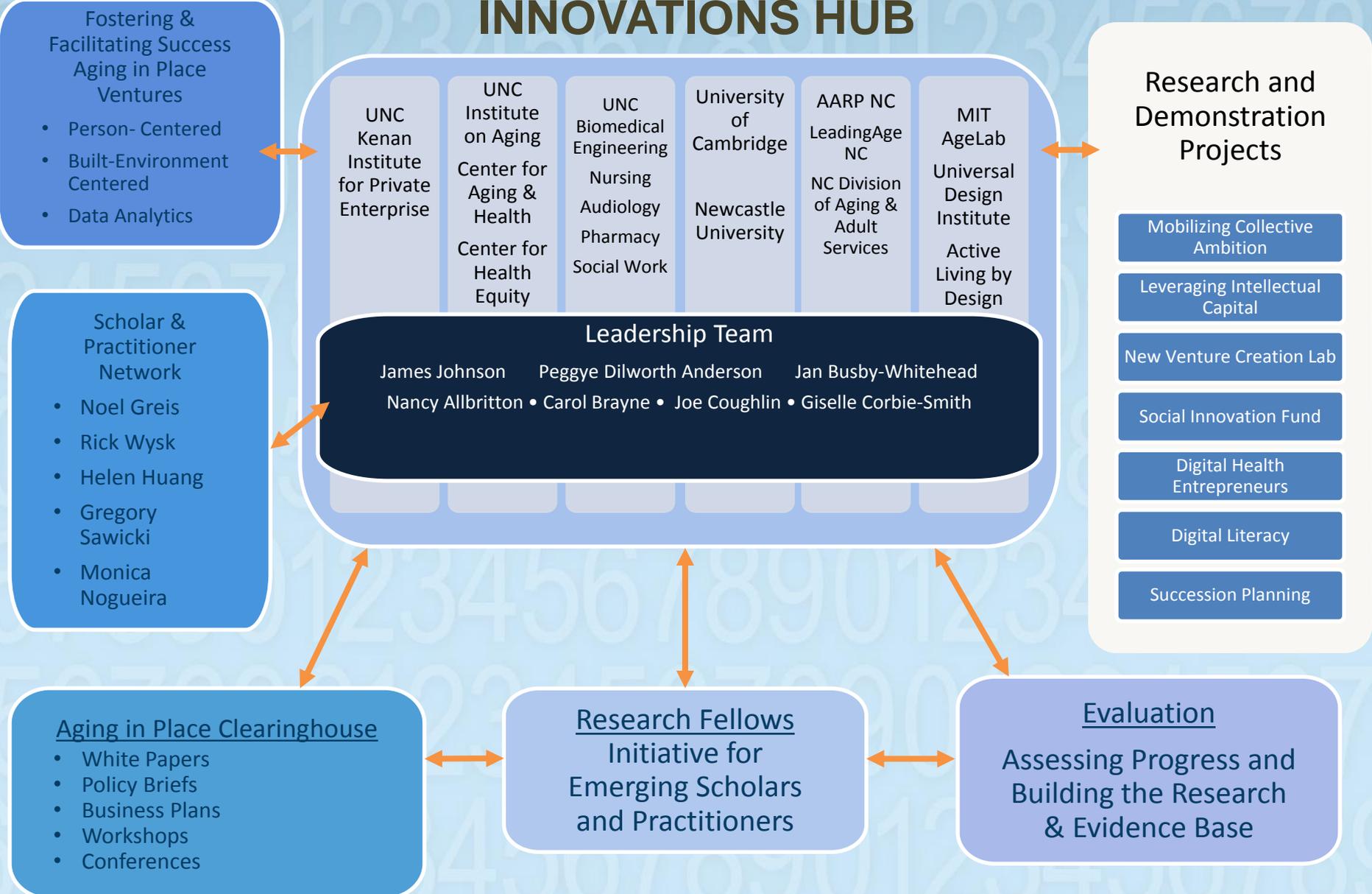
James Johnson Peggye Dilworth Anderson Jan Busby-Whitehead
 Nancy Allbritton • Carol Brayne • Joe Coughlin • Giselle Corbie-Smith

Research Fellows Initiative for Emerging Scholars and Practitioners

Evaluation
 Assessing Progress and Building the Research & Evidence Base

Research and Demonstration Projects

- Mobilizing Collective Ambition
- Leveraging Intellectual Capital
- New Venture Creation Lab
- Social Innovation Fund
- Digital Health Entrepreneurs
- Digital Literacy
- Succession Planning



AUGUST 2012



THE ECONOMIC IMPACT OF RACIAL HEALTH DISPARITIES
IN NORTH CAROLINA

Stephen J. Appold, James H. Johnson Jr. and John D. Kasarda
FRANK HAWKINS KENAN INSTITUTE OF PRIVATE ENTERPRISE

Kenan-Flagler Business School
THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Leading Cause of DALYs, YLDs, YLLs, & Deaths, North Carolina, 2006-2010

DALY Rank	Cause	DALY (%)	YLD (%)	YLL (%)	Deaths (%)
		MALE			
N/A	ALL	582,468 (100%)	239,072 (100%)	343,396 (100%)	37,959 (100%)
6	Dementia	19,122 (3.3%)	16,619 (7.0%)	2,503 (0.7%)	701 (1.8%)
		FEMALE			
N/A	ALL	510,844 (100%)	258,038 (100%)	252,806 (100%)	38,607 (100%)
2	Dementia	32,451 (6.4%)	27,139 (10.5%)	5,313 (2.1%)	1,856 (1.8%)

Top Five Most Expensive Illnesses, 2008

Condition	Total Expenses (\$ million)	Visits to Offices & Hospitals	Unique Patients Treated	Average Annual Costs Per Person Treated
Heart Conditions	95,577.04	68,013	23,234	\$4,114
Trauma-related Disorders	74,291.00	135,399	33,140	\$2,242
Cancer	72,157.41	75,221	15,480	\$4,661
Mental Disorders	72,101.80	144,740	37,799	\$1,907

Percent Distribution of Expenditures for Mental Disorders, 2008

Type of Service	Percent of Total Expenditures
Hospital Out Patient/Office Visits	25.8
Hospital Inpatient Stays	13.6
Emergency Room Visits	1.4
Prescribed Medicines	40.9
Home Health	18.3

Aging in Place

Technological Solutions

SMART SLIPPERS



GLOWCAPS



SENIOR PLAYGROUNDS



Think about Urban Design for Our Aging Population



MOVING FORWARD

- Mobilize Collective Ambition
- Leverage Intellectual Capital
- Establish New Venture Creation Laboratory
- Create Social Innovation Fund
- Develop Aging in Place Clearinghouse
- Engage in Succession Planning

THE END

