We are pleased to submit our application for a proposal for a Preliminary Study Grant, through the HIP Seed Grant in Healthcare Innovation mechanism. This study proposes to use a community-based participatory research approach to compare the effectiveness of a federally-funded, home visit intervention program (Healthy Start), with, or without, an interactive mobile phone application enhancement (mHealth), to evaluate improved reproductive health-seeking behavior and infant birth outcomes for low income women of color.

Reducing disparities in infant mortality is a national priority, because the inequality between non-Hispanic Black and non-Hispanic White populations is pronounced. In the U.S., 7.14% of live births are preterm for non-Hispanic Whites, while 13.2% of live births are preterm in non-Hispanic blacks. In the state of Georgia, from 2007-2009, 11.9% of white infants and 17.6% of black infants were born preterm.

Emory University researchers, each from the Schools of Nursing, Medicine, and Public Health will lead the study, along with community partners from the Center for Black Women’s Wellness (CBWW), will provide access to the study subjects. The Center for Black Women’s Wellness is the sole Atlanta grantee for the Healthy Start Program, which provides outreach, care coordination, and health education to pregnant and postpartum women living in neighborhoods where infant mortality is high. Georgia Tech team members will lead the interactive mobile application development and implementation for the mHealth enhancement intervention. They will use existing software and assist with data analysis. The HIP seed funds will allow our team to generate the preliminary data and pilot testing of the mHealth intervention necessary for a planned submission to a specific funding opportunity announcement from the National Institutes of Health for mobile applications to improve adherence to medically recommended care. Our multidisciplinary, inter-institutional team includes the following collaborators:

Emory University:
School of Medicine: Dr. Anne Lang Dunlop, MD, MPH, Assistant Professor and Director, Division of Preventive Medicine; Staff physician, Grady Hospital; email: amlang@emory.edu
School of Nursing: Dr. Jenny Foster, CNM, MPH, PhD, Assistant Professor of Nursing, nurse-midwife and cultural anthropologist, Lillian Carter Center for Global Health and Social Responsibility; email: Jennifer.foster@emory.edu
School of Public Health: Dr. Michael Kramer, PhD, Assistant Professor, Epidemiology; email: mkram02@emory.edu

Georgia Institute of Technology:
Sheila Isbell, MS, CS, Research Scientist, Information and Communications Lab; email: Sheila.isbell@gtri.gatech.edu
Leanne West, MS Landmarc Research Center Director; Electro-Optical Systems; email: Leanne.West@gtri.gatech.edu

Center for Black Women’s Wellness:
Natasha Worthy, Program Manager for Atlanta Healthy Start; email: Natasha@cbww.org
Tekesia Shields, Family Support Worker, Community Researcher; email: tekesiashields@yahoo.com

The total budget that will be requested to support our collaborative efforts for one year is $25,000. Thank you for your consideration of this letter and our research goals.

Sincerely,

Sheila D. Isbell
Abstract
The purpose of this proposal is develop, study, and evaluate the use of a mHealth intervention tool as a means of improving reproductive health communication and care for women in medically underserved areas (MUAs). Medically Underserved Areas/Populations are areas or populations designated by Health Resources and Services Administration (HRSA) as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population. MUAs tend to share a number of problems including access to technology, health literacy, health communication and provider access issues. However, the development of technology is not sufficient for adoption in a community; a large part of this work involves engagement of the family support workers and women in MUAs throughout the design and development process. We take a CBPR approach which by definition, “equitably involves all partners with a research topic of importance to the community with the aim of combining knowledge and action for social change, to improve community health and eliminate health disparities.” Minkler, p.6 Our research team includes both academic and community partners committed to promoting reproductive health seeking behavior, increasing pregnancy spacing, and reducing infant mortality. The tool will be developed with our community partners to ensure ease of adoption and use by the community. As a team, we believe this project is innovative, because we view poor pregnancy outcomes (such as preterm birth and low birth weight) not as isolated events, but as a chronic condition in high risk mothers. The chronic nature of reproductive health is not a common understanding within the target communities or within the health provider community in Atlanta. We aim to improve this by creating an interactive platform by which community members and care supporters can manage and communicate priority reproductive health messages.