

From Medical Model to Population Health



DOYLE M. CUMMINGS, PHARM.D., FCP, FCCP
BERBECKER DISTINGUISHED PROFESSOR OF
RURAL MEDICINE
PROFESSOR OF FAMILY MEDICINE, PEDIATRICS,
& PUBLIC HEALTH
BRODY SCHOOL OF MEDICINE

Acknowledgements

- My wife and family
- My supervisors
- My colleagues at ECU
- My colleagues in the community
- My students
- My friends
- Myriad of others



Involving Students

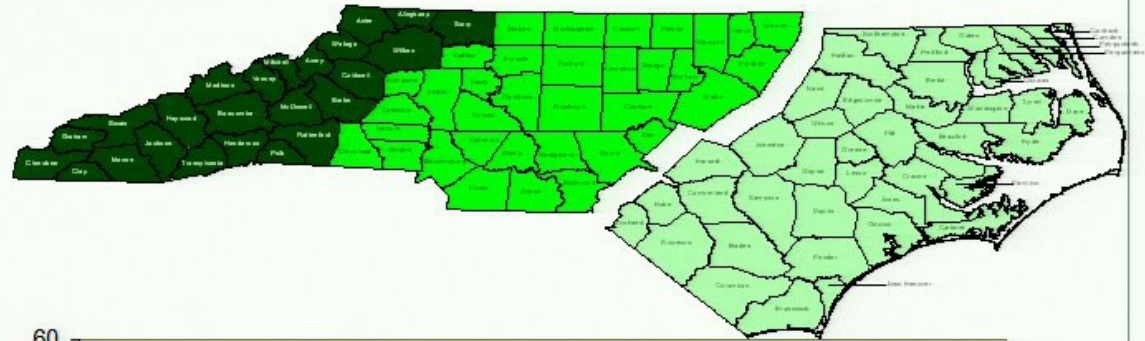
- Enlightenment
- Engagement
- Evocation
- E-mersion
- Evaluation



My Transition in Thinking – Medical Model to Population Health



ECU Health Sciences Vision: To improve the health of **the population of eastern North Carolina**



Mortality rate per 100,000 population

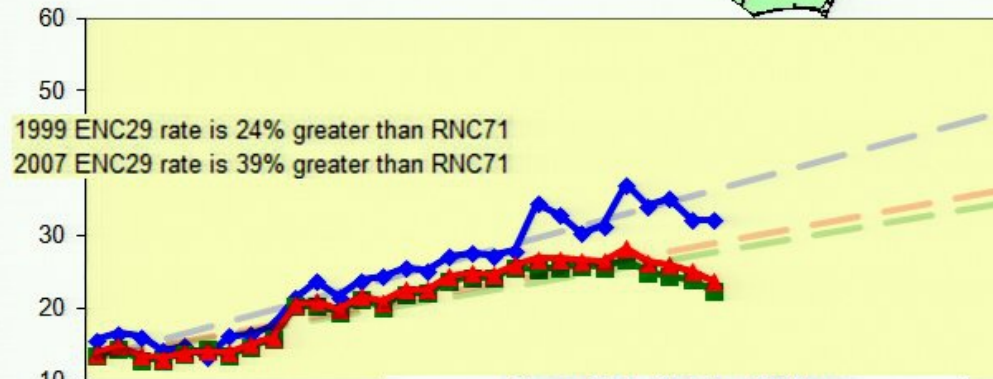


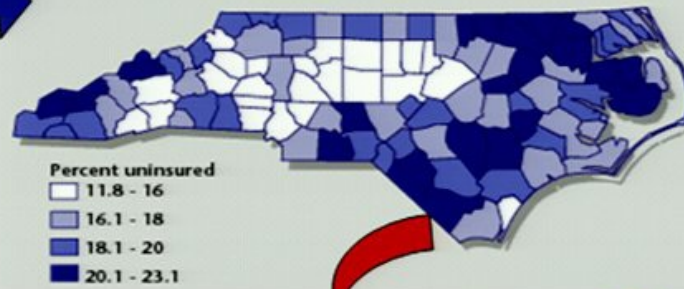
Figure 6.5 i. Diabetes Mellitus:
Trends in mortality rates for ENC29, RNC71, and NC,
1999-2007 with projections to 2020

Regional Convergence of Social Issues

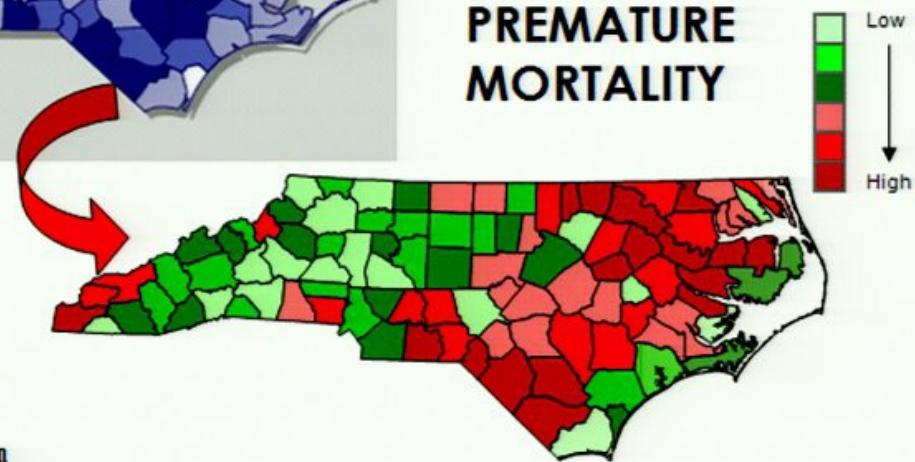
POVERTY RATE



PERCENT OF THE POPULATION WITHOUT HEALTH INSURANCE



PREMATURE MORTALITY



Data for 1999
Center for Health Services Research and Development
East Carolina University

JL Wilson

Health Disparities and Population Health in NC



The future health of eastern NC will be determined to a large extent by how effectively we work with rural communities to eliminate health disparities among those rural populations experiencing gaps in disease, disability, and death.

Medical, Behavioral, and Many Other Interventions: No Delivery System



Research (Discovery)

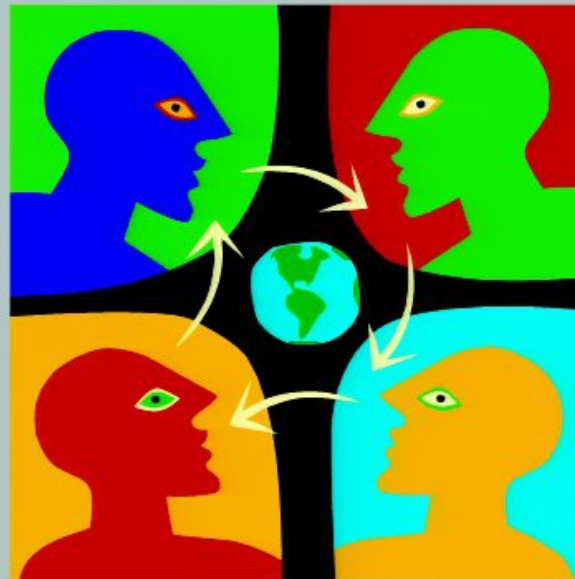


Testing



Roadblocks to Delivery

Focused and enhanced effort in translational research, dissemination and diffusion are needed to achieve improved population benefits



Translational Research - A Roadmap to Start



Where we are.

Where we've been.



What happened.

Where we're going.



Socio-Ecologic Model



Source: Adapted from McLeroy, et al., An ecological perspective on health promotion programs. *Health Education Quarterly* 1988; 15:351-77.

Guiding Principles for Research

Start (and
continue)
with
community
coalition



Interventions

❖ **Interventions should be designed for dissemination.**

○ Intervention design is part of an engineering process.



Strategy: Bi-Modal Intervention in Doctor's Office and Community



Improved Outcomes and Reduced Disparities in Diabetes Care For Rural African Americans



**PAUL BRAY, MA., LMFT
RESEARCH ASSISTANT PROFESSOR OF FAMILY
MEDICINE**

**DOYLE M. CUMMINGS, PHARM.D, FCP, FCCP
PROFESSOR OF FAMILY MEDICINE, PEDIATRICS,
& PUBLIC HEALTH**

**DEBRA THOMPSON, DNP, FNP
BERTIE MEMORIAL HOSPITAL/UNIVERSITY
HEALTH SYSTEMS**

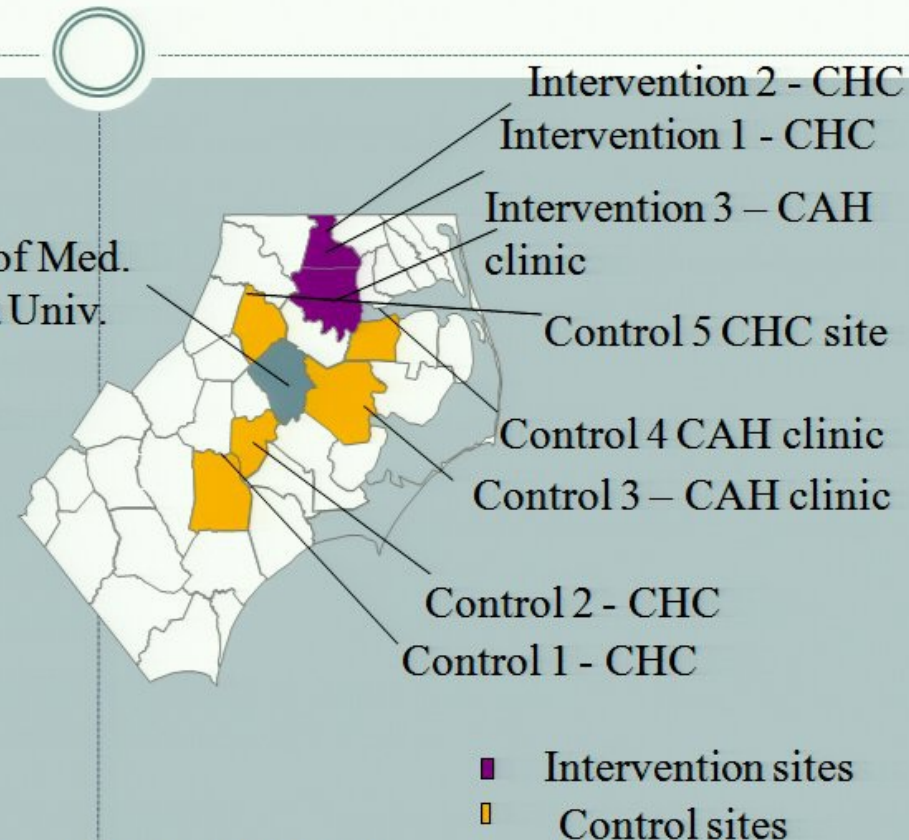
We gratefully acknowledge our financial support: Robert Wood Johnson Foundation, Kate B. Reynolds Charitable Trust, Roanoke Chowan Foundation; and the work of our research staff

Design/Setting/Patients: Rural Primary Care

Design: Prospective care redesign and care management intervention with 3 yr follow-up in three purposely selected rural fee-for-service practices compared to usual care in five randomly selected control practices with similar practice and patient characteristics.

Patients: n = 727 randomly selected AA Type 2 diabetes; n = 368 intervention site pts; n = 359 control site pts.

Outcome Measures: HbA1c, BP, lipids, at baseline & long-term (3 yr) follow-up

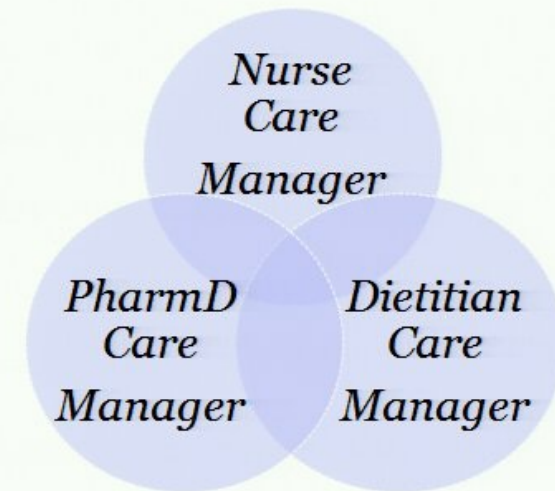


Care Redesign and Circuit Rider Care Managers



Delivery Redesign & Care Management

1. Schedule diabetics on specific 1/2 days
2. Standing orders for care management and labs, especially if out of control
3. Standing orders for visit frequency & follow-up
4. Coaching/goal setting--primary tool for patient self-management
5. Culturally tailored for literacy/relevance
6. Expanded roles for RN/CDE and PharmD, including prescribing
7. Point of care--delivered during PCP visit
8. Physicians and care managers form a team



Multivariate General Linear Model

Decrease in HbA_{1c} as outcome

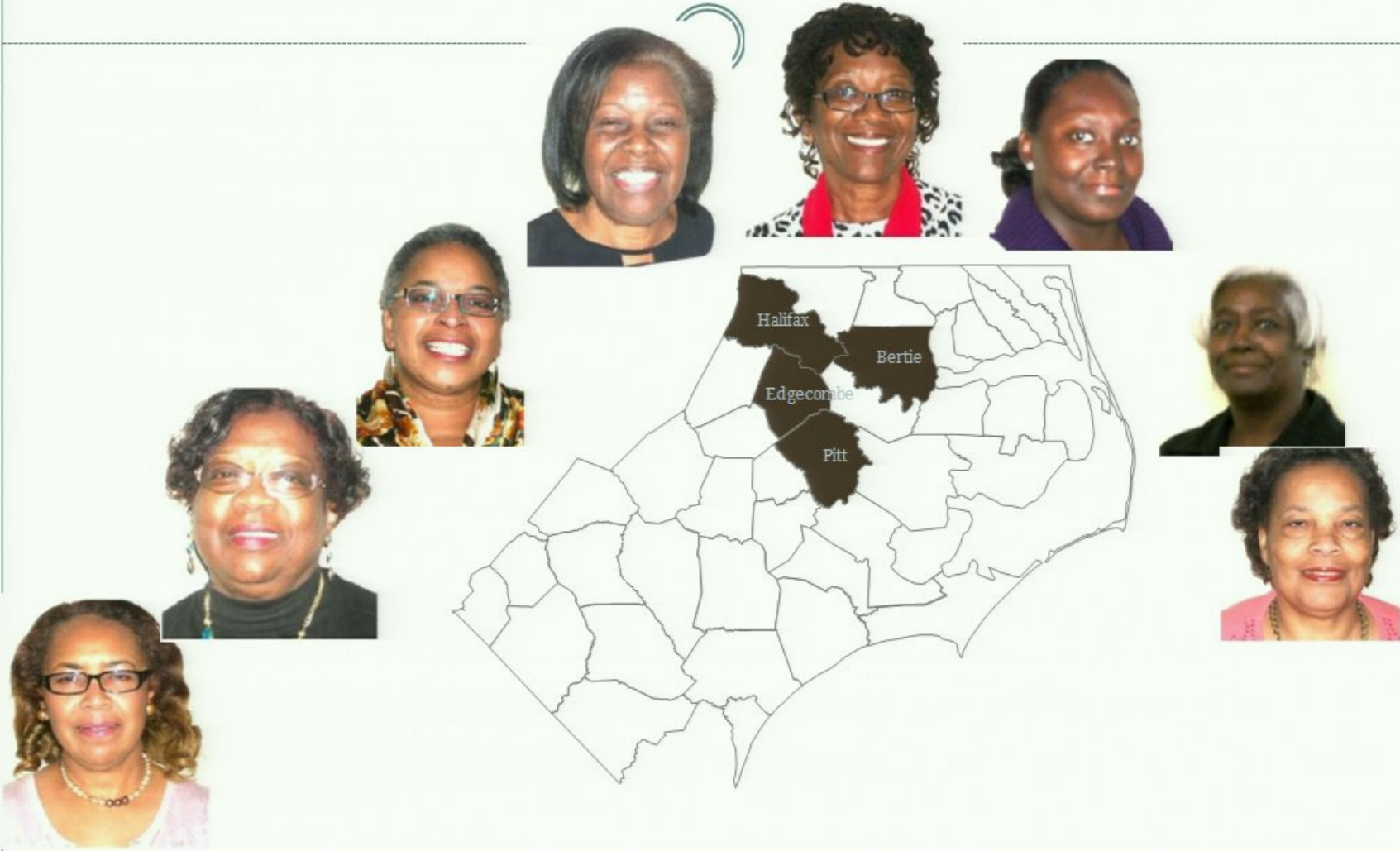
Variables in Model	Parameter \pm Std Error	Significance of effect
Age	0.022 \pm 0.006	P < 0.001
Gender	0.184 \pm 0.138	NS
Duration of Diabetes	-0.026 \pm 0.010	P = 0.009
# visits/yr	0.008 \pm 0.029	NS
Baseline a1c	0.606 \pm 0.030	P < 0.001
Intervention clinic effect		F(1,6)=17.97, p=0.005

The **EMPOWER** Trial



Empowering
Rural African
American Women
and Communities
to Improve
Diabetes
Outcomes

EMPOWER Team and Territory



EMPOWER : A Small Changes Approach

- We are investigating the effectiveness of a small changes approach to lifestyle change to facilitate long term control
- Design: RCT in 300 women; 150 intervention and 150 delayed participants
- Culturally relevant behavioral small change intervention (16 sessions) and social support delivered by trained community health workers
- Outcomes (6 & 12 mo): HbA1c, BP, weight, dietary patterns, pedometer counts, measures of family/social support, diabetes distress, empowerment, depression, self-care, medication adherence, and life satisfaction



Biological Outcomes

EMPOWER!



Step
Counts



Blood
Pressure



Body
Mass
Index



HbA1C



Challenge



- Eastern NC health challenges remain substantial.
- Think big with me about how ECU faculty, students and staff can make a difference in the years to come....



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Brody School of Med.
East Carolina Univ.

