Testing Methods for Identifying and Describing the Health, Health Care Needs and Resources for Socially Isolated Older Adults

Type of Grant (Joint or Partnership): Joint Pilot Project

Community Partner Names and Affiliations:
George Ware, Taking Neighborhood Health to Heart

Academic Partner Names and Affiliations:
Deborah Main, PhD, University of Colorado Denver, Health & Behavioral Sciences

Health Disparity Focus: Social-emotional health; Cardiovascular disease

Abstract: The primary focus of this community translational pilot project is to test methods for identifying and describing physical and mental health of socially isolated older adults living in five diverse neighborhoods in the Denver metropolitan area. The project will collect 200 surveys on mental and physical health from isolated older adults, specifically focusing on hypertension and depression. Project outcomes include producing credible pilot data on methods of recruiting isolated older adults to participate in health research, designing senior resource materials for community residents and agencies, and increasing understanding of health risks affecting older adults in the target neighborhoods. Dr. Main at the University of Colorado Denver will work in conjunction with a community-based participatory research group, Taking Neighborhood Health to Heart, in order to implement the project. This community-academic partnership began in 2006 and has implemented multiple local and national research projects. The partnership will follow up this pilot research with grant proposals that build upon data on recruitment methods, survey data on mental and physical health of isolated versus non-isolated older adults, and information on social ties and resources for this population. Additionally, the partnership will co-author peer-reviewed papers at the end of the grant.
Please answer questions A-H, using the formatting guidelines listed in Section IV of the RFA, in six pages or less. References and letters of support do not count against the page limit. After completing the questions below, please continue to Section XI to complete your budget and budget justification.

A. Focus of Pilot Project: What is the primary focus of your pilot project in terms of community translational research? What health disparity will this partnership help you address? Note: when possible, please provide data supporting that a health disparity exists in the community. (For Colorado data, see: http://www.cdphe.state.co.us/ohd/disparitiesinco.html).

The primary focus of this community translational pilot project is to test methods for identifying and describing physical and mental health of socially isolated older adults living in five diverse neighborhoods in the Denver metropolitan area. It is estimated that between 10% and 20% of adults over 65 are socially isolated (1,2,3). In our Taking Neighborhood Health to Heart (TNH2H) neighborhoods, of all the households with at least one adult over 60 years old, 40% are living alone, with this percentage varying by socio-economic conditions (4). Social isolation is an established risk factor for morbidity and mortality associated with both poor physical and mental health (1,2,5), with its deleterious effects greatest among older adult, poor and minority populations — now among the fastest growing populations in the US. In addition to evidence linking social isolation to depression and other mental health conditions, research has pointed to social isolation as an important risk factor for high blood pressure, particularly among aging populations (6,7). And research on social isolation addresses 2 of 3 PACT Council health disparity priority areas: seniors, and especially minority seniors lacking strong social networks, are more likely to be hypertensive and suffer from depression and other mental illnesses, such as dementia and increased suicide risk (8,9,10). Research on social isolation, however, remains a significant challenge because this population is difficult to reach and recruit in studies; and they are also less likely to receive needed programs, services and other resources, exacerbating health disparities (11,12).

An important translational research challenge is to identify better methods for recruiting this population and getting them to participate in research. Socially isolated seniors are different from most of the "hard-to-reach" populations targeted in recruitment studies in important ways. For example, snowball sampling and newer, respondent-driven sampling, involve target populations in recruitment based on social connections or sharing something in common (such as prostitutes and gay men with HIV). However, socially isolated seniors tend not to meet these criteria, making these evidence-based recruitment strategies less helpful.

In summary, given aging US populations and considerable growth among those who are minority and poor, research to understand and decrease social isolation among older adults in diverse communities addresses a clear and compelling translational research gap.

B. Desired Outcome(s): What do you plan to accomplish throughout this 12-month grant period? How will you know if you’ve accomplished this? How will you demonstrate this?

The primary objective of this pilot project is to test methods for identifying and describing the health, health care and resource needs of socially isolated older adults**. This fits our larger goal of developing a community translational research agenda devoted to understanding and improving the health of socially isolated adults living in five diverse TNH2H neighborhoods: Park Hill, Northeast Park Hill, Northwest Aurora, East Montclair, and Stapleton.
Specific Aims for this 12-month grant period include:

AIM 1: Describe the availability and gaps in community and clinical resources for older adults who live in the five TNH2H neighborhoods.

AIM 2: Determine effective recruitment methods targeting older adults living alone within TNH2H neighborhoods (and those defined as socially isolated) and their willingness to participate in health surveys (that ask about potentially sensitive topics like depression) and have their blood pressure taken.

AIM 3: Describe the frequency of social isolation among older adults in TNH2H neighborhoods and how their physical and mental health, social ties and use of community-based health and health care resources differ from same aged adults who live alone but are not socially isolated.

AIM 4: Disseminate project findings to community members, service providers and scientific journals.

As a result of accomplishing work guided by study aims we will have (1) produced credible pilot data for preliminary studies in a NIH proposal we will begin writing during the grant period, (2) designed dissemination materials for use by community members and local service providers that could include health findings and maps of available community health and health care programs and resources for seniors, and (3) begun co-authoring (with community members) 1-2 peer reviewed publications on socially isolated older adults to establish our experience in these areas. As with all TNH2H projects, a subcommittee of community members and researchers will monitor and document project tasks, timelines and budgets to ensure accomplishment of our project objective, aims and research tasks. (**Note: we will work with community members and service providers to determine the age cutoff for defining "older adults;" although typically defined as 65 years and older, our community has suggested we consider lowering the age to 55 years due to observations of increasing economic and social pressures faced by this pre-Medicaid age group).}

C. Study Design and Methods: What is the design of the study to achieve your objective? What methods will you use to achieve your objective?

This pilot project will employ a mixed-methods (qualitative and quantitative), cross sectional study design. We describe proposed methods for each specific aim below.

AIM1: We will determine the availability and gaps in community and clinical resources for seniors by interviewing local community and clinical service providers, a group of isolated older adults identified through existing community ties, and through ongoing discussions with older adults in TNH2H. We will identify salient themes within interviews and discussions and use existing GIS data layers to develop a detailed inventory (including location and services offered) of all available services for older adults in our geographic "footprint."

AIM2: Through a participatory process, we will identify up to three alternative community-based recruitment strategies for socially isolated older adults we will test in this project; for example: (1) a venue-based recruitment method (13) where we will sample from existing senior centers, community centers, etc. (2) a recruitment method suggested by one of our community members (an older adult who volunteers with senior populations) and supported by previous research on finding "nonassociative members" (14), which uses community "key informants" to help identify older adults who live alone, and (3) multi-stage randomized door-to-door methods previously used in TNH2H to reach adults living in apartment buildings. In our analysis, we will use the following recruitment metrics to determine efficiency and effectiveness: number of contacts needed to reach eligible older adults who live alone, number of contacts to reach socially isolated older adults, number of eligible older adults who agree to participate in the survey, and the degree to which participants represent those living in sampled areas using 2010 Census data on socio-demographic variables.
AIM3: Using one of the selected recruitment methods, we will conduct up to 200 face-to-face household surveys in English or Spanish. The surveys will take no more than 30 minutes to complete and whenever possible use established survey measures/items previously collected in our adult household surveys (which will allow important comparisons to representative, general adult populations). Survey content will include measures of health status, healthy days (physical and mental), depression (PHQ-2), chronic health conditions, measures of social networks/isolation and socio-demographic variables. Because hypertension is among the most consistent outcomes associated with social isolation among seniors, we will be taking actual blood pressure readings of willing participants using digital blood pressure cuffs -- a method successfully used in previous research by lay outreach workers in area barbershops (15). Also, based on community input and pilot testing, we will include an established, brief measure of social isolation for older adults (e.g., UCLA Loneliness Scale or Lubben Social Network Scale). As used in our previous survey research (16), we will use 2010 Census data to design multi-stage sampling methods to enhance representativeness of our older adult sample and, for each recruitment method, establish target goals for socially isolated and non-isolated older adults and keep recruiting until goals are reached. All data collector teams will be trained, with at least one member being a bilingual Spanish speaker. Once collected, survey data will be analyzed using descriptive and mixed model regressions to describe the frequency of social isolation in our older adult sample, whether social isolation is a risk factor for physical and mental health, respondent receptivity to having blood pressures taken and answering questions about social networks and depression, and any differences in access to vital resources within their neighborhoods including health care, food, getting prescriptions, and other health, social and community services for older adults who are or are not socially isolated.

AIM4: Once data are analyzed and interpreted by TNH2H community and academic partners, we will work closely with various members and groups within TNH2H (see below) to develop and disseminate findings to the neighborhoods (community members and clinical and community-based providers) and co-author papers and subsequent grant proposals to seek additional funding. TNH2H will stand by one of its principles that CBPR data will be shared with the neighborhoods before publication in peer-reviewed journals and that community members and researchers making significant contributions will be included as co-authors on papers and will serve as co-presenters at local and national conferences.

D. Description of the Community-Academic Partnership: How long has this partnership existed? What previous collaborative work have you done, including research? How will this partnership strengthen proposed research?

This project involves community and academic partners from an established CBPR initiative, Taking Neighborhood Health to Heart. In 2006 Dr. Main (UC Denver) was awarded a grant from the National Heart Lung and Blood Institute (NHLBI) to develop this new CBPR community-academic partnership and conduct research on the influence of built and social environments on health and health disparities in five neighborhoods surrounding the newly redeveloped Stapleton airport site. As part of the project, 950 health surveys were collected in the neighborhoods using a door-to-door and phone survey method. This initial grant led to the formation of the TNH2H community council, which has included over 80 local residents, researchers from UC Denver, and local policy and philanthropic leaders. In 2009, TNH2H (as community lead) and UC Denver received a CCTSI community engagement grant to disseminate research findings using neighborhood house meetings, which created a more intimate environment to share health information and identify community concerns and priorities. The study additionally focused on conducting just under 200 door-to-door household surveys of residents living in (often locked) apartment complexes, since they were underrepresented in the original adult study and at greater risk for a number of chronic health conditions.
After successfully completing the CCTSI project it became clear that there were many residents, such as seniors and refugees, who were not reached by traditional survey methods, with this same group unlikely to be reached through targeted health interventions in the area. Since 2009, it has been one of TNH2H’s main priorities to target populations in the diverse neighborhoods that cannot readily access healthcare services, health interventions, or vital resources because of race/ethnicity, age, language barriers or legal status. TNH2H has identified a large refugee population in two of the neighborhoods and worked with the Colorado Alliance for Health Equity and Practice (CAHEP) to identify their health concerns. Meanwhile, many members have raised concerns about the isolated older adult population living in the neighborhoods, citing that many elderly will not leave their homes or answer their doors. It has since become a TNH2H priority to understand best methods of reaching isolated older adults so that we may target health interventions to benefit this vulnerable group. In 2010, a doctoral student from McGill University, Carri Hand, moved to Colorado while completing her dissertation on the topic of chronic health conditions of isolated senior women. She has attended our monthly meetings and has just submitted a post-doctoral proposal to the Canadian Institutes of Health Research to work with TNH2H to develop and pilot test culturally and socially relevant interventions for socially isolated senior women. In order for interventions to be effective, however, TNH2H must better understand methods of reaching isolated seniors. If funded, Dr. Hand’s work will begin in May 2012, with Dr. Main her post-doctoral research advisor.

E. Description of Community Partner: What background, skills, and previous experience does the Community Partner have related to the work proposed in this application — and in engaging or working with Academic Researchers?

Since its inception in 2006, TNH2H has grown to include a group of diverse and involved community residents and leaders from each of the five neighborhoods. Additionally, TNH2H has created three committees that support the larger community group and focus on specific target areas: the steering community, the food committee, and the data review and dissemination committee (DRAD). The DRAD committee, consisting of 8-10 community members and researchers, has experience managing data, carrying out field research and managing/disseminating information back to community residents. DRAD, as the Community Lead, received the CCTSI Community Engagement Pilot Grant in 2009, which was vital in identifying isolated seniors as a priority group to whom interventions should be targeted. Although the proposed study is starkly different from the previous CCTSI grant in both methods and proposed outcomes, many of the skills and tools developed in past projects have strengthened the group's ability to carry out proposed research.

F. Description of Academic Researcher: What background, skills, and previous experience does the Academic Researcher have related to the work proposed in this application — and in engaging or working with Community Partners? If academic researcher is a junior investigator (i.e., less than five years out of training and has not received R01), briefly describe mentoring plan from senior investigator(s).

Dr. Debbi Main is a Professor and Chair in the Department of Health and Behavioral Sciences, University of Colorado Denver and also holds an appointment at the Anschutz Medical Campus. Through funding from the National Institutes of Health (NHLBI), Dr. Main helped form Taking Neighborhood Health to Heart (TNH2H) in 2006. Through this partnership TNH2H has collected over 1100 household surveys of residents living in five neighborhoods and detailed information on the built environments that surround these households, including access to safe places for physical activity and buying affordable, healthy food. This model of participatory research is reflected in other aspects of Dr. Main's research collaborations -- for
example, involving barbershop owners in supporting ongoing CVD screening and follow-up within their shops; evaluating price, availability and quality of food in local grocery stores to inform community about healthy food options; involved youth-serving community-based organizations in new partnerships to enroll kids and families in public health insurance; and involving youth in designing active neighborhoods for kids.

G. Description of Community Engagement: How will the Community Partner be engaged in the proposed project? How is community engagement important to the proposed project and its success? How will you make sure that partners are equitably involved?

All TNH2H projects actively involve community residents in all facets of the project (including the development of this pilot grant proposal). The primary mechanism we use for all TNH2H projects is to form a subcommittee: for this project, it will be devoted to the Socially Isolated Older Adults. This subcommittee (of 8-10 community members, academic researchers and doctoral students) will meet twice a month to develop study protocols and methods (including COMIRB application); hire and train data collectors, and identify health and health care services and programs for older adults within the five neighborhoods. The project will also be supported through a variety of other TNH2H groups. TNH2H involves a large community council (anywhere from 15-35 community members and academic researchers attend) that meets monthly to review research projects, devotes time for small group work guided by project-specific subcommittees to ensure consistent input from community members about study methods and materials. In addition to the large council, TNH2H has a Steering Committee that oversees TNH2H and sets the agenda for large meetings. TNH2H also has a Data Review and Dissemination committee that meets monthly to monitor data collection progress, implement standards and processes for managing and sharing data both internally and among a variety of academic and community groups. Among the DRAD’s priorities is to reinforce the importance of community input, involvement, and decision-making in how local-level health data are collected, analyzed, interpreted, and disseminated. Together, these TNH2H structures and processes are in place to ensure that community and academic partners are equitably involved in all phases of the research process.

H. Proposed Next Steps: What do you plan to do once this one-year grant cycle ends? What are your intermediate and long-term goals for continuing the Community-Academic partnership and research proposed in this application?

Once this community translational pilot project is completed we will be poised to write and submit 1-2 peer-reviewed papers and an RO1 to NIH that builds upon pilot data on recruitment, blood pressure data on isolated and non-isolated older adult populations, and survey data on mental and physical health, social ties and resources needs of this hard to reach population (and also intervention components designed through our collaboration with Dr. Carri Hand). Also, we will share findings with community members and continue building our collaborations with local community-based programs and service providers to leverage findings and relationships to improve programs, services and outreach to socially isolated adults. Our interest in social isolation fits within our ongoing CBPR initiative and social determinants framework which view building and revitalizing social connections throughout our neighborhoods as among the most important and sustainable forms of capital to promote and sustain health and well-being. Strengthening ability to address social isolation among older as well as younger populations by increasing social capital and connections seem even more important today, as the economic climate becomes more tenuous and programs and services more piece-meal.
References
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**Budget Justification:**

Please include a brief justification for each major budget item.

ACADEMIC RESEARCH PARTNER: $8483
PERSONNEL: $4,680
Graduate students: We plan to hire a number of graduate students to assist in qualitative and quantitative data analysis and GIS mapping for the final four months of the project. We anticipate a total of 25 hours/week for the students combined, at a rate of $18/hour for four months, totaling $4,680.

RESEARCH/EVALUATION COSTS: $870
Data entry program: Once surveys are collected, we will hire a graduate student highly proficient in statistical analysis to design a data entry program. We estimate this will take 15 hours at $18/hour, totaling $270.
Software: In order to conduct qualitative and quantitative data analysis, we will require two SPSS and ATLAS licenses for each graduate student, estimated at $150 per package, totaling $600.

TRAVEL: $181
Local Travel/Mileage and Parking: This budget includes a request of $181 to cover local travel/mileage. Costs will be reimbursed to project members at an approved rate of 0.53 cents per mile for 200 miles per year ($106 total) and $75 per year in parking fees.
CONSULTANTS: $1,000
We have allocated $1,000 to hire two consultants. Ronica Rooks, a professor at the Department of Health and Behavioral Sciences at the University of Colorado Denver specializes in healthy aging among minority populations and social capital and aging in place. We will use Professor Rook's expertise to advice our community-research council as we select measures of social isolation, hypertension and mental health, and design survey methods. Dr. Sheena Bull is a professor in the Department of Community and
Behavioral Sciences in the Colorado School of Public Health and in the Department of Health and Behavioral Sciences. Dr. Bull has significant experience recruiting hard to reach populations using innovative recruitment methods, and will be a valuable asset to the community-research council as they design methods for targeting isolated seniors in the community.

OTHER MATERIALS: $725
Printing/Marketing Costs: We anticipate spending $500 on printing materials for marketing and dissemination, and other office supply costs.
Electronic Blood Pressure Monitors: We will purchase three blood pressure monitors at approximately $75 each (total $225).

COMMUNITY PARTNER: $22,558
PERSONNEL: $18,960
Project Coordinator: We will hire a project coordinator from one of the five neighborhoods to provide support for the project team and community participants. The project coordinator will arrange all council meetings, assist in training data collectors, and coordinate all data collection and entry. We anticipate an average of 10 hours per week for 10 months of the project, at a rate of $18/hour, totaling $7,800.
Community Data Collectors: We will hire four (4) community members to carry out data collection. We anticipate 250 hours of data collection with teams of two data collectors, including eight-hour training. Two of the data collectors will be bilingual and will be paid at a rate of $14/hour. Two of the data collectors will not be bilingual and will be paid at a rate of $13/hour. This budget includes a request for $2,800 for bilingual data collectors and $2,600 for non-bilingual data collectors for year 1 of the project ($6,750 total).
Data Entry: We will hire the community data collectors, or hire additional community members or graduate students to enter survey data in the specified data entry program. We anticipate 230 hours of data entry at $13/hour, totaling $3,410.
Spanish Interpreter and Translator: (Javan Quintela of Lexicon Translation Services) will facilitate communication with monolingual Spanish-speaking community members who attend project meetings and large community meetings. Mr. Quintela will translate all project materials for data collection and correspondence with community members. He will also interpret input that community members provide to the project team. This budget includes a request of $600 in interpretation services at community meetings. It includes $400 in translation services for survey materials, flyers and dissemination materials (total $1000).

RESEARCH/EVALUATION COSTS: $2,650
Incentives: We have allocated $10 incentives for the 150 survey participants. Additionally, we will provide $5 incentives for community member referrals for survey participants, estimating 70 referrals. We will include $10 incentives for participants in the community council meetings, estimating four meetings with 20 participants each. All incentives will be in the form of gift cards. The total cost for incentives is $2,650.

FOOD: $250
We will provide food at the data collector training, totaling $50, and snacks/refreshments at each of the community council meetings. Total cost for food is $250.

TRAVEL: $181
Local Travel/Mileage and Parking: This budget includes a request of $181 to cover local travel/mileage. Costs will be reimbursed to project members at an approved rate of 0.53 cents per mile for 200 miles per year ($106 total) and $75 per year in parking fees.

OTHER: $500
We will spend $500 on printing and supplies for marketing, dissemination, and data collection.