

2010-2011
Summary of Activities
Center for Healthy Communities

Introduction

The USA Board of Trustees approved the Center for Healthy Communities on 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 and has achieved local, regional and national recognition by promoting education, research and public service to targeted communities.

The primary activities of the Center are under the umbrella of a Center of Excellence P-20 Grant¹. The bulk of the Center's community outreach programs are now funded by this 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 provided brief summaries of other research projects advanced by the research core.

Title: Broad-based collaborative on minority health and health disparities¹
Grant #; 1P20 MD002314
Reporting Period May 1, 2010 to May 31, 2011

OVERALL SUMMARY

A. Specific Aims: 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 four of the P-20 grant we have focused on sustaining programs and building relationships within our service area. We continue to take an approach based on community based participatory research principles. As such, our relationships with our community partners have been strengthened and we continue to include those partners in decisions regarding our future plans.

B. Studies and Results: Details of the activities of the Administrative, Community Engagement, Mentoring and Training, and Research Cores detailed in the individual reports of each core. However, we would like to highlight some other accomplishments here.

The leadership of the COE has remained intact with all core leaders maintaining their roles. We have our core leaders meetings where we continue our discussions on the science of our approaches and exciting new initiatives that will address our objectives. The links between cores efficient use of resources, discovery of new partners, and facilitate greater involvement of the community in our research enterprise.

The Community Engagement Core strengthened our Community Health Advocates (CHAs) program. CHA initiated projects focus on previously identified areas of priority jointly determined between investigators and community members. Our CHAs have represented our Center in academic meetings focusing on linkages between community and academia. From these meetings we discovered that our program is unique in its approach and has matured beyond most other programs with similar objectives. We continue our partnership of providing African American churches with a web-based program that facilitates activities of health ministries and allows for a tailored 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 relationships with several of our students who are now in college and continue their advancement toward health careers. We have continued our partnership with the College of Education where we co-sponsor a program for 3rd through 5th grade students to enhance math, science and reading skills. These students come from the communities of which the COE focuses. We have initiated a program to address childhood obesity, (*We Run This City*), that we intend to be an annual event that will eventually be self-supporting.

The Research Training and Mentoring Core provided 6 rising college sophomores, who were part of our pipeline programs while in high school, with research experience in the summer of 2010. We are identifying mentors to provide a similar experience for more students this summer. Illustrating linkages between cores, we use investigators with strong linkages to our Research Core to provide these opportunities for students coming from our pipeline programs.

The Research Core has maintained a full portfolio of projects. The Research Core has continued monitoring of all research programs, and core leadership meets with research project PIs. Lead and co-investigators of our research projects have presented updates of their work at Health Disparities Research Group (HDRG) meetings and they are active members of the HDRG. The HDRG has continued its momentum and has worked on original projects with community based participatory research themes. A novel concept of research apprenticeship has been used in one of the projects. This approach is based on a hypothesis that members of health disparate communities will be more likely to participate in clinical research of importance to them if they have a better understanding of research. Implementation of this project has strengthened the connection between the community, Community Engagement Core, and research core.

C. Significance: We work hard to eliminate health disparities in our region. 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 Gulf Coast. The community based participatory research approach has guided development of our research portfolio, strengthening our ties to the community, and our effectiveness in meeting our goals.

D. Plans: Plans for each core will be outlined in each individual report. Major initiatives for year 5 include the following:

a) We will continue our CHA program. In year 5 of the grant we will continue to engage CHAs in decisions as to what programs we will pursue. We will continue our CHA initiated projects and our partnerships with faith based institutions. We will expand the youth CHA

program and work to develop an intergenerational program where youth and adult CHAs can mutually benefit from each other's experiences.

b) We will continue our information dissemination via a variety of mechanisms – enhanced website usefulness, newsletter, and sharing of results of CHA initiated projects.

c) We will continue to support our portfolio of research projects and will implement new pilot research projects that will hopefully lead to larger funded initiatives.

d) The students in the academic pipeline will be encouraged to remain disciplined and committed students.

e) We will identify new opportunities for members of HDRG to collaborate in scientific and outreach efforts to reduce health disparities.

E. Publications:

King JA, Tan F, Mbeunkui F, Chambers Z, Cantrell S, Chen H, Alvarez D, Shevde LA, Ofori-Acquah SF. Mechanisms of transcriptional regulation and prognostic significance of activated leukocyte cell adhesion molecule in cancer. *Mol Cancer*. 2010 Oct 7;9:266. Available from: <http://molecular-cancer.com/content/9/1/266>

Tan F, Ghosh S, Mbeunkui F, Thomas R, Weiner JA, Ofori-Acquah SF. Essential role for ALCAM gene silencing in megakaryocytic differentiation of K562 cells. *BMC Mol Biol*. 2010 Dec 2;11:91. Available from: <http://www.biomedcentral.com/1471-2199/11/91>

F. Abstracts/Presentations

Gerthoffer WT, Murphy LT, Battles M, Charaff E, Malozzi C, Wentzel G, Massey CV. Dynamic changes in plasma Hsp27 levels and phosphorylation in patients with cardiovascular disease. *FASEB J*. 2011 25:791.10.

Hudson K. How do you do it? Methodological questions, challenges and ideas in researching health disparities. 36th Annual Meetings of The Sociological Association; 2010 Oct 15; Baton Rouge, LA.

Preud'Homme D, Likely C, Phelps L, Higginbottom L, Pettry A, Blair-Elortegui J. Does parents' knowledge of their BMI status and cardiovascular risks (CV) improve their children's BMI after 3 months of family centered intervention for weight management (FCI)? *J Am Coll Nutr*. 2010 Oct;29(5):528-57.

Preud'Homme D, Likely C, Phelps L, Higginbottom L, Pettry A, Blair-Elortegui J. Effect of parents' knowledge of their BMI and CV risks on the compliance with a family centered weight management intervention (FCI) for obese children. *J Am Coll Nutr*. 2010 Oct;29(5):528-57.

G. Challenges: We remain challenged in our ability to response to the many requests we get for partnerships, evaluation of projects, and collaboration or leadership on new grant opportunities. These opportunities come to us as a result of our COE funding that has established us as an important community resource for addressing health disparities. We will continue to work to meet the challenge of answering our community's calls. Many individuals and organizations

that work with us do so voluntarily, and, as a result, there is great variability in the time they have available to work on these projects. We remain dedicated to keeping these partners engaged on our objective of eliminating health disparities.

Reports from Individual Cores Administrative Core

A. Specific Aims: 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. Studies and Results: With regards to the first objective we continue to monitor the resources of the COE grant. Our meetings with College of Medicine and University grants and contracts and business offices continue. We have retained a full-time grant administrator for the Center of Healthy Communities who has a majority of her activities on the grant. Our Internal Advisory Board continues to meet and provide valuable guidance to the Center.

We continue to have core leader meetings regularly. In these meetings we handle day-to-day management issues of the grant. However, importantly, we spend a majority of our time examining and exploring through new initiatives. These discussions have resulted in new partnerships between the Community Engagement and Research Cores and are expected to result in new funding opportunities in the future.

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. All core leaders have represented the Center at events across the region and nation with a particular focus on maintaining and strengthening our community relationships.

We have continued our support of the University's Sickle Cell Center's annual conference. We were also able to support the attendance of many of our CHAs at this meeting where important and practical information was disseminated.

C. Significance: The Administrative Core remains the driving force behind COE, insuring that COE activities and projects are closely aligned to the overarching goals of the Center. The Administrative Core is also the major point of contact for researchers, internal and external to the University of South Alabama, who seek COE's expertise in support of their own research efforts. Most notably, during Y4, the Administrative Core provided advice to several local and regional research initiatives related to the health effects of the Gulf Coast oil spill, particularly as it impacted the disadvantaged minority communities served by COE.

It also facilitated networking between potential researchers and community based groups, fostering the inclusion of CBPR elements in the research proposals submitted by several investigative groups.

In addition, the Administrative Core's consistent and visible leadership in furthering health disparities/health equity endeavors within the University of South Alabama, throughout the Mobile community and beyond, serves to promote and energize community members' involvement with the COE and with other investigators pursuing health disparities research.

D. Plans: We will continue the activities outlined in Section B above. In general the plans of the administrative core will remain the same:

- a) Manage all resources (personnel, financial, and physical) for the Center of Excellence;
- b) Foster new scientific relationships between current Center of Excellence investigators and other scientists within and external to the University of South Alabama;
- c) Oversee and foster interaction with Center of Excellence internal advisory committees;
- d) Continually monitor Center of Excellence interactions with key community partners to enhance those relationships;
- e) Constantly convene a leadership team of Core Directors to determine effectiveness of Center of Excellence activities and evaluation of new strategies;
- f) Maintain website to meet the identified needs of our partners.

Community Engagement/Outreach Core

A. Specific Aims: 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:

Specific aim 1: In year 4 our major intervention to achieve this goal was to nurture a Community Health Advocate (CHA) program designed to empower community members to become leaders in addressing their communities' health issues and to expand our health information dissemination efforts.

Our CHA program has continued to develop. We have over 150 CHAs, (including adult and youth CHAs) of which nearly 70 are quite active. 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 community organizations 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 4 we continued to have our 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. 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. Some major events and programs are highlighted below (Table 1).

Table 1. Major Events and Programs

<p>2010 Mid South Sociological Association Annual Conference, September 2010: <i>“Sociological Perspectives: Essential Science to Understand Health and Eliminate Health Disparities.”</i></p>	<ul style="list-style-type: none"> - Dr. Roma Hanks, Community Outreach Core Co-Director, served as President of MSSA and took the opportunity to focus the meeting on health disparities - 10 active Community Health Advocates (CHAs) and 2 Youth Community Health Advocates (YCHAs) presented a workshop highlighting COE’s community based efforts in the fight against health disparities - Through active participation in “From the Field” sessions, CHAs and YCHAs shared their experiences outlining effective approaches for community intervention focused on health disparities, demonstrating how knowledge can be translated into action within their communities.
<p>Regional Health Disparities Symposium (RHDS); July 16, 2010</p>	<ul style="list-style-type: none"> - Working conference format held at the University of South Alabama’s College of Medicine - 54 participants in attendance including Community Health Advocates/Youth Community Advocates, university representatives, service organizations and health care counselors - Discussions held to identify priority areas which (along with those identified in the 2008 and 2009 RHDS) provide a “road map” for the activities of all of the COE’s cores -Ranking of priorities: <ol style="list-style-type: none"> 1. Pathways to Creating Effective Healthcare Policy (Prior Rank #3) 2. Pathways to improve Nutrition and Promote Physical Activity (Prior Rank # 2) 3. Pathways to Safe and Healthy Housing (Prior Rank # 1) 4. Pathways to Eliminate Violence (Prior Rank # 4) 5. Pathways by Which Women can Better Influence the Health of their Families (Prior Rank #5)

<p>TEEN SUMMIT: Health Reform – Understanding the effects of Healthcare Policy. March 21, 2011 (Bishop State Community College)</p>	<ul style="list-style-type: none"> - Activity designed and carried out by the Youth CHA - Objective: educate members of the community about the Patient Protection and Affordable Care Act (PPACA) - Keynote speaker: Karen Ashton, Executive Officer and Senior Intergovernmental Affairs Officer; U.S Department of Health & Human Services - Teens prepared for the meeting by doing research on recent health reform activities and legislation - 73 community members in attendance - In order to provide community members with the opportunity to voice their opinion regarding the implementation of the PPACA in the state, participants were invited to sign a petition, in support of or in opposition to, the PPACA - 56 attendees signed the petition in support of the PPACA, none of the attendees signed the petition opposing the law - The petitions will be forwarded to the Governor and Attorney General of the State of Alabama, so they are informed of these community members' positions regarding this issue
<p>Health Disparities Curriculum and Pathways to Progress</p>	<ul style="list-style-type: none"> - Program developed to answer the challenge of maintaining dedication to mission among a group of volunteers - A Health Disparities on-line Curriculum developed as a value added tool to enhance CHA knowledge of health and health disparities - Curriculum 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 - CHAs are incented to complete the curriculum and ultimately use the information gained in a self-designed community based project - Incentives include education materials (CDs, books, etc), trips to appropriate meetings, or financial support for CHA directed projects
<p>2010 “We Run This City” Marathon Program (currently in progress)</p>	<ul style="list-style-type: none"> - New childhood obesity initiative introduced, derived from the Cleveland YMCA program called “We Run This City” - The program encourages children to lead an active, healthy lifestyle while being engaged in a goal-oriented program - Objective: teach young people ages 11-14 to set and achieve goals, increasing their self-confidence as well as their fitness and endurance - Boys and Girls Clubs in Mobile main source of program participants. - 43 participants enrolled so far - Participant teams led by Dietitians, Volunteer Coaches, and Physical Therapy students - Training schedule (which includes a nutrition component) allows participants to cover the distances necessary to be prepared for race day. Students accumulate 25 miles of conditioning over 12 weeks and complete their last 2 miles on the day of the race

Other CHA Program Highlights:

- Go Red for Women is an annual event typically hosted by the Center. This year, in an effort to promote sustainable community output, the Center supported three different CHA-sponsored Go Red events (held in the 36617, 36605, and 36603 zip codes). Attendees totaled approximately 120 for all three events.
- The Peer-Supported Diabetic Self Management program was a CHA minigrant program initiated by Barbara Hodnett. The program provided resources for patients with diabetes that included: nutritional advice, glucose monitoring, alternative techniques for lowering numbers and information on the psychological ramifications of the disease. Speakers included: Dana Herazo, M.ED., CSG, RD, LD, CDE, Dr. Nathaniel Abston, Jr., Alethea Hill, PhD, MSN, RN, ANP-BC. A total of 8 sessions were held at the Bethel AME Church in zip code 36603. The average participant number over the 8 sessions was 10 and participants “graduated” at the end of the program.
- We continue to provide six churches represented by our CHAs with the “Universal Patient Record Information System” (UPRIS), a web-based platform that provides health information of importance to the African American faith-based community. Health Ministries are able to find valuable, culturally sensitive resources from the site.
- Monthly CHA meetings are held to update CHAs on upcoming community events, as well as to provide the opportunity for them to report on their individual efforts and collaborate with other volunteers and advocates regarding needs and possible partnerships. Meetings are also built to foster relationships with health ministry leaders in the Empowering Project by bridging programs into one assembly.
- For our fourth year, CHA and Center-sponsored events have reached a total of 1,207 community members through such outlets as health ministry events, health fairs, health disparity workshops/seminars and annual events.

Specific aim 2: The major intervention for this objective is our pipeline programs for school age children. We have continued the 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 two programs attend inner-city high schools that are located in our service area, namely: Blount, LeFlore, Vigor, and B.C. Rains High School. We administer pre- and post-tests to participants, and were happy to see a significant increase in post-test scores during the last summer session.

Table 2 lists details of participation in the high school pipeline program.

Table 2. Pipeline Program components and participation by High School

Program Component	No. of Students participating				Total
	Blount H.S.	LeFlore H.S.	Vigor H.S.	B.C. Rains H.S.	
STRIPES (Rising 11 th grader)	4	9	1	2	16
STARS (Rising 12 th grader)	1	-	6	4	11
Shadowing Program (Graduating 12 th graders – Class of 2010)	-	-	1	1	2

Other Pipeline Initiatives:

- We have continued our partnership with Dr. Andre Green, Assistant Professor in the 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 improve the educational experience. We have continued support of his 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. His efforts have resulted in a manuscript in submission, with another in preparation.
- College Tour Trip: Our Graduating STARS Students had the opportunity to visit three colleges (HBCU’s): Spellman College, Morehouse College and Clark Atlanta University.
- STARS & STRIPES Saturday Academy academic school year of 2010-2011: Saturday Academies are held every third Saturday of the month, at the USA College of Medicine Conference Room. 27 students participate in a total of 9 sessions (September through March).
- After School Tutoring (September through March): Tutoring sessions are held on Tuesday and Thursday, from 3 p.m. to 5 p.m., at the Toulminville Public Library.

Specific Aim 3: Our evaluation plan for the Outreach Core continues to be both formative and summative. As part of the formative evaluation, we continue to look at the process of engagement for CHAs. We maintain discussions with our CHA leadership council regarding the approach to take to evaluate the effectiveness 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.

We expect that more formal evaluation of the effects on overall health of the community and the health behaviors of the community will intensify during Y5, the last year of current funding.

Our concern for evaluation fatigue was outlined previously (Administrative Core Human Subjects section) so we have been cautious in our evaluative efforts thus far.

We are posed to start a new evaluation project that allows for point of service data entry of CHA activities. This project will be done in collaboration with the USA Department of Computer Sciences and Engineering. Using computer tablets that link to a database, selected CHAs will be able to enter data –in real time– on the topic/nature of their activities, the number of persons contacted, and location where held. This novel opportunity will allow us to better determine how information flows within our communities.

C. Significance: The Community Engagement Core has made considerable progress in developing the large and active group of CHAs who address health disparities. It is our goal that each individual will become his or her own health advocate, and, in doing so, will improve the health of their family and members of the surrounding community.

Presentations at the 2010 Mid South Sociological Association Annual Conference, September 2010: *“Sociological Perspectives: Essential Science to Understand Health and Eliminate Health Disparities.”*

Alexandria Broadnax, Angelique Brown; Youth Community Health Advocates/Pipeline Students
University of South Alabama: Center for Healthy Communities Pipeline Program (STARS and STRIPES)

Theresa McPherson; Community Health Advocate: Lights of Empowerment – Living a Healthy Lifestyle

Barbara Hodnett; Community Health Advocate: Diabetes Education Support Group

Hattie Myles, Ph.D.; Community Engagement Core Co-Director: STARS and STRIPES Pipeline Program

Thkisha Sanogo; Community Engagement Core Project Manager: Community Health Advocacy Program

Errol D. Crook, MD; COE PI: Medical and Sociological Perspectives in Health Disparities

RESEARCH EDUCATION/TRAINING CORE

A. Specific Aims: 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. Studies and Results: We have continued the undergraduate Research Program where we place undergraduate students from health disparate populations in summer research experiences. In the summer of 2010, we supported 6 STARS graduates in a mentored research experience with College of Medicine investigators.

These STARS alumni have completed their freshman year of college, evidence of our ability to maintain contact with our students after entering college. In addition, we are able to counsel them on other opportunities/programs that provide bridges to programs in health care careers.

We have had one of the STARS graduates accepted to a pipeline program at USA College of Medicine that assures acceptance into medical school with successful completion. Thus, we have been successful at completing the pipeline. We will continue the Under Graduate Research Program in a similar manner during Y5.

Table 3 below provides detail of the students participating in the Under Graduate Research Program, their mentors and the research topic areas involved. Students presented their work in poster format at the College of Medicine Research Day in August 2010.

Table 3. Under Graduate Research Program participation.

Student Name	Mentor	Project
Alexandria Broadnax Graduated from Leflore H.S. Attending Dillard Univ-2 nd yr Major: Biology Goal: Hematologist	Stevens, Troy, Ph.D. Title: Professor and Director Department: Pharmacology	The effects of Doxycycline on Pulmonary Microvascular Endothelial Cell Growth
Leia Brown Graduated from Leflore H.S. Attending Alabama St Univ-2 nd yr Major: Pre Med Goal: Physical Therapist	Bauer, Natalie R. Ph.D Title: Assistant Professor Department: Pharmacology	The effect of cigarette smoke extract on the Endothelial Glycocalyx and Sialic Acid (PMVECs)
Narcethia Allen Graduated from Vigor H.S. Attending Alabama A&M -2 nd yr Major: Engineering Goal: Bio Chemical Engineer	Rich, Thomas, Ph. D. Title: Associate Professor Department: Pharmacology	Lung Biology Research
Alison Johnson Graduated from Leflore H.S. Attending Univ of South AL Univ-2 nd yr Major: Nursing Goal: Nurse	Alvarez, Diego, M.D., Ph.D. Title: Assistant Professor Department: Center for Lung Biology	Lung Biology Research
Maya Battles Graduated from Leflore H.S. Attending Alabama A&M-2 nd yr Major: Social Work Goal: Hospital Social Worker	Gerthoffer, William T., Ph.D. Title: Chair, Biochemistry Department: Biochemistry	Heat stroke protein 27 and how its levels might be a Predictive biomarker for Cardiovascular Disease
Quinton Miles Graduated from Leflore H.S. Attending Auburn Univ-2 nd yr Major: Pre Med Goal: Veterinarian	Townsley, Mary I., Ph.D. Title: Asst Dean, COM/Dir Faculty Affairs Department: Physiology	The detection of Apoptosis in the Alveolar Septal wall after lung injury

Research Core

A. Specific Aims: 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.

B. Studies and 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.

Health Disparities Research Group

The HDRG is an assembly of university faculty and community members who gather to discuss health disparities research and determine local strategies to address the problem. Members come from all 3 colleges in the health sciences division and the colleges of Business, Education, Engineering, and Arts and Sciences. During Y4, we have successfully continued this effort and have been able to grow interest in the group's activities. Meetings are held monthly and steady participation continues among a 12 – 15 core group of participants.

During Y4, HDRG conducted a review of its activities and accomplishments, with the purpose of streamlining its work. Table 1 details the three meetings in which such review was conducted.

Table 1. HDRG review meetings.

Meeting	Objectives and Methods	Outcomes
HDRG Internal Research Forum May 27, 2010 - 20 members in attendance - Presentations by 10 members	- Promote interdisciplinary collaboration through presentation and discussion of research projects and/or research interests by individual HDRG Faculty	- Showcase areas of expertise and areas of research interest of HDRG members, as a way to foster synergy between faculty and promote multidisciplinary collaboration for research addressing health disparities
HDRG Steering Committee Meeting June 15, 2010	- Review the organizational and operational model of HDRG - Propose streamlined goals	- Discussion of the need to devote staff member time to the promotion and coordination of HDRG

- 7 constituent members in attendance	and objectives for discussion by HDRG Faculty	Activities -Original five HDRG Goals simplified into four proposed goals and 16 objectives to be presented to HDRG for discussion
HDRG Retreat October 29, 2010 -23 members in attendance	-Evaluation of Goals and Objectives proposed by Steering Committee -Define member responsibilities to carry out objectives	-Four goals adopted as proposed by Steering Committee - 14 of 16 objectives proposed adopted - 2 objectives modified - 2 additional objectives adopted -Four Committees defined involving 13 HDRG members charged with implementation of objectives defined

A notable outcome of the overall HDRG review process was the consolidation of links between HDRG and the Community Engagement Core. The Community Engagement Core Project Director was invited to participate in meetings of the HDRG "Community Integration Committee", with the view to provide seamless continuity between pertinent activities of the Community Engagement and research Cores. Moreover, the decision was made to plan and conduct a joint HDRG- Regional Health Disparities Symposium (RHDS) in Year 5, as a mechanism to strengthen the community-academia partnership intrinsic to the CBPR model.

Development and promotion of HDRG's CBPR activities: The multidisciplinary efforts of the HDRG have resulted in a sub-study that is a collaborative project with a community based group (See report for Pilot Study "HDRG-BAWC collaboration"). This grassroots initiative of the HDRG is one example of the energy and commitment of this group to the CBPR model. In addition, HDRG faculty has developed a subcommittee to begin data assembly and dissemination of the activities of the HDRG. This model will therefore be available for other Centers to mimic and modify for their specific circumstances. The process by which research projects develop within this model is unique and will be shared.

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.

In year 4 we continued Pilot 6 (was funded in year 3) along with other established research

projects (Pilots 1, 3 and 5). In addition, we worked with investigators who had submitted applications to our internal RFAs in years 2 and 3 to develop their research programs into fundable projects. We have been successful in this regard and were able to start an additional project in year 4 (Pilot 7). We have also identified another project for funding in year 5. The latter constitutes another example of the linkages between community engagement and research as the project will implement and evaluate an intervention with the objective of increasing the frequency of family meals. The investigator is a member of the Nursing School faculty and will use African American faith-based institutions as the site for her intervention. Community Engagement Core CHAs will be active participants in the research process.

Pilot 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 provided data on health disparities to investigators preparing proposals. Finally, we have strengthened the link between community and research by having community engagement core personnel and CHAs take part in HDRG meetings and the HDRG retreat. Given the value of this relationship we are moving forward with the joint RHDS-HDRG forum that will provide a compass for future directions of research supported by our Center.

Individual Research Projects:

1) A Family Based Approach For The Treatment Of Obesity Blair, J.\Preud`Homme, D., PI

Specific Aims:

- 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.

Presentations:

Preud`Homme D, Likely C, Phelps L, Higginbottom L, Pettry A, Blair-Elortegui J. Does parents' knowledge of their BMI status and cardiovascular risks (CV) improve their children's BMI after 3 months of family centered intervention for weight management (FCI)? Am J Coll Nutr 2010 Oct;29(5):528-57.

Preud`Homme D, Likely C, Phelps L, Higginbottom L, Pettry A, Blair-Elortegui J. Effect of parents' knowledge of their BMI and CV risks on the compliance with a family centered weight management intervention (FCI) for obese children. Am J Coll Nutr 2010 Oct;29(5):528-57.

2. The Impact of Labor Force/Labor Market Status On Access To Health Care Among Black Families in Mobile, Alabama

Hudson, K., PI

A. 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?

Presentation:

Hudson K. How do you do it? Methodological questions, challenges and ideas in researching health disparities. 36th Annual Meetings of The Sociological Association; 2010 Oct 15; Baton Rouge, LA.

3. A Network Approach to Facilitating Continuity Of Care For Patients With Chronic Diseases In The Aftermath of a Natural Disaster

Arrieta, M., PI

A. Specific Aims: 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.

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.

4. Heat Shock Protein 27 As A Marker Of Atherosclerosis

Gerthoffer, W., PI

A. Specific Aims: This is 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.

Presentation:

Gerthoffer W, Murphy L, Battles M, Charaff E, Malozzi C, Wenzel G, Massey C. Dynamic changes in plasma Hsp27 levels and phosphorylation in patients with cardiovascular disease. *FASEB J.* 2011 March 17;25:791.10.

***5. Bay Area Women's Coalition – HDRG Collaboration
Hudson, K., Arrieta, M., PIs***

A. Specific Aims: This project is a collaborative effort of the HDRG and the Bay Area Women's Coalition, an advocacy group from one of our targeted 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.

- 1) For BAWC and HDRG to jointly develop and field a pilot home environment and family health survey.
- 2) To Improve Trinity Gardens community members' understanding of the value of health research and the role the public can play in the research enterprise.
- 3) Foster-within and between BAWC and HDRG-the development of the attitudinal perspective, communication channels and administrative mechanisms necessary to support effective academia - community partnerships for research.

***6. Uncovering Health Literacy: Developing A Remotely Administered Questionnaire For Determining Health Literacy Levels In Health Disparate Populations
Shaw, T., PI***

A. Specific Aims:

- 1) Develop a set of questions related to a person's health care experience, comprehension, and literacy that can be remotely administered;
- 2) Interview patients in low income clinic setting and administer both the questions in our new tool as well as an established measure (in-person survey) of health literacy;
- 3) Analyze questions developed in objective 1 to achieve a final set of questions that correlates well with established in-person survey tools.

R01 Research Core
PI: (Ofori-Acquah, Solomon (Emory University, via subcontract))

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 begun studying 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 discovered that activated leukocyte cell adhesion molecule (ALCAM/CD166), a member of the immunoglobulin super family localizes to sites of intercellular junctions in various epithelial tissues. We then discovered for the first time that primary BC tumors expressed significantly lower levels of ALCAM mRNA compared to normal breast tissue. Our findings have since been reproduced by two independent investigators, each demonstrating that loss of ALCAM function, either due to reduced expression, or mis-location of the protein inside BC tumors is a bad prognostic indicator (Ofori-Acquah and King, 2008). Collectively, these studies suggested loss of ALCAM function contributed to the aggressive BC phenotype such as the type commonly found 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.

Publications:

King JA, Tan F, Mbeunkui F, Chambers Z, Cantrell S, Chen H, Alvarez D, Shevde LA, Ofori-Acquah SF. Mechanisms of transcriptional regulation and prognostic significance of activated leukocyte cell adhesion molecule in cancer. *Mol Cancer*. 2010 Oct 7;9:266. Available from: <http://molecular-cancer.com/content/9/1/266>

Tan F, Ghosh S, Mbeunkui F, Thomas R, Weiner JA, Ofori-Acquah SF. Essential role for ALCAM gene silencing in megakaryocytic differentiation of K562 cells. *BMC Mol Biol*. 2010 Dec 2;11:91. Available from: <http://www.biomedcentral.com/1471-2199/11/91>

Other Center Activities:

Research Activities

The Center for Healthy Communities Research Division has had an active year outside of the Center of Excellence related activities. Below, we report on the activities of some 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 (RWJF) 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 tele-monitoring will improve control of diabetes among health disparate populations. Recruitment was a challenge but was completed. This study has been completed and the final report has been submitted to the RWJF. Our primary hypothesis was not supported but in subgroup analysis of patient adherent with protocol we did observe a clinically significant improvement in glucose control. We expect several manuscripts to be written from the data over the next year. Manuscripts with focus on the primary hypothesis, recruitment and retention of subjects and their acceptance of the technology, acceptance and utilization of health care providers of the technology, and cost analysis.

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^R partnered in the effort that grew from our past collaborative experiences with Morehouse on reducing health disparities after disasters (eg: Hurricane Katrina). The project has been completed, preliminary data analysis has been done and first drafts of papers have been written.

Major Grant Submissions

We submitted our proposal for renewal of our P-20 Center of Excellence Grant. The renewal proposal contains the 4 cores we currently have with some exciting additions to our overall programs. We have enhanced the CHA and pipeline programs and have been able to integrate all cores more thoroughly. We submitted the proposal in April 2011 and should know about funding in the winter months of 2012.

The CHC participated in the submission of a RFP from NIH that focused on impact of Gulf Coast BP oil spill. The CHC coordinated community outreach efforts and brought our partners to the table to develop a comprehensive outreach and educational program that ran in concert with the main research projects.

Center of Healthy Communities Activities Summary

The 2010-11 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 mission.