Background

Cardiovascular Disease Disparities
- Heart disease is leading cause of death in the U.S. and the 2nd leading cause of death in Minnesota.
- Large health disparities exist for nearly all cardiovascular conditions, with African Americans experiencing worse cardiovascular risk profiles than most other ethnic groups locally and nationally.
- African American women experience higher rates of obesity, physical inactivity, and poorer dietary habits—all of which are significant risk factors for stroke and heart disease.

Disparities in the Twin Cities
- The 2006 SHAPE Survey, a public health surveillance project in Hennepin County, examined overall health, health care access and utilization, healthy lifestyles, and social/environmental factors.
- North Minneapolis—home to the study site, Robbins Urban Wellness Retreat—has the worst rates on nearly all health indicators examined in comparison to other urban and suburban segments of Hennepin County:
  - adult obesity (25-30%)
  - physical inactivity (17-25%)
  - smoking (30-40%)
  - frequent mental distress (10-18%)
  - lowest proportion of adults reporting a healthy diet (<30%)

Thus, there is an urgent need to address these cardiovascular risk disparities in Minneapolis.

Mind-Body Practices, Health & Well-Being
- Mind-body practices (e.g., mindfulness, meditation, Tai Chi, acupuncture, breathing exercises, and yoga) are increasingly recognized for their positive impact on overall health and well-being.
- Mindfulness-based stress reduction (MBSR) is an increasingly popular practice used to cope with chronic illness. Mindfulness is defined as non-judgmental, present-moment awareness. It is a self-practicing technique for relaxing the body and calming the mind.
- MBSR combines mindfulness mediation, breathing practices, gentle yoga and relaxation techniques. Research shows MBSR effectively reduces stress, anxiety, depressive symptoms, and blood pressure, in addition to improving immune and autonomic nervous system functioning.
- Despite growing knowledge about health benefits of mind-body practices in general and MBSR in particular, much remains to be learned about their effects in minority populations. Moreover, little research has examined the efficacy of mind-body practices for addressing health disparities. Interventions that specifically address the impact of stress on health and incorporate stress management tools as well as techniques to promote self-care and healthy lifestyles through self-compassion and awareness are needed. The current project proposes just such an intervention with African American women residing in Minneapolis.

Specific Aims

The long-range goals of this research program are to develop and implement culturally relevant mind-body interventions based on a holistic approach that will promote stress management, coping and healthy living concepts that lead to improved health and well-being in African Americans. Our intent is to establish the efficacy of these interventions for reducing health disparities. We have developed a community-centric model of engagement that allows us to conduct our research in a trusted community setting with investigators and navigators that live and work in the community. Our main hypothesis is that mind-body interventions that reduce stress will activate positive coping strategies and enable participants to adhere to dietary and physical activity guidelines to improve health and well-being. Because cultural acceptance and feasibility of mindfulness-based programs as a stress management tool within the African American community are unknown, the purpose of this study is to examine feasibility of mindfulness within a convenience sample of African American women in Minneapolis and evaluate whether mindfulness reduces stress, improves mood, increases quality of life, and improves adherence to a healthy lifestyle program. The study aims are:

Aim 1
Examine the acceptance of an 8-week Mindfulness in Motion program, taught by a certified mindfulness teacher/practitioner within a female African American sample.

Aim 2:
Evaluate the impact of the Mindfulness in Motion program on levels of stress, positive and negative emotions, and coping self-efficacy.

Aim 3:
Evaluate the impact of Mindfulness in Motion program on adherence to a healthy lifestyle program focused on standard dietary and physical activity guidelines.

Aim 4:
Evaluate the impact of Mindfulness in Motion program on adherence to a lifestyle program focused on standard dietary and physical activity guidelines.

Exploratory Aim:
Determine the impact of the 8-week Mindfulness in Motion program, in combination with the healthy lifestyle program, on weight and blood pressure.

Research Plan & Methodology

Recruitment
- Participants will be recruited through planned community health awareness / informational sessions on healthy living and various health topics that will be hosted at Robbins Urban Wellness Retreat in North Minneapolis and other community events beginning Fall 2014.
- Recruitment events are timed to coincide with health awareness months i.e. Breast Cancer Awareness featuring the ANIKA Foundation’s annual ‘Pole’d Out’ event and a heart awareness event in February 2015.

Phase I
- Participants will include women who volunteer at the community information events to try the Healthy Life (HL) Model. The HL model is a healthy lifestyle program that includes standard dietary and physical activity guidelines, recommendations on daily water intake and sleep, and a resource management manual.
- Participants will attend a group orientation for the program where they will receive information about the specific tenets of the HL Model, and be provided with a journal and calendar/chart with each of the tenets listed and activities to guide them and promote goal-setting over the course of the two-month program.
- A pre and post evaluation of current lifestyle habits, weight, and blood pressure measurement per standard protocol will be obtained.
- Women will be asked to complete a brief online survey weekly to assess how many days in the past week they followed the HL Model guidelines.

Phase II
- Phase II will be launched approximately 2 months after completion of PHASE I. Our goal is to recruit 40 African American women who completed the HL program to participate in an 8-week study with random assignment to either the intervention (MM + HL Model) or the active control (HL Model only) group with 20 women per group.
- The intervention and control groups will have a “refresher” session on the HL Model, then, the intervention group will start the MM program.

Phase III
- Following the completion of the study by mid-April 2015, we will begin compiling, analyzing and computing results in preparation for filing final report.
- A ‘thank you’ retreat will be hosted for study participants, who will be encouraged to bring their mothers, daughters and others to encourage sharing family histories with each other as a means of reducing risk factors.

Assessments & Analyses
- Pre and post assessments of stress, emotions, coping, resilience, health related quality of life, blood pressure and weight will be obtained from participants.
- Adherence will be measured by weekly self-report on the extent to which the HL Program guidelines were followed and, for women randomized to the MM + HL program in Phase II, we will obtain weekly self-report of their mindfulness practice.
- Descriptive statistics and linear regression models will be used to evaluate study aims.

Impact
- The study will provide needed data on the feasibility and cultural acceptance of a mindfulness-based program, one type of mind-body intervention, in African American women, who as a group experience high levels of stress and cardiovascular health disparities, but among whom very few studies of mind-body interventions have been conducted.
- If project hypotheses are supported, this study lays the foundation for larger-scale mind-body intervention studies with African Americans.
- As community residents and advocates, we believe that by helping participants understand the mind-body connection and the connection between their diet and lifestyle behaviors, they’ll begin to see the value in applying mindfulness to their lives. By bringing consciousness to their choices and actions, they begin to think and choose carefully. Once you know better, you do better.