

2009-2010
Summary of Activities
Center for Healthy Communities

Introduction

The USA Board of Trustees established the Center for Healthy Communities September 4, 2004 to help the University better address the needs of underserved residents in the Gulf Coast Region. The Center has enjoyed continued growth and development during its existence and has achieved local, regional and national recognition as an effective vehicle by promoting education, research and public service for targeted communities.

The primary activities of the Center are under the umbrella of the Center of Excellence Grant. The bulk of the Center's community outreach programs are now funded by the grant. The Center has enjoyed funding for several other research projects. In this report we have included a summary of Activities for the last year of the Center of Excellence Grant and brief summaries of other research.

Title: Broad-based collaborative on minority health and health disparities
Grant #: 1P20 MD002314
Reporting Period May 1, 2009 to May 31, 2010

OVERALL SUMMARY

A.) Objectives

The overall goal of the University of South Alabama Center for Healthy Communities (CHC) Center of Excellence (COE) is to utilize a broad-based collaborative and multidisciplinary effort to address health disparities within the University of South Alabama (USA) service area. In year three of the P-20 grant we have focused on sustaining programs and relationships within our service area. We continue to take an approach based on community based participatory research principles. Our relationships with our community partners have been strengthened and we continue to include those partners in decisions regarding our future.

B.) Studies and Results

The leadership of the COE has remained intact with all core leaders maintaining their roles. We continue meetings of Core leaders and they have evolved from dealing with day-to-day administrative issues to discussions on the science of our approaches and exciting new initiatives that will address our objectives. In these meetings we have started to share findings from our work and have been able to build stronger bridges between cores. The members of the internal advisory committee continue to be strong advocates as well as advisors.

The community engagement core strengthened our community health advocates (CHAs) program. A number of CHA initiated projects have been implemented. The CHA initiated projects were focused on the areas of importance outlined in our previous Regional Health Disparities Symposium. We have enrolled several African American churches into a web-based program that facilitates activities of health ministries and allows for a personally created electronic record of health information. The pipeline programs of the community engagement core continue with the successful recruitment and retention of junior high and high school students. We have maintained a relationship with several of our students who have now completed their freshman year of college. We have continued our partnership with the College of Education. In this partnership we co-sponsor a program for 3rd through 5th grade students to enhance math, science and reading skills. These students come from the communities on which our COE focus.

C.) Significance

Our efforts continue to increase the community's knowledge and interest about health disparities. The COE award has been instrumental in enhancing the role of the Center for Healthy Communities (CHC) as a leader and resource in the fight against health disparities along the Northern Gulf Coast. Our CHA's have been empowered to develop their own initiatives in the fight against health disparities in their own communities. We believe these grassroots efforts are most likely to be successful in this fight.

D.) Publications:

Crook ED, Arrieta MI, Foreman RD. Management of hypertension following Hurricane Katrina: a review of issues in management of chronic health conditions following a disaster. *Curr Cardio Risk Rep* 2010 May;4(3):195-201.

Abstracts/ Presentations

Hudson K, Dubose L, Shaw T, Bryan V, Hudson A, Hansberry S, Brye W, Bonner V, Toelken K, Foreman R, Eastburn S, Crook E, Arrieta M. Research apprenticeship as a novel element in community based participatory research. Partnering to Improve Health: The Science of Community Engagement, National Center for Research Resources and Association for Prevention Teaching and Research 2010 May 13-14; Arlington, VA.

Hudson K, Hawthorne S, Arrieta M, Crook E. The impact of labor market segmentation on access to health care in low income neighborhoods: some preliminary findings. 73rd Annual Meeting of the Southern Sociological Society 2010 Apr 21-24; Atlanta, GA.

Myles H, Hanks RS, Kendrick LA. Youth and adult community health advocates take a stand against health disparities: intergenerational constructions and solutions. *Association for Applied and Clinical Sociology* 2009 Oct 8-9; San Antonio, TX.

Myles H, Hanks RS, Kendrick LA. Pumping progress: a pipeline to the health professions. Partnering to Improve Health: The Science of Community Engagement, National Center for Research Resources and Association for Prevention Teaching and Research 2010 May 13-14; Arlington, VA.

Myles H, Hanks RS, Kendrick LA. The cycle of success: moving from community identification of priorities to engaging community health advocates in the process of eliminating health disparities. Partnering to Improve Health: The Science of Community Engagement, National Center for Research Resources and Association for Prevention Teaching and Research 2010 May 13-14; Arlington, VA.

Reports from Individual Cores

Administrative Core

A.) Objectives:

The aims of the Administrative Core remain unchanged and are as follows:

- 1) To facilitate the achievement of objectives in all other cores (research, community engagement, research education and training) via support of their activities.
- 2) To foster established and develop new key relationships within and external to the University of South Alabama to expand the Center of Excellence's effectiveness in addressing its overall objective.

B.) Results:

We continue to have core leader meetings regularly. These meetings have evolved from dealing with day-to-day management issues of the grant to examining and thinking through new initiatives. These discussions have resulted in new partnerships between the community engagement and research cores. These new initiatives are expected to result in new funding opportunities in the future.

Our internal advisory board, chaired by Troy Stevens, PhD, Professor of Pharmacology and Director of the University of South Alabama Center of Lung Biology, has met and offers advice continually. Other members of the committee come from the Schools of Allied Health, Nursing, Art and Sciences and Education.

As to the second objective, we continue to nurture established relationships. As mentioned above, we are challenged in our capacity to form new partnerships. Therefore, we have focused our efforts on strengthening those relationships currently in existence. We continue to use personal meetings, our newsletter, our website, and collaborative projects to sustain these relationships. Of note, the Core Director and Grant PI, Dr. Crook, gave 12 presentations on health care reform to various groups between May 2009 and June 2010.

The content of the presentation evolved with the health care reform debate and eventual adoption of legislation.

Like last year, we continued our support of the University's Sickle Cell Center's annual conference. We supported the keynote speaker, Dr. K. Haskell, MD, Director of the Sickle Cell Center at the University of Colorado Health Sciences. We were able to support the attendance of many of our CHAs at this meeting where important and practical information was disseminated.

Community Engagement Core

A.) Objectives:

The objectives of the community engagement core remain unchanged and are as follows:

- 1) To improve health of the populations at high risk for health disparities via dissemination of health information and community based health advocacy;
- 2) To develop a new generation of healthcare providers and healthcare researchers who will focus on issues underlying health disparities;
- 3) To provide evidence of the effectiveness of strategies for community engagement in order to understand both process and outcome in building a community based outreach program.

B.) Studies and Results:

Objective 1: In year 3 our major intervention to achieve this goal was to nurture a community health advocate program designed to empower community members to become leaders in addressing their communities' health issues and to expand our health information dissemination efforts.

Community Health Advocate (CHA) Program

Our CHA program has continued to develop. We now have 127 adult CHAs and 62 youth CHAs (189 total). This represents considerable growth of the program as there were 73 active CHAs reported at the end of year 2. We have continued our Advisory Board for the CHAs. The Advisory Board is built on a stakeholder model and each stakeholder on the CHA advisory board is a member or leader of a community organization that has provided other CHAs already and are likely to provide more in the future.

This project is based on community based participatory principles. In year 3, several CHAs identify the health initiatives that deserve priority. Similar to past years they have continued to focus their efforts on physical activity, obesity, cardiovascular disease, diabetes, hypertension, women's health, and stress. In year 3 our many of our CHAs have become trainers for the other CHAs in many of these areas. The CHA initiated projects have had success and have been used as demonstration projects for other CHAs to implement in their areas. As in previous years we continue to have monthly meetings for our CHAs and continue our "Passport Program" to acknowledge their accomplishments and additional training. Certain events and programs to are highlighted below.

Highlighted CHA/YCHA events

Martin Luther King Day presented an opportunity to distribute information at the Health Fair at a local community park, Lyons Park. The day's events also included workshops and seminars at a local community college campus where CHAs and Youth CHAs had an opportunity to participate in open forums and listen to discussions by community leaders. Over 2,000 community members participated and more than 200 people were screened for blood pressure and blood glucose. In a collaborative effort with one of the local community centers, Dumas Wesley, volunteers from across the area, CHAs and University of South Alabama students engaged in hands-on volunteer activities in the 36617 zip code. Dumas Wesley Community Center provides a multitude of services to residents in Mobile. These services include but are not limited to, daycare and after school care, senior programming and transitional housing for women and children. The Martin Luther King Day activities included removing debris from the streets, painting interior walls for low-income residents, repairing a roof for an elderly citizen and building a ramp for accessibility at Dumas Wesley. Over 500 participants assisted in the neighborhood improvements sponsored through the partnership between the CHC Center of Excellence, University of South Alabama and Dumas Wesley Community Center.

Go Red for Women, an annual event hosted by the CHC Center of Excellence, was held at a local restaurant, The Spot of Tea, in downtown Mobile. The event emphasized the importance of physical activity to reduce heart disease, obesity, diabetes, stroke and kidney disease. Guest speakers were Alabama State Senator Vivian Figures, a local political figure who has made health care an important part of her legislative agenda, and Dr. Clara Massey, Chief of Cardiologist and Professor at USA. The day's events concluded with a Dancefit session conducted by, CHA, S Woods, in the Cathedral park across the street from the restaurant. All 115 attendees received tools to facilitate and motivate continued physical activity.

"Walk for Families" was sponsored by Dumas Wesley Community Center. The walk was complimented by a health fair where Center of Excellence staff as well as CHAs distributed health information, provided health screenings, and disseminated valuable information about Center programs and services.

Our youth CHA organized and ran an event in August 2009 focused on 5 priority area that they identified. The **"One Night Stand"** was a great success with valuable information and discussions exchanged on teen pregnancy, domestic/ dating violence, obesity, physical activity and HIV / STDs. Many community and governmental organizations participated and described this event as one of the best venues for having access to large groups of teenagers.

Other Initiatives

Online Training Curriculum

In an attempt to standardize the information being disseminated by CHAs, a health curriculum is being developed. Content areas were determined by health disparities targeted in Healthy People

2010 and those identified by our CHAs. Session topics include: Diabetes, Heart Disease and Stroke, Nutrition and Obesity, HIV/AIDS & STDs, Childhood Asthma, Cancer, Kidney Disease, Injury & Violence Prevention, Health Communication/Literacy and Health Care Policy. Online modules are being developed to provide a convenient venue for training. CHAs will be able to access the curriculum through the COE website.

Community Health Advocate Mini Grant Program

In July 2009 five (5) mini-grants were awarded to active CHA's. These CHAs developed their proposals with help of Community Engagement Core staff. The proposal outlined the goal to be achieved, the target audience, the needs to be met, the assessment method and a budget breakdown. An application review committee comprised of COE staff and CHA's reviewed applications and selected the first five projects. Based on the success of these initiatives a second round of the mini-grant program was offered in March 2010 with completion scheduled for June 30, 2010. The first five mini-grants are outlined below. Over 400 participants were involved in the 5 programs outlined below.

W. P. Lewis - Emotional Clutter (Domestic Violence)

Program - Presenting techniques, providing resources and sharing information to and with women dealing with domestic violence to help women identify abusive relationships, evaluate self-worth, and healing through information, education, and hope. Amount awarded: \$1000

S. Graham - It's Your Choice, Kids Ready, Set, Fit (Physical Activity / Obesity)

Program - Health and Fitness program for kids from the ages of 9-12, Amount awarded: \$1000

D. Thomas - Inspire Me! Zumba Fitness & Obesity Awareness

Program - Zumba fitness group exercise class for obesity awareness and the importance of being active. Amount awarded: \$1000

T. McPherson - Listen, Learn, and Live (Blood pressure control and stress reduction)

Program - The project focused on techniques to reduce stress and anxiety and on healthy dietary practices, including food preparation demonstrations. Amount awarded: \$1500

B. Rigsby - Hypertension Improvement: A Faith-Based Approach

Program - This faith-based project focused on improving the blood pressure control of African American adults through the implementation of healthy lifestyle modifications.

Participants were given blood pressure measuring devices for the length of the program, monitored their blood pressure, and were given information on healthy dietary and exercise practices to lower blood pressure. Amount awarded: \$1976.55

Universal Patient Record Information System (UPRIS)

Many of the CHAs have come to the program as representatives of their respective church's health ministries. Universal Patient Record Information System (UPRIS) is a web-based

platform that provides health information of importance to the African American community. They allow churches to have a home page and, importantly, for church members to have a personal site for their personal health information. Our partnership with UPRIS was strengthened after Hurricane Katrina when so many members of health disparate populations were displaced without access to their health information. We have provided this resource to 6 churches represented by our CHAs and it will continue through year 5 of the grant. Health ministries are able to find valuable resources from the site. Information is culturally sensitive and focused on health issues of importance to African American congregations.

Objective 2: Our major intervention for this objective is our pipeline programs for school age children. We have continued our high school programs STARS (Students Training for Academic Reinforcement in the Sciences) and STRIPES (Special Training to Raise Interest and Prepare for Entry into the Sciences). Students in these 2 programs attend 4 inner-city high schools that are located in our service area. We administer pre- and post-tests to participants, and were happy to see a significant increase in post-test scores over the last summer session.

In the STARS program we had 7 students who participated in classes to enhance their science, math, communication, research and test taking skills. These students will graduate from high school in 2010. In addition, there were 7 students who had experiences in health career arenas during the summer of 2009. These students graduated from high school in 2009. The observerships were in nursing, optometry, pediatrics, sports medicine, family medicine, anesthesiology and pharmacy.

There were 20 students in the STRIPES program. Like the STARS students these rising juniors participated in classes that enhance math and science skills. This program was for 4 weeks and all efforts were made over the year to retain these students as STRIPES for the summer of 2010. Saturday academies were held once a month to encourage retention and to enhance skills in test taking, self-study and career development. In addition, we provided tutoring in areas identified as challenges by our STARS and STRIPES students. Tutoring was provided by medical students so that mentoring could occur.

Like in previous years we are gratified that several of our students were able to take advantage of other special opportunities. We had 2 STARS students selected for a program called STEP-UP. The *Short-Term Education Program for Underrepresented Persons (STEP-UP)* was created by the Office of Minority Health Research Coordination (OMHRC) in the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The **STEP-UP Program** is designed to provide short-term research education for high school students from racial and ethnic minority or disadvantaged backgrounds to expose them to research in health disparate areas. This program provided support for eight consecutive weeks of research education and training during the summer provided by Center of Excellence faculty (R. Hanks, Ph.D.) and a cancer researcher (E. Reed, MD). The program culminated at the end of the summer with a Scientific Session and Summer Research Presentations held at the campus of the National Institutes of Health (NIH) in Bethesda, Maryland:

We had 2 students earn summer scholarships to colleges. One student earned a scholarship to Dillard University, where she eventually matriculated, and another earned a scholarship for a summer internship to the School of Veterinary Medicine at Auburn University. These pre-med and pre-veterinary students took advantage of these opportunities and used the summer of 2009 as a jump-start to their freshman year.

Other Pipeline Initiatives

We have partnered with Dr. Andre Green, Assistant Professor in the University of South Alabama College of Education to enhance our pipeline programs. Dr. Green's area of scholarly focus is the enhancement of science and math education and accomplishment among underprivileged and African American youth. He bases his interventions on mentorship as a method to enhance the educational experience. He has established a summer program that focuses on 3rd through 5th graders from the same neighborhoods as our STARS and STRIPES students. His program is a 6-week session during weekday mornings over the summer. His program provided a method for us to identify students earlier and bring them into our pipeline before they are lost. Like we did in the summer of 2009, we are providing financial support for his program for the summer 2010 with year 3 funds.

Objective 3: Our evaluation plan for the Outreach Core is both formative and summative. As part of the formative evaluation, we continue to look at the process of engagement for CHAs. We have conducted interviews with CHAs to understand their motivation and barriers to being a CHA. We continue discussions with our CHA leadership council regarding the approach to take to evaluate the effective of this strategy. We have continued developing our database to record such indicators as: meeting attendance, training event participation, information delivery, and health education activities in the community. With the initiation of CHA directed projects we have opportunities to evaluate more directly the impact of CHA efforts on lifestyle modification, behavior modification, and enhancement of health literacy / IQ. We expect that more formal evaluation of the effects on overall health of the community and the health IQ of the community will intensify in the last year of the grant. Our major activities thus far have been to educate our CHAs of our obligation to evaluate our efforts and of the importance of the evaluative process to direct future efforts. Our concern for evaluation fatigue was outlined above so we have been cautious in our evaluative efforts thus far.

Research Education / Training Core

A.) Objectives:

The specific aim of the research education / training core is to address the disparity in the number of African Americans and other underrepresented minority biomedical researchers.

B.) Results:

We evaluated the programs that were proposed for this core. In the original proposal we designed The Career Pathway for Minority Scientists (CPMS) program. CPMS has the objective

to advance the careers of underrepresented minorities in basic science and clinical research through effective mentoring strategies. The program introduces doctoral students, post-doctoral fellows, and junior faculty to grant writing and review, developing a research portfolio and research plan, promotion and tenure issues, developing a relationship with mentor, and issues faced in job negotiation. We have a mock study section using actual NIH submitted grants led by Dr. Mary Townsley, Professor of Physiology and Assistant Dean for Faculty Affairs, USA College of Medicine. The other program was the undergraduate research program where we took undergraduate students from health disparate populations and placed them in summer research experiences.

The Core Leaders, members of the Health Disparities Research Group, and members of the internal advisory committee evaluated both programs with regard to potential impact and overall contribution to the COE. A decision was made to focus on the undergraduate research program. This program allows for a longer experience at a point in the educational careers where students start to make decisions about their professional careers. In addition, it provides a mechanism for us to maintain contact with students who participated in our pipeline program as high school students. It is our hope that maintaining contact with these students, via such a program, will make it more likely that they continue on a path toward a health care career. Of note, there are programs that are available to these students after their sophomore year that can provide a bridge to medical school or other graduate school programs. Therefore, we have decided to focus on providing a research opportunity for our STARS graduates in the summer after their freshman year.

In the summer of 2009 we had 5 students participate in the Undergraduate Research Program. Two of these students were STARS alumni and another was a graduate of a high school in our service area. We ended the summer with a conference where participants did an oral presentation of their work. Students were involved in research on sickle cell, approach to health disparities in the community, childhood obesity, nicotine use in expectant mothers, and impact of employment-based benefits on health seeking behavior. Those in attendance in addition to participants were their mentors, COE staff, and other members of their research groups. Feedback from participants and mentors was positive.

We have 6 STARS alumni who have just completed their freshmen year of medical school participating in the program in the summer of 2010. Mentors have been identified, several of whom have been advisors and mentors for us since the inception of the COE. We have placed our students in labs of the Center of Lung Biology so that they can benefit from the relationships that they built within our programs over the last several years.

While not definite, we hope to have another CPMS session in year 4 of the grant. This program was highly rated by participants in the past, but we had significant challenges in finding participants. Therefore, we will focus on young faculty at the University of South Alabama's Health Science Division. The health science division includes the Colleges of Medicine, Nursing and Allied Health. Several new faculty have joined these Colleges and CPMS would be of value in assisting them to develop their scientific careers. Moreover, we will have the opportunity, at a

critical time in their career, to demonstrate the importance of pursuing a line of research focusing on health disparities. Identification of potential participants will be facilitated by Deans and Associate Deans who have relationships with our Center.

Research Core

A.) Objective: The overall goal of the Research Core is to Provide Academic and Logistical Support to Promote Multidisciplinary Research in Minority Health and Health Disparities at USA. The Specific Aims to address this goal are as follows:

- 1) To promote the generation of data from hypothesis driven, multidisciplinary research projects focused on issues of importance to the health of African Americans and low-income groups.
- 2) To expand the cohort of investigators conducting innovative health disparities related research through several mechanisms.
- 3) To critically review health disparities related research conducted in the U.S. so that appropriate research questions can be formulated to impact the health of our community.

B.) Studies/ Results:

The major programs of the research core are hypothesis driven, investigator initiated research, the Health Disparities Research Group (HDRG), and invigoration of research interest in health disparities. We strive for a community based participatory research model whenever possible. We will discuss our progress to date in the three main areas outlined above.

1) Health Disparities Research Group

The HDRG is an assembly of university faculty and community members who regularly convene to discuss health disparities research and determine local strategies to address the problem. Members come from all 3 colleges in the health science division and the colleges of business, education, and arts and sciences. We have successfully continued this effort and have been able to grow interest in the group's activities. Meetings are held monthly and participation continues among the core group of participants. The HDRG held a retreat in May 2010 where participants outlined their research interests in an effort to enhance collaborative efforts in health disparities research. In addition, the group determined areas where the HDRG may concentrate some of its collaborative efforts. The collaborative efforts of the HDRG have resulted in a substudy that is a collaborative project with a community group. This grassroots initiative of the HDRG is one example of the energy and commitment of this group.

2) Invigoration of Research Interest in Health Disparities

We have set several processes in place to achieve this goal. First and foremost is the development of successful research projects that have impact. The Core Director (M. Arrieta) and the PI (E. Crook) continue to be sought out by deans and department chairs to discuss opportunities in health disparities research in general and collaborative opportunities with our center specifically.

Secondly, we look to identify credible research projects in health disparities and facilitate their completion. The Core Director monitors all research projects and works with project PI's to facilitate productive use of COE resources.

A new pilot project has been implemented in year 3 from a RFP to university investigators. This new project was selected from among 24 project applications. We are particularly excited about this project as it is the result of a collaboration between a clinician and a basic science investigator examining a novel mechanism that may explain disparities in cardiovascular disease seen in high risk groups like African Americans. The PI on the grant has presented at Internal Medicine Grand Rounds to highlight the study. This presentation should enhance recruitment into the study and also raised awareness of the opportunities in health disparities research when clinical and basic investigators collaborate. In addition we have announced another RFP for projects to be implemented in year 4.

All project principal Investigators present at HDRG meetings so that all of our partners are aware of their work and can look for ways to collaborate. In these sessions several ideas are shared that ultimately strengthen projects. We have supported health disparities researchers as visiting professors that interact with faculty. We provide local data on health disparities to investigators preparing proposals. In addition, we have evaluated several future options where we may pursue additional funding.

3) Individual Research Projects with Specific Aims- PI: S. Ofori-Acquah, Ph.D.

a) Specific Aims

Breast cancer (BC) affects African-American women at a lower frequency than white women, yet progression of the tumor and mortality from the disease is higher in the minority population highlighting a major health disparity in the United States (US). We reasoned that variation in the biology of tumors played a critically important role in disease outcome than had previously been fully appreciated in the general population and in African-American versus Caucasians women with BC. To this end, we studied cell adhesion molecules tethered at sites of cell-cell contact with the notion that such molecules are involved at critical stages in the transformation of normal epithelial cells into malignant tumors. We proposed the **OVERALL HYPOTHESIS** that "Loss of Function of ALCAM Causes an Aggressive Tumor Phenotype in Breast Cancer that may contribute to Poor Survival in African-American Women". This overall hypothesis is being tested in three specific Aims:

[1] ALCAM gene expression is suppressed in breast cancer

[2] PP5 promotes breast cancer tumor growth, in part by, suppressing ALCAM expression

[3] Loss of function of ALCAM contributes to aggressive tumor biology in African-American women with breast cancer

4) Pilot Projects

Pilot 1

Title: A Family Based Approach for the Treatment of Childhood Obesity

PIs: Judy V. Blair-Elortegui, M.D., (Associate Professor, Department of Internal Medicine), and Daniel Preud'Homme, M.D. (Professor, Department of Pediatrics)

Objectives: As the obesity epidemic worsens pediatric obesity also grows at rapid rates. The mainstay of pediatric obesity management (prevention and therapy) involves diet and lifestyle changes such as limiting television viewing and increasing physical activity. Children are dependant on their family unit to be able to achieve any of the recommendations. Low socioeconomic status seems to be a strong circumstantial factor and studies have identified higher than national rates of obesity in the children in that group. Parents of lower socioeconomic status also have significant barriers to accessing healthcare for themselves and therefore may not be aware of their obesity status or its related co-morbidities. We have hypothesized that children will do better in managing their weight when the whole family is involved. Parents will also benefit from weight management as well as detection of silent co-morbidities such as hypertension or diabetes mellitus. The following **specific aims** were developed to address this hypothesis.

- 1) To determine if a family oriented approach to childhood obesity will be more effective in achieving weight loss or weight maintenance than the traditional child focused approach.
- 2) To determine if a family oriented approach to childhood obesity will lead to the detection of previously undiagnosed, asymptomatic obesity related co-morbidities in the parents of obese children.
- 3) To determine if parents of obese children effectively lose weight in a family oriented approach.

Pilot 3

The Impact of Labor Market Status/Labor Force on Access Health Care Access and Utilization among Low-Income Minority Families in Mobile, Alabama

PI: Kenneth Hudson, Ph.D. (Associate Professor, Department of Sociology and Anthropology)

Objectives: The primary mechanism for access to health care in the United States is employer provided health insurance. Since the 1970s, the American labor market has become increasingly characterized by labor market dualism, the polarization between good jobs with high wages and benefits (primary labor market jobs) and low wage jobs without benefits (secondary labor market jobs). The labor market is also increasingly characterized by jobs that combine primary and secondary characteristics (intermediary labor market jobs). This increase in labor market dualism has resulted in an increase in the number of Americans without employer provided health insurance. This segment of the population includes many people who are employed and their families. **In this project we hypothesize that individuals and families that do not participate in employer provided health plans, and that rely on public health care resources, have less**

than optimal utilization of available health care.

In this project we will examine how a family's labor market structure (the combination of primary, intermediary, and secondary jobs within each family) affects their access to health care and the family's utilization of health care services.

Specific Aims:

- 1) To determine the frequency of access to employer provided healthcare in a minority, low income, and urban population.
- 2) To determine the public healthcare resources available to families.
- 3) Do changes in labor force status affect access to and utilization of employer provided healthcare.

Pilot 4

Title: Community-Based Asthma Intervention Consortium

PI: Loran Clement, M.D. (Professor and Chair, Department of Pediatrics)

Objectives: During the last thirty years, the prevalence and morbidity of asthma has dramatically increased in the United States. Research efforts to characterize this epidemic have shown that the impact of this chronic respiratory disease is disproportionately high among urban dwellers, lower socioeconomic groups, ethnic minorities, and children. The inability of contemporary systems and practices to reduce asthma morbidity has stimulated efforts to develop novel interventions that improve the health of children with asthma. A wide variety of disparate strategies have been tested. Although these models differ in rationale and approach, several general observations can be made. First, asthma education programs directed at healthcare providers have not translated into significant changes in the quality of asthma care for the disadvantaged. Conversely, almost any intervention that educates patients about the importance of controller medication use and provides serial assessments of disease activity improves health status. One intervention that has shown great promise is the Breathmobile program. This novel school-based outreach program integrates validated strategies for case identification, continuity of care, a structured healthcare encounter, patient tracking, and high levels of patient participation in a "real world" setting.

The Breathmobile is a mobile clinic that is staffed and equipped so a multi-disciplinary team can provide highly specialized care in an efficient, economical fashion to asthma patients.

Hypothesis: Asthma can be identified and disease control can be achieved and maintained in urban children participating in an integrated community-based disease management network. We propose to develop and refine a mobile clinic program that is suitable for use in a medium-sized urban area that will identify and treat pediatric patients with undiagnosed or poorly controlled asthma who would otherwise escape detection.

Specific Aims:

- 1) Develop and validate an asthma assessment instrument that can be used both for case identification as well as a point-in-time measurement instrument for detecting uncontrolled (persistent) asthma with a high sensitivity and specificity.
- 2) Develop a community-based disease management network that integrates the resources of an academic health center, a public school system, civic groups, and concerned volunteer individuals.

Pilot 5

Title: A network approach to facilitating continuity of care for chronic diseases in the aftermath of a natural disaster

PI: Martha Arrieta, M.D., M.P.H., Ph.D. (Associate Professor, Department of Internal Medicine)

Objective: Disaster preparations usually focus on the provision of shelter for vulnerable individuals, and/or evacuation planning and support. However, in the aftermath of Katrina, the need to provide for continuity of care for populations whose health was already compromised became painfully evident. Uninsured and underinsured individuals, many of them African American, rely on the federally supported primary care infrastructure for health needs in general, and the management of chronic diseases in particular. **We hypothesize that a strategy to provide for continuity of care for patients with chronic diseases in the aftermath of a disaster will need to rely heavily on the community health centers that constitute the area's safety net. Moreover, such strategy will require the development/strengthening of avenues and processes for communication between the distinct federally funded organizations that serve specific geographic units in the Gulf Coast.** Additionally, mechanisms should be in place to facilitate the flow of patients across organizations. Finally, links between community health centers, other health care institutions (hospitals, pharmacies) and community based organizations are a critical component in the provision of continuity of care, especially in the event of a disaster. Therefore, our network approach to preparing for and providing care to patients with chronic diseases in the wake of a disaster.

Specific Aims:

- 1) We propose to build the capacity of the primary care infrastructure in the Gulf Coast by fostering the development of a network of primary care providers that would function seamlessly across the Mississippi – Alabama - Florida state boundaries, to provide continuity of care to patients with chronic diseases affected by a disaster.
- 2) The present proposal aims at facilitating a structured dialogue among community health centers, hospitals, commercial and not-for-profit pharmacies, and community based organizations in order to: a) identify the critical chronic disease management needs in the immediate aftermath of a natural disaster, both from the provider and the patient perspectives, b)

identify the elements of a community based network that would be ready to cover such needs, and c) define the resources required to make such a network functional. We will focus on the management of major chronic diseases and of HIV/AIDS.

Study 6

Bay Area Women's Coalition – HDRG Collaborative

PIs: Kenneth Hudson, Ph.D., and Martha Arrieta, M.D., M.P.H., Ph.D.

Objective and aims: Underrepresented minority groups are less likely to participate in medical research programs. There is a long history of mistrust for the medical establishment among ethnic minorities. As a result specific interventions that may improve the health of these populations cannot be studied or go undiscovered. **We hypothesized that underrepresented groups would be more likely to embrace medical research if they understood it better.** This project is a collaborative effort of the HDRG and the Bay Area Women's Coalition, an advocacy group from one of our target neighborhoods. We felt the best way for health disparate populations to garner an understanding for medical research was for them to be empowered with knowledge of how medical research is conducted, knowledge of how to review the literature on a topic, and knowledge of how to formulate a research question.

Study 7

Heat shock protein 27 (HSP27) as a marker of atherosclerosis

PI: William Gerthoffer, Ph.D. (Professor and Chair, Department of Biochemistry and Molecular Biology)

Objectives and Aims:

We are proposing a pilot study to test the hypothesis that low plasma levels of small heat shock protein 27 (Hsp27) is a risk factor in medically underserved populations of patients who are at high risk for cardiovascular disease. Hsp27 is considered an "anti-atherogenic" protein because it has antiproliferative and anti-inflammatory effects in vascular smooth muscle and endothelial cells. Hsp27 is secreted into the blood in nondiseased individuals, and in one clinical study patients with coronary artery disease had much lower plasma levels of Hsp27 compared to nondiseased patients. There is also cell biological data showing unstable atherosclerotic plaques contain much less Hsp27 than nondiseased arterial tissue. Based on these observations low plasma levels of Hsp27 has been proposed to be a marker of plaque instability. To test the **hypothesis** that plasma Hsp27 levels correlates inversely with the incidence and severity of coronary artery disease in a high risk, diverse patient population, Hsp27 levels will be measured by enzyme-linked immunoassay in blood samples in a cross-sectional study of three groups of patients: 1. Control volunteers with one or no major risk factors for cardiovascular disease. 2. Patients with multiple risk factors undergoing outpatient cardiovascular stress testing. 3. Patients who undergo elective cardiac catheterization.

Each patient population will represent differing degrees of risk of cardiovascular disease. By comparing plasma Hsp27 levels in these three clinically distinct groups we will test for a correlation between low plasma levels of Hsp27 and clinical evidence of coronary artery disease.

Other Center Activities

Research Activities

The Center for Healthy Communities Research Division has had a very active and productive year. We report on the activities of three major initiatives that are in addition to the Center of Excellence Grant.

Tele-monitoring of blood glucose in type 2 diabetes:

This project is funded by the Robert Wood Johnson Foundation Finding Answers Program and is done in collaboration with the Mobile County Healthy Department (B. Eichold, PI). In this project we test the hypothesis that real-time feedback for blood sugars via telemonitoring will improve control of diabetes among health disparate populations.

Recruitment was a challenge but was completed. We have employed several strategies to enhance recruitment and retention. Data acquisition will be completed in the fall.

Tele-health and Mental Health:

The research core used funding through a subcontract with Morehouse School of Medicine to explore the utility of tele-health in the provision of mental health services. AltaPointe partnered in the effort that grew from our past collaborative experiences with Morehouse on reducing health disparities after disasters (eg: Hurricane Katrina). The project will be completed in the fall. There has been great enthusiasm among the partners for the acceptance of the technology and the data acquired.

Summary Center of Healthy Communities Activities

The 2009-10 year has been a productive year for the University of South Alabama Center for Healthy Communities. The Center of Excellence Grant continues to successfully address its objectives. We continue to be a point of contact for investigators interested in addressing questions in health disparities. Our community and university partners continue to grow in number and commitment to our shared missions. We look for additional resources to support our mission, primarily through research grant proposals, and we continue to have success in these endeavors. We have contributed to the body of knowledge regarding health disparities through presentations and publications. In the next academic year the Center will prepare for renewal of its COE grant.