EXECUTIVE SUMMARY: Strong Hearts, Healthy Communities in Montana State University

There are notable CVD disparities among individuals living in rural settings, particularly medically underserved rural areas. These disparities are driven by complex factors such as socioeconomic disadvantage, topographic and geographical distances/barriers, social and cultural issues, and limited access to healthcare, physical activity opportunities, and/or healthy foods. Montana represents one of the most rural states, with 76% of its 998,199 people living in frontier (<6 people per square mile) or rural areas. Although Montana’s CVD mortality rates have declined similarly to U.S. rates, CVD remains the leading cause of death in Montana and CVD risk factors are on the rise, including obesity, high cholesterol, hypertension, and diabetes. The objective of Strong Hearts, Healthy Communities (SHHC) is to address rural CVD health disparities through civic engagement and implementation of a community-based intervention in 10 medically underserved rural towns in Montana. SHHC builds upon a long-standing collaboration with National Institute of Food and Agriculture extension educators, who will lead the front-line community engagement and program implementation activities. For Specific Aim 1a, we will characterize CVD awareness as well as barriers and facilitators to healthy eating, active living, smoking cessation, stress management, and CVD prevention topics in the partner communities. We will conduct built environment audits and qualitative research with residents, health educators, local leadership, practitioners, and other stakeholders to gather knowledge about economic, social/cultural, food environment, and physical features in the towns. For Aim 1b, we will work with community members to inform intervention development, facilitate community engagement, and build capacity through the establishment of local Community Advisory Boards. Data and activities from Aims 1a and 1b will inform the intervention design. For Aim 2a, overweight and obese midlife and older women will be recruited to participate in a 24-week community-randomized study. Intervention community subjects will participate in a twice weekly program focused on exercise, nutrition, and other CVD prevention education and skills. The intervention will also include community-wide events and activities to raise awareness and access of local resources, e.g. healthy foods, physical activity opportunities, and preventive services. We will evaluate anthropometric (e.g. BMI), physiologic (e.g. lipids, blood pressure, hemoglobin A1C), behavioral (e.g. 7-day accelerometry), and psychosocial (e.g. quality of life) outcomes with intervention subjects. For Aim 2b, we will evaluate the influence of intervention participants on adult household members by measuring change in anthropometric and psychosocial variables using a pre-post intervention survey. Data will also be collected at community events and through surveys with local health educators. The novel integration of civic engagement and community-based programming has the potential to make clinically significant improvements among participants, their families, and communities, while also providing a feasible model for other underserved rural communities to improve health and reduce CVD risk among residents.