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14. ABSTRACT SEVIEW Phase II, its Co-investigators and Administrative Core have completed Year 4 of the additional community-based research and service outreach programs. A 12-month no cost extension (NCE) has been approved for FY16 (September 1, 2015 – August 31, 2016). The purpose of SEVIEW is to discover and deliver innovative health care and community capacity building solutions for underserved populations. An additional targeted outcome is to reduce the rejection rate as well as improve the enlistment opportunities and tenure of active duty military personnel. The Administrative Core delivered operations, infrastructure access, strategic consultation, and quality process support to ensure proper directions, logistics, financial transactions, regulatory compliance, collaborative exchange, community-capacity building, and alignments with the goals of programmatic synergies and streamlining administrative processes and to foster strategic partnerships and programs to address the burden of health disparities. An evaluation planning process, inclusive of an evaluation logic model to identify SEVIEW success objectives, continues to be developed and will be completed during the FY16 NCE. SEVIEW programmatic activities, infrastructure, collaborative exchange and evaluation priorities/outcome measures will drive the Phase II NCE and serve as foundational for SEVIEW achievement of its stated aims.					
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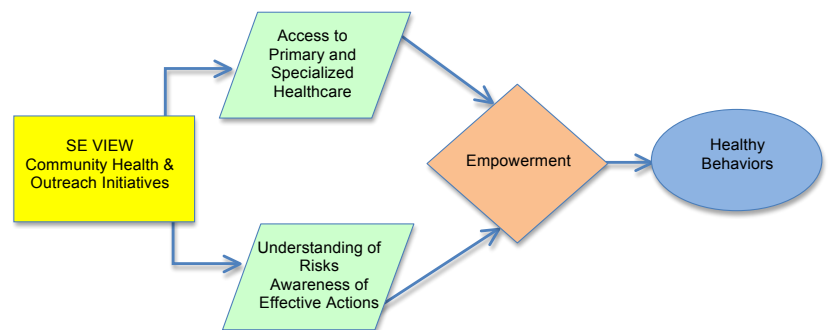
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Introduction to SEVIEW

South Carolina and other Southeastern states share a disproportionate burden of chronic diseases, including diabetes, hypertension, various cancers, metabolic syndrome and periodontal disease, which limit opportunities for individuals to enter military service. The rural nature of the region compounds issues of healthcare access and delivery. Racial, ethnic and socioeconomic disparities amplify incidence, prevalence and complications associated with chronic illness. With escalating healthcare costs impacting federal, state and employer budgets, the economic consequences of health disparities represent a key driver for effecting change, improving quality of care for many Americans and ensuring a military-ready population. The Medical University of South Carolina (MUSC) is addressing these burdens through the **Southeastern Virtual Institute for Health Equity and Wellness (SEVIEW)**. The vision of SE VIEW is to develop a nationally recognized, multidisciplinary, inter-professional team of researchers, educators, outreach professionals and laypersons to reduce health disparities. Sabra C. Slaughter, PhD, serves as the Principal Investigator (PI) of SE VIEW and Director of the SE VIEW Administrative Core (SEVAC). Dr. Slaughter and SEVAC provide comprehensive program planning, management, coordination, integration and evaluation. Overall, SEVIEW seeks to:

- Increase awareness of the underlying causes of chronic diseases in the region.
- Develop novel methods to engage communities in the prevention and treatment of chronic diseases.
- Develop community-based services and research initiatives focused on chronic diseases and socioeconomic factors.
- Develop a range of youth-based, active and interactive, electronic modalities to increase the prevention, detection and treatment of chronic diseases.

Figure 1. Conceptual Flow of SEVIEW's Plan to Reduce Health Disparities



SEVIEW operates as a model of cooperation to advance collaborative community-based research and service outreach initiatives designed to improve health conditions that preclude enlistment or reduce the functional tenure of military personnel. The flow concept is illustrated in **Fig. 1**.

SEVIEW Goals

- **GOAL A** - Integrate MUSC's model initiatives focused on health disparities into SEVIEW by identifying programmatic synergies and streamlining administrative processes.
 - Objective A1: Establish a single Administrative and Coordinating Core to oversee project logistics, financial transactions, regulatory compliance and bi-directional communications.
 - Objective A2: Establish an Evaluation & Tracking Core to monitor SE VIEW activities and provide timely feedback to the Principal Investigator, Initiative Directors and TATRC to improve program quality.
- **GOAL B** - Develop strategic partnerships and programs to address the burden of health disparities.
 - Objective B1: Establish an Educational Program to reduce health disparities.
 - Objective B2: Establish a Preventive Medicine, Health and Wellness Program to reduce health disparities.
 - Objective B3: Establish a Community Partnerships and Outreach Program to reduce health disparities.

Body

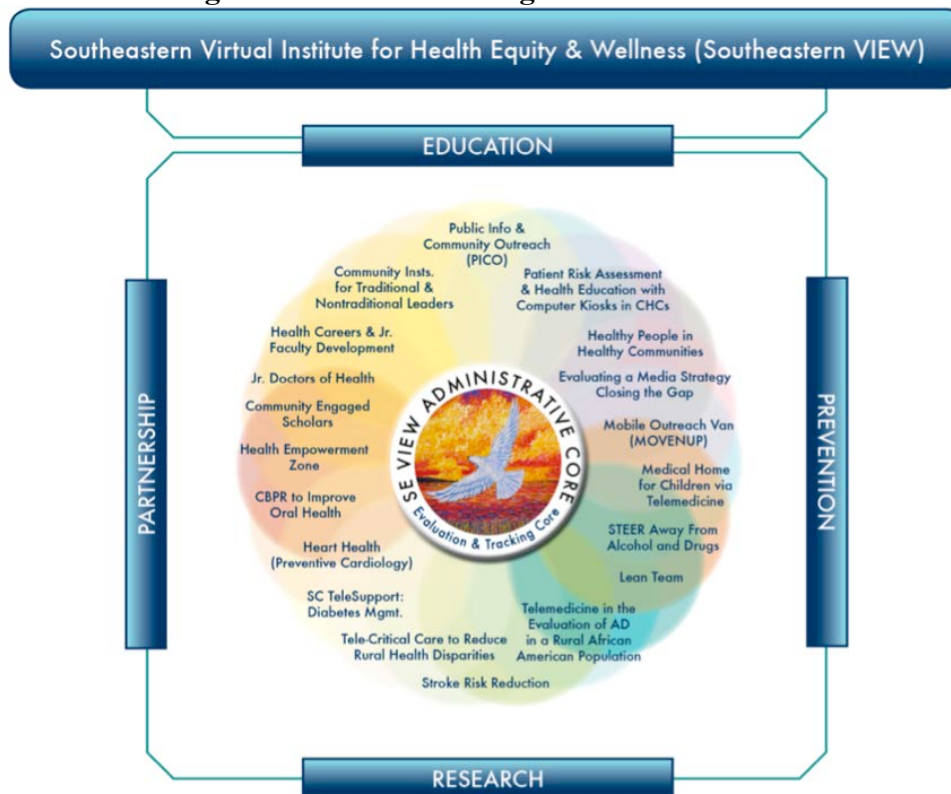
SEVIEW Phase II, its Co-investigators and Administrative Core have completed Year 4 of the 6 additional community-based research and service outreach programs. The purpose of SEVIEW is to discover and deliver innovative health care and community capacity building solutions for underserved populations. An additional targeted outcome is to reduce the rejection rate as well as improve the enlistment opportunities and tenure of active duty military personnel.

The Administrative Core delivered operations, infrastructure access, strategic consultation, and quality process support to ensure proper directions, logistics, financial transactions, regulatory compliance, collaborative exchange, community-capacity building, and alignments with the goals of programmatic synergies and streamlining administrative processes and to foster strategic partnerships and programs to address the burden of health disparities.

An evaluation planning process, inclusive of an evaluation logic model to identify SEVIEW success objectives, continues to be developed and will be completed during the Phase II no cost extension. SEVIEW programmatic activities, infrastructure, collaborative exchange and evaluation priorities/outcome measures will drive the Phase II NCE and serve as foundational for SE VIEW achievement of its stated aims.

SEVIEW's community-based research and service initiatives are aligned under three program categories addressing **Education (B1)**, **Preventive Medicine, Health and Wellness (B2)**, and **Community Partnerships and Outreach (B3)**. **Fig. 2** illustrates SEVIEW's integrative framework.

Figure 2. SEVIEW's Integrative Framework



A. Goal A – integrate MUSC’s model initiatives focused on health disparities into SEVIEW by identifying programmatic synergies and streamlining administrative processes.

A1. Objective A1 – establish a single Administrative and Coordinating Core to oversee project logistics, financial transactions, regulatory compliance and bi-directional communications.

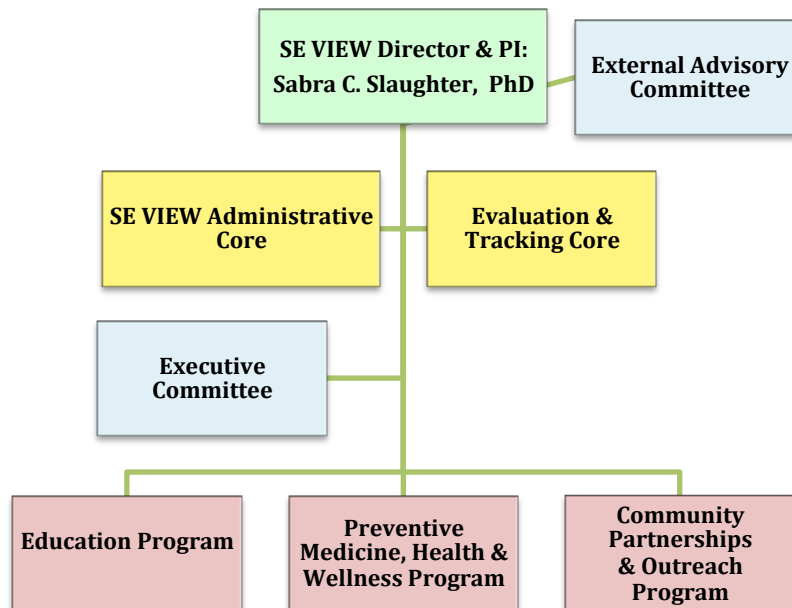
Effective leadership and management ensure that SEVIEW initiatives are fully realized. SE VIEW has strong support at the highest levels at MUSC. The Principal Investigator, Project Manager, Business Manager and Initiative Directors are highly capable individuals with the commitment, experience and authority to conduct SEVIEW.

A1a. Southeastern VIEW Administrative Core (SEVAC) Team:

- Jennifer Friday, PhD (Evaluation Consultant)
- Thomas Gordon, PhD (Strategic Planning Consultant)
- Sabra C. Slaughter, PhD (SEVIEW Principal Investigator)
- Tracey W. Smith, MHA (Program Manager)
- Garcia E. Williams (Marketing Consultant)
- Bart Yancey, MPA (Business Manager)

Fig. 3 shows the SEVIEW Organizational Chart. Key elements include a well-defined academic home, clear leadership, synergistic programs and committee structures. Individual initiatives are aligned under the three program headings. SEVAC ensures that lines of communication, agendas, actions and decisions are coordinated and targeted to the project goals and objectives. SEVAC staff coordinate activities across the region, convene committee and town hall meetings, host retreats, manage program logistics, and ensure overall operational efficiency.

Figure 3. SEVIEW Organizational Chart



A1b. Director and Principal Investigator

Sabra Slaughter, PhD, SEVIEW Principal Investigator, serves as Chief of Staff in the Office of the President of MUSC. He previously directed the SC Area Health Education Consortium (AHEC). Dr. Slaughter earned a PhD in psychology from the University of Michigan. Dr. Slaughter has extensive administrative experience in health professional education, outreach and workforce diversity. He has been PI of 9 major extramural projects

related to healthcare and health disparities. As Chief of Staff, Dr. Slaughter works closely with the MUSC Board of Trustees, President, Vice Presidents, Deans and Faculty. He has the authority to make institutional decisions and commitments in developing SE VIEW policies and procedures, and is authorized to manage the adoption and implementation of best practices.

A1c. Strategic Planning Consultant

SEVIEW has engaged TAGA Consulting, a strategic planning and consulting company, to help design, facilitate and support strategic planning and ongoing quality improvement processes. TAGA's founder and principal, Thomas A. Gordon, PhD, is a licensed psychologist with degrees from Harvard University and the University of Michigan. Dr. Gordon has provided strategic consulting services to public and private institutions including Aetna Healthcare, AT&T, Johnson & Johnson, Merck Pharmaceuticals, Siemens, US Army, US Dept. of Labor and US Postal Service. Responsibilities include collaborating on the design of the planning process, supporting the flow of information between SEVIEW initiative directors and key stakeholders to identify synergies and minimize barriers; developing processes to ensure effective communications, cultural sensitivity and shared focus on SEVIEW activities; and developing and guiding change management activities to support commitment to the SEVIEW plan.

A1d. Committee Structure

Internal and external committees facilitate coordination and accountability. Committee members and stakeholders will receive annual progress reports in addition to interim (quarterly and ad hoc) reports, plans and assessment materials.

Executive Committee (EC). The Executive Committee (EC), composed of the Initiative Directors, is SE VIEW's internal committee for communication, collaboration and management. The PI serves as chair, the Program Manager serves as Executive Secretary, and the Strategic Planning Consultant and Evaluation & Tracking Director are standing advisors. The EC holds bi-monthly 3.5-hr meetings. Each meeting includes 2-3 scheduled 'stand-up' 15-min program reports on recent progress, challenges, alternatives, results and future directions as well as 3-min 'roundtable' updates from other program leaders. The EC's role is to ensure integration among initiatives, advise on issues common to all SEVIEW initiatives such as resource utilization, and see that SEVIEW milestones are met in a timely manner. The members are responsible for evaluation and tracking with direct input from the Evaluation & Tracking Director.

External Advisory Committee (EAC). The SEVIEW External Advisory Committee (EAC) is made up of one nationally recognized expert in health disparities (W. Timothy Garvey, MD), three civic/community leaders in SC (Vince Ford, Allen Parrott, D.Min, and Rita Scott), and one TATRC member (Wilbur Malloy, MA, MLS – Ex Officio Member). The purpose of the EAC is to review SEVIEW's impact, integration and productivity based on measurable progress toward goals and to advise SEVIEW leadership concerning scientific direction and results. They will review the performance of the PI and make recommendations for enhancing impact and effectiveness. EAC Community members, in tandem with SEVIEW Initiative Directors, will help create a plan for community education, outreach and advocacy that is responsive to the diversity, needs and interests of the communities served by SEVIEW. The EAC met during the October 2012 SEVIEW Annual Reception and Retreat that took place on October 17-18, 2012. The following lists the SEVIEW EAC member biographies:



Vince Ford

Mr. Vince Ford is Senior Vice President of Community Health at Palmetto Health in Columbia, SC. Mr. Ford is responsible for Palmetto Health's \$17 million title to the community for health issues. Mr. Ford had been working under the auspices of Richland Memorial Hospital since April 21, 1997. Prior to that, he was the Executive Director of the Boys and Girls Clubs of the Midlands. Mr. Ford is active in the community and has served as Director of the Sick Cell Foundation and as Chairman of Richland School District One School Board. The South

Carolina School Boards Association named him Outstanding School Board Member for the Sixth Congressional District and All-State School Board Member. Mr. Ford also serves on the Benedict College Board and the University of South Carolina African American Community Advisory Board. Mr. Ford earned his Bachelor of Science in Sociology from Benedict College and Master of Science in Individual and Family Development from S.C. State University.



W. Timothy Garvey, MD

Dr. W. Timothy Garvey is Professor of Medicine and Chair of the Department of Nutrition Sciences at the University of Alabama at Birmingham. He obtained his MD degree, cum laude, from St. Louis University in 1978, and completed residency training in Internal Medicine at Barnes Hospital, Washington University, in 1981. He then was a clinical fellow in Endocrinology and Metabolism at the University of Colorado Health Sciences Center and University of California, San Diego School of Medicine. He subsequently held faculty posts at the University of California, School of Medicine (Assistant Professor), Indiana University School of Medicine (Associate and full Professor), and from 1994 to 2003 was the Director of the Division of Endocrinology, Diabetes, and Medical Genetics at the Medical University of South Carolina. Dr. Garvey moved to UAB on June 1, 2004.

Dr. Garvey has achieved international recognition for his research in the metabolic, molecular, and genetic pathogenesis of insulin resistance, Type 2 Diabetes, and obesity. His studies have involved the cellular and molecular biology of cell and animal models, metabolic investigations of human subjects on metabolic research wards, and the genetic basis of diseases in Gullah-speaking African Americans, Pima Indians, and national cohorts of diabetes patients. Dr. Garvey has directed an independent laboratory since 1987 supported by the National Institutes of Health (NIDDK, NHLBI), the Department of Veterans Affairs, the AHA, JDFI, the ADA, and other agencies. Dr. Garvey also has a track record of community based research and outreach in the context of two initiatives, Project Sugar (a genetics study among Gullah-speaking African Americans) and MUSC/HBCU Partners in Wellness (a program in community health at 6 historically black colleges and universities in SC intended to challenge minority students towards careers in the health professions).

He has provided service as a member of national research review committees for the Juvenile Diabetes Research Foundation, the American Diabetes Association, the VA Merit Review Program, and the National Institutes of Health. He was a standing member of the Metabolism Study Section at NIH from 1998-2002, and has chaired several ad hoc NIH study sections. Dr. Garvey currently serves on the editorial boards of Diabetes, and has previously served in this capacity for the Journal of Clinical Endocrinology and Metabolism and Diabetes Reviews. He is a member of the American Society for Clinical Investigation, the Association of American Physicians, the Endocrine Society, and the American Diabetes Association, and the North American Association for the Study of Obesity.



Allen W. Parrott, D.Min

Dr. Allen W. Parrott is the Presiding Elder of the Kingstree District in the Seventh Episcopal District of the African Methodist Episcopal Church. He has been involved in health ministry and the role of the church in addressing health needs of the people. Dr. Parrott has also developed workshops and has written several publications focusing on lay ministry and the class leader in Methodism. Among them are: 1) Class Leaders Training Workshop, a six-hour intensive training that focuses on the biblical, historical and theological understanding of the class leader ministry, 2) Empowering The Laity for Effective Ministry and Service: A Message And A Ministry, and 3) Empowering Class Leaders for Effective Ministry. Dr. Parrott is a 1971 graduate of Mayo High School, Darlington, South Carolina. He graduated from Allen University (Columbia, SC) in 1975 with a Bachelor of Arts degree. He earned a Masters of

Divinity degree from Turner Theological Seminary in Atlanta, GA (1979), and a Doctor of Ministry degree from Erskine Theological Seminary (Due West, SC). Dr. Parrott is married to Barbara Ann Canty Parrott of Sumter, South Carolina. They are the proud parents of three children, Kevin Eugene (Erica), Korey Allen (Autumn), Kimberly Rochelle and two grandchildren, Kendall and Jayden.



Rita L. Scott

Mrs. Rita L. Scott is the Vice President and General Manager of WCSC-TV5. This station is the CBS affiliate in Charleston and the number one station in ratings and revenue. WCSC is also the number one web/mobile platform in the Lowcountry. In 2010, the station launched a second digital channel “Live 5 Plus” and in September 2011 launched “Bounce” the first over the air network targeting the African American community on its third digital channel.

Mrs. Scott is active in the community, serving on numerous Boards to include Spoleto USA, International African American Museum (Vice Chair), Trident United Way, Regional CEO Council, and is also a member of the Nielsen Alliance. In 1999, Mayor Riley and the City of Charleston honored her as the first African American woman to become General Manager of an affiliate television station, naming October 21 in her honor.

Mrs. Scott was born in High Point, North Carolina. Her career in the broadcasting field began in sales with WGHP Television, Greensboro/High Point, North Carolina. She has held numerous positions in television sales including positions with WJW in Cleveland, Ohio and Cap Cities/ABC National Sales in Chicago, Illinois before eventually moving back to the Carolinas as Local & National Sales Manager at WBTV in Charlotte. Mrs. Scott attended High Point College and Appalachian State University with studies in Speech Communications with a Broadcast Concentration and a Business Minor.



Wilbur W. Malloy, MA, MLS (ASCP) SBB

Mr. Malloy is a retired Army Officer (Lieutenant Colonel, Medical Service Corp) and during his 23 years of military service directed numerous clinical laboratories and blood banking facilities. He has received numerous awards and accolades to include the Legion of Merit. Wilbur is a disabled Vietnam-era veteran and served in Operation Desert Shield/Desert Storm in Saudi Arabia. During his last military assignment, he served as the Laboratory Manager for the Department of Pathology and Area Laboratory Services at the Walter Reed Army Medical Center, Washington DC. Currently, Wilbur is the Portfolio Director for Blood Products and Blood Safety and serves as a Program Director for the Telemedicine and Advanced Technology Research Center (TATRC) at the United States Army Medical Research and Materiel Command (MRMC), Fort Detrick, MD. TATRC

manages approximately 500 million dollars in medical research for the Department of Defense and Wilbur has utilized his 30 plus years of experience in healthcare and military medicine to identify, explore and demonstrate key technologies and biomedical principles required to overcome technology barriers that are both medically and militarily unique. Wilbur has contracting officer representative responsibilities for projects in the areas of computational biology, bio monitoring, blood products and safety, regenerative medicine, nano-medicine and biomaterials, medical logistics, infectious disease, wellness and training, and genomics and proteomics. Mr. Malloy has completed graduate studies at the University of Maryland and is a graduate of Pepperdine University (Malibu, CA) with a Master’s Degree in Healthcare/Research Management and North Carolina A&T State University (Greensboro, NC) with a Bachelor of Science degree in Professional Biology. He is a

registered Medical Laboratory Scientist/Medical Technologist and Specialist in Blood Banking and Immunohematology.

A2. Objective A2 – Establish an Evaluation & Tracking Core to monitor SEVIEW activities and provide timely feedback to the Principal Investigator, Initiative Directors and TATRC to improve program quality.

An evaluation planning process, inclusive of an evaluation logic model to identify SE VIEW success objectives, continues to be developed and will be completed during the FY15 NCE. SEVAC continues to engaged Jennifer C. Friday, PhD, of The Friday Consulting Group, to provide expertise and guidance in designing and implementing the Evaluation Plan. Dr. Friday is a behavioral scientist with >25 years' experience in researching and evaluating health and education programs. She received her BS in biology from Millikin University, and master's and doctoral degrees in psychology from the University of Tennessee, Knoxville. For 13 years she worked at the CDC in programs dealing with HIV/AIDS and violence prevention. Dr. Friday's policy development skills were honed at the Joint Center for Political and Economic Studies in Washington, DC. She has facilitated workshops and training programs, devise strategic plans, and guided program planning and evaluation for government agencies, community-based organizations, and for-profit and non-profit entities, including Community Health Outreach Works, Inc., Alliance for Christian Media, Oakhurst Community Health Center, and the Rosalynn Carter Institute for Human Development.

The evaluation consultant will: (a) develop the logic model; (b) identify key success indicators and measures for each initiative; (c) develop the evaluation plan and framework for the overall SE VIEW project; (d) keep performance indicators and data collection focused on measures of success; (e) demonstrate the value of increased effectiveness and efficiency; (f) utilize quality improvement methods to achieve evaluation aims; and (g) work with participants on how to utilize evaluation data. The SEVIEW Evaluation Plan includes process, outcome and impact evaluation. The impact evaluation will be designed now as part of the Evaluation Plan, and implemented at a future date when SE VIEW is completed and/or integrated into the community.

Process Evaluation. The process evaluation will document and analyze implementation of the project. This includes identification and integration of the individual initiatives into the overall SEVIEW project. Data collection methods will include document reviews such as quarterly reports, minutes from bi-monthly project meetings, key informant interviews and observations. Data and information from the process evaluation component will be used to provide feedback to improve services on an ongoing basis.

Outcome Evaluation. The outcome evaluation of the project documents whether the project goals and objectives were met. The outcome evaluation will address the degree to which the project was successful in achieving measurable, positive results in the key outcome goals of the project. Specifically, the outcome evaluation is designed to document the project's degree of success in conducting the outcome evaluation. Both quantitative and qualitative data will be collected and analyzed. The outcomes for the evaluation are divided into short-, medium-, and long-term objectives. The short-term objectives focus on increasing the knowledge base of the participants, the medium term objectives focus more on behavior change while the long-term objectives are focused on the overall outcomes for the program.

Impact Evaluation. The impact evaluation component will focus on the extent to which the SEVIEW activities made a difference in the target community. This will include changes in community health status, improved access to care, and general improvement in health delivery systems. The impact evaluation will be designed as part of the evaluation plan, but it is not expected that this will be a part of this current project. Impact evaluations will be implemented at a future date once the project is completed and has had some time to become integrated into the community.

Data Plan

The evaluation will utilize both qualitative and quantitative data. Qualitative data will include document reviews, individual interviews, focus groups and surveys. Quantitative data will be collected through implementation activities, participation rates, self-report questionnaires, curriculum assessments, and other program activities.

Data will be gathered utilizing a variety of methods and modalities. Utilizing multiple data sources is critical because of the variety of activities that each of the projects will be engaging in. This will help to facilitate gathering a variety of information that will be helpful in understanding how the program is being implemented and the progress towards achieving the program outcomes.

Baseline data will be collected by each of the SEVIEW projects at the outset. These baseline data will be summarize for use by SEVIEW as the starting point for the overall evaluation. Process evaluation data will be ongoing and additional data to support the process evaluation will be collect quarterly or as needed for the established reporting system. Outcome data will be collected once a year during the project period.

In addition to the data collected by the individual projects, the overall SEVIEW project will also collect data to supplement the information received. Data collection methods will include the following:

- **Case Studies**

Case studies of SEVIEW projects may be conducted to take a thorough look at the steps needed to develop, implement, and evaluate the project. This would provide an in-depth description about what is needed for effective service delivery and achievement of outcomes.

- **Document Reviews**

Analysis of documents that include but are not limited to program records, research reports, census data, health records, as well as newspaper and magazine articles. Paper and computerized archival data will be collected and analyzed, attendance at all program functions will be recorded and monitored, and site visits by members of the evaluation team will be used to provide feedback on the fidelity of implementation

- **Focus Groups**

Focus Groups with subsets of the communities beings served, participants, partners and others will be conducted to gather in-depth information related to the activities of SEVIEW.

- **Interviews**

Data will be collected with in-person or telephone interviews and with targeted focus groups. This will provide qualitative data that will be incorporated into both the process and outcome components of the evaluation.

- **Medical Assessments and Tests**

An assortment of medical assessments and diagnostic tests will be administered by the SEVIEW projects. These include, but are not limited to blood pressure readings, hemoglobin A1C, cultures.

- **Observations**

Observe situations, behaviors and activities in a formalized and systematic way, usually using observational checklists and trained observers.

- **Surveys and Written Data Collection Instruments**

Data will be collected through the use surveys that will be collected in a variety of ways including in-person, online, phone and mail. These surveys may be developed for the individual programs or may be existing standardize measures. We will also utilize program logs and other data collection methods use as part of the regular program activities. In addition, evaluation staff will participate in project meetings and other program activities where their presence will not interfere with program delivery or data collection. Paper and computerized archival data will be collected and analyzed, attendance at all program functions will be recorded and monitored, and site visits the evaluation team will be used to provide feedback on the fidelity of implementation.

Data Analysis

The mixed model nature of the data to be collected will require a variety of data analysis methods. Data will be analyzed using standard statistical packages and will include descriptive and inferential statistics. The data analysis will be developed as the final program plans are approved and implemented.

Institutional Review Board Submission Plan

Phase I projects needing IRB approvals were submitted to local IRB. Once they received approval, they were then submitted to the Human Subject Protection Office at the US Army Medical Research and Material Command in Ft. Detrick, MD for its approval. The process varied in length for the different projects. As part of the process evaluation, a survey is being developed to learn more about the approval process and to determine ways to streamline the process. This information will be used to help guide the Phase II projects.

Evaluation Logic Model

The following logic model provides the framework for the SE-VIEW Evaluation Plan. The vision and goals of SEVIEW have been established. In the model, we identify each of the projects and link them to the specific goals. Two separate evaluation plans have been developed for Phase I and Phase II. It is anticipated that once all the projects have received IRB approvals and are in their implementation phase that the Evaluation Plans will be combined.

The inputs necessary for SEVIEW to be successful have been identified. There are several SEVIEW activities that are listed. They include instructional and research activities, outreach and service activities, health care delivery and prevention services, as well as policy activities. The communities that are targeted are the I-95 Corridor and the Coastal Carolina communities, with some specific focuses on Johns Island, the Sea Island Gullah population and Williamsburg County. These communities represent all the racial and ethnic populations and socio-demographic groups that are affected by health disparities.

The broad range of outcomes has been identified. These will become more specific and targeted as the individual projects begin implementation of their activities. The outcomes that directly relate to SEVIEW are incorporated into the overall evaluation plan. Similarly, the data sources that have been identified are drawn from the individual projects.

The general evaluation questions are stated. As the projects get off the ground and begin the full implementation, it is anticipated that there would be additional evaluation questions that will need to be asked. Additional indicators will also be identified as we progress through the implementation of the project, and as the program activities become better defined. **Table 1** illustrates the SEVIEW II Evaluation Logic Model.

Table 1. SEVIEW Evaluation Logic Model (Phase II)

SEVIEW VISION

To develop a nationally recognized multidisciplinary, inter-professional team of researchers, educators, outreach professionals and laypersons to eliminate health disparities.

SEVIEW GOALS & OBJECTIVES

Goal A: Integrate MUSC's model initiatives focused on health disparities into the SEVIEW by identifying programmatic synergies and streamlining administrative processes.

Objectives:

A1: Establish a single Administrative and Coordinating Core to oversee project logistics, financial transactions, regulatory compliance, and bi-directional communications.

A2: Establish an Evaluation and Tracking Core to monitor SEVIEW activities and provide timely feedback to the Principal Investigator, Initiative Directors and TATRC to improve program quality.

Goal B: Develop strategic partnerships and programs to address the burden of health disparities.

Objectives:

B1: Establish an Educational Program to reduce health disparities: Program initiatives will focus on increasing awareness of health issues in communities that bear a disproportionate burden of chronic diseases, and address educational deficits related to chronic diseases. SEVIEW Projects linked to this goal:

- MUSC Public Information and Community Outreach Initiative (PICO)
- Community Institutes for Traditional and Nontraditional Leaders
- Our Health Series: Made-For-TV Dialogues

B2: Establish a Preventive Medicine, Health and Wellness Program to reduce health disparities: Program initiatives will expand proven strategies and/or develop novel methods to engage communities, and remove barriers to effective healthcare. SEVIEW Projects linked to this goal:

- Providing a Medical Home for Underserved Children in Williamsburg County via Telemedicine

B3: Establish a Community Partnerships and Outreach Program to reduce health disparities: These activities will provide the foundation for integrated efforts to address chronic disease burden in populations that could provide talented recruits for military service, and disseminate evidence-based research findings. SEVIEW Projects linked to this goal:

- STEER Away From Alcohol and Drugs
- Evaluating a Media Strategy – Closing the Gap, Inc.
- CBPR to Improve Oral Health
- Junior Doctors of Health
- Patient Risk Assessment and Health Education with Computer Kiosks in Community Health Centers
- Healthy People in Healthy Communities

INPUTS

Churches/Faith-Based Organizations, Clinics/Health Centers, Emergency Dept., Federal Clinics, Funding Support, Government Agencies, Grocery Stores, Healthcare System, Hospitals Materials (Training Tools, Evaluation), MUSC, Health Clubs, PTO, Restaurants, Schools, SEVIEW Consultants, SEVIEW Projects, staff, tools and worksites

OUTPUTS**Activity**

Community Engagement, Consultation, Cultural Exchange, Healthcare, Health Promotion, Health Career Academy, Instructional, Mentoring, Networking, Outreach, Policy, Prevention, Research, Screening, Service, Training, Web and Internet, Wellness Council

Target Population

Communities, I-95 Corridor, Coastal Carolina, Groups: African Americans, Community Leaders, Elderly, Obese Children, Rural Population, School Aged Children, Teenagers

OUTCOMES**Short Term**

Increase knowledge base; increase skills and awareness

Medium Term

Utilization of knowledge base

Long Term

Increase positive behaviors; decrease in negative behaviors

DATA**Data Sources**

Activity Logs, Attendance Logs, Behavioral Risk Factor Surveillance System, Census Data, Clinic Data, Community Members, Community Partners, Comorbidity (DRGs & ICD-9), Council of Governments, De-Identified Ref. Lists, Follow-Up Records, Federally Qualified Health Centers Patient Electronic Care Sys. (FQHC - PECS), Partners, Hospital Discharge Data, Institutional Data, Land Developers, Medicare/Medicaid Data, Meeting Agendas, Meeting Minutes, MUSC Faculty, MUSC Students, Neighborhood Assoc., Office Of Vital Records Participant Logs, Program Data, Program Faculty, Program Participants, Public Access Info, Registration Forms, SC Dept. of Health, SC Off. Of Res. & Statistics, School Attendance Zones, School Data, Secondary Sources, Standardized Media Contact Form, Store Audit Survey, Structured Activity Form, Telephone Logs, Transportation Authority, Web “Hits”, Working Group Reports, Youth Risk Behavioral Surveillance System

Data Collection Methods

Case Studies, CDC Change Questions, Clinical Screenings, Current Resource List, Focus Groups, Interviews, Key Informant Interviews, Medical Assessments/Tests, Observation, Organizational Assessments, School Cafeteria Audits, Screening Tools, Service Delivery, Surveys –General, Tests/Assessments,

			Walkability Survey, Windshield Survey Data Collection Measures Clinical Dementia Rating Scale, Clock Drawing Test, Continuing Educ. Credits, Depression (PHQ-9), Diabetes Fatalism Scale, Diabetes Knowledge Questionnaire, Diagnostic Evaluations, Essential Medical Tests/Screens (Hemoglobin A1C; Blood Pressure; Cultures; Body Mass Index; Lipids Profile), Geriatric Depression Scale, Health Literacy, Logical Memory IIA, Medical Comorbidity (Charlson Index), Mini Mental State Exam, Modified Hachinski Ischemia Scale, Morisky Medication, Adherence Scale Patient Demographics Survey, Perceived Diabetes Self Efficacy Scale, Quality of Life Measures, Resource Use, Social Support, Standard Clinical Assessment, Summary of Diabetes, Self-Care Activities Scale, Supportive Care Measures
EVALUATION QUESTIONS			
Process Evaluation Questions <u>Inputs</u> How many resources (human and financial) are needed to achieve goals? Who will implement the program? Who provided program services? What are the characteristics of coalitions, collaborations, partnerships, etc.? Are the resources adequate? <u>Activities</u> How many programs/sessions/activities delivered? What services/activities were provided? Was the curriculum delivered as intended? Are implementation objectives being attained? What was the quality of the delivery (consistency and fidelity)? <u>Target Population</u> How many participants are in the program? How many participants are in each session/activity? What is the participant's level of satisfaction with the program/activity? What were the facilitators to implementation?		Outcome Evaluation Questions <u>Increase Knowledge</u> Did knowledge increase? <u>Change Behavior</u> Did we have behavioral changes? <u>Achieve Outcomes</u> Was programmatic integration achieved? Were strategic partnerships established? Are outcome objectives being achieved? Did the projects/interventions improve access to services? Did the projects/interventions improve the quality of services provided?	Impact Evaluation Questions Which aspect of the program contributed more to the outcomes? Are there unintended outcomes? Are participants satisfied with program implementation and outcomes? What changes have participants made as a result of the program? Who does the program affect directly and indirectly? Who benefits from this program and how? Are the program's results worth the resources?
INDICATORS Levels of participation, levels of service and activity, levels of support, establishment of advisory groups, listing of community programs and services, evidence of partnership activities, achievement of objectives, changes in knowledge/behavior, changes in vending machine choices, changes in physical activity, improved nutrition, increase in DASH-type meals, research productivity, reduction in health indicators, increased access to healthcare services			

B. Goal B - Develop strategic partnerships and initiatives to address the burden of health disparities.

MUSC has substantial strengths serving the goals of education, prevention, community partnership and research to eliminate health disparities. These include a dynamic and diverse faculty, outstanding facilities, a strong and diverse student body, and many existing community ties. Building on these strengths, SEVIEW has identified and integrated robust programs focused on the elimination of health disparities to ensure a military ready workforce, retention of active duty personnel, and continued health in VA health services.

As shown in **Fig 2.**, SEVIEW's community-based research and service initiatives are aligned under three program categories addressing **Education (B1)**, **Preventive Medicine, Health and Wellness (B2)**, and **Community Partnerships and Outreach (B3)**. The alignment of initiatives with these objectives is based on primary thrust and specific goals of each project. However, all the programs use resources and tools that integrate educational, disease prevention/health promotion, and community engagement principles.

To illustrate SEVIEW's synergies, thematic interactions and potential for administrative efficiencies, **Tables 2-4** chart all the SEVIEW initiatives as programmatic clusters with respect to three integrative concepts: **Stages of Life, Community Engagement and Empowerment Strategies, and Disease Targets.**

Table 2. SEVIEW's Comprehensive Plan to Reduce Health Disparities across the Lifespan

italics = funded in SE VIEW Phase I

boldface = new/funded in Phase II

Objectives/Approaches	Stages of Life		
	Children	Adolescents	Adults
B1 EDUCATIONAL PROGRAMS TO REDUCE HEALTH DISPARITIES			
B1a Public Information and Community Outreach (PICO)			
<i>B1b Community Institutes for Traditional and Nontraditional Leaders</i>			
<i>B1c Health Careers Academy & Junior Faculty Development</i>			
B1d Junior Doctors of Health			
B2 PREVENTIVE MEDICINE, HEALTH AND WELLNESS PROGRAMS			
<i>B2a Stroke Risk Reduction Initiative</i>			
<i>B2b Heart Health Initiative (Preventive Cardiology Research)</i>			
B2c SC TeleSupport (Diabetes Management Initiative)			
<i>B2d Tele-Critical Care to Reduce Rural Health Disparities</i>			
B2f STEER Away from Alcohol and Drugs			
B2g Providing a Medical Home for Underserved Children via Telemedicine			
B3. COMMUNITY PARTNERSHIPS AND OUTREACH PROGRAMS			
<i>B3a Lean Team Initiative</i>			
<i>B3b Community Engaged Scholars – Collaborations in CBPR</i>			
<i>B3c Mobile Outreach Van (MOVENUP) Initiative</i>			
<i>B3d Health Empowerment Zone</i>			
B3e Healthy People in Healthy Communities			
<i>B3f Telemedicine in the Eval. of AD in a Rural, African American Population</i>			
B3g Evaluating a Media Strategy – Closing the Gap			
B3h CBPR to Improve Oral Health Disparities			
B3i Patient Risk Assessment & Health Ed. w/ Computer Kiosks in CHCs			

italics = funded in SE VIEW Phase I

boldface = new/funded in Phase II

Objectives/Approaches	Strategies				
	CBPR	Health IT	Health Literacy	Tele-medicine	Work-force dev.
B1 EDUCATIONAL PROGRAMS TO REDUCE HEALTH DISPARITIES					
B1a Public Information and Community Outreach (PICO)					
B1b Community Inst for Traditional and Nontraditional Leaders					
B1c Health Careers Academy & Junior Faculty Development					
B1d Junior Doctors of Health					
B2 PREVENTIVE MEDICINE, HEALTH AND WELLNESS PROGRAMS					
B2a Stroke Risk Reduction Initiative					
B2b Heart Health Initiative (Preventive Cardiology Research)					
B2c SC TeleSupport (Diabetes Management Initiative)					
B2d Tele-Critical Care to Reduce Rural Health Disparities					
B2f STEER Away from Alcohol and Drugs					
B2g Providing a Medical Home for Underserved Children					
B3. COMMUNITY PARTNERSHIPS AND OUTREACH PROGRAMS					
B3a Lean Team Initiative					
B3b Community Engaged Scholars – Collaborations in CBPR					
B3c Mobile Outreach Van (MOVENUP) Initiative					
B3d Health Empowerment Zone					
B3e Healthy People in Healthy Communities					
B3f Telemed. in the Eval. of AD in a Rural, African American Pop.					
B3g Evaluating a Media Strategy – Closing the Gap					
B3h CBPR to Improve Oral Health Disparities					
B3i Patient Risk Assessment & Health Ed. w/ Computer Kiosks					

TABLE 4. SEVIEW’S Strategic Targets for Reducing Health Disparities

italics = funded in SE VIEW Phase I

boldface = new/funded in Phase II

[illegible]

Key Research Accomplishments, Reportable Outcomes, Conclusion and References

The purpose of the Phase II Annual Report is to provide a summary of SEVIEW achievements in strengthening and expanding its scope by incorporating additional projects. The following is a high level overview of these initiatives included in Phase II:

- **Junior Doctors of Health**

JDOH uses a comprehensive strategy targeting children, adolescents, teachers and parents. With the leadership of the research team, MUSC students serve as instructors/mentors in a dynamic curriculum, teaching children to track eating and exercise habits. Teachers serve as healthy role models, participating with the children in exercise programs and pedometer competitions. Parents are active participants in workshops and family health activities. JDOH also teaches adolescents about health-related careers and offer service-learning experiences. The research team has identified measurement sets for process evaluation as well as pre- and post-survey tools for impact evaluation, and work closely with the SEVIEW Evaluation & Tracking Core to finalize. (Mary P. Mauldin, EdD, Office of Instructional Technology & Faculty Resources)

- **STEER Away from Alcohol and Drugs**

This project uses a multifaceted approach: **S**creening, **T**raining, **E**ducating, **E**valuating, and **R**eferral for treatment. Specific aims are to: screen individuals at local health fairs, community centers and other community facilities for alcohol and drugs, using evidence-based questionnaires; train multidisciplinary professionals (nurses, social workers, psychologists, physicians, physician assistants) to assess, evaluate and treat alcohol and drug use in patients in various clinical settings; educate middle and high school students, adults and individuals in treatment/recovery, using evidence-based tools; evaluate the impact of STEER on participants' knowledge base and behaviors, as well as the impact on health indices of patients seen by trained healthcare professionals participating in the STEER program; and refer patients identified as having an alcohol or drug use disorder to appropriate treatment. (Deborah Deas, MD, MPH, Professor, Department of Psychiatry and Behavioral Sciences)

- **Providing a Medical Home for Underserved Children in Williamsburg County via Telemedicine**

This project uses telemedicine technology to extend and enhance the local healthcare infrastructure in rural, underserved Williamsburg County in the I-95 Corridor. A medical home-focused initiative allows local providers, in collaboration with MUSC personnel, to see their patients in a school setting. Through face-to-face teleconferencing with exam capabilities in the school setting, children will have access to a medical home with regularly scheduled preventive care visits as well as sick care as needed. MUSC provides a referral clinic for specialty needs. (James T. McElligott, MD, MSCR, Assistant Professor, Department of Pediatrics)

- **Evaluating a Media Strategy - Closing the Gap, Inc.**

This initiative evaluates the impact of a communication strategy to deliver evidence-based health information to medically underserved, rural and urban African Americans, including a unique group, the Sea Island Gullah population, with distinctive cultural practices and language patterns containing many words of West African language origin. The research team has identified process evaluation metrics and is working with the Evaluation & Tracking Core to complete the evaluation plan. (Marvella E. Ford, PhD - Associate Professor, Department of Biostatistics and Epidemiology)

- **CBPR to Improve Oral Health**

Specific aims are to promote sustainable oral care self-management practices, improve availability of preferred oral healthcare options, and incorporate advanced technology in dental restorative procedures. The investigators and Johns Island community members have conducted a formative study and are ready to implement a multi-level socio-culturally tailored intervention that targets identified barriers to oral care. This initiative uses a community-based participatory research (CBPR) approach to design and test a multi-level intervention including church-level strategies, group-based education and community-based oral health promoters. (Renata S. Leite, DDS, MS - Assistant Professor, Department of

Stomatology/Periodontics)

- **Patient Risk Assessment and Health Education with Computer Kiosks in Community Health Centers**

This initiative implements an innovative use of health computer kiosks to promote patient self-assessment of risk factors in a community clinic setting. The desired outcomes include improved accuracy of patient perception of disease risk factors, more effective patient/provider interactions, increased patient self-efficacy and health knowledge, and ultimately healthier lifestyle behaviors. (Vanessa Diaz, MD – Associate Professor, Department of Family Medicine)

- **Healthy People in Healthy Communities – Health Information Exchange (HIT)**

This program engages in community dialogues about ongoing needs and resources; provides health education and small grants for local programs; supports health screening/referral for care; assesses and overcomes barriers to obtaining healthcare and medications; strengthens local healthcare delivery network; builds local capacity for sustainability; promotes and assists adoption of electronic medical record (EMR) systems and HIT. (Marilyn A. Laken, PhD – Professor of Nursing and Medicine)

PROJECT TITLE: Junior Doctors of Health

DIRECTOR: Mary Mauldin, EdD

The mission of Junior Doctors of Health (JDOH) is to promote wellness in underserved populations by creating “Junior Doctors of Health,” youth empowered to take control of their own health, pursue career interests, educate their families, friends, and communities about healthy eating and exercise.

The program is implemented in sites that educate underserved youth in Charleston and across the state. Through JDOH, Medical University of South Carolina (MUSC) and University of South Carolina (USC) student mentors teach youth about healthy choices, suggest ways to make changes to their current diet and physical activity, and encourage youth to explore healthcare professions with the goal of ultimately eliminating health and education disparities in this population. JDOH uses a comprehensive strategy with pipeline aspirations to target youth, teachers and parents.

In order to implement these ideas comprehensively and interactively, supplies were purchased to use in the classrooms as student mentors delivered the JDOH curriculum. JDOH worked with pre-K to 8th grade youth in seven Charleston County School District (CCSD) schools serving predominately low income, African American youth. Additionally, JDOH was taught to rural and low-income youth across South Carolina through collaborations across the state. At the culmination of this award, the JDOH staff, made a recommendation for the schools that we served to benefit from the supplies that these schools would not purchase on a yearly basis. We donated the supplies to faculty, staff and students at the schools in Charleston, as this area had the most schools that we delivered the program to. Some of the supplies include body models, cups, paper, pens, pencils, cardstock, construction paper, mason jars, balls, curriculum activities, scissors, as well as pots, vegetable seeds and other products that would help classroom teachers facilitate and recreate the JDOH curriculum. The schools were very thankful and appreciative for the supplies, as they will help to benefit the schools. The supplies were distributed to the following schools: Charleston Progressive Academy, Meeting Street Academy, Sanders Clyde Elementary/Middle School, Mitchell Elementary and James Simons Montessori.

MUSC/USC students serve as instructors/mentors in a dynamic curriculum, teaching youth to track eating and exercise habits. Teachers serve as healthy role models, participating in exercise programs and nutrition classes. Parents are active participants in workshops and family health activities. Additionally, through partnerships with local middle school J-ROTC instructors, a Leadership program has been created for 7th and 8th grade students. The program, entitled the MUSC Junior Doctors of Health Leadership Program (LP), includes a unified curriculum that is delivered by both the J-ROTC instructors and MUSC Student Mentors. The J-ROTC

instructors cover Leadership Theory and Application, Foundations For Success, and Wellness, Fitness, and First Aid. The MUSC Student Mentors meet with the LP students regularly to provide tutoring in areas of academic need such as mathematics and literacy to promote academic success and to deliver interactive health promotion activities.

As part of the SEVIEW project, the JDOH program meets *Goal B: To develop strategic partnerships and programs to address the burden of health disparities*; and more specifically, *Objective B1: Establish an Educational Program to reduce health disparities*. Program initiatives focuses on increasing awareness of health issues in communities that bear a disproportionate burden of chronic diseases and address educational deficits related to chronic diseases. The project's goal is the prevention of childhood obesity and seeks to target youth on multiple levels through direct (youth education) and indirect (teacher, parent, and community outreach) methods. The following information provides details regarding specific program activities with military relevance, as well as the reach of JDOH program:

- **Youth Pipeline.** Alarming statistics regarding the prevalence of overweight and obesity affect the military from recruitment to retention to combat readiness. Seventy-five percent of Americans aged 17-24 are unable to join the military with the leading medical cause being overweight or obese. This statistic is especially staggering when considering 50% of youth enter the military or consider entering the military. To address this national security issue, the DOD has made changes in daycares, schools, and military base life to improve the health and nutrition of military families. Between 1995 and 2008, the percentage of potential recruits who failed their physical exam because of being overweight rose by almost 70% (Neibuhr, Cavicchia, Bedno, Cowanm, & Barker et al., 2009).

In addition to obesity affecting military recruitment efforts, overweight active-duty personnel have been found to be more likely to leave military service because of failure to meet weight standards before finishing their contracted period. Over 1,200 first-term enlistees leave early each year because of being overweight (Dall, Zhang, Chen, Wagner, Hogan, Fagan, Olaiya, & Tornberg, 2007). In order to replace these 1,200 enlistees, the military must recruit and train replacements at a cost of \$50,000 for each man and woman or at a cost of \$60 million a year. In addition to obese active-duty personnel leaving their military service early, overweight or obese active-duty personnel are found to have higher absenteeism rates as well as more days with below-normal productivity than those who are not overweight (Dall et al., 2007). The link between the need for childhood obesity prevention efforts to ensure success of the military is clearly evident.

To address childhood obesity, JDOH works with pre-K to 8th grade youth in seven Charleston County School District (CCSD) schools serving predominately low income, African American youth. Additionally, JDOH is taught to rural and low-income youth across SC through collaborations with the SC Area Health Education Consortium (SC AHEC), University of South Carolina (USC) and Charleston Southern University (CSU). **Table 5** summarizes an example of one of the curriculums that was delivered. As shown in **Table 6**, 2,187 youth and adolescents received the program across the state between 2011-2015.

Table 5: Summary of the 4th Grade Curriculum

Session 1: Healthy Eating and Limiting Sugar-Sweetened Beverages		
Station 1: Review of MyPlate	Station 2: Reading Nutrition Facts	Station 3: Hands on Snack Preparation and Tasting
• Introduction to the MyPlate. • Engage youth in fruit/veggie seed planting activity. Deliverables: • Emphasis on making half of your plate filled with fruits and	• Youth participate in food label reading activity. Deliverables: • Read Nutrition Facts to help you choose the healthiest food option. • Pay close attention to the serving size	• Fruit smoothie taste testing. • Youth create a health goal related to healthy eating or healthy drinking.

vegetables. • Make at least half of your grains whole grains. • Try eating more beans, peas, tofu, nuts and seeds.	listed on the package. • Choose foods with low amounts of saturated fats, sugars, and sodium.	
Session 2: Wise Exercise and the Body		
Station 1: Exercise and Jump Rope Activity	Station 2: How Much is in Your Cup?	Station 3: Hands on Snack Preparation and Tasting
• Review the Exercise Pyramid. • Deliverables: • Aim for at least 60 minutes of exercise each day. • Limit screen time to less than 2 hours per day. • Sports are a great way to get in your 60 minutes of daily exercise.	• Review the human body model and the affects of sugar sweetened beverages on the organs. • Deliverables: • Excessive sugar has negative effects on the body. • It is important to consume water especially when exercising. • Avoid sports drinks and other sugar sweetened beverages.	Vegetable snack tasting. Youth create a health goal related to exercise and limiting screen time.
Session 3: Health Profession Exploration		
Station 1: Health Professions	Station 2: The Human Body	Station 3: Hands on Snack Preparation and Tasting
Student mentors showcase their health profession by bringing in props or an activity.	Human body model demonstrations of bodily functions (e.g. the heart pumping blood).	Vegetable snack tasting. Review goals from the previous two sessions.
Session 4: Youth Advocacy		
Introduction	Create Advocacy Project	Share Advocacy Poster
Discussion of advocacy JDOH review	Each student can create a health message to share with a grandparent.	Youth present their advocacy poster in front of their peers.

To provide continual support and leadership opportunities to youth as they become older, a partnership was formed to enhance the self-advocacy of healthy lifestyles and personal academic success. In 2011-2012, we conducted the pre-pilot, MUSC Junior Doctors of Health Leadership Program (LP), which focused on *Leadership Theory and Application*, *Foundations For Success*, and *Wellness, Fitness, and First Aid*, and the JDOH youth curriculum. In the summer of 2012, JDOH staff continued to work with the J-ROTC instructors to combine the different components of the program into a unified curriculum delivered by both the J-ROTC instructors and MUSC student mentors that was presented in the fall of 2012. In December of 2012, the J-ROTC instructors and JDOH staff met to de-brief about the fall semester and decided to incorporate tutoring in areas of academic need such as mathematics and literacy into the LP to promote academic success. The tutoring activities were supplemented with interactive health promotion activities delivered by MUSC student mentors over the course of eight meetings for the 7th and 8th grade class for three semesters. The J-ROTC instructors continued to cover *Leadership Theory and Application*, *Foundations for Success*, and *Wellness, Fitness, and First Aid*.

During the fall of 2014, the team offered the four JDOH sessions to the 9th grade class. Additionally, the JDOH program coordinator connected the J-ROTC instructor with Dr. Courtney Howard from the College of Charleston's (C of C) School of Education, Health, and Human Performance. Dr. Howard serves as the Director for the Center for Partnerships to Improve Education and is interested in exploring opportunities for students enrolled in the [Call Me MISTER](#) (Mentors Instructing Students Toward Effective Role Models) program at C of C to serve as tutors and mentors to the J-ROTC Instructor's students.

As shown in **Table 6**, 134 7-8th grade youth participated in the LP between 2011-2014. A total of 2,053 youth and received the JDOH program across the state between 2011-2015.

Table 6: Statewide Reach of JDOH Curriculum by Region in 2011-2015

Location	Youth			Adolescents in Leadership Program (LP)		
	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
Lowcountry	342	353	587			
Mid-Carolina	100	110	114	33	47	54
Pee Dee	65	251	69			
Upstate	22	23	17			
Total	529	737	787	33	47	54

- **MUSC Student Mentors.** The JDOH youth sessions are delivered by students from the six colleges at the Medical University of South Carolina (MUSC), Dietetic Interns, University of South Carolina (USC), and College of Charleston (C of C). Between 2011-2015, a total of 546 university students from a wide range of disciplines delivered JDOH across SC. See **Table 7**.

Table 7: JDOH Student Mentors by Academic Degree Program and Method of Participation, 2011-2015

	SC-AHEC ¹	MUSC ² elective	USC ³ elective	USC elective	Volunteer (CSU ⁴ /MUSC)	PT ⁵ Course	PA ⁶ Course	OT ⁷ Course	
Degree Program	ISLP ⁸	Addressing Childhood Obesity	Addressing Childhood Obesity	Nutrition through the Lifecycle	JDOH	Cardiovascular and Pulmonary	Community Health & Preventative Medicine	OT Lab Course	Total by Degree Program
Dental Medicine	-	1	-	-	-	-	-	-	1
Dietetic Internship	35	-	-	-	-	-	-	-	35
Graduate Studies	2	-	-	-	2	-	-	-	4
Health Professions	62	12	-	-	3	64	19	42	202
Medicine	2	50	-	-	53	-	-	-	105
Nursing	13	2	-	-	3	-	-	-	18
Pharmacy	104	10	9	10	2	-	-	-	135
English	-	-	-	1	-	-	-	-	1
Business	-	-	-	3	-	-	-	-	3
Biology	-	-	-	1	-	-	-	-	1
Public Health	2	-	4	12	-	-	-	-	18
Psychology	-	-	-	1	-	-	-	-	1
Social Work	-	-	-	3	-	-	-	-	3
Exercise Science	-	-	8	11	-	-	-	-	19
Total	220	75	21	42	63	64	19	42	546

¹South Carolina Area Health Education Consortium

²Medical University of South Carolina

³University of South Carolina

⁴Charleston Southern University

⁵Physical Therapy

⁶Physician Assistant Studies

⁷Occupational Therapy

⁸Interprofessional Service Learning Project

- Families.** Resources to build wellness and academic success should follow a child home. To address this important facet of our pipeline, we provided education to families through wellness workshops to support obesity prevention in the home. Family members participated in hands-on activities, making easy, cheap, and fast meals and snacks in addition to receiving information about diet and sampling health food. By spending resources focusing on the health of parents who are either overweight or at risk for being overweight, JDOH is addressing the strong social stigmatization that is associated with obesity among adults (Puhl & Latner, 2007). There is extensive literature documenting that obese adults face social disadvantages including employment, education, healthcare, and interpersonal relationships (Brownwell, Puhl, Schwartz, & Rudd, 2005 as cited in Puhl & Latner, 2005). Having a parent who is overweight has been shown to be a predictor for the child becoming overweight (Hood, Moore, Sundarajan-Ramanurti, Singer, Cupples & Ellison, 2000). Parents' knowledge of nutrition and their levels of physical activity are influential in their child's development of habits (Lindsay, Sussner, Kim & Gortmaker, 2006). Parents serve as role models by supporting healthy eating and exercise behaviors in the home.

The JDOH program facilitated Family Workshops taught by MUSC Dietetic Interns in the Charleston area covering topics such as: *Limiting Sugar Sweetened Beverages*, *Heart Healthy Cooking*, *Grocery Shopping on a Budget*, *Healthy Summer Grilling*, and *Healthy Soul Food*. **Table 8** reflects that between 2011-2015, JDOH reached 350 family members.

Table 8: Family Members Participating in JDOH Family Workshops, 2011-2015

School/Community Sites	Parent Total
Sanders Clyde Elementary	6
Mary Ford Elementary- <i>First Steps</i>	26
Charleston Progressive Elementary	109
Dart Library	12
Meeting Street Academy	73
Neighborhood House	27
Charleston Development Academy	22
James Simons Elementary	34
Mitchell Elementary	17
Parent University	24
Total	350

This year, we continued to host the Parent and Child Exercise (PACE) program where parents and youth had the opportunity to exercise together. The exercise program was held at the Meeting Street Academy in the fall where parents and youth participated in yoga and cardio kickboxing. A total of 28 parents and youth participated in the program over the course of 5 weeks. See **Table 9**.

Table 9: Parents and Youth Participating in PACE

School	Parent Total	Youth Total
Meeting Street Academy	15	13
Total	15	13

- Teachers.** Teachers are a child's early role models and a teacher who believes personal wellness is important is more likely to convey a positive attitude regarding healthy eating and exercise. To support teacher wellness, JDOH offered free weekly exercise classes at the JDOH site locations in 2011-2012

and 2012-2013. During the 2013-2014 school year, a JDOH program coordinator surveyed teachers to identify a day, time, and semester that would work best for their schedule for the future. See **Table 10**.

Table 10: Teachers Participating in JDOH Exercise Classes

School	Total Teacher Number	
	2011-12	2012-13
Charleston Progressive Elementary	22	18
James Simons Elementary	7	12
Meeting Street Academy	9	-
Memminger Elementary	17	7
Mitchell Elementary	12	9
Charleston Development Academy	6	-
Total	73	46

Military Relevance: Obese youth become obese adolescents and adults. The US Armed Forces are recruiting from an increasingly overweight pool. Failure to meet weight standards is the top reason for medical disqualification for service. Our initiative includes strong collaboration with J-ROTC instructors, starting in 7th grade, as part of a comprehensive pipeline program.

KEY RESEARCH ACCOMPLISHMENTS:

- Established a relationship built upon trust with J-ROTC instructors at the Burke Middle High School.
- Hosted strategic planning meetings about LP that included J-ROTC instructors, middle school guidance counselor, and high school principal.
- Enhanced existing JDOH curriculum with the development of LP, developing a pipeline for wellness and career exploration.
- Unified the curriculum with the J-ROTC instructors to meet the needs of the Leadership Students at the Burke Middle High School.
- Piloted the re-vamped LP program.
- Re-vamped the JDOH curriculum to include MyPlate, use more technology, and emphasize setting health goals among many other interactive activities.
- Piloted the re-vamped youth curriculum for all grade levels in Charleston and across the state.
- Worked with USARMC ORP to refine IRB.
- Received IRB approval from MUSC, the Charleston County School District, and DOD to evaluate the LP for success and impact.
- Learned the challenges of the consent form process while participating in community research.
- Met with MUSC's IRB Vice Chair to explore alternative consent form processes to improve recruitment for future studies.

REPORTABLE OUTCOMES:

- Received a YES! Grant to fund Parent/Youth Exercise program at participating JDOH schools.
- Hired Elana Wells, MPH, CHES in February 2012 to assist in the management of all program activities including student mentor, youth, parent, teacher and community target populations.
- Launched the JDOH website (www.musc.edu/JDOH).
- Developed a formal collaboration with Charleston Southern University's Health Promotion and Kinesiology Department to provide students with the opportunity to deliver the JDOH program to youth in their community starting in the fall of 2013.
- Partnered with the College of Charleston to provide internship opportunities for Public Health undergraduate students in future fall and spring semesters starting in the fall of 2013.

- Partnered with College of Charleston's Center for Partnership to Improve Education to offer an internship opportunity to an Education Major undergraduate student who aligned the re-vamped JDOH curriculum to state education and core standards.
- Extended the "Addressing Childhood Obesity using Community Approaches" (IP 707) course to USC.
- Offered the JDOH program as the class project in the USC course, "Nutrition through the Lifecycle" (HPEB 620) thereby increasing the number of health professions represented in the JDOH program and increasing the number of underserved youth in Columbia who receive the program.
- Provided the JDOH curriculum as a class community project offered in Physical Therapy, Physician Assistant, and Occupational Therapy courses thereby reaching more youth in the community.
- Submitted 5 grants to support program sustainability.
- Presented two oral presentations at conferences highlighting the JDOH program and discussing opportunities to extend through additional universities and AHEC locations (Spring 2014, Summer 2014).
- Thirty-eight individuals from 17 states indicated they were interested in bringing JDOH to their state after attending the JDOH presentation at the conferences.
- The *MUSC Catalyst* featured an exciting news story about [JDOH's 10-year anniversary](#) in May 2014.

CONCLUSION:

America's childhood obesity rates have tripled in the past 30 years. Today, nearly one in three youth are overweight or obese, a problem that follows them through to adulthood. Studies cite that 80% of youth age 10-15 who were overweight became obese by 25 and youth overweight by 8 are more likely to have severe adult obesity. Unfortunately, obese youth become obese adolescents and adults, so the US Armed Forces are recruiting from an increasingly overweight pool.

During the four years of implementation through the SE VIEW project, JDOH has delivered the dynamic childhood obesity curriculum to 2,187 youth and Leadership Program students and delivered nutrition education and exercise programs to 350 family members.

JDOH staff will continue to apply for grant funding to ensure program sustainability and explore opportunities for institutionalization within the university.

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PROJECT TITLE: STEER Away From Alcohol and Drugs**DIRECTOR:** Deborah Deas, MD

Project STEER engages in addressing the health disparities in access, education, and treatment of the use and misuse of alcohol and other drugs in the minority, rural, under-served and at-risk population in Charleston, Dorchester, Berkeley counties and along the I-95 corridor, including Williamsburg County. The project addresses: education, prevention, partnership and research. **Aim 1:** To **screen** and offer addiction treatment **resources** to minority, rural, underserved individuals (18 years and older) each year at local health fairs and community centers for risky alcohol and drug use. **Aim 2:** To **educate** community leaders, counselors and students about the importance of drug and alcohol use and abuse **Aim 3:** To **train** key personnel at community locations to perform **screening** and referral on their own: “Train the Trainer,” and to provide them information about treatment **resources**.

KEY RESEARCH ACCOMPLISHMENTS:

- Hired Shameeka Bowman on September 30, 2013 as Project Coordinator.
- Developed local resource brochures of alcohol and drug treatment centers in Charleston, Dorchester, Berkeley counties and along I-95 corridor to include:
 - Medical University of South Carolina, Institute of Psychiatry, Center for Drug and Alcohol Programs (CDAP), Charleston, SC
 - Medical University of South Carolina, Adolescent Substance Use Skills Education Training (ASSET), Charleston, SC
 - Charleston Center, Charleston, SC
 - Dorchester Alcohol & Drug Commission, Summerville, SC
 - Ernest E. Kennedy Center, Moncks Corner, SC
 - Beaufort County Alcohol & Drug Abuse Department, Beaufort, SC
 - Circle Park Behavioral Health Services, Florence, SC
 - Clarendon Behavioral Health Services, Manning, SC
 - Tri-County Commission on Alcohol & Drug Abuse
 - Dawn Center, Bamberg, SC
 - Dawn Center, Orangeburg, SC
 - New Life Center, Allendale, SC
 - New Life Center, Hampton, SC
 - New Life Center, Ridgeland, SC
 - Sumter Behavioral Health Services, Sumter, SC
 - Williamsburg County Department on Alcohol & Drug Abuse, Kingstree, SC
 - Free Support Groups
 - Alcoholic Anonymous, Charleston, SC
 - Alcoholic Anonymous, Columbia, SC
 - Alcoholic Anonymous, Walterboro, SC
 - Narcotics Anonymous, Charleston, SC
 - Narcotics Anonymous, Orangeburg, SC
- Developed educational series to accommodate the resources provided by National Institute on Drug Abuse and National Institute of Health resource materials
 - Series I - The Science of Addiction
 - Youth Session – “Family Addiction – Who killed My Grandfather?”
 - Parent Session – “What is Addiction?”
 - Series II - Shattering the Myths of Drugs
 - Youth Session – “What Your Friends Don’t Know!”
 - Parent Session – “What Your Children Don’t Want You Know!”
 - Series III - Drug & Alcohol Facts

- Youth Session – “The Truth and Nothing But The Truth”
- Parent Session – “Commonly Used Drugs and Street Names”
- Church Session – “He Comes to Steal, Kill & Destroy”
- Scheduled community sessions on alcohol, drug screening, and education:
 - South Carolina Area Health Education Consortium
 - Hispanic Health Initiatives & Office of Practice - Hispanic Migrant Outreach Program, College of Charleston
 - Perinatal Awareness Successful Outcomes (PASO) – Latino Community based program of the South Carolina Public Health Institute.
 - Jabra Communications El Solo 980-1480 Hispanic Radio Broadcast (Listeners 2000-4000) – Dr. Marcelo Lopez, MUSC; “Addiction Issues within the Hispanic Community”
 - Parents Anonymous – “Leading the Way 2013 Conference “ – Communities In School
 - Department of Human Resources at Charleston County Government
 - The Arts Institute of Charleston
 - Pineland Girls Home- Summerville, SC
 - Brashier Middle College Charter High School, Greenville, SC-Health & Wellness Seminar
 - South Carolina State University, Orangeburg, SC – Training Sessions for Drug Use Screening
 - Trident Technical College
 - Charleston County Missionary Baptist Association
 - Lowcountry District Missionaries
 - Sanders-Clyde Creative Arts School
 - HALOS (Helping and Lending Outreach Support)
 - CIS (Communities in Schools)
 - Partners for a Better Community
 - Dorchester High School
 - Colleton County High School
 - Burke High School
 - Garrett Academy of Technology
 - St. John’s High School
 - Lincoln Middle/High School
 - James Island Charter High School
 - North Charleston Creative Arts Elementary
 - University of South Carolina (Salkehatchie campus)
 - Springfield College
 - Denmark Technical College
 - Florence Crittenton Programs
 - Wando High School
 - Limestone College
 - Jenkins Orphanage
 - Mitchell Elementary
 - Southeastern Institute
 - YMCA of Greater Charleston
 - Mental Health
 - Williamsburg Technical College
 - Webster University
 - Family Corp
 - Andrews High School
 - Family Services Inc.

- Lowcountry AIDS Services
- Transitions Hospice
- Father to Father
- College of Charleston

REPORTABLE OUTCOMES:

Project STEER has successfully achieved its goal of screening, training, educating, evaluating and providing resources to the community about addiction and adverse effects of drugs and alcohol abuse. Several collaborative efforts have been made in communities with local schools, colleges, and nonprofit businesses.

Project STEER has participated in health fairs, career fairs, lectures, workshops, churches and school events.

Aim 1: Screenings

Over the course of the year, the Project STEER Team met its goal of screening seventy-five participants. **One hundred and fifty-six (156)** participants that have completed the Drug Abuse Screening Test (**DAST-10**) and/or the Alcohol Use Disorders Identification Test (**AUDIT**).

Aim 2: Education

During the SEVIEW period of performance, Project STEER exceeded its goal of educating 30 subjects. Pre and posttests were administered to measure knowledge attained. **One hundred and fifty-five (155)** participants have completed pre and posttests pertaining to the education of drug and alcohol misuse.

National Institute on Drug Abuse materials was distributed as follows through education series and health fairs.

- Science of Addiction
- Shattering the Myths of Drugs
- Commonly Abused Drugs
- Drug Facts: Bath Salts
- Drug Facts: Synthetic Marijuana
- Drug Facts: Marijuana
- Drug Facts: Alcohol

Aim 3: Trainings

Project STEER exceeded its goal of training participants, utilized materials from National Institute on Drug Abuse through PowerPoint presentations, pamphlets and handouts. **Sixty-eight (68)** participants that have completed pre and posttests pertaining to the education of drug and alcohol misuse and the tools used to identify such.

CONCLUSION:

Alcohol and other drugs of abuse have negatively impacted the lives of many, and the lack of education about the effects and the knowledge of how to access treatment contribute to the overall burden of illness. Alcohol abuse is one of the leading causes of essential hypertension, leading to higher rates of heart disease and stroke, two very important health disparities in African Americans. Project STEER addresses the health disparities in access, education, and treatment of the use and misuse of alcohol and other drugs in the minority, rural, underserved and at-risk population in the Tri-County (Charleston, Dorchester, and Berkeley) as well as Williamsburg County along the I-95 Corridor.

The STEER research group has made progress towards screening, educating and providing resource materials local treatment centers information throughout South Carolina. The team will continue to work with the community to improve ongoing identification of drug and alcohol misuse in our underserved communities.

REFERENCES:

1. National Institute of Health, National Institute of Alcohol abuse and Alcoholism
2. U.S. Department of Health and Human Services, National Institute of Health
3. National Institute on Drug Abuse

PROJECT TITLE: Providing a Medical Home for Underserved Children in Williamsburg County via Telemedicine

DIRECTOR: James T. McElligott, MD

This project uses telemedicine technology to extend and enhance the local healthcare infrastructure in rural, underserved Williamsburg County in the I-95 Corridor. A medical home-focused initiative allows local providers, in collaboration with MUSC personnel, to see their patients in a school setting. The rural geography and limited number of providers in the county restrict the availability of in-person visits for many children, leading to increased morbidity and elevated health care costs. Through face-to-face teleconferencing with exam capabilities in the school setting, children will have access to a medical home with regularly scheduled preventive care visits as well as sick care as needed. MUSC will provide a referral clinic for specialty needs. While school-based telemedicine initiatives occur throughout the country, this initiative is unique in that it targets a rural area, engages the county healthcare infrastructure, and emphasizes the importance of a medical home. Williamsburg County is ideal for this project as the leadership and stakeholders in the area display a strong sense of individualism, pride, and motivation to improve. The area is situated for growth through an accessible interstate and has untapped potential for recreation and tourism. A recent report by RTI International lists targeting health disparities as one of six key recommendations for improvement in the area, with special attention on the need for primary preventive care for children. The Telemedicine Medical Home is intended to reach children who do not have an existing provider, and will be constructed with goals of equal access to local providers to minimize redundancy of care and maximize efficiency of existing resources.

Military Relevance: The program provides needed primary health care to a geographically isolated region. The future health of our nation is largely dependent on the healthcare our children receive. Many future military recruits will be from medically underserved, rural areas. This program addresses disparities in healthcare by coupling telemedicine technology with the central focus of preventive care, the medical home. It also compares the utility of a mobile telemedicine unit to be used at multiple sites vs. fixed-site telemedicine units. The efficient use of telemedicine for cost-effective delivery of high quality healthcare to remote areas is highly relevant to military needs and interests.

Goal A: Implement a school-based telemedicine clinic to provide care to elementary school-aged children in Williamsburg County.

- Objective A1: Establish a process for a child to receive an in-school healthcare visit with a provider when a child is ill or in need of chronic disease management services.
 - 121 children were seen via telemedicine.
- Objective A2: Integrate the school-based telemedicine clinic into the local healthcare infrastructure in a collaborative manner that improves access to care.
 - Two local practices agreed to participate in the program by providing tele-consultation. The local hospital-based clinic demonstrated the feasibility of joint video sessions, and participated by the program clinician's request for patients requiring co-management to complete the visits.
 - The second practice, a local FQHC, participated by establishing a direct relationship and assuming primary responsibility of the telehealth care with one of the expansion schools. The decision was made to expand to all schools in the county at the end of the grant period.

Goal B: Measure the utilization of telemedicine connection between health care providers and elementary schools in a rural, underserved region:

- Objective B1: Determine the proportion of telemedicine visits that were for publicly insured patients, and for patients who have no insurance.
 - 59% of the visits were for publicly insured children; 12% were uninsured.
 - No private insurance patients were seen. Private insurance carriers in the region do not cover the service at this time.
- Objective B2: Determine the proportion of telemedicine visits that were successfully completed without the need for in-person evaluation.
 - Zero (0) visits required an in-person visit for diagnosis; 5 visits resulted in referrals for specialty care. The specialty care visits were initially done via telemedicine, with 2 resulting in recommendations for in-person care.
 - Laboratory evaluation was required for one visit, performed at the local hospital.
- Objective B3: Determine the utilization of the telemedicine program over time as a rate of use per month.
 - Total school enrollment for the telemedicine program was 1,032 students (2 rural in Williamsburg County; 1 urban in Charleston outside the scope of the grant); 121 visits were conducted over 18 months of school care, leading an average of 6.7 visits/month or roughly 1.5 visits/week for every 1000 students during the pilot period.

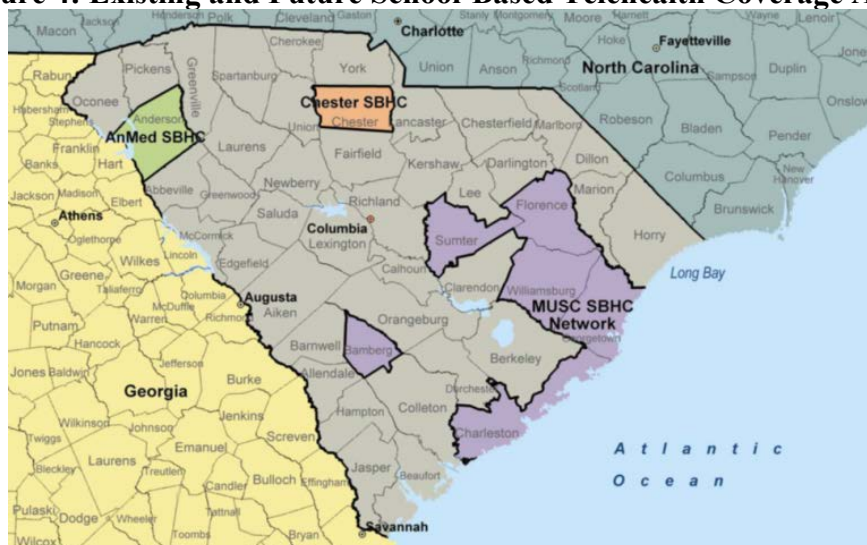
Additional Efforts to Prepare for the Post-grant Period:

During the grant funded period, and increasingly over the past year, the application of telehealth has grown at MUSC and in South Carolina as a whole (see **Fig. 4**). The state legislature has committed over \$40 million in funds to MUSC to develop telehealth over the past two years, and the school-based telehealth program has played a prominent role in awareness of the potential benefits of these efforts. In collaboration with other state entities and care providers in the state, strategic planning and program expansion is planned for telehealth in South Carolina to include school-based care. Additionally, school-based efforts in general have grown in scope through support from entities such as the Department of Health and Human Services. Telehealth is considered a key component of creating a sustainable model for school-based care, particularly in the setting of managed care organizations and similar shared-risk models. To this end, while the overall telehealth consultation numbers were low, the past year has included in depth planning for expansion and the building of a robust model for care. Work preparing the program for the post-grant period includes:

- Incorporating all schools in Williamsburg County, including preparing the clinic space for technology installation
- Identifying the first schools of two additional counties, Bamberg and Sumter, to participate in the expanded program
- Implementation of telehealth network management software and internal workflow adjustments to improve the efficiency of consultations and communications with other providers
- Hiring of an MUSC school-based program manager and a dedicated school-telehealth nurse practitioner and an in-county telepresenter and case manager
- Continued funding secured for Dr. McElligott as the Medical Director for Telehealth
- Pursuit towards improved reimbursement including:
 - Collaborative planning with SC Medicaid and Blue Cross Blue Shield
 - Advocacy for enhanced per-member-per-month fees for medical homes working with school-based efforts
 - Advocacy for telepresenter fees to support the school staff
- Collaboration with other SE VIEW projects

- SE VIEW projects that are involved with school-based interventions continue to meet and exchange experience, advice and collaboration ideas.
- Additional collaboration is ongoing between the STEER and Healthy People in Healthy Communities initiatives, which both have their focus on Williamsburg County.

Figure 4: Existing and Future School-Based Telehealth Coverage Areas



Collaboration with Other SEVIEW Projects:

- Regular collaboration occurs with several telehealth efforts that have been supported through SE VIEW through the Center for Telehealth.
- The SE VIEW investigators who are involved with school-based interventions have formalized relationships in subsequent grant funded and hospital supported efforts.
- Additional collaboration is ongoing between the STEER and Healthy People in Healthy Communities initiatives, which both have their focus on Williamsburg County.

The statement of work includes basic data supporting successful progress towards the intended outcomes of the project. As the program's volume increases, health utilization data will be employed to identify any shifts in patterns of emergency room usage, inpatient visits and outpatient usage among users of the school telehealth program compared to controls. As the process measures have been monitored, baseline health utilization was evaluated, which includes one published manuscript: (*McElligott JT*, Summer A. "Health Care Utilization Patterns for Young Children in Rural Counties of the I-95 Corridor of South Carolina." *Journal of Rural Health*, September 2012.). A second publication has been submitted and is currently being reviewed (access patterns of low-risk children in the region). A third is in analysis (access patterns of school-aged children in the region).

Baseline data has confirmed access issues for young children in the region that includes Williamsburg County (I-95 Corridor). These comparisons were determined for at-risk young children, as these high utilizers of health care are indicators of disparities. The follow-up studies underway will determine more specific patterns of health care utilizations for school-aged children, including a determination of any relationship between outpatient visits (or a lack of) with increased, preventable emergency room and inpatient visits. The specific utilization patterns of the children enrolled in the program will be compared with these baseline rates. **Table 11** illustrates the disparity in health care access points for young children in the region.

Table 11: Healthcare Access Markers by County Grouping

Healthcare Access Markers by County Grouping				
	I95	Other Rural	Urban	P value
Number of Counties	12	13	21	
Mean number of physicians per 10,000 population	8	12	17	.2
Mean number of physicians per 100 square miles	4	14	51	.03
Mean number of hospital beds per 100 square miles	12	25	56	.03

Table 12 illustrates the disparity in the region for the use of preventive care for children with Medicaid.

Table 12: Disparity for Use of Preventive Care

	I-95	OTHER RURAL	URBAN	p value
MEAN ANNUAL WELL VISITS	4.9	5.7	5.6	<.01
MEAN ANNUAL OFFICE BASED SICK VISITS	8.2	9.6	12.8	<.01
% WHITE	26%	50%	41%	<.01
% MALE	52%	51%	53%	.75
% MOM WITH HIGH SCHOOL EDUCATION	67%	60%	62%	.12
% TEEN MOM	80%	76%	76%	.24

Tables 13-14 demonstrate that these rural populations are seen in the emergency room and are admitted more frequently than urban areas for conditions that are often preventable. Interestingly, the rural region with more access had relatively more visits despite having better preventive care, indicating that the access points themselves lead to increased visits. This indicates that healthcare utilization patterns are best compared within like regions, as regional geographic factors can influence the analysis.

Table 13: Odds of and ED or IP Visit - Other Rural vs. Urban

ODDS OF AN ED OR IP VISIT: OTHER RURAL VS URBAN		
TYPE OF VISIT	ODDS RATIO	CONFIDENCE INTERVAL
ED	1.49	1.21-1.83
IP	1.40	1.17-1.67

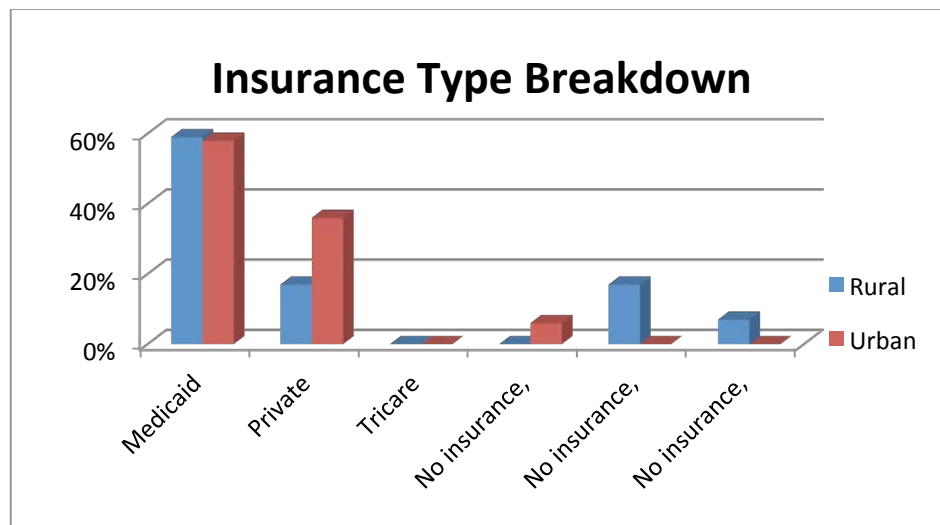
Table 14: Odds of an ED or IP Visit – I=95 vs. Urban

ODDS OF AN ED OR IP VISIT: I-95 VS URBAN		
TYPE OF VISIT	ODDS RATIO	CONFIDENCE INTERVAL
ED	1.42	1.10-1.84
IP	1.12	0.90-1.40

Visit Types. The urban school participated in more visits than the rural schools, although the rollout of the rural schools was delayed due to IRB and funding restraints. The conditions seen were a mix of low-acuity illness and chronic disease management, which are ideal conditions for this program. As anticipated, majority of patients were Medicaid funded. The remainder was largely made up of privately insured children for the urban site and uninsured children at the rural sites. Both of these insurance types will require special attention moving forward as we will be required to bill for all visits. **See Table 15 and Fig. 5.**

Table 15: Visit Types

	Rural	Urban	Total
Total telehealth visits	33	88	121
Most common conditions	Rash, asthma, pink eye	Ear pain, throat pain	Rash
Average age	8.5 years	5.6 years	6.5 years
Insurance			
Medicaid	59%	58%	59%
Private	17%	36%	29%
No insurance, unknown eligibility	24%	6%	12%

Figure 5: Insurance Type**Evidence of Cost Savings:**

Assessing long-term sustainability is a key focus of current and future outcomes generation. A cost analysis of the impact of school-based clinics in the urban Charleston area has verified significant savings for children utilize the clinics as evidenced by reduction in seasonal costs when participants are compared with a control population. Children who utilize the clinic contribute a savings of \$874 per child cost during a three-month period in the fall school semester after controlling for their baseline health access patterns in the summer period. The Medicaid claims data used in this analysis included 96 children participating in both on-site and telehealth school-based programs and 6555 controls matched by race, age and geographical location.

In Williamsburg County the baseline assessments reveal undermanaged chronic diseases. It is hypothesized that a focus on chronic disease management in the program, coupled with a population health focus that incorporates school-wellness programs, will lead to enhanced cost savings and improved health. A modeling analysis of school-aged asthmatics in Williamsburg County (N= 633) reveals that the asthmatics that utilized the emergency room at least twice in a year period accounted for less than 10% of asthmatics, but 75% of the respiratory related emergency room costs. The results of this cost-modeling study will directly impact the scope and type of asthma specific interventions to be employed in the partnering schools.

KEY RESEARCH ACCOMPLISHMENTS:

- Demonstrated feasibility of school-based telehealth in partnership with local medical homes in a rural area
- Verified a need for improved health care access in the intervention region
- Identified asthma as a chronic disease for which a targeted intervention has potential for significant health improvement and cost savings
- Cost analysis for school-based care in South Carolina identified a \$874 per child savings for those who utilize the service

REPORTABLE OUTCOMES:

- School-based care can support the patient centered medical home model
- Children in the I-95 region of South Carolina are 49% more likely to use the emergency room and 42% per more likely to be admitted as an inpatient
- Cost savings for school-based care can be demonstrated for children who utilize the service

CONCLUSION:

This school-based telemedicine effort has demonstrated that the model can be used to provide management of acute illness and chronic disease for underserved children in a rural region. The model successfully recruited local providers, though work to more fully integrate local practices is needed. The program has played a prominent role demonstrating how telehealth can augment efforts to alleviate healthcare disparities, and subsequently benefitted from access to increased resources, which are beginning to be applied. As a consequence, a more robust school-telehealth care team at MUSC has been established and significant program expansion is planned. As a direct result of the SE VIEW support, the program is now supported in a robust way with a combination of hospital support, state appropriated funds and external grant awards. An expanded care team allows for increased scope of services. Additionally, the expanded program intends to leverage a population health approach, which appears to be revealing unprecedented paths towards sustainability.

REFERENCES:

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PROJECT TITLE: Evaluating a Media Strategy – Closing the Gap in Healthcare, Inc.

DIRECTOR: Marvella Ford, PhD

The Scientific Context of the "Evaluating a Media Strategy to Provide Health Messages to Medically Underserved Populations in South Carolina" Project

Closing the Gap in Healthcare, Inc. (CGHI) incorporates a series of radio broadcasts that provide health messages to medically underserved populations in South Carolina with low health literacy. The health messages are delivered through radio broadcasts. Thus, CGHI is a health communication strategy. In the Health Communication chapter of Healthy People 2010 (the national health promotion and disease prevention agenda) the authors define effective health communication as "the study and use of communication strategies to inform and influence individual and community decisions that enhance health."¹ See Fig. 6.

CGHI broadcasts on radio stations that have predominantly African American and/or underserved audiences. The broadcasts occur as frequently as eight times a day starting at 6:30am and ending around 7:30pm daily. Each week, a health tip is broadcast. Past health tips have included "African American Women and Breast Cancer," "A Husband's Story of Breast Cancer," and "Aging Gracefully."

The mission of CGHI is to decrease health disparities by providing evidence-based health information. To date, no formal evaluation of the impact of CGHI has been

Figure 6: Effective Health Communication

Attributes of Effective Health Communication
■ Accuracy: The content is valid and without errors of fact, interpretation, or judgment. ■ Availability: The content (whether targeted message or other information) is delivered or placed where the audience can access it. Placement varies according to audience, message complexity, and purpose, ranging from interpersonal and social networks to billboards and mass transit signs to prime-time TV or radio, to public kiosks (print or electronic), to the Internet. ■ Balance: Where appropriate, the content presents the benefits and risks of potential actions or recognizes different and valid perspectives on the issue. ■ Consistency: The content remains internally consistent over time and also is consistent with information from other sources (the latter is a problem when other widely available content is not accurate or reliable). ■ Cultural competence: The design, implementation, and evaluation process that accounts for special issues for select population groups (for example, ethnic, racial, and linguistic) and also educational levels and disability. ■ Evidence base: Relevant scientific evidence that has undergone comprehensive review and rigorous analysis to formulate practice guidelines, performance measures, review criteria, and technology assessments for telehealth applications. ■ Reach: The content gets to or is available to the largest possible number of people in the target population. ■ Reliability: The source of the content is credible, and the content itself is kept up to date. ■ Repetition: The delivery of/access to the content is continued or repeated over time, both to reinforce the impact with a given audience and to reach new generations. ■ Timeliness: The content is provided or available when the audience is most receptive to, or in need of, the specific information. ■ Understandability: The reading or language level and format (including multimedia) are appropriate for the specific audience.

conducted. To address this issue, we will systematically obtain the information needed to refine the design, implementation, and quality of CGHI. To accomplish this aim, we will conduct focus groups with members of communities from the broadcast coverage areas of the radio stations on which CGHI is aired.

The purpose of the focus groups is to assess CGHI by evaluating responses to focus group questions based on the 11 attributes of effective health communication shown in the adjacent table. We will ask general questions related to focus group participants' sources of health information, and their perceptions of disparities.

African Americans are the primary focus of the information presented through CGHI. However, South Carolina is home to a unique cultural group, the Sea Island population. This is the most genetically homogenous group of blacks in the United States and the group has distinctive cultural practices, including an English-based Creole language containing many African words, unique cuisine, and strong family ties.

Therefore, to include the perspectives of people of Sea Island ancestry in the evaluation, we will conduct focus groups in the Sea Island areas of South Carolina that are included in the broadcast region in addition to other areas of the region.

Statement of Work

- **Task 1.** Develop a focus group moderator's interview guide to assess participants' perceptions of the extent to which the CGHI meets the 11 attributes of health communication
- **Task 2.** Conduct 12 focus groups within the broadcast coverage area of the Closing the Gap in Healthcare, Inc. radio broadcasts
- **Task 3.** Evaluate the focus group results

KEY RESEARCH ACCOMPLISHMENTS:

- **Results Related to Task 1:** This task has been completed. The project team (Drs. Ford, Spruill, Bryant, Lapelle and Ms. Jefferson) developed the focus group moderator's guide that will be used in the focus groups. The moderator's guide is included in **Attachment A**. The MUSC IRB approved it for use in the study. The team also developed the other study materials, including the recruitment flyer, the eligibility screener, the recruitment follow-up letter, and the MUSC IRB-approved and stamped consent form. All of these items, which have received MUSC IRB approval for their use, are included in **Attachment B**.
- **Results Related to Task 2:** The project team has identified the cities/towns where the focus groups took place and all 12 of the planned focus groups have been conducted. The distribution of cities/towns was based on the geographic region covered by the Closing the Gap in Healthcare, Inc. radio broadcasts. The focus groups that were conducted in the Sea Islands were culturally homogenous as well as racially homogeneous. The statewide geographic locations of the cities/towns where the focus groups were conducted are listed below:
 - Sea Islands
 - Edisto Island
 - Wadmalaw Island
 - Yorges Island
 - Other Locations
 - Summerville/Ladson
 - Moncks Corner/Goose Creek
 - McClellanville/Awendaw
 - Bamberg
 - Walterboro
 - Charleston (West Ashley/James Island)
 - North Charleston
 - Huger

- **Results Related to Task 3** The attached manuscript draft (introduction only) provides a summary of the focus group data (**Attachment C**).

REPORTABLE OUTCOMES:

Anticipated Products

The study results will inform the current gap in knowledge about the extent to which the CGHI is perceived to incorporate the 11 attributes of effective health communication and whether these perceptions are different in African Americans of Sea Island ancestry vs. those who are not. The results will also lead to the development of peer-reviewed manuscripts. In addition, the results will provide preliminary data for a larger grant proposal to expand/ modify/refine the CGHI and test the outcomes of these modifications.

Program Sustainability

Various proposals were funded during the year to support leveraging non-SE VIEW financial resources for project sustainability:

P20 CA157071

NIH/NCI

9/26/11-8/31/15

SC Cancer Disparities Research Center (SC CaDRe)

The essential purpose of the SC CaDRe is to create a critical mass of well trained and experienced faculty who can conduct cancer disparities research at SC State University and the Medical University of South Carolina.

The SC CaDRe will also enhance the racial and ethnic diversity of students who choose cancer research careers.

Role: Principal Investigator

R01 MD005892 Ford/Esnaola (PI)

NIH/NIMHD

4/1/12-12/31/16

NCMHD/Temple University

Improving Resection Rates Among African Americans with NSCLC

This study will test whether a statewide patient navigation intervention improves receipt of surgical resection, reduces time to surgery and improves survival in AAs with early stage disease, and it may uncover modifiable root causes underlying underuse of lung cancer surgery among AAs. The patient navigation intervention may prove to be a practical but powerful strategy for use by other health care providers, institutions, and communities seeking to reduce persistent racial disparities in lung cancer surgery and outcomes.

Role: Co-Principal Investigator

UG1 CA189848 Hughes-Halbert/Ford/Britton (MPIs)

NIH/NCI

8/1/14-7/31/19

Medical University of South Carolina NCORP Minority/Underserved Community Sites

The NCORP Minority/Underserved Community Site will contribute to the accrual of cancer patients to NCI-approved clinical cancer research studies, assist with the development of projects in cancer care delivery research, and provide training in cancer health disparities to Research Bases in NCORP.

Role: Co-Principal Investigator

U24 MD00694 Tilley (PI)

NIH/NIA

10/1/11-9/30/16

A Randomized Recruitment Intervention

This project is a randomized trial of a recruitment intervention to increase racial/ethnic diversity. Intervention will focus on specialty clinics where treatment trials for low prevalence diseases are usually conducted. The targets of the intervention will be the specialists and clinical trial coordinators.

Role: Co-Investigator

CTO:101942 Peterson (PI)

Hollings Cancer Center

2/1/13-12/31/15

Getting Onboard with an Active Lifestyle to Reduce the Risk of Breast Cancer Recurrence (G.O.A.L. Study)

The purpose of this feasibility study is to test a 12-week cancer rehabilitation intervention to increase physical activity and evaluate association between changes in PA and levels of select inflammatory biomarkers in women with invasive breast cancer diagnosed within previous 36 months who are overweight or obese.

Role: Co-Investigator

R25 CA193088

9/1/15-8/31/20

South Carolina Cancer health Equity Consortium (SC CHEC): Summer Undergraduate Research Training Program

The Medical University of South Carolina (MUSC), the University of South Carolina, and three Historically Black Colleges and Universities – Claflin University, South Carolina State University and Voorhees College – have created an innovative, inter-institutional, 14-week summer course. This is combined with a hands-on laboratory research training platform and career mentoring by some of the nation's leading cancer researchers at MUSC to attract and catalyze a new generation of diverse biomedical scientists.

Role: Principal Investigator

W81XWH-15-1-0266

DOD/CDMRP

7/15/15-7/15/18

South Carolina Cancer Health Equity Consortium: HBCU Student Summer Training Program

The goal of this program is to provide research training activities over a 3-year period to 12 students from three Historically Black Colleges and Universities (HBCUs) in South Carolina: Claflin University, South Carolina State University and Voorhees College. The three aims are to: (1) provide training in the basics of research design and methods to undergraduate students from three HBCUs, (2) immerse four students per year in prostate cancer research, and (3) implement a unique dual-level research mentoring strategy for the students.

Role: Principal Investigator

CONCLUSION:

The investigators have made substantial and quantifiable progress toward meeting the tasks listed in the Statement of Work.

REFERENCES:

1. Healthy People 2010. Secretary's Advisory Committee on health Promotion and Disease Prevention Objectives for 2010.

PROJECT TITLE: Community Based Participatory Research (CBPR) to Improve Oral Health

DIRECTOR: Renata S. Leite, DDS

The proposed study is designed to test the feasibility of a bundled, multi-level intervention, whose design is based on the preferences of the targeted rural population. The CAD/CAM system is a new technology that could be used by the military during treatment delivery to speed up the treatment time and reduce laboratory fees, and still provide state of the art esthetic prosthetic therapy. A social-ecological model is proposed to guide the intervention, providing a framework for intervening at multiple levels of influence (individual, peer and organizational) on oral health behaviors. By improving the oral care and oral health literacy of communities as a whole we will be improving the oral health of potential military recruits, decreasing the time spent on improving recruits oral health just prior to their active recruitment, therefore decreasing delays in recruitment due to poor oral health and decreasing the dollar amount spent with oral care.

Research findings demonstrate complex barriers impede prevention and early treatment of oral health diseases in disadvantaged groups¹. According to our formative study², these barriers include fear³; history of unpleasant experiences^{4,5}; being under- or uninsured^{6,7}; low health literacy and education levels⁸; cultural orientations that contribute to lack of trust⁹; logistic barriers of transportation, clinic schedules, and rural residence^{10, 11}; and difficulties negotiating relationships with healthcare providers¹². Prior studies reveal that academically led individual level interventions do not improve oral health outcomes¹³. The use of a community preferred, multi-level and locally relevant intervention is a promising approach to address oral health disparities in this population.

The African American (AA) Gullah population along the Southeastern U.S. sea coastal regions are a direct descendant population of rice plantation enslaved Africans from West Africa¹⁴. Gullah refers to several things: language, people, and a culture. The Gullah today have a considerably lower level of non-African genetic admixture as compared to other AA groups¹⁵, which is thought to be due to their longtime geographical, social and cultural isolation¹⁶. When compared to other AAs, the Gullah face profound OH disparities. Fernandes *et al.* found significantly higher prevalence rates of PD among Gullah AA (70.6%) as compared to national estimates of AAs (31.3%)¹⁷. The mean total number of missing teeth among the Gullah is significantly higher at 8.3 (se= 0.42; range: 0-25)¹⁷ when compared to means reported in the National Health and Nutrition Examination Survey (NHANES) 1988-1994 and 1999-2002 among dentate non-Hispanic black adults of 6.87 (se=0.15) and 5.78 (se=0.14), respectively ($p<0.01$)¹⁸, demonstrating that extraction is the treatment of choice in this population. For severely damaged/ broken down teeth the treatment options in a public health clinic is either extraction or a large posterior resin restoration, which may not be as resistant as ceramic restorations. Extractions and restorations that do not provide long-term resolutions may have a negative impact on an individual's oral health-related quality of life¹⁹. Furthermore, the loss of teeth may perpetuate poor oral hygiene²⁰. Ceramic restorations have not been made available to low socio-economic populations as an option for restorative care due to the cost of fabrication and compliance required with a second visit for delivery of the restoration. However, using a new CAD/CAM system (CEREC AC; Sirona, Charlotte, NC) all ceramic restorations can be fabricated for severely broken down teeth in one office visit overcoming the compliance requirement and with no additional high laboratory fee associated with the fabrication of ceramic restorations.

The approaches we have identified to intervene with this community, although used with other health promotion interventions, are novel in the field of oral health and include: use of community-based participatory research (CBPR) approach to design and test an oral health intervention; the use of a community oral health promoter (COHP); the use of multi-level or ecological approaches to influence individual and community-level changes; and the use of high technology (CEREC system) to provide high end prosthodontic care at low cost and on a productive time frame, suitable for community/outreach clinics. The academic-community partnership approach has been recommended by Healthy People 2010²¹, the Institute of Medicine²² and others²³⁻²⁵ as a strategy to eliminate health disparities. The partnership between the James B. Edwards College of Dental Medicine, Our Lady of Mercy Community Outreach Clinic in Johns Island, SC and the community advisory board (CAB) has developed into a capable partnership able to implement this proposed application.

Over the past decade, patient navigators have been used to help patients access and overcome barriers to receiving quality cancer care²⁶. More recently, patient navigators have been examined in primary care to extend a provider's reach in promoting adherence to preventive health recommendations^{27,28}. Navigators play a reactive role by trouble-shooting problems, while community workers, such as lay health educators, inform patients about the importance of adherence to a particular healthy behavior²⁹. Compared to navigators, educators are more proactive in addressing specific barriers. We propose to utilize a layperson to work in a combined role of educator and navigator to address the barriers and improve oral health outcomes.

KEY RESEARCH ACCOMPLISHMENTS:

Aim 1. Develop a novel community preferred OH multi-level intervention in church settings.

To develop/refine church level, group education/behavioral level, and individual level COHP training and treatment protocols; establish COHP recruitment process; and, evaluate participants' identification and recruitment processes and retention.

- The Oral Health handbook used with the group education/behavioral level intervention has been tested using community focus groups, following the CBPR approach
- A Community Oral Health Promoter (COHP) has been hired and trained
- Participants have been identified with the help of Church leaders, and 35 participants are enrolled;
- A Church Advisory Board (ChAB) was formed in the intervention Church
- Investigators met with ChAB to better develop and refine the church level strategy. According to the study protocol, one church level intervention had to be provided every month for the first 3 months of the study. Since we have 2 cohorts of participants, we planned on providing 5 church level interventions. We have completed all church level interventions.
 - Dec/2013: Oral Health Poster displayed at the main Church door.
 - Jan/2014: Movie and popcorn for kids
 - Feb/2014: Health fair
 - Mar/2014: Essay/Drawing Contest
 - Apr/2014: Presentation on the Relationship between Oral Health and Alzheimer's Disease and Stroke.
- We have conducted 12 peer groups and 40 one-on-one meetings;
- The COHP has answered to 3 phone calls, to answer oral health related questions from study participants;
- In the intervention church, 20 participants were enrolled; and only 1 has not yet been to the community dental clinic Our Lady of Mercy for dental treatment, as recommended by the study staff; 19 have completed the 3-month visit; while 7 have completed the 6-month visit and 1 has been terminated due to non-compliance with the study procedures.
- In the control church, 15 participants were enrolled; 14 have been to the community dental clinic Our Lady of Mercy for dental treatment, as recommended by the study staff; 10 have completed the 3-month visit; 7 have completed the 6-month visit; 1 was terminated due to health complications; and 5 were terminated due to non-compliance with the study protocol.

Aim 2. Evaluate intervention feasibility including intervention dosage and fidelity as well as monitoring and measurement of target outcomes.

To develop intervention monitoring, supervision, fidelity protocols and process evaluation; and to design and pre-test activity monitoring.

- Intervention monitoring, supervision and fidelity protocols and forms have been developed.
- Data analysis is being conducted.

Aim 3. Evaluate preliminary efficacy indications of the intervention and estimate outcome measurement variability needed to calculate sample size for a subsequent study of intervention efficacy.

We hypothesize that participants randomized to the intervention group (n=20) will demonstrate improved OH, OH literacy and OH self-efficacy and decreased dental anxiety with fewer occurrences of broken appointments as compared to those in the CG (n=20).

- MUSC IRB approval received on December 20, 2012.
- Protocol submitted to DoD for review and approval on January 16, 2013.
- Protocol re-submitted to DoD for review and approval on March 15, 2013.

- Protocol reviewed by the US Army Medical Research and Material Command (USAMRMC), Office of Research Protections (ORP), Human Research Protection Office (HRPO) and granted initial approval on August 13, 2013.
- IRB continuing review approved on December 07, 2013.
- Participant recruitment is completed.
- All 6-month visits completed
- Data analysis being conducted

REPORTABLE OUTCOMES:

- Spruill I, **Leite RS***, Fernandes J, Kamen DL, Ford ME, Jenkins C, Hunt K, Andrews J. Two Decades of Successes, Challenges, and Lessons Learned: Community Based-Scholarship and Community Engaged Research among the “Gullah” Population of South Carolina. *Int J Community Research and Engagement*. 2013. 6(1): 150-169.
- Andrews JO, Cox MJ, Newman SD, Gillenwater G, Warner G, Winklwer J, White B, Wolf S, **Leite RS**, Ford M, Slaughter S. Training Partnership dyads for CBPR: Strategies and Lessons Learned from the Community Engaged Scholars Program. *Health Promotion Practice*. 2013. 15(4): 524-533.
- **Leite RS**, Hudson CM, West LI, Carpenter EM, Andrews JO. Assessment of oral health disparities among the Gullah population of Hollywood, SC – Hollywood Smiles. Aging Research Day. Charleston, SC March 8th, 2013.
- Koch K, Hubbard J, Stamatiades G, Mueller M, **Leite RS**. Hollywood Smiles - An Oral Health Community Based Multi-Level Intervention. 48th Annual Perry V. Halushka MUSC 2013 Student Research Day. Charleston, SC. November 8th, 2013.
- Stamatiades GP, **Leite RS**. Hollywood Smiles Intervention and Handbook: A Post Program Evaluation. 48th Annual Perry V. Halushka MUSC 2013 Student Research Day. Charleston, SC. November 8th, 2013.
- Koch K, Hubbard J, Stamatiades G, Mueller M, **Leite RS**. Hollywood Smiles - An Oral Health Community Based Multi-Level Intervention. 7th Annual National Conference on Health Disparities. St. Thomas, VI. November 13-16, 2013.
- Health Resources and Services Administration (HRSA) grant T12HP24722. The South Carolina Oral Health Safety net Enhancement Portfolio: Improving Access to care through Innovative Oral Health Workforce Approaches (PI: Martin – Univ of South Carolina; MUSC Co-I: Leite). 2012-2015.
- International Association of Dental Research/Unilever. Using a Social Marketing Campaign and the CBPR Approach to Improve the Oral Health of Gullah African American Communities (PI: Leite). Grant submitted. 2014.
- CMS/Civil Money Penalty Funds for Certified Nursing Homes. Facilitating Long-Term Oral Health Skills – *FLOSS* (PI: Leite). Grant under review. 2014.
- Dr. Leite was the recipient of the James E. Clyburn Emerging Leader in Public Health and Health Disparities Award, presented by the University of South Carolina, Columbia, SC.
- Dr. Leite was nominated a Member of the Omicron Kappa Upsilon – National Dental Honor Society, Zeta Eta Chapter - Medical University of South Carolina in Charleston, SC.
- Health Resources and Services Administration (HRSA) Workforce Grant submitted and awarded (2015-2020) \$1,209,994 – Rural Oral Health Advancement and Delivery Systems (ROADS).
- Health Resources and Services Administration (HRSA) Undergraduate Training in Public Health submitted and awarded (2015-2020) \$1,736,062 – Rural Oral Health Advancement and Delivery Through Interprofessionalism Program (ROADTRIP).
- Leite RS. Hollywood Smiles – A Community-based Participatory Approach to Oral Health. Oral Presentation at the 2014 James B. Edwards College of Dental Medicine Oral Health Symposium. Medical University of South Carolina, Charleston, SC. November 21st, 2014.

- Koch K, Hubbard J, Stamatiades G, Mueller M, Leite RS. Hollywood Smiles - An Oral Health Community Based Multi-Level Intervention. 5th James B. Edwards College of Dental Medicine Scholars Day. Charleston, SC. February 19th, 2015.

CONCLUSIONS:

There are significant benefits associated to this protocol. This study is design to test the feasibility of a bundled, multi-level intervention, whose design is based on the preferences of the targeted rural Gullah community. If this study demonstrates feasibility in recruitment and retention of Gullah participants, acceptability of church members, and preliminary signals of efficacy, we will broaden our recruitment for the future R01 with other Gullah communities in the state.

Despite major improvements in oral health for the general population, oral health disparities exist for many racial and ethnic groups, by socioeconomic status, gender, age and geographic location. When compared to other African Americans, the Gullah face profound oral health disparities. There are 9 counties identified as the Gullah homeland and or the Sea Islands of SC, primarily Beaufort, Charleston, Berkeley, Dorchester, Colleton, Horry, Georgetown, Hampton, and Jasper, which will allow replication and testing of the intervention in multiple churches in multiple counties, therefore allowing us to decrease oral health disparities throughout the Southeastern US. The use of the CAD/CAM technology to provide all ceramic restoration to low socioeconomic communities will allow a decrease in the cost involved previously with this type of restorations.

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PROJECT TITLE: Patient Risk Assessment and Health Education with Computer Kiosks in Community Health Centers

DIRECTOR: Vanessa Diaz, MD

This initiative proposes an innovative use of a tablet-based health questionnaire to promote patient self-assessment of risk factors in a community clinic setting. Implementing healthy lifestyle behaviors is more likely in individuals who see themselves at risk.¹ Minorities are less likely to assess their health risks accurately and less likely to adhere to healthy lifestyle behaviors.^{2,3} Providing patient education regarding lifestyle behaviors in clinical practice can be difficult for a variety of reasons. Introducing a user-friendly electronic interface could help provide risk assessment and education to those who may not have considered their risk of disease. The aims of this study are to determine whether using an interactive tablet-based lifestyle behavior questionnaire in a federally qualified health center waiting room that generates summary printouts for providers immediately prior to a primary care visit can: (1) improve patients' awareness of their unhealthy lifestyle behaviors; (2) improve communication between patients and their providers about how to transition to healthier lifestyle behaviors; and (3) provide patients with the knowledge and motivation that they need in order to make changes to their lifestyle behaviors to enable them to live healthier lives and reduce the incidence of preventable diseases. We will compare these outcomes at three different time points over the course of a year: 1 week after baseline, 6 months after baseline, and 12 months after baseline. There will be two groups of informed and consenting participants aged 18-35 years old (ages targeted for military recruitment): (A) The intervention group will take the tablet-based questionnaire immediately prior to their primary care visit and receive a summary printout for their physician; (B) The control group will take the tablet-based questionnaire immediately after their primary care visit. After completing the tablet-based questionnaire, all participants will be provided with health education electronically aimed at improving their reported poor health behaviors. We hypothesize that participants in the intervention group, who will have the opportunity to interact with their provider about their identified unhealthy lifestyle behaviors shortly after completing the interactive tablet-based questionnaire, will show more improvement in the above outcomes than participants in the control group after 12 months of follow-up. The innovative combination of health information technology (HIT) using a tablet-based health questionnaire to measure perceived and actual risk for disease and to deliver health education to encourage healthier lifestyle behaviors would be useful in recruitment settings as well as in military clinics and hospitals.

Study follow up was completed in May 2015. Month 6 had a 60% follow-up rate (151 of 252 subjects) and Month 12 had a 51% follow-up rate (127 of 252 subjects). We are analyzing the 6-month and 12 month follow up data, and will report on any findings, and will pursue publication of any results; if significant.

Out of a projected 300 participants, there were 252 individuals (53% intervention; 47% controls) enrolled in the study. The sample was 71% Non-Hispanic black, 4.8% Hispanic, and 69% female participants. More than half of the participants had a BMI of 25 or higher, placing them in the overweight or obese category. There were 35 participants who expressed an interest in serving in the Armed Forces. However, 20 of those 35 had a BMI level greater than 25. This indicates that the project is already reaching individuals who may be ineligible to enlist in the Armed Forces due to health risk.

Significant Findings

- Overweight individuals in the intervention group were more likely to discuss weight loss with their doctor (59% vs. 33%, $p=0.0088$)
- Participants in the intervention group were more likely to trust their providers than those in the control group (83% vs. 71%, $p = 0.0427$)
- Participants were more likely to feel their provider cared about their health in the intervention group than in the control group (80% vs. 68%, $p=0.0468$)

- Participants receiving weight-related counseling felt their provider told them the truth compared to those who did not receive counseling (93% vs. 76%, $p=0.0128$)

Please see details in Tables 16-21.

Table 16: Demographics at Baseline			
Category	Total (N=252)	Control Group (N=118)	Intervention Group (N=134)
Age (mean $\pm$ SD)	26.6 $\pm$ 4.8	26.3 $\pm$ 4.7	26.9 $\pm$ 4.9
Gender			
Male	78 (31.0%)	39 (33.0%)	39 (29.1%)
Female	174 (69.0%)	79 (67.0%)	95 (70.9%)
Race			
Non-Hispanic Black	180 (71.4%)	80 (67.8%)	100 (74.6%)
Non-Hispanic White	49 (19.4%)	27 (22.9%)	22 (16.4%)
Hispanic	12 (4.8%)	4 (3.4%)	8 (6.0%)
Other	11 (4.4%)	7 (5.9%)	4 (3.0%)
Body Mass Index (BMI)			
Underweight	10 (4.0%)	6 (5.1%)	4 (3.0%)
Normal	78 (30.9%)	36 (30.5%)	42 (31.3%)
Overweight	61 (24.2%)	31 (26.3%)	30 (22.4%)
Obese	103 (40.9%)	45 (38.1%)	58 (43.3%)

Table 17: Personal/Family Experience and Interest in the Armed Forces			
Question	Total (N=252)	Control Group (N=118)	Intervention Group (N=134)
YES , someone in my family has served in the Armed Forces.	141 (55.9%)	72 (61.0%)	69 (51.5%)
YES , I have served in the Armed Forces.	9 (3.6%)	4 (3.4%)	5 (3.7%)
YES , I am interested in serving in the Armed Forces. ⁺	35 (14.4%)	14 (12.3%)	21 (16.3%)

⁺Only asked if person did not previously serve in the Armed Forces

Table 18: Overweight/Obese Participants' initial thoughts about their weight, and whether they discussed losing weight with their provider during their visit for individuals with personal or family experience and interest in the Armed Forces				
	Total (N=106)	Intervention (N=51)	Control (N=55)	P-value
Would you like to...?				0.7718
Weigh more	6 (5.7%)	2 (3.9%)	4 (7.3%)	
Weigh less	81 (76.4%)	39 (76.5%)	42 (76.4%)	
Stay the same	19 (17.9%)	10 (19.6%)	9 (16.4%)	
Do you want to discuss weight loss with MD? ⁺				---
Yes	33 (64.7%)	33 (64.7%)	---	
No	18 (35.3%)	18 (35.3%)	---	
Did you discuss weight loss with your MD? ⁺⁺				0.0022

Yes	31 (38.3%)	22 (55.0%)	9 (21.9%)	
No	50 (61.7%)	18 (45.0%)	32 (78.1%)	

⁺Only asked in the Intervention Group

⁺⁺Based 1-week follow-up responses

Table 19: Assessing Behavioral Changes in Overweight/Obese Participants at Baseline, Week 1, 6 Months, and 12 Months

	Total ⁺	Intervention	Control	P-Value
YES, I would like to weigh less.				
Baseline	125 (76.2%)	65 (73.9%)	60 (78.9%)	0.7418
Week 1	101 (74.8%)	54 (74.0%)	47 (75.8%)	0.7336
Month 6	72 (73.5%)	31 (64.6%)	41 (82.0%)	0.1363
Month 12	63 (77.8%)	33 (80.5%)	30 (75.0%)	0.5874
YES, I think I have a healthy diet.				
Baseline	58 (35.4%)	34 (38.6%)	24 (31.6%)	0.3459
Week 1	59 (43.7%)	35 (47.9%)	24 (38.7%)	0.2810
Month 6	46 (46.5%)	26 (53.1%)	20 (40.0%)	0.1927
Month 12	37 (45.1%)	24 (57.1%)	13 (32.5%)	0.0250
YES, I think I get enough physical activity.				
Baseline	45 (27.4%)	26 (29.6%)	19 (25.0%)	0.5153
Week 1	44 (32.8%)	24 (33.3%)	20 (32.3%)	0.8949
Month 6	38 (38.8%)	19 (39.6%)	19 (38.0%)	0.8722
Month 12	30 (36.6%)	12 (28.6%)	18 (45.0%)	0.1226

⁺Baseline (N=164); Week 1 (N=135); Month 6 (N=99); Month 12 (N=82)

Table 20: Participant's Perception of Whether Their Lifestyle Behavior is Healthy Compared to Whether Their Behavior is Healthy at Baseline

	Total (N=201)	Intervention Group (N=105)	Control Group (N=96)	P-value
Weight, N (%)				0.7525
Accurate Perception	136 (67.7%)	70 (66.7%)	66 (68.8%)	
Inaccurate Perception	65 (32.3%)	35 (33.3%)	30 (31.2%)	
Diet, N (%)				0.6221
Accurate Perception	139 (69.2%)	71 (67.6%)	68 (70.8%)	
Inaccurate Perception	62 (30.8%)	34 (32.4%)	28 (29.2%)	
Physical Activity, N (%)				0.2408
Accurate Perception	105 (52.2%)	59 (56.2%)	46 (47.9%)	
Inaccurate Perception	96 (47.8%)	46 (43.8%)	50 (52.1%)	
Alcohol Consumption, N (%)				0.7339
Accurate Perception	75 (66.4%)	42 (67.7%)	33 (64.7%)	
Inaccurate Perception	38 (33.6%)	20 (32.3%)	18 (35.3%)	

Participant's Perception of Whether Their Lifestyle Behavior is Healthy Compared to Whether Their Behavior was Healthy at Baseline.

Adapted from "Use of a Tablet-Based Risk Assessment Program to Improve Health Counseling and Patient-Provider Relationships in a Federally Qualified Health Center" by Vanessa A. Diaz et al. 2015. *American Journal of Medical Quality*. Published online before print May 20, 2015.⁸

Table 21: Participant Satisfaction with Provider during the Week 1 follow up

	Total (N=201)	Intervention Group (N=105)	Control Group (N=62)	P-value
Did you feel that you could trust your MD? N (%)				0.0427
Yes	155 (77.1%)	87 (82.9%)	68 (70.8%)	
No	46 (22.9%)	18 (17.1%)	28 (29.2%)	

Did you feel that your MD told you the truth about your health? N (%)				0.1148
Yes	164 (81.6%)	90 (85.7%)	74 (77.1%)	
No	37 (18.4%)	15 (14.3%)	22 (22.9%)	
Did you feel that your MD cared as much as you about your health? N (%)				0.0468
Yes	149 (74.1%)	84 (80.0%)	65 (67.7%)	
No	52 (25.9%)	21 (20.0%)	31 (32.3%)	

Participant Satisfaction with Provider during the Week 1 follow-up. Adapted from “Use of a Tablet-Based Risk Assessment Program to Improve Health Counseling and Patient-Provider Relationships in a Federally Qualified Health Center” by Vanessa A. Diaz et al. 2015. *American Journal of Medical Quality*. Published online before print May 20, 2015.⁸

KEY RESEARCH ACCOMPLISHMENTS:

While we were waiting on regulatory approval, we worked on a study that was recently published in *The American Journal of Gastroenterology*. It was a result of work conducted under the SE View project that discovered disparities in bariatric surgery between white and black adults in the US. The article has generated some media attention.

- Article link - <http://www.nature.com/ajg/journal/v108/n8/abs/ajg2012365a.html>
- US News and World Report - <http://health.usnews.com/health-news/news/articles/2013/08/05/whites-are-heavier-users-of-weight-loss-surgery-study-finds>

REPORTABLE OUTCOMES:

- Paper published in the *American Journal of Medical Quality* titled “Use of a Tablet-Based Risk Assessment Program to Improve Health Counseling and Patient-Provider Relationships in a Federally Qualified Health Center.”
 - Article link – <http://ajm.sagepub.com/content/early/2015/05/20/1062860615587012.long>
- Presentation scheduled for the 2015 North America Primary Care Research Group (NAPCRG) Annual Meeting - October 24-28, 2015 in Cancun, Mexico.
- Poster presentation on Research in Progress at the 2014 North American Primary Care Research Group (NAPCRG) Annual Meeting - November 21-25, 2014 in New York, New York.

CONCLUSION:

Our study demonstrates that prompting providers to have a discussion regarding lifestyle behaviors, specifically for weight management, does lead to more counseling being provided. However, this study does not evaluate the quality of that counseling, which is a necessary future direction. More research is needed to evaluate the long-term benefits of increased counseling. Finally, our results show that the discussion of lifestyle behaviors was associated with an improved patient-provider relationship. Specifically, patients had more trust in their providers, and felt their providers were more honest and caring. This suggests that integrating health information technology into primary care may encourage increased counseling opportunities and improve health directly as well as indirectly by improving continuity of care and adherence through a better patient-provider relationship.

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PROJECT TITLE: Healthy People in Healthy Communities – Health Information Exchange (HIT)

DIRECTOR: Marilyn A. Laken, PhD

Health information technology (HIT) provides the capability to mobilize healthcare information electronically across organizations within a region, community or hospital system. The goal of HIE is to facilitate access to and retrieval of clinical data to provide safer and more timely, efficient, effective, and equitable patient-centered care. HIE systems facilitate the efforts of clinicians to meet high standards of patient care through electronic participation in a patient's continuity of care with multiple providers and coordinate follow-ups. The Direct Trust Health Information Systems Program offers a technology and policy framework that enables participating health care providers using EHRs to securely exchange clinical information for treatment and public health and quality reporting purposes. Direct Trust has created a “trust framework” that extends use of direct exchange to over 40,000 health care organizations and 760,000 direct addresses/accounts. This trust framework supports both provider-to-provider direct exchange and bi-directional exchange between consumers/patients and their providers. The idea is that health information will follow the patient and be available for clinical decision making as well as for uses beyond direct patient care, such as measuring quality of care.

The objective for Year 4 was to develop and test a successful HIE system in the Williamsburg county hospitals and healthcare providers to allow them to exchange health information to improve coordination of care and meet meaningful use requirements. HIE implementation is more efficient if the participating hospitals and provider clinics have active EHR system (EHRs). The collaborative group of key stakeholders including primary care physicians, school nurse from the school district, WRH, Hope Health and DHEC in the Williamsburg County continued to serve as advisors with a mission to continue to develop and promote HIE in the county.

ACTIVITIES/RESEARCH PROGRESS

October- December 2014

Williamsburg Regional Hospital (WRH) and Medical University (MUSC) OCIO continued collaboration on the health information exchange (HIE) and health information technology (HIT). Mr. David Slenzak, Implementation Technology consultant at WRH worked hard on the data transmission process for HIE. There were two important components: 1. PRODUCTION environment (during the pilot testing, this will be WRH) and 2. TEST region (during the pilot testing, this will be the primary care practice at Williamsburg and MUSC hospital). The MUSC/WRH team discussed couple different technical approaches. WRH has already done the

configuration on their side to send *out* the discharge summary document *via* secure e-mail which would be transmitted through secure HISP (Health Information Systems Program) to other providers.

Mr. Slenzak started working with Dr. Allen, a primary care provider who was willing to be the TEST region and set up the DirectTrust.org account and configure their system for the exchange of HIE. Dr. Allen's EHR was Greenway and should have been a part of the DirectTrust.org HISP, and hence there would be no cost associated in transmitting these CCD-A summary documents (discharge assessment information) through secure e-mail and enabling the physician office to incorporate the data into their chart.

Williamsburg CHAB meeting November 6, 2014 held at WRH

Attendees: Dr. Laken, Dr. Qanungo, Dr. McElligott, Dr. Atkinson, Dr. Floyd, Mr. Slenzak, Ms. Poston, Ms. Lamb and Ms. Hayward. Ms. Hayward is a recent member of the Williamsburg County Community Health Advisory Board (CHAB) replacing Ms. Andrea McKnight, PA.

In the CHAB meeting, everyone gave updates on their projects, including prospective telehealth projects. A detailed update on the progress of implementing HIE between WRH (PRODUCTION environment) and the primary care office (TEST region) was discussed. Dr. Atkinson and Hope Health showed interest in participating in the HIE. Dr. Laken also talked about new opportunities. She discussed some ideas about developing a surveillance system for flu in the Williamsburg County. The idea about developing a pilot project on this with the primary care providers was well accepted.

January- March 2015

Williamsburg Regional Hospital (WRH) and Medical University (MUSC) OCIO continued to collaborate on the health information exchange (HIE). Initially, the test site (for pilot test) was supposed to be Dr. Raymond Allen's primary care practice at Williamsburg. But it was increasingly difficult to get Dr. Allen engaged in the process due to changes in his practice. Meanwhile, Hope Health, a large FQHC with two sites in the County, had genuine interest to become the first test site. Mr. Slenzak, Implementation Technology consultant at WRH started working to get HIE established between WRH and Hope Health. Hopehealth also shared the same EHR (Nexgen) with the WRH which would make it easier to establish the HIE.

Dr. Marilyn Laken continued discussions and exchange of ideas through conference calls and e-mail transmission with Dr. Frank Clark, CIO at MUSC, HopeHealth, and Mr. Slenzak at WRH. Plans were made for a meeting of the Community Health Advisory Board in the next quarter to continue to oversee implementation of health promotion programs and HIE.

April 2015-June 2015

Williamsburg CHAB meeting May 15, 2015 held at WRH

Attendees: Dr. Laken, Dr. Qanungo, Dr. Acierno, Dr. McElligott, Dr. Floyd, Dr. Jones, Ms. Poston, Ms. Lamb and Ms. Nesmith.

In the CHAB meeting, the SUCCESS of implementing the first TEST HIE between WRH, Hope Health and MUSC was celebrated. Everyone gave updates on their projects, including prospective telehealth projects. Dr. Qanungo discussed her new role in Telehealth Research and had a dialogue regarding the use of telehealth at multiple levels, in nursing care, education for diabetes, stroke, community outreach programs in rural areas, and most importantly for care coordination. Mrs. Lamb, the Williamsburg School District (WCSD) Nurse supervisor discussed about school-based clinics and said that by August all of the nine schools in Williamsburg would be participating in the Telehealth program with the Center for Telehealth at MUSC directed by Dr. McElligott. The reports of the school-based clinics would go to the child's primary clinics *via* fax. Henceforth the NEED for a HIE between school-based clinics and the WRH or other primary care clinics in the county was discussed. Dr. Laken said she would pursue this issue. Dr. Laken also described the process of HIE between Williamsburg and neighboring counties. Dr. Laken and the team started planning for the next steps for sustainability and expansion in the county (e.g. a) form linkages, b) get the word out through a county-wide

presentation/showcase in Williamsburg where leaders and prominent stakeholders of SC including Representative Clyburn, Project Officer from DOD, the Governor of SC and other dignitaries will be invited and c) look for future funding ideas).

Williamsburg Regional Hospital HIE Activities Update

Mr. Slenzak, Implementation Consultant at WRH prepared a written update that is detailed under “Key Research Accomplishments”. The greatest win that was updated and discussed was the success of the implementation of the first HIE in the Williamsburg County. Dr. Clark, MUSC OCIO confirmed **that there has been no other county in SC to have a successful HIE in place**. So this was a big accomplishment. Once the test cases of sending and receiving C32/CCD documents are successful between the healthcare facilities around Williamsburg and the WRH, then the next step will be to send up signed agreements to the involved healthcare practices and to establish written protocols to have a clear understanding of “when” ,“who” and “how” to make contact.

July 2015-September 2015

Williamsburg Regional Hospital (WRH) and Medical University (MUSC) OCIO continue to collaborate on the health information exchange (HIE). Dr. Marilyn Laken continued discussions and exchange of ideas through conference calls and e-mail transmission related to HIE with Dr. Frank Clark, CIO at MUSC, HopeHealth, Mr. Slenzak at WRH, the school district, nursing EHR companies and other stakeholders in Williamsburg County. Drs. Laken and Qanungo visited several stakeholders in Williamsburg County on August 25th. Mr. Pasley, County Supervisor, agreed to host the celebration. He expressed support for all components of the current and future plans for the HIE. Mrs. Poston and Dave Slenzak worked on a plan to complete the HIE connects between WRH and MUSC and WRH and the rural clinics and HopeHealth. All will sign a legal agreement and plan a protocol that outlines how the HIE will function. Once that the testing for HIE is complete and successful, Mr. Slenzak’s team in WRH will work on the clinical workflow by working on the following items. The following next steps are in working progress:

- Build Regional List of Direct Trust Addresses and Test Transfer
 - Obtain list of common acute care organizations
 - Obtain list of common long term care organizations
 - Obtain list of common primary care and specialists
 - Reach out and test
 - Build final list of ready and tested organizations
- Address Regulatory Concerns
 - Confirm compliance with HIPAA regulations
 - Update policies and consent forms if necessary
 - Stay tuned for new MU requirements
- Transfer data on 10% of Patients (MU requirements to be confirmed)
 - Determine best way to quantify and track transfers with hospital application
 - Determine best way to quantify and track transfers with ambulatory application
 - Determine best workflow for generation and transfer of CCD in various ambulatory settings
 - Determine best workflow for generation and transfer of CCD in various hospital settings
 - Implement new workflows in hospital settings
 - Implement new workflows ambulatory settings
- Track Compliance
 - Track compliance in hospital setting
 - Track compliance in ambulatory setting
- Discuss Optimal End State

- Sending to one address instead of many would reduce the burden on our sending staff but it would require added burden if we wanted to retrieve from a central data repository
 - Discuss with MUSC
 - Discuss with SCHIE
 - Discuss fees and costs associated with these options
- Determine technical and workflow mechanics for retrieving from SCHIE
- Discuss Regional Collaboration
 - Build regional consensus around mutual delivery. This will only be successful if we can get other organizations take the same actions we are taking.
 - Generate a memorandum of understanding (MOU)
 - Discuss fees and costs associated with this collaboration.

Focus is specifically on getting Data Use and Reciprocal Support Agreement (DURSA) signed between WRH, MUSC and HopeHealth, along with protocols for sharing data.

Drs. Laken and Qanungo met with the interim School District Superintendent, Mrs. Brock and chief school nurses, Jennifer Lamb. Efforts are in progress to arrange for a nursing EHR in the school-based clinics in Williamsburg. After reviewing several software packages, a company called “Health Office Anywhere” was selected. HealthOffice®Anywhere is a remarkable Cloud-based system that is designed for school districts to keep their school-based clinic’s health records secure, accurate, compliant, accountable and fiscally sound. On August 17, the HealthOffice®Anywhere staff gave a demonstration of the school EHR and Drs. Marilyn Laken, Shannon Hudson, Suparna Qanungo, Jennifer Lamb, Frank Clark and Mark Daniels attended the demonstration. Then Dr. Laken made a follow-up conference call with the company to explore how to connect the Williamsburg school district with the HIE.

Dr. Laken met also met with Drs. Jimmy McElligott and Mark Lyles about the MUSC Clinically Integrated Network to see how the HIE would fit.

We plan to have a CHAB meeting in the next couple months. Dr. Laken met with Dr. Slaughter to plan the Countywide showcase/celebration of the success of the first HIE in the Williamsburg County to promote better health and a stronger community. Plans are being made to host the Countywide showcase sometime in November 2015.

KEY RESEARCH ACCOMPLISHMENTS:

The greatest milestone/research accomplishment was the successes of implementation of the first HIE in the Williamsburg County. There has been no other county in SC as rural as Williamsburg to have a successful HIE in place. We have been successful in sending and receiving CCD documents to and from the following organizations. Please see **Table 22** for details.

Table 22: Sending/Receiving of Documents

Sent To	Sent From	Status
Lake City Hospital	WRH	Complete
Lake City Hospital	WRH Ambulatory	Complete
WRH Ambulatory	Lake City Hospital	Complete
WRH	Lake City Hospital	Complete
Hope Health	WRH	Complete
WRH	Hope Health	Complete
Hope Health	WRH Ambulatory	Complete
WRH Ambulatory	Hope Health	Complete
MUSC	WRH	Complete

WRH	MUSC	Complete
MUSC	WRH Ambulatory	In Progress
WRH Ambulatory	MUSC	In Progress

REPORTABLE OUTCOMES:

- *First HIE in a county in SC:* The first HIE was established in Williamsburg county between WRH and Hope Health, Lake City Hospital and MUSC. There are multiple benefits of using this HIE process. First it is a very quick method of transmitting summary documents. As soon as the nurse does the discharge assessment and before even the patient leaves, all the information is transmitted to his/her primary care provider or specialists. The system will also be able to transmit discharge summaries from an ED visit, which would be great for the primary physicians to access especially for the cases of 48 hr. follow-up. In the current process, it often becomes difficult for primary physicians to access hospital records for the 48 hr. follow-up cases and the HIE will greatly advance that process. The other advantage of the HIE over a regular patient portal is that unlike the patient portal, the transmitted information actually lands directly into the patient's chart in his/her primary provider's EHR system and the provider does not have to hunt for it, which is a great leap towards coordination of care.
- *Cross Project synergy and Collaborations:* The Center for Telehealth at MUSC has initiated a school-based telehealth clinic project in Williamsburg County and is working with providing the children with care when needed at their schools. The initiation of a nursing EHR in the schools and linking it to the HIE will support a more complete coordinated care for these children and youth and provide them with a medical home.

Plans for FY 16 include the following:

- Work with Community Health Advisory Board to continue to build consensus plan for HIE coordinated by Williamsburg Regional Hospital.
- Continue to engage in community dialogues with CHAB and local medical community to determine ongoing needs and resources for HIE/HIT.
- Establish that infrastructure will be located in and managed by the Williamsburg Regional Hospital, with assistance and training provided by the Office of the Chief Information Officer at the Medical University of South Carolina.
- Continue to assist in building a bond between Williamsburg Regional Hospital and local medical community.
- Evaluate process and progress of adoption/implementation of the HIE by medical practice sites, hospitals and schools in Williamsburg County and surrounding areas.
- Work with the software company to link the school EHR with the HIE, state reporting for flu and vaccinations and consider a product that can be used in local businesses.
- Identify additional sources of funding to sustain our efforts in Williamsburg County.

CONCLUSION:

Building HIE capacity in Williamsburg County will provide the technological foundation required to vigorously pursue good health across the lifespan for all residents of Williamsburg County. We are putting into place several approaches to sustaining our partnership in Williamsburg County. The improved health of the community will enhance military readiness and foster economic opportunity as the years of productive activity increase and the burdens of chronic disease decrease.

APPENDIX A

Focus Group Moderator's Guide: Marvella E. Ford, Co-Principle Investigator

Study: Evaluating a Media Strategy to Provide Health Messages to Medically Underserved Populations in South Carolina

I. WARM-UP AND EXPLANATION (10 minutes)

A. Introduction

1. Good evening. My name is Marvella Ford. I work at the Medical University of South Carolina.
2. Thanks for coming.
3. Your presence and participation are important. Your thoughts and comments will be valuable in helping us to evaluate the Closing the Gap in Healthcare radio series and improve the health messages delivered through its radio broadcasts.

Purpose

1. What we are doing here today is called a focus group. It's a discussion to find out your opinions -- like a survey.
2. We are interested in all of your ideas, comments and suggestions.
3. Each of you is very important and all of your comments -- both positive and negative -- are welcome.
4. There are no right or wrong answers.
5. Please speak up -- even if you disagree with someone else here. It's important that I hear what each of you think.

B. Procedure

1. We will be audiotaping our discussion. Everything you say is important to us, and we want to make sure we don't miss any comments. Later we'll go through all of your comments and use them to prepare a report on our discussion. However, all of your comments are confidential and will be used only for research purposes. Nothing you say will be connected to your name. Each of you has been given a nametag with a number on it. You will be referred to by your number throughout the entire focus group session. Therefore, DO NOT state your name when you respond. Also, if any questions make you uncomfortable, feel free not to answer them.
2. You don't have to wait for me to call on you but please speak one at a time, so the tape recorder can pick up everything.
3. We have many topics to discuss so I may change the subject or move ahead. Please stop me if you want to add anything.

Ice Breaker and Introductory Questions

We are looking at a set of criteria that are important to making good health messages. Some of these criteria may be more important than others. Your responses to the following questions will help us to decide which criteria are most important.

What media channels, such as TV, radio, newspapers, or the internet, have been most helpful to you as sources of health information?

How important have the Closing the Gap radio broadcasts been to you or others you know? In what ways have the broadcasts been important to you?

What have been the topics of the Closing the Gap Broadcasts that have been the most helpful to you? How did that information help you?

Availability

1. How good do you feel the radio is as an approach for reaching you with the Closing the Gap health messages? (Probe: What other approaches might be better? E.g., Internet, television, magazines, newspapers, Facebook, Twitter, etc.)
2. At what time of day do you typically listen to the Closing the Gap broadcast? (Probe: What are you usually doing while you listen to the broadcast? (E.g., driving, eating, doing household chores, etc.) (Probe: What would be your preferred time to listen to the broadcast? Does it come on at that time? What makes this your preferred time?) (Probe: how does this time fit best into your schedule?)

Timeliness

1. How often have you heard health information on the Closing the Gap broadcasts that was helpful to you? Did you get the information at a time when you really needed it? (Probe: What was going on in your life that made this information most helpful to you?)

Balance

[Play recorded Closing the Gap broadcasts (1 on cancer screening and others on randomly selected topics)]

1. Theodosia character: What are your thoughts about this character? (Probe: was her way of talking helpful in providing health information? If so, in what ways? If not, in what ways?)
2. Do you feel that the Closing the Gap broadcasts provide health information in a fair and or unbiased way? (Probe: If so, what are some examples? If not, what are some examples?)
3. Let's think about an example such as cancer screening. To what extent do you feel that the Closing the Gap broadcasts provide information about how cancer screening can be potentially helpful or harmful?
4. Do you ever get the sense that you are being asked to do health-related activities without fully understanding the pros and cons of these activities? (Probe: what are some examples from the broadcasts?)

Consistency

1. Does the health information that you have received from the Closing the Gap broadcast give the same message as the health information that you have received from other sources? (Probe: If not, do you remember what the differences were? What were the other source(s) of information?)
2. Which source of information do you think was most correct? (Probe: How did you come to this conclusion?)
3. Have other health messages you have heard or read in the media (i.e. newspaper, radio, TV, brochures, magazines) been consistent with the information you have heard on Closing the Gap in Healthcare Broadcasts?
4. Has the information on particular health topics been consistent and or the same throughout the Closing the Gap in Healthcare Broadcasts?

Accuracy

1. How much of the information that you have heard on the Closing the Gap broadcasts do you think was correct?

Reliability

1. To what extent do you trust or believe the information that you have heard on the Closing the Gap in Healthcare broadcasts?
2. To what extent do you trust or believe Dr. Bell as a source of information?
3. Does it matter who delivers the message of the Closing the Gap in Healthcare broadcast? (Probe: Would you still listen if someone else's voice is on it?)

Reach

1. How often do your friends and relatives listen to the Closing the Gap in Healthcare broadcast?

Repetition

1. How often have you noticed that the same Closing the gap broadcasts are being aired? Do you think that the broadcasts are aired enough times? (If so, please state your reasons. If not, please state how often, and when you think they should be aired.)

Cultural Competence

1. Do you believe that the information you hear on the Closing the Gap in Healthcare broadcasts speaks to the culture of African Americans?
2. Do you feel that the health messages are expressed in a way that is culturally correct?
3. Have you ever been offended by the way any of the broadcasts were conducted?

Understandability

1. How often have you heard words or terms in the Closing the Gap broadcasts that you still did not understand when the broadcast had finished? What were those terms?

APPENDIX B

Focus Group Recruitment Flyer, Eligibility Screener, Recruitment Follow-Up Letter, and Stamped MUSC IRB Consent Form



Want to be Part of a Focus Group For A Research Study?

The study will conduct focus groups with community members to discuss your sources for gaining health information.

COMPENSATION AND FOOD WILL BE PROVIDED

You Are Eligible If You Are:

- African American
- 21 years of age or older
- Able to attend one focus group meeting (about 2 hours)
- A listener of the Closing the Gap in Healthcare Radio Broadcast with Dr. Thaddeus John Bell

Date: To be determined

Time: To be determined

Location: To be determined

If you are interested in participating, please call 1-888-782-0371 or 843-744-9009.

This study is being conducted by the Department of Medicine/Division of Biostatistics and Epidemiology at the Medical University of South Carolina, Hollings Cancer Center and is supported by the Department of Defense/ Southeastern Virtual Institute for Health Equity and Wellness Grant.



Date

Name

Address

City, State Zip

Dear _____:

You have received this letter because you have agreed to participate in a focus group research study. The goal of the study is to evaluate the Closing the Gap in Healthcare, Inc. radio broadcasts. Your thoughts and participation will help us to improve the health messages delivered through the radio broadcasts.

Deciding to take part is up to you. If you **DO NOT** want to take part, please call 843-876-1569. When you call, just state that you do not want to take part in the focus group.

The focus group session is scheduled for (date) at (time) in (location). The focus group will last about 2 hours.

You will receive a light meal for participating in the focus group. If you would like to receive more information about the focus group, please call **Melanie Sweat Jefferson at (843) 876-1569 at the Medical University of South Carolina.**

Sincerely,

Marvella E. Ford, PhD
Associate Professor
Department of Medicine
Division of Biostatistics and Epidemiology
Associate Director, Cancer Disparities Program
Hollings Cancer Center



IRB Number: Pro00009605
Date Approved 9/19/2011

TELEPHONE SCRIPT FOR THE ELIGIBILITY SCREENER

The Evaluating a Media Strategy to Provide Health Messages to Medically Underserved Populations in South Carolina

Hello, is this Mr./Ms. _____? This is _____. I am calling on behalf of the Medical University of South Carolina about a research study opportunity. Mr./Ms. _____, our goal is to provide the best health communication strategies for providing health information. To help us meet this goal, we would like to ask you some questions. We are interested in your sources for gaining health information.

We know that your time is valuable. The questions will take about 5 minutes to complete. Do you have a few minutes now for me to ask you some questions?



NO	Would you be able to give me a list of dates and times when it would be more convenient for us to talk? <i>Interviewer writes down a list of more convenient dates/times and calls back at those times.</i>
UNDECIDED	Your opinions are very valuable to us. Taking part in this project will not affect the regular medical care you receive. Deciding to take part is up to you. Your answers will be kept confidential and will not be seen by anyone who is not directly involved in this project. If you have about 5 minutes, I would like to read a few questions over the telephone.
DOES NOT WANT TO PARTICIPATE	Thank you very much for your time. The regular medical care you receive will not be affected by your decision to not participate in this study.

OR



YES	Your opinions are very valuable to us. Taking part in this project will not affect the regular health care you receive. Deciding to take part is up to you. Your answers will be kept confidential and will not be seen by anyone who is not directly involved in this project. If you have about 5 minutes, I would like to read a few questions over the telephone. Mr./Ms. _____, please feel free to ask me as many questions as you would like as we go through the questions. <i>Proceed with first question.</i>
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IRB Number: Pro00009605
Date Approved 9/19/2011

ELIGIBILITY SCREENER NARRATIVE

A. Are you age 21 or older?

YES

If YES, continue

Or

NO

If NO, then thank them for responding and terminate the call.

"Mr./Ms. _____, we are looking for people aged 21 and over. Thank you very much for your time. We will call if another opportunity for you to participate arises".

B. May I confirm that you are a Black/African American male/female?

YES

If YES, continue and circle the correct race and gender

Or

NO

If NO, then thank them for responding and terminate the call.

"Mr./Ms. thank you very much for your time. We will call if another opportunity for you to participate arises".

C. Do you listen to the radio?

YES

If YES then continue.

Or

NO

If NO, thank them for responding and terminate the call. "Mr./Ms. _____, our survey will be held with people who listen to the radio. Thank you very much for your time. We will call if another opportunity for you to participate arises".

D. Do you listen to (name of one of the stations that broadcast CGHI, Inc.) with Dr. Thaddeus John Bell?

YES

If YES then continue.

Or

NO

If NO, thank them for responding and terminate the call. "Mr./Ms. _____, our survey will be held with people who listens to _____. Thank you very much for your time. We will call if another opportunity for you to participate arises".

E. Have you heard any of the CGHI, INC broadcasts with Dr. Thaddeus John Bell?

YES

If YES then continue.

Or

NO

If NO, thank them for responding and terminate the call. "Mr./Ms. _____, our survey will be held with people who listens to _____. Thank you very much for your time. We will call if another opportunity for you to participate arises".

F. Mr./Ms. _____, you are eligible to participate in the focus group. The focus group will assess your perceptions of health disparities, and your sources of obtaining health information. The focus group will last no longer than 2-hours. For your participation you will receive a light meal and a \$55.00 gift card at the end of the focus group session.

G. Would you like to participate in the focus group?

YES

If YES, continue

Or

NO

If NO, then thank him/her for responding and ask for the reason why he/she does not want to participate in the focus group (document reason on the telephone contact form) and terminate the call. "Mr./Ms. _____, thank you very much for your time".

H. Are you available to participate in the focus group at this time?

YES

If YES, continue

Or

NO

If NO, then ask them if there is another time or date that would be more convenient for you to participate in the focus group. (Document the time and date on the focus group Appointment Form). Thank them for their time and reconfirm their focus group appointment. "Mr./Ms.____, thank you very much for your time. You will receive a written notification with all of the focus group information. I look forward to speaking with you on **DATE** at **TIME**."

I. Thank you so much for choosing to participate in this survey. Let me first tell you a little bit about the focus group....**Your participation in the focus group is voluntary.** You can decide not to take part at the beginning or you can start and then decide to stop. If you do not participate, you will not be a part of this study. Whatever you decide, you will not receive a penalty or loss of benefits of any sort based upon your decision. Your decision will not affect the medical care you receive from your usual source. All information you provide will be kept confidential. It will only be used for research purposes. It will be stored in a locked filing cabinet in a locked room and on a password-protected study network directory. Only study staff will have access to the information you provide. You will not be identified by name, address, or social security number once the study has ended.

If you have any more questions about your participation in this study or study related injury, you may contact Dr. Marvella Ford, the Principal Investigator, at (843) 876-1116 or Mrs. Melanie Jefferson, the study coordinator, at (843) 876-1569. You may contact the MUSC Hospital Medical Director (843) 792-9537 concerning medical treatment. If you have any questions about your rights as a research subject in this study, you may contact the MUSC Institutional Review Board for Human Research at (843-792-4148).

J. Do you have any questions?

YES

If YES, answer questions.

NO

If NO, state, "Thank you very much for your time."

End Call.

Reasons people do not want to participate...

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____
- 11. _____
- 12. _____
- 13. _____
- 14. _____
- 15. _____

**MEDICAL UNIVERSITY OF SOUTH CAROLINA
CONSENT TO BE A RESEARCH SUBJECT**

Study Title:

**Evaluating a Media Strategy to Provide Health Messages to Medically Underserved
Populations in South Carolina**

Focus Group Consent

A. PURPOSE AND BACKGROUND:

You are being asked to participate in a research study sponsored by the Medical University of South Carolina (MUSC). This study is sponsored by the Department of Defense, Southeastern Virtual Institute for Health Equity and Wellness Project (DOD- SE VIEW). The purpose of this study is to evaluate the impact of the "Closing the Gap in Healthcare, Inc." radio broadcast series, and learn about what your sources of health information are, and your perceptions of health disparities. You are being asked to participate in this study because you are a member of a community within the broadcast coverage areas of the radio stations on which "Closing the Gap in Healthcare, Inc." is aired. The investigators in charge of this study are Dr. Marvella E. Ford, Dr. Ida J. Spruill, and Ms. Debbie C. Bryant. This study is being done at the MUSC Hollings Cancer Center and will involve between 80 to 100 participants.

B. PROCEDURES:

All of the study procedures described below are being done specifically for the study. This study does not involve medical treatment. If you agree to be in this study, the following will happen:

You will receive a brief introduction about the purpose of the focus group. You will be introduced to other members of the group through a brief icebreaker in which each participant is asked to describe his or her dream vacation and light refreshments will be served. This will take about 15 minutes.

You will be asked to complete a short background form before the focus group begins. The form will include questions about you, such as your age, sex, gender and race. It will take about 5 minutes to complete. Your name will not appear on the form.

1. You will be asked to participate in a focus group. The group will include about 8-10 people. Discussion topics will include questions about your perceptions of the Closing the Gap in Healthcare, Inc. broadcast, perceptions of health disparities, and sources of health information. The focus group discussion will be audio-taped.



IRB Number: Pro00009605
Date Approved 8/2/2013
Expiration Date: 8/1/2014

Please initial your choice below:☐ Yes, I agree to be audiotaped.☐ No, I do not agree to be audiotaped.**C. DURATION:**

Your participation in the study will be completed after one focus group session. This session will take about 1.5 to 2 hours.

D. RISKS/DISCOMFORTS:

1. There are no known physical or psychological risks or discomforts associated with this study.
2. It is possible but unlikely that some of the focus group questions could pose minor psychological discomfort related to focus group questions. To protect against this risk you can choose to not respond to any questions or to terminate participation at any point.
3. One might worry about someone sharing information you provided during the focus group to unauthorized people. Because the study questions ask only about your perceptions about health communication and health disparities, this should pose no more than minimal risk to you. Procedures are in place to protect your information from being released to unauthorized people. Only research staff and the sponsor directly involved with the study will have access to study information. Information from the background form and focus group will be kept in a separate location from information that identifies you as a person. We will collect your name, phone number and address so that we can remind you about the study appointment. All your study information will be kept locked in a protected location, where only authorized people can access it.

E. BENEFITS:

There may be no direct benefit to you from participating in this study. It is possible, however, that discussions about your perceptions of health communication and health disparities may provide you with useful information. It is hoped that the results of the study will provide insight about how to better provide health information to underserved communities.

F. COSTS:

There are no costs to you for participating in this focus group.



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Please initial your choice below:☐ Yes, I agree to be audiotaped.☐ No, I do not agree to be audiotaped.**C. DURATION:**

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E. BENEFITS:

There may be no direct benefit to you from participating in this study. It is possible, however, that discussions about your perceptions of health communication and health disparities may provide you with useful information. It is hoped that the results of the study will provide insight about how to better provide health information to underserved communities.

F. COSTS:

There are no costs to you for participating in this focus group.



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G. COMPENSATION:

You will receive compensation. A gift card valued at \$55.00 will be given at the completion of the focus group and you will receive a light meal.

H. ALTERNATIVES:

You do not have to participate in this study. Choosing not to participate will not affect you or your future medical care in any way.

If you wish to know more health information but do not want to participate in this study, the researchers will provide you with the telephone number of local support groups and websites where you can find this information.

Results of this research will be used for the purposes described in this study. This information may be published, but you will not be identified. Information that is obtained concerning this research that can be identified with you will remain confidential to the extent possible within State and Federal law. The investigators associated with this study, the sponsor, and the MUSC Institutional Review Board for Human Research will have access to identifying information. All records in South Carolina are subject to subpoena by a court of law.

In the event of a study related injury, you should immediately go to the emergency room of the Medical University Hospital, or in case of an emergency go to the nearest hospital, and tell the physician on call that you are in a research study. They will call your study doctor who will make arrangements for your treatment. The study sponsor does not pay for your treatment, the Medical University Hospital and the physicians who render treatment to you will bill your insurance company. If your insurance company denies coverage or insurance is not available, you will be responsible for payment for all services rendered to you.

Your participation in this study is voluntary. You may refuse to take part in or stop taking part in this study at any time. You should inform the investigator in charge of this study if you decide to do this. Your decision not to take part in the study will not affect your current or future medical care or any benefits to which you are entitled.

The investigators and/or the sponsor may stop your participation in this study at any time if they decide it is in your best interest. They may also do this if you do not follow the investigator's instructions.



IRB Number: Pro00009605
Date Approved 8/2/2013
Expiration Date: 8/1/2014

APPENDIX C

Draft Manuscript – Introduction Only

CLOSING THE GAP IN HEALTHCARE

Evaluating a Media Strategy to Provide Health Messages to Medically Underserved Populations

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Key Words: health disparities, health communication, qualitative analysis

Manuscript/Main Text Word Count: 7,590 (Maximum = 5,500)

INTRODUCTION

Health Disparities in the U.S. and in South Carolina

The U.S. National Institutes of Health defines *health disparities* as “differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups”[3]. For nearly every category of chronic disease, African Americans bear a disproportionate disease burden in comparison to their European American counterparts. According to the Institute of Medicine’s report titled: “Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care”[2], the U.S. health care system provides minorities with different treatment in comparison to European Americans, which results in health disparities.

For example, in the U.S., African Americans, Hispanics, and Native Americans experience a 50%-100% higher rate of diabetes prevalence and mortality than European Americans [2]. According to the American Diabetes Association [5], in the U.S., diabetes prevalence rates for African Americans were 13.2% in comparison to the 7.6% diabetes prevalence rates for Caucasian Americans. The age-adjusted diabetes mortality rate per 100,000 in year 2013 for African Americans was 39.5% and 18.6% for Caucasian Americans [6].

In South Carolina as in the nation as a whole, diabetes ranks as the seventh leading cause of death [13]. In South Carolina, 1 in 8 African Americans has been diagnosed with diabetes, and this is “the 16th highest rate of diabetes among African Americans in the nation [13].” Although over the past 20 years, African American females in South Carolina have had the highest diabetes prevalence compared to any other racial/ethnic or gender group, African American males have experienced a 167% increase in diabetes prevalence, from 5.4% in 1990 to 13.9% in 2010.

Racial and ethnic differences are also seen in disparities in prevalence and mortality rates related to cardiovascular disease. According to the U.S. Department of Health and Human Services, Office of Minority Health, in 2011, the age-adjusted prevalence rate of cardiovascular disease among African Americans was 7.0%, compared to a prevalence rate of 6.3% among European Americans [7]. In 2010, the age-adjusted cardiovascular mortality rate among African Americans was 229.5%, compared to a rate of 179.9% among European Americans [7].

In South Carolina, cardiovascular disease is the second leading cause of death [15]. African Americans in this state have a higher probability of developing ischemic heart disease than European Americans, which contributes to an average 10-year lower life expectancy for African Americans [16].

Cancer disparities also exist in the U.S. Between 2005 and 2009, for all cancer sites, incidence rates were 613.1 for African American males and 533.7 for European American males; the rate ratio was 1.15. During the same time period, for all cancer sites, incidence rates were 391.7 for African American females and 418.3 for European American females; the rate ratio was 0.94 (ACS Facts & Figures for African Americans, 2013-2014). Between 2005 and 2009, for all cancer sites, mortality rates were 288.3 for African American males and 216.7 for European American males; the rate ratio was 1.33. During the same time period, for all cancer sites, mortality rates were 180.6 for African American females and 155.0 for European American females; the rate ratio was 1.17(ACS Facts & Figures for African Americans, 2013-2014).

In South Carolina in 2010, the cancer incidence rate for European Americans was 443.2%, and the cancer incidence rate for African Americans was 442.3% [8]; while the cancer mortality rate for European Americans was 173.5%, and the cancer mortality rate for African Americans was 205.2%.

The purpose of this study was to evaluate perceptions of a radio-based health communication strategy that is geared primarily toward African American adults and the medically underserved. The radio broadcast is titled

“Closing the Gap in Healthcare, Inc. (CGHI).” Its mission is to decrease health disparities in South Carolina by providing evidence-based health information to a broad community audience. CGHI incorporates a series of radio broadcasts that provide health messages to medically underserved populations in South Carolina with low health literacy. In the Health Communication chapter of Healthy People 2010, the authors define *effective health communication* as “the study and use of communication strategies to inform and influence individual and community decisions that enhance health [18].”

CGHI broadcasts on radio stations that have predominantly African American and/or medically underserved audiences. The broadcasts occur as frequently as eight times a day, starting at 6:30 a.m. and ending around 7:30 p.m. daily. The topics of the health tips change on a monthly basis. Past health tips have included “African American Women and Breast Cancer,” “A Husband’s Story of Breast Cancer,” and “Aging Gracefully.”

Prior to this study, no formal evaluation of the impact of CGHI had been conducted. To address the lack of evaluation, systematically, the investigators obtained the information needed to refine the design, implementation, and quality of CGHI. To accomplish this aim, the investigators conducted focus groups with members of communities from the broadcast coverage areas of the radio stations on which CGHI was aired. The focus groups were designed to assess CGHI’s effectiveness by evaluating responses to focus group questions based on the 11 attributes of effective health communication shown in Figure 1.

African Americans are the primary focus of the information presented through CGHI. In addition to the general African American population in the state, South Carolina is home to a unique cultural group, the Sea Island population. This is the most genetically homogenous group of Blacks in the United States, and the group has distinctive cultural practices, including an English-based Creole language containing many African words, unique cuisine, and strong family ties.

Therefore, to include the perspectives of people of Sea Island ancestry in the evaluation, the investigators conducted focus groups in the Sea Island areas of South Carolina that are included in the broadcast region in addition to other areas of the region.