Opportunities for Dissemination and Implementation Research in Cancer Prevention and Control

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Research Interests

- Understanding What Works to Prevent and Control Cancer
  - Research synthesis and evidence construction
    - Federal guideline and recommendation processes
    - Approaches to systematic reviews, reviews of the "gray literature", and uncertain evidence
- Using research evidence to improve public health and healthcare
  - Health services research
  - Dissemination and implementation research
    - Test new approaches to make sure that we get more of what works to more people in more places in less time and at lower cost
  - Comparative effectiveness research
- Cancer Prevention and Control
  - Reduce or eliminate screening and other disparities for colorectal, lung and breast cancer
  - Address tobacco prevention, cessation and control

Public Health Agency Experience

- South Carolina Department of Health and Environmental Control
  - Assistant Deputy Commissioner for Health

- Centers for Disease Control and Prevention
  - Director, Program Services and Development Branch
  - Director, US AID and World Bank Collaborative Efforts

Academic Experience

- University of North Carolina – Chapel Hill
  - Research Associate Professor, Department of Maternal and Child Health, Gillings School of Global Public Health
  - Director, Dissemination Core, Lineberger Comprehensive Cancer Center and UNC CTSA, NC TraCS
  - Director, Child Health Services, Sheps Center for Health Services Research

- Medical University of South Carolina
  - Associate Professor, Department of Public Health Sciences
  - Associate Director, Community Engagement Core, SCTR
  - Team Lead, Dissemination and Implementation Research, Hollings Cancer Center

Extramural Research, 2000 - present

- **As PI or co-PI (14)**
  - Federal (5)
    - NCI (1), CDC (1), CDC/NCI (2), Office of Population Affairs (1)
  - National Association of Attorneys General (1)
  - States (2)
  - Foundations and Philanthropies (6)
    - Robert Wood Johnson Foundation (4)
    - Other (2)
- **As Co-Investigator, Team Lead, etc. (16)**
  - Federal
    - AHRQ (3), CDC (2), NIH/NCRR (2), NCI (4)
  - South Carolina Cancer Alliance (1)
  - Carolina eHealth Alliance (1)
  - American Cancer Society (1)
  - Robert Wood Johnson Foundation (1)
  - State of Florida (1)

Current Extramural Projects

- Title: Implementing Evidence-based Approaches to Reduce Disparities in Colorectal Cancer Screening, PI
- Title: South Carolina Clinical & Translational Research Institute; Associate Director, Community Engagement Program, Core Director
- Title: Behavioral Strategies to Accrue and Retain Diverse Underserved Populations in HIV-Related Malignancy Clinical Trials; Task Lead
- A Dissemination and Technical Assistance Project to Optimize Statewide Access to Key, Patient-Centered Cancer Services (PCCS) Across South Carolina; Co-Investigator.
- CeHA Evaluation for Sustainability; Co-Investigator

Current Pending Extramural Projects

- NIH, NCI, Physical Activity to Reduce Joint Pain during Aromatase Inhibitor Therapy. R21. JIT for May Board 2013. (PI: Leigh Callahan, UNC – Chapel Hill); Co-Investigator
- NIH, National Institute on Minority Health and Health Disparities (NIMHD), West Philadelphia Consortium to Address Disparities – Phase 3. R24. (PI: Jerry Johnson, University of Pennsylvania);Co-Investigator

Upcoming Studies

- **Colorectal Cancer Screening**
  - Collaborate with partners in SC and NC to develop and test models to increase reach of cancer screening programs among individuals without a medical home
    - Collaborate with CISNET effort in South Carolina
- **Guideline Concordant Care and Medicaid Medical Home Enrollment**
  - Replication of secondary data analysis completed in NC to determine whether Medicaid Medical Home enrollment is associated with guideline-concordant surveillance and follow-up care among breast cancer survivors
  - Upcoming publication in Medical Care
- **Medicaid Coverage and Safety Net Programs: Preventing Invasive Cervical Cancers and Lowering Costs**
  - Evaluate the implementation and effectiveness of Medicaid and related safety net programs in southern states to 'avert' cases of invasive cervical cancer among Medicaid enrolled women and treated for pre-cancerous cervical conditions.

Medicaid Coverage & Safety Net Programs: Preventing Invasive Cervical Cancers and Lowering Costs

Cancer Relevance

- Cervical cancer is a highly preventable disease especially with recent development of a human papilloma virus (HPV) vaccine for women under the age of 30.
- For women of all ages, early screening and detection via pap smears and pelvic exams can prevent pre-cancerous conditions from developing into invasive cervical cancer.
- Access to screening services for low-income, uninsured women has been available through the NBCCEDP and treatment, through the BCCPTA.
- If these and related safety net programs maintain needed follow-up screening, they can be a powerful tool for preventing cervical cancer cases among women at high risk.
- As states prepare for screening coverage expansion with ACA, knowledge of how BCCPTA and other programs work to prevent cases of cervical cancer will be critical to making Medicaid a cost effective insurer for low-income women.

Medicaid Coverage & Safety Net Programs: Preventing Invasive Cervical Cancers and Lowering Costs

- **Objective/Hypothesis**: We propose to evaluate the effectiveness of Medicaid and related safety net programs in two southern states to 'avert' cases of invasive cervical cancer among women enrolled and treated for pre-cancerous cervical conditions.

- **Specific Aims:** To 1) follow women over their post-treatment period to evaluate continuity of enrollment and screening; 2) measure the rate of return among those losing Medicaid coverage; 3) evaluate the role of NBCCEDP and family planning or other Medicaid waiver programs in serving these women; and 4) gauge national trends in the costs of invasive cervical cancer and relative trends in states with and without Medicaid expansions.

- **Cancer Relevance:** Cervical cancer is a highly preventable disease especially with recent development of a human papilloma virus (HPV) vaccine for women under the age of 30. For women of all ages, early screening and detection via pap smears and pelvic exams can prevent pre-cancerous conditions from developing into invasive cervical cancer. Access to screening services for low-income, uninsured women has been available through the NBCCEDP and treatment, through the BCCPTA. If these and related safety net programs maintain needed follow-up screening, they can be a powerful tool for preventing cervical cancer cases among women at high. As states prepare for screening coverage expansion with ACA, knowledge of how BCCPTA and other programs work to prevent cases of cervical cancer will be critical to making Medicaid a cost effective insurer for low-income women.

Reducing Obesity as a Cancer Risk

- Three events to build academic – community partnerships
  - Weight of the Nation Seminar Series at MUSC
  - MUSC Obesity Research Summit
    - SCTR led activity
    - October 18-19 in Charleston
  - Obesity Community Summit
    - Center for Community Health Partnerships, Community Advisory Committee led
    - Purpose is to understand and use existing research findings to develop an evidence-based action plan to address obesity in the Tri-County Region
- SC Clinical and Translational Research Institute Pilot Projects
  - Community- Engaged Scholars Program (CESP)
  - Priority given to projects addressing obesity and its determinants

D & I Research Team

- Under development as part of
  - Cancer Prevention and Control Program for the Cancer Center Support Grant, Hollings Cancer Center
  - Service to support non-cancer interests of faculty at MUSC, primarily through SCTR infrastructure
- Intention to have a statewide focus
- First event was the Implementation Science Retreat
- Planning to convene a faculty group to explore research opportunities in D & I Research

Implementing Evidence-based Approaches to Reduce Disparities in Colorectal Cancer Screening
Full Research Project, Carolina Community Network Center, CNP

The Issue

- Substantial disparities exist in colorectal (CRC) incidence and outcomes across racial and ethnic groups
- Structural and policy barriers contribute to disparities in CRC screening
- Patient- and system-level barriers limit the effectiveness and reach of recommended CRC screening approaches
- Patient preferences and insurance status impact participation in CRC screening and use of recommended screening modalities

The Opportunity

- Evidence-based approaches exist to
  - Reduce or eliminate disparities in colorectal cancer screening, morbidity and mortality
    - Using small media
    - Reducing structural barriers
    - Employing reminder systems to prompt client participation in screening
  - Improve participation in colorectal cancer screening
  - Reach providers with information that informs practice decisions and changes policy

Our Intent

- To test the feasibility of
  - *Implementing multi-level evidence-based approaches* to increase CRC screening using evidence from the Community Guide to Preventive Services and the US Preventive Services Task Force
  - *Using principles of community engaged research* to maximize public health impact and inform
    - Intervention development
    - Our understanding of determinants underlying screening disparities
    - Implementation processes among a population of uninsured individuals

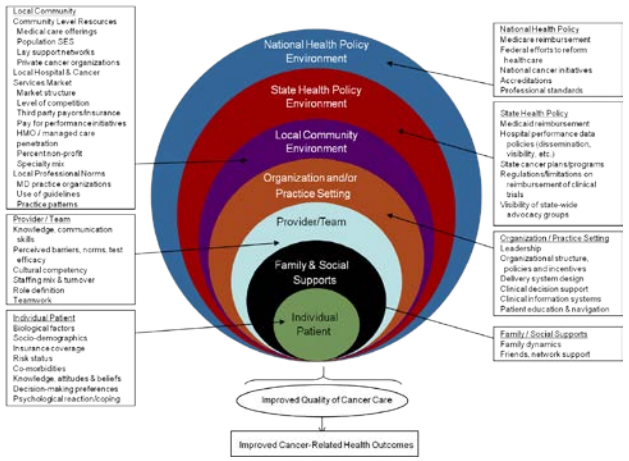
Research Questions

- **Is it feasible to**
  - Implement a multi-level, evidence based system for CRC screening with
    - Clear partner roles and responsibilities
    - Processes to accommodate patient preferences & reduce structural and other barriers
    - Procedures to monitor and report on FIT distribution, collection, referral and follow-up timelines and processes?
  - Create a Safety Net with local endoscopy providers to provide no-cost follow-up colonoscopies for study participants returning a positive FIT?
- **Does receipt of a small media intervention** increase return rates for FIT among uninsured African American individuals receiving care in "free clinics"?

Our intervention needed to address

- Four types of cancer care
  - Screening, detection, diagnosis and treatment
- Transitions or interactions necessary to go from one type of care to the other
- Multilevel contextual influences
  - State Health Policy
  - Local Community Environment
  - Organization and/or Practice Setting
  - Provider Team
  - Individual Patient

Figure 1. Multilevel Influences on the Cancer Care Continuum.



Multilevel Implementation Plan

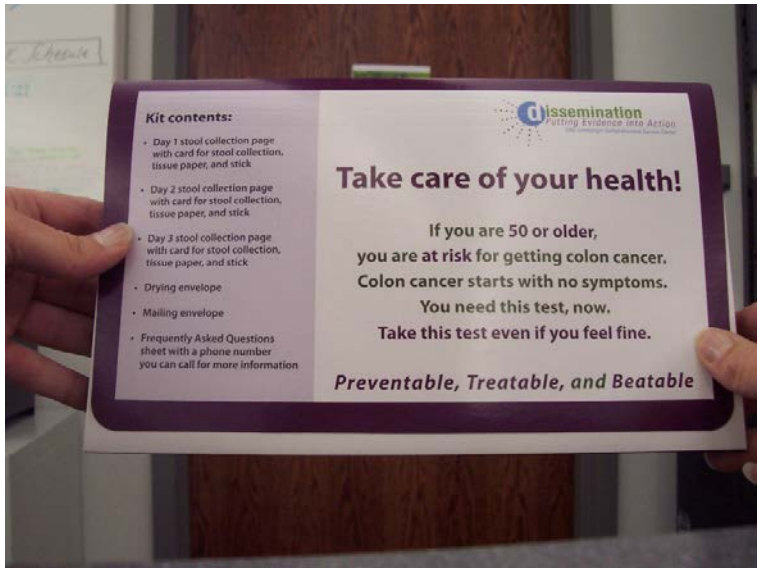
- **Local Community Environment**
  - Create Safety Net for individuals without ability to pay
  - Increase awareness of CRC screening guidelines and options among providers and community members
- **Practice Setting**
  - Create system to address four types of cancer care (screening, detection, diagnosis and treatment) and transitions necessary to go from one type of care to another
  - Implement evidence-based approaches to increase participation in CRC screening
    - Clinician recommendation in support of screening
    - Free FIT and access to follow-on detection, diagnosis and treatment if necessary and regardless of ability to pay
- **Individual Patient**
  - Provide education to increase awareness of need for screening and potential to treat CRC if found early
  - Accommodate expressed patient preference for FIT
  - Re-design FIT packaging to be more user friendly and as a small media intervention

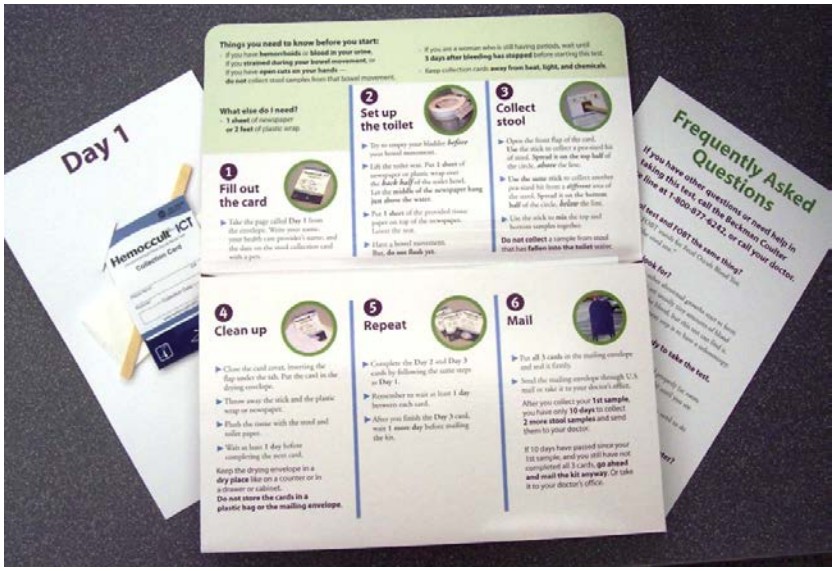
Adaptations to Evidence-based Approaches

- Make CRC Screening User Friendly
  - Use FIT not FOBT → lower false-positive rate & easier prep
  - Distribute FIT at free and low-cost clinics → increase reach
  - Small media intervention → Re-design FIT packaging
  - Provide self-addressed stamped envelope → facilitate return rates
  - Notify all patients of results; positive results require face-to-face or telephone communication → remove barriers

Redesign FIT Packaging

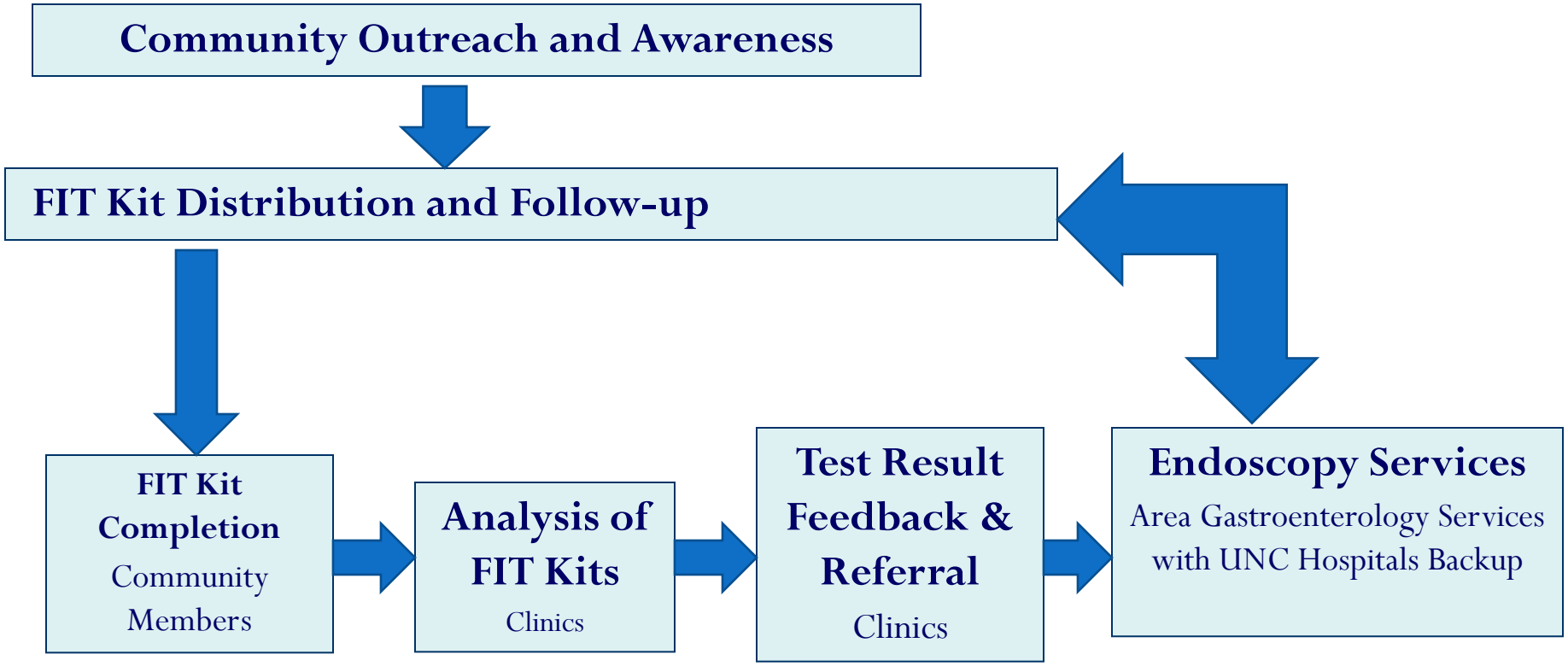
- Actual Kit to put everything "in", including cards, sticks, tissue paper, drying envelope
- Fonts and graphics make instructions easier to read and understand
- Health messaging, FAQ and 1-800 number for help





Results – Community Environment

Created system with clear roles and responsibilities to monitor and report on FIT distribution, collection, referral, diagnostics, treatment, and follow-up timelines and processes



Results – Community Environment

- **Local Health System Market and Referral Structure**
  - Created a Safety Net with local endoscopy providers
    - Three of four project participants returning a positive FIT received no-cost follow-up colonoscopy (offer was extended to 4th person)
  - Unable to quantify endoscopists' commitment to deliver a specific amount of free care

Results – Practice Setting

- Each participating practice setting
  - Developed and implemented their own approach to implementing guideline concordant care
  - Implemented systems to collect data on risk status and reason for risk, demographics, test refusal, receipt and return, positive test results, diagnostic colonoscopies completed
- Practice settings used available data to
  - Monitor timely delivery of intervention and patient progress through the system
  - Provide feedback to all providers in setting and to community

Results – Individual Patient

- Achieved higher than expected FIT return rates overall
  - 67% return rate (pilot project) and 55-57% (preliminary data for trial) compared to 48-50% reported in literature
- African American participants in the pilot returned FIT tests at lower rates (58.2%) than Whites (77.6%)
- Effect of re-designed FIT Kit on return rates did not produce a statistically significant result overall in the pilot
- African American individuals were more likely, though not statistically so, to return the re-designed FIT Kit than non-African American individuals in the pilot
  - 71.7% for re-designed FIT Kit compared to 61.8% for usual FIT Kit

Summary

- Community-academic partnerships can work to adapt, implement and test multi-level, evidence-based approaches to improve cancer screening
- Low income individuals were willing to enroll in both a CRC screening program based on FIT and a randomized control trial to test a small media intervention's impact on FIT return rates
- A multi-level, evidence-based, systems approach
  - Achieved improvement in overall FIT return rates while addressing
  - Community concerns about participating in screening without guaranteed follow-up care regardless of ability to pay
  - Health system and provider concerns about being overwhelmed by increased access of uninsured individuals to CRC screening, and particularly colonoscopy
- Partnerships developed in this project laid the foundation for future research partnerships with academic institutions, health systems, primary care practices, and community members
- Preliminary data from the pilot study were used to obtain an RO1 now in the field and data from both studies will inform future modeling and research

Thank You

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