

Regional Institute on Aging Seventh Year Highlights 12/14

The Regional Institute on Aging (RIA) is a virtual research organization designed to serve the citizens of metropolitan Wichita, Sedgwick and the adjacent counties, and, eventually the surrounding Midwestern states. This annual report presents highlights of work in competitive research programs, community based programs and projects, university and community service.

NIA MSTEM: Advancing Diversity in Aging Research (ADAR) through Undergraduate Education (R25) Resubmission:

There are three irrefutable facts regarding MSTEM (medicine and STEM) education in the US: 1) we are failing to advance our international scientific and technical status through the training of MSTEM scientists; 2) the failure to produce MSTEM scientists is particularly acute when examined in the context of ethnicity and race; 3) a significantly expanded cadre of MSTEM scientists is required to meet the unprecedented challenges of national and global aging.***

In later 2011, the National Institute on Aging (NIA) issued a Funding Opportunity Announcement (FOA), PAR-12-016: NIA MSTEM: Advancing Diversity in Aging Research through Undergraduate Education. The FOA sought applications for Institutional Research Education Grants (R25) and. . . . “encourages R25 applications from institutions that propose creative and innovative research education programs to diversify the workforce in aging by (1) supporting undergraduate competency and completion in medicine, science, technology, engineering and mathematics (MSTEM) (2) application and transition to graduate study that advances a cadre of students from diverse backgrounds into NIA MSTEM fields. The interests of the NIA span biological, biomedical, behavioral, clinical, and social sciences research across the lifespan with a focus on processes of aging through midlife and old age.” The annual budget is capped at \$350,000 direct costs annually for up to 5 years.

The research team submitted an application on May 25, 2013. The application scored well (i.e., received a ‘4’ or very good in the NIH system), was within the funding range but was not funded.

The application was revised and resubmitted on September 25, 2014. The specific aims of the revised application are:

1. Recruit program participants from area high schools, WSU, and Butler Community College who have interest in or are majoring in NIA MSTEM disciplines.

***Adapted from the NIA/NIH R25 application, Alex Chaparro, Ph.D., PI, Teresa S. Radebaugh, Sc.D. and Larry Whitman, Ph.D., Co-Is.

2. Recruit faculty mentors from NIA MSTEM disciplines and provide them with training and support to effectively mentor program participants to graduation.
3. Support and retain program participants through (a) summer bridge programs; (b) intensive multi-component advising (c) research experiences; (d) financial support; (e) professional/scientific socialization, including training in the responsible conduct of research; and (f) completion of minor in aging studies.
4. Assist program participants with application, acceptance, and enrollment in NIA MSTEM graduate or professional programs with an emphasis on aging-focused programs (Ph.D.), geriatrics (M.D.), or combined programs (M.D./Ph.D.).
5. Evaluate the impact and outcomes of all program components and use those results to refine and fine-tune recruitment, selection, support, and retention efforts to enhance participants' experiences and to increase the likelihood of success in undergraduate, graduate, or professional training.

A major criticism of the initial 5/25/2013 application was the dispersal of students to several universities around the country for summer research experiences. This strategy was thought to inhibit the development of community within the student group.

In response to that criticism, the 9/25/2014 revised application developed an alliance with Douglas E. Wright, Ph.D. University of Kansas Medical Center, PI, Kansas IDeA Network of Biomedical Research Excellence (K-INBRE) program. This alliance was discussed with and is supported by the Vice Chancellor for Research, UKMC, Richard Barohn, M.D. Succinctly, all R25 supported undergraduate students will spend at least one summer at KUMC under the umbrella and tutelage of the K-INBRE program. Because of the breadth and sophistication of the extramurally funded research at KUMC and the emphasis on aging, the students can be matched with mentors whose research interests mesh with those of the students. This experience will also allow the students a first hand, in depth contact with faculty and departments that may be targets for their graduate or medical school applications.

Community Based Programs and Projects:

Falling Less in Kansas (Falling LinKS): This phase of the Falling LinKS projects focused on dissemination and implementation. The ongoing Research and Implementation Team includes: Drs. LaDonna Hale, Teresa Radebaugh, Michael Rogers, Nicole Rogers, Ms. Rosemary Wright, Ms. Karen Kendrick (Envision) and Mr. Shannon Riley (Envision). The major foci of Falling LinKS work in 2014 were connecting with Emergency Medical Systems (EMS), the translation of the Toolkit into Spanish and a major cosmetic redesign.

From the early discussions which led to the development of the Falling LinkS Toolkit, the team recognized that there were a number of potential ways to reach older adults in rural and frontier Kansas. This is exemplified by our dissemination work ranging from placement of a copy of the Toolkit in almost every library in Kansas, providing it online for free download, partnering with the Kansas State Research and Extension Service to offer programs on fall risk reduction around the state, in addition to the many speaking engagements. A major potential dissemination avenue is via the EMS located in every county.

Contacts were made with the EMS departments in Harvey, Rice and Sedgwick Counties to explore the issues presented to them by older adults who fall and their interest in programs to reduce risk. EMS responders are often the first contact an older adult who falls may have with the health care system around the issue of falling. In some counties (for example, Phillips County, informal communication 2013), the rate of fall related dispatches hovers at 50%. This is further complicated as a significant proportion of the older adults who fall and for whom the ambulance is called then refuse transport (“no loads”). These events present important time and cost issues for EMS services all over Kansas.

We have worked with Rice County, a rural county in north central Kansas (population about 10,000 in 2010). Rice Co. EMS has now implemented a screening procedure at point of contact adapted from the Falling LinkS Toolkit. The screening instruments are reviewed and decisions made about potential interventions which includes referral to the local hospital for a fall risk reduction program. This program development initiative is in the very early stages, and they are working to identify the issues to be addressed by a systematic falls program. The pilot work has resulted in referral for long term care, intervention by family members and participation in falls program. They plan to continue to gather information for about 6 months before making decisions about long range permanent fall risk reduction programming.

A relationship was developed with the Sedgwick County EMS with the same goal as the Rice County work: understand the situation and determine if fall risk reduction work is possible. The situation is different in Sedgwick County because the population pyramid is slanted to the younger age groups. Simply, the proportion of fall related dispatches for older adults is not as high as some of the rural, “older” counties. A systematic examination of the fall related calls has been undertaken by two paramedics who have volunteered for the work. The development work is ‘paused’ at the moment as the person who championed the efforts within Sedgwick County EMS has enrolled as a doctoral student at WSU. His time is, therefore, limited.

A clear and growing need of older Kansans is a translation of the Toolkit into Spanish (completed 1/14). With support from the College of Health Professions as an Inter-professional Education Project, the Toolkit was tested in focus groups with older Spanish speaking adults to provide information on the usability and

acceptability of the Toolkit. La Familia Senior Community Center was the site of the focus groups. Drs. Amy Ham, LaDonna Hale and Nicole Rogers led the efforts. Physician Assistant students, several of whom were bilingual and native speakers, conducted the focus groups. The Toolkit is being revised as necessary based on information gained from the focus groups. The revised and corrected Spanish Toolkit is expected to be ready for distribution in early 2015. A paper for publication presenting the Spanish focus group work is under development.

The Toolkit is now undergoing a design “renovation” by senior faculty and students in the College of Fine Arts. That work will be completed by early 2015.

The Consequences of Intense Energy Exploration in Small Town Kansas:

This WSU—Kansas State research team conducted focus groups and interviews in Anthony, Kansas through the spring and fall of 2013 to understand the impact of intense energy exploration in a small rural town. This project was led by Richard Muma, Ph.D. and aims to understand the impacts of intense energy exploration on the residents of small towns and rural area so that community preventive measures may be developed and instituted to reduce the negative consequences. There was a particular emphasis on the experiences of older adults

The thematic data analysis has been completed and a paper drafted. The next steps are to finalize the paper, submit it for publication and then determine the subsequent research steps.

Older Adult Pet Adoption Program! (OAPA!)

This collaborative community based research program with Prairie View, Inc., Caring Hands, Harvey County Department on Aging, and the Regional Institute on Aging continues. A major problem has been the absence of an identified leader who has the time to coordinate the program. All involved are committed but have too many competing demands. After a multi-month search, a volunteer coordinator has been engaged. She is a retired social worker from Prairie View and has the necessary skill set and interests. This addition to the program development/research group will now allow it to continue and accelerate.

Faculty and Student Research Development

The Director continues to serve as a mentor to both faculty and graduate students with research interests related to aging across colleges at WSU.

University and Community Service

- Wichita Medical Research and Education Foundation Board
- Center for Community Support and Research Advisory Committee
- External Advisory Committee, KU Alzheimer’s Disease Center
- Internal Advisory Committee, KSU/WSU, COBRE, submitted 2/14
- Board of Trustees, Presbyterian Manors of Mid-America, Inc.
- El Dorado Community Foundation