

PROJECT SUMMARY/ABSTRACT

Only one in four adults aged 50-64 have received the core set of preventive services (i.e., mammography, colonoscopy, influenza vaccination). As the baby boomer generation continues to get older, there will be a need for greater understanding regarding how people “age in place” and for interventions to support healthy aging in place, especially among the most vulnerable members of our society. Leveraging the positive benefits of social capital and social networks in these groups may be useful in the promotion of cancer screening interventions, but little research has examined and tested this hypothesis. Thus, the specific aims are to: (1) identify barriers and facilitators to social capital for cancer screening in public housing from the perspective of public housing resident leaders; (2) describe the social networks of low-income public housing residents minorities aged 50-75 years old for cancer prevention behaviors; and (3) develop and pilot test a peer-led intervention to promote cancer prevention behaviors among public housing residents to determine feasibility and sample size estimates for a future randomized clinical trial (RCT). The proposed research is directly relevant to the candidate’s career goals and objectives and will be used to build a program of research to develop interventions to reduce cancer disparities in minorities while strengthening the candidate’s training in four new areas. The candidate’s immediate career goals are to obtain further specialized training in: (1) social network analysis, (2) multi-level modeling, (3) health policy and (4) intervention development and randomized clinical trial design so that she may successfully execute proposed study goals. Given the institution’s high-quality research environment and resources, and with the guidance of the experienced mentoring team, the candidate will have the support and resources necessary to successfully pursue the proposed research and training aims. Over the course of the five-year funding period, she will participate in ongoing one-on-one weekly and twice monthly meetings with each of her mentors, complete formal coursework/workshops and interactive training activities offered at her institution including grand rounds, work-in-progress research meetings, and journal clubs, submit a minimum of ten first author manuscripts for publication in high impact, peer-reviewed journals and attend nationally recognized research conferences to foster national networks with researchers in the field of cancer prevention and control. This multimodal training plan will provide the comprehensive skills needed to achieve her research aims and professional goal of becoming an independent scholar. The results of the proposed study will be used to test a future RCT of the developed intervention aimed at increasing cancer prevention behaviors in minorities. The long term goal of the proposed research will be to disseminate the intervention, in partnership with community organizations and government agencies (i.e., department of health, New York City Housing Authority) among older adult minorities in low-income, community-based settings, thereby reducing cancer mortality in this underserved population.

PROJECT NARRATIVE

This project will be the first step in understanding and exploring the social networks of public housing residents aged 50-75 years old as they relate to cancer prevention behaviors. The creation of a targeted, peer-led intervention to promote cancer prevention behaviors among low-income, public housing residents will aid in the reduction of cancer mortality disparities. The proposed research is directly in line with NIH's mission to protect and improve health for medically underserved minority populations.

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FACILITIES AND OTHER RESOURCES

Mount Sinai Health System

The Mount Sinai Health System is an integrated health system committed to providing distinguished care, conducting transformative research, and advancing biomedical education. Structured around seven member hospital campuses and a single medical school, the Health System has an extensive ambulatory network and a range of inpatient and outpatient services—from community-based facilities to tertiary and quaternary care.

The Health System's seven member hospital campuses include Mount Sinai Beth Israel, Mount Sinai Beth Israel Brooklyn, The Mount Sinai Hospital, Mount Sinai Queens, Mount Sinai Roosevelt, Mount Sinai St. Luke's, and New York Eye and Ear Infirmary of Mount Sinai. These hospitals and the entire Mount Sinai network will benefit from synergies with the Icahn School of Medicine at Mount Sinai, one of the nation's leading medical schools, which is on the forefront of medical and scientific training, biomedical research, and patient care. The Health System includes approximately 6,600 primary and specialty care physicians, 12-minority-owned free-standing ambulatory surgery centers, over 45 ambulatory practices throughout the five boroughs of New York City, Westchester, and Long Island, as well as 31 affiliated community health centers. Physicians are affiliated with the Icahn School of Medicine at Mount Sinai, which is ranked among the top 20 medical schools both in National Institutes of Health funding and by U.S. News & World Report.

Icahn School of Medicine

Icahn School of Medicine at Mount Sinai (ISMMS) was established in 1963 under a charter from the New York State Department of Education. The School was created as an academic partner to The Mount Sinai Hospital (MSH), and together ISMMS and MSH comprised The Mount Sinai Medical Center (MSMC). In 2013, Mount Sinai combined with Continuum Health Partners to form the Mount Sinai Health System. The Health System encompasses the Icahn School of Medicine and seven hospital campuses in the New York Metropolitan area. Together, the School and the member hospitals serve some of the most diverse and complex patient populations in the world. The Icahn School of Medicine is among the top twenty medical schools in the United States in NIH funding. Driven by a culture of innovation and discovery, ISMMS is guided by a \$2.25 billion strategic plan that emphasizes translational science. The School's multidisciplinary research institutes foster collaboration along a continuum that runs from the laboratory to patient care delivery. State-of-the-art laboratories support groundbreaking research, and abundant clinical venues offer superb patient care and training opportunities. The Leon and Norma Hess Center for Science and Medicine opened in December 2012, providing approximately 550,000 square feet of new space in which scientists and physicians can work in close proximity and collaborate to advance Mount Sinai's efforts to diagnose, treat and prevent human disease. Currently, over 1,100 students are enrolled in six degree-granting programs: MD; PhD in Biomedical Sciences or Neuroscience; Master of Biomedical Sciences; Master of Public Health; Master of Science in Genetic Counseling; and Master of Science or PhD in Clinical Research. Approximately 55% of students are pursuing a Doctor of Medicine (MD) degree; 25% are working toward a doctoral (PhD) degree; and 20% are seeking a Master's (MS) degree. Some students are pursuing dual degrees, primarily a MD/PhD, MD/MSCR or MD/MPH. ISMMS also offers postgraduate research and clinical training opportunities. The School attracts an outstanding and diverse student body to its highly competitive programs and invigorating academic environment. The Levy Library supports the education, research, and clinical information needs of the Mount Sinai Medical Center, including the Icahn School of Medicine at Mount Sinai. The Library provides an inviting environment designed to facilitate research, study, and collaboration. It offers an extensive collection of biomedical databases, e-journals, e-books, and print resources; and serves as a resource on information retrieval, information management and scholarly communication issues. The Icahn School of Medicine campus stretches from East 98th Street to 102nd Street between Madison Avenue and Fifth Avenue on the Upper East Side of Manhattan.

Oncological Sciences – Cancer Prevention & Control

In 1986, Mount Sinai made a major commitment toward leadership in cancer research and clinical care by establishing the Department of Oncological Sciences and the Division of Cancer Prevention and Control. The Department supplies dedicated space for faculty, staff and trainees, budgetary support, and primary tenure-track faculty appointments. The faculty contributes to all activities of pre- and post-doctoral training in both cancer biology and cancer prevention and control. The Department is located in the Icahn Medical Institute, a 16-floor biomedical and clinical research facility. It houses research and office space in over 27,000 square feet for up to 100 investigators who conduct both basic and applied research in the following areas: cancer, developmental biology, human genetics, pharmacology, immunobiology, molecular genetics, neural aging, structural biology and cancer and prevention and control. Office space includes centralized administrative and clerical support offices, dedicated office space for junior and senior faculty, meeting rooms, a conference room/library, and centralized

copying and computer facilities. The Department has state-of-the-art computer capabilities and is fully computer networked, providing staff with access to informational databases, including the National Library of Medicine, Medline, and data analysis programs. This is the home department for the Icahn School of Medicine at Mount Sinai academic staff of the proposed study, and provides a strong, supportive research environment with all necessary resources for them to successfully accomplish their duties as outlined.

East Harlem Partnership for Cancer Awareness (EHPCA) (within the Department of Oncological Sciences)

In an NCI-funded U01, Jandorf and colleagues developed the East Harlem Partnership for Cancer Awareness (EHPCA), a coalition of hospitals, community health centers, and community agencies with the common goal of increasing cancer awareness and preventive care in East Harlem. Launched in 1999, the EHPCA acts as Mount Sinai's Community Advisory Board, shaping our team's investigations for the purpose of increasing minority involvement in all aspects of the cancer care continuum. Meetings are held quarterly, providing the research team opportunities to gain valuable feedback for ongoing and new research. They will bring rich and diverse strengths to the proposed research.

Mount Sinai Community Advisory Board (CAB)

Members of our existing CAB, representing East and Central Harlem, will continue to work with us to achieve our common goals and are fundamental to carrying out the proposed study. Specific to the proposed project, CAB members will be asked to participate throughout all years of the grant including helping to access potential participants, feedback and comments on the results of Aims 1-3, and with the development and revisions of the to be determined intervention in Aim 3. Their connections to the community are vital to the inclusion of patient centered research and its relevance to the minority communities we seek to serve and we will ask for their help in recruiting resident leaders to participate in the proposed study. The Icahn School of Medicine at Mount Sinai partners and communicates with many of the groups and organizations in its surrounding community including the district community boards (Boards 8,10 and 11), places of worship, health centers, police precincts (including the 19th, 23rd and 25th Precincts), and individual community members. From 2010 to 2012, we have worked with over 70 community based organizations in East and Central Harlem. CAB members will assist in serve on a special advisory committee to provide feedback on the interpretation of results, intervention development and in any other ways needed. They will meet twice a year throughout the 5-year grant.

Department of Population Health Science and Policy

Dr. Bickell is a professor in the Department of Population Health Science and Policy. The Department's multi-disciplinary character and mission has allowed it to make major evaluative contributions to the full range of translational research – from first in-human studies to implementation science – and to explore their policy implications for regulation, coverage, payment, and optimal organizational models of health care delivery. The mission of the Department of Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai, is to develop, analyze, and disseminate evidence that can guide decision-making and policy toward improvements in health and more effective, efficient and equitable health care. Our unique research mission bridges the traditional division among bench science, clinical medicine, public health and health care policy. The Department's vision is to expand our portfolio of internationally recognized research that shapes important public and private policies, affects treatment paradigms, reduces disparities in health care, and develops new analytical approaches and methodological breakthroughs. The Department has built a sizable portfolio of research that is both timely and enduring. The aim of this research is not only to produce outstanding peer-reviewed studies, but also to conduct research that affects treatment paradigms, increases equity, and shapes policy.

Center for Health Equity and Community Engaged Research (CHECER)

The Center for Health Equity and Community Engaged Research's mission is to improve the health and health care of underserved populations by identifying causes of disparities in health and healthcare, developing and testing community-partnered, sustainable interventions and disseminating lessons learned to inform policy and systems change. The Center - a hub for researchers across Mount Sinai interested in health equity, health disparities and community-engaged research - provides infrastructure to support their work and foster collaborations across divisions, departments, institutes, and community--based organizations and clinical entities. CHECER's diverse and multi-disciplinary faculty have a rapidly

expanding regional, national and international collaborative research portfolio covering numerous program areas and methodologies.

Active programs areas:

- Cancer - projects include epidemiologic studies investigating explanatory mechanisms of racial disparities in cancer aggressiveness, SEER-Medicare comparative effectiveness studies, qualitative studies of patient and physician decision-making, implementation research, community-based interventions to aid patients in need and randomized trials to coordinate cancer care.
- Cardiovascular disease - clinical and community based research to control hypertension (locally and in developing countries), heart failure, and prevent recurrent strokes in partnership with community organizations, emergency departments and federally qualified health centers.
- Metabolic disease - community engaged research to understand and address diabetes related health disparities in clinical and community settings, and randomized trials among adults and youth aimed at diabetes prevention through weight loss.
- Kidney disease - reducing risk of chronic kidney disease among adults of African descent through patient education, testing and returning results for genetic mutations in APOL1, studying taxi workers' health and risk for bladder cancer.
- Adolescent medicine - diabetes prevention, environmental health and long acting reversible contraception research involving low-income, minority adolescents.
- Infectious disease - work to improve screening and treatment of hepatitis B and C and HIV in minority communities.
- Maternal and child health - portfolio of research aimed at improving perinatal quality of care for underserved women and reducing racial/ethnic disparities in perinatal outcomes. Research areas include postpartum depression, neonatal mortality, maternal morbidity and mortality, and obstetrical and neonatal quality of care. Collaborations with Nursing, Social Work, Pediatrics, Psychiatry, and Obstetrics, Gynecology and Reproductive Science.

Department of Medicine, General Internal Medicine

Dr. Bickell is also has a faculty appointment in the Department of Medicine. The Department of Medicine is the largest department at Mount Sinai, and shares the common, three-part mission of patient care, research, and education. Exceptional research and education programs are prerequisites to fulfilling that mission. The Mount Sinai Department of Medicine is home to a residency program many have described as one of the best in the country. The remarkable students who compete for placement in the program and the success of our residents after graduation exemplify this claim. Our graduates pursue scholarship to enhance quality of care, advance medical research, and strengthen medical education. Many of our former trainees hold leadership positions in academic medicine. In research, the department received \$71 million from the National Institutes of Health in 2008 placing it among the top 20 departments of medicine in the country. Many Department of Medicine faculty were instrumental in the success of Mount Sinai's application to become a member of the federal Clinical and Translational Science Award Consortium, which resulted in a \$34.6 million grant to the School of Medicine. Department of Medicine faculty lead seven of the 14 interdisciplinary research institutes established by Mount Sinai's dean, Dennis S. Charney, MD, to facilitate breakthrough science

The Division of General Internal Medicine (within the Department of Medicine) is strongly committed to caring for the whole patient and places special emphasis on providing patient-centered care. The division embraces the mission of Icahn School of Medicine by pursuing an integrate approach to patient care, research, and education. We pursue all dimensions of these three components, considering them inseparable elements of the art and science of medicine. The Division of General Internal Medicine is conducting research across a broad range of patient and population-based areas spanning hospital, ambulatory care, and home care settings. Our research focuses on four broad areas: the self-management of chronic diseases among patients with complex health

problems, care for homebound adults, age and race related disparities in care, and comparative effectiveness research. Methodological areas of focus include clinical epidemiology, outcomes research, health services research, and behavioral health research. We conduct prospective observational and intervention studies, employing a variety of survey and interviewing strategies, qualitative studies, and studies that utilize publicly available survey and administrative data. The Division of General Internal Medicine operates an outpatient practice, Internal Medical Associates (IMA), providing medical care for adults ages 18 years and older. This is Mount Sinai's largest hospital-based clinic. With accessible preventive care and treatment from physicians and staff who understand the social and cultural needs of our community, the IMA is improving the health of all patients and is reducing non-emergent use of the Hospital's emergency room.

All internal medicine residents have practices within the IMA in which they see a cadre of patients throughout their three years of training. The Visiting Doctors Program, also within the division, is the largest academic home visit program in the nation. Visiting Doctors teams with numerous community organizations, such as the Little Sisters of the Assumption Family Health Service and VNS Choice, an affiliate of the Visiting Nurse Service of New York, one of the oldest and largest home health care organizations in the nation. These community partnerships play an integral part in the success of the program. Our faculty consists of highly respected medical educators, including national and institutional leaders in both undergraduate and graduate education. In addition, our faculty members lead the development of two new tracks within our Primary Care Internal Medicine Residency, which will reinforce the centrality of our mission for the future of the department. Finally, our General Internal Medicine Fellowship program, established in 2000, develops promising internists into outstanding clinician-educators and clinician-researchers.

Institute for Translational Epidemiology

The Institute of Translational Epidemiology, headed by Dr. Paolo Boffetta, takes advantage of Mount Sinai's extraordinary strengths in both research and practice in basic, clinical and preventive disciplines to foster the development of cutting-edge, multidisciplinary epidemiology research projects in the clinic, in the community, and in collaborating institutions across the world. The mission of the Institute for Translational Epidemiology is to establish an institute of international excellence in epidemiologic research that builds on the strengths of Mount Sinai in clinical and preventive research. Epidemiology research has greatly contributed in the last 60 years to improving our knowledge in many areas of medicine, which in turn has entailed major changes in clinical and preventive practices. The observational nature of epidemiology makes it susceptible to bias and confounding, and research should be conducted according to the highest methodological standards. Over the last decades, epidemiologic research has successfully identified the main lifestyle and environmental risk factors of chronic diseases. Observational research is key in establishing causal associations in medicine, when experimental studies are not feasible for ethical or logistical reasons. Recently, genome-wide association studies have contributed to the identification of variants contributing to the individual susceptibility to disease. A major challenge of epidemiologic research rests in the elucidation of the separate and combined effects of genetic, biochemical and lifestyle risk factors of chronic diseases and outcome determinants. The goals of the Institute for Translational Epidemiology will be attained through projects conducted both at the local level, on the population of patients at Mount Sinai, and globally, through large-scale, international collaborative studies. The main areas of epidemiologic research within the Institute are cancer (as part of the Cancer Prevention Program of the Tisch Cancer Institute), cardiovascular disease, geriatrics, psychiatry, and infectious diseases.

Tisch Cancer Institute

The Tisch Cancer Institute at Mount Sinai Medical Center is emerging as an innovative leader in patient care and research. Through a range of multidisciplinary programs spanning prevention, detection, and treatment, the Institute builds on Mount Sinai's extraordinary history of medical breakthroughs to offer new hope for those living with or at risk of cancer. The Tisch Cancer Institute extends Mount Sinai's leadership in the practical application of cutting-edge research, providing patients with access to the most current and promising treatments and techniques available. The Institute also plans and participates in clinical trials, which qualified individuals may enroll in for the benefit of patients now and in the future.

Because the Institute spans a number of different departments, divisions, and centers, our robust clinical and research programs are located in buildings throughout the Mount Sinai campus. Cancer patients receive comprehensive outpatient care at the Derald H. Ruttenberg Treatment Center, as well as personalized inpatient care at Mount Sinai Hospital. As The Tisch Cancer Institute continues to grow, we are implementing new multidisciplinary programs scientific research. Nearly one-third of Mount Sinai's strategic investments have been dedicated to cancer care and research — illustrating Mount Sinai's commitment to fighting the disease. Additional services include screening, clinical trials, genetic counseling, psychosocial support, nutritional counseling, complementary medicine, and wellness counseling. The Tisch Cancer Institute occupies four full floors of Mount Sinai's translational research facility, the Center for Science and Medicine (CSM): two floors for basic research and two for clinical care and research. The Derald H. Ruttenberg Treatment Center has more than doubled in clinical capacity since moving to its new location in the CSM in October 2012. The Dubin Breast Care Center, a 15,000 square foot facility located on the first floor of the Klingenstein Pavilion, opened in 2011. The Center represents a bold new vision for breast cancer care and research — one that focuses on the physical and emotional health of individuals with or at risk for breast cancer. The Dubin Breast Care Center houses a range of multidisciplinary services in one centralized location.

The Minority, Outreach, Recruitment and Education (MORE) Core of the Tisch Cancer Institute was developed, supporting our commitment to both our communities and our cutting-edge research efforts. Focusing on East and Central Harlem, MORE is devoted both to the needs of our neighborhoods and to supporting the mission of The Tisch Cancer Institute. Directed by PI Jandorf, our outreach efforts focus on reducing health care disparities through increased screening efforts, focusing initially on breast, cervical, skin and colorectal cancer; and now expanding into lung and gastric cancers. Recruitment efforts include educating community members as well as patients about the role of clinical research and how they might participate. Finally, our education efforts seek to bring more educational programs (throughout the cancer continuum) to community members. All of the work of MORE is supported by lay health advocates (community members trained to educate and enlist their peers in our outreach, recruitment and education efforts).

Mount Sinai Biostatistics Shared Resources Facility for Cancer Research

The purpose of the Biostatistics Shared Resource Facility (SRF) is to provide statistical assistance for expanded efforts in biobehavioral, basic science, molecular and genetic epidemiological, and translational/clinical research in cancer. The core provides the following services (1) consultation on study design, (2) consultation on statistical analysis, (3) workshops on using software, and (4) courses on statistical methods.

Mount Sinai Community

Since its inception, the Icahn School of Medicine at Mount Sinai has fostered community partnerships to optimize the care of vulnerable populations. Faculty members have benefited from collaborations with underserved, often hard-to-reach populations as well as the front line clinicians that care for them, in terms of faculty members' efforts to recruit diverse populations for research, develop research partnerships and ensure that community expertise, experiences and priorities inform their work. In partnering with investigators, members of the community have benefited from greater access to medical resources, educational programs, technical assistance with program development and evaluation, and obtaining funding and collaborators to implement their research and project ideas. The Centers for Community and Academic Research Partnerships (CCARP) at Mount Sinai facilitates the formation and transformation of these partnerships so that they become the catalyst for groundbreaking research that uncovers and addresses important social, environmental, and health problems; builds skills among academic and stakeholders; and improves health of communities.

CCARP connects Faculty and diverse stakeholders so that the values and cultures of stakeholders are respected throughout the research process. CCARP creates a unique environment where all stakeholders learn from one another and address issues affecting the well-being of communities. CCARP builds and supports stakeholder/academic research partnerships, and develops skills and infrastructure to conduct high-quality community-engaged research. Seasoned experts offer one-on-one support and initial consultations to identify novel research questions. In addition, they can provide and initial consult on grant proposal development, research design, as well as how to best implement effective recruitment and retention strategies.

CCARP can further assist on how to evaluate, communicate and disseminate research outcomes to improve health, systems of care, policies and local environments.

Professional Development Resources

Office of Academic Development & Enrichment

Since 2011, the Office of Academic Development & Enrichment (OADE) has focused on career development for junior faculty at the Icahn School of Medicine at Mount Sinai (ISMMS). OADE has aimed to ease the process of faculty on-boarding, increase access to mentoring resources, provide forums and workshops that address faculty needs, as well as opportunities for cross-departmental collaboration between faculty. OADE, previously known as the Office of Academic Enhancement and Mentoring, was started for the purpose of addressing mentoring needs for ISMMS faculty at the Instructor and Assistant Professor level. Mentoring is vital to career success, navigating the specifics of the promotion process, developing skills, as well as helping faculty members manage the optimal work-life balance. In addition to providing materials and hosting events, OADE coordinates with department Mentoring Leaders and division Mentoring Champions to help coordinate outreach, connect faculty to resources, and assess program success. Metrics that OADE is focused on include overall satisfaction, promotion success rate, amount of time to find a mentor within Mount Sinai Health System, and satisfaction with mentoring programs. Activities conducted by OADE include:

- Coffee Talk, a bi-monthly, informal event where new faculty of all ranks are invited for coffee with Dean Lakshmi Devi to get answers to any questions they may have about Mount Sinai Health System.
- Faculty Resources Fair, an annual event that gives faculty an opportunity to interface with administrative offices, educational resources, Centers of Research Excellence (COREs), and other services at Mount Sinai Health System.
- Faculty Development Symposium, which features an address on a subject related to career development, with break-out sessions for basic science and clinical science faculty.
- Faculty First, a quarterly lunch with ISMMS Dean Dennis Charney, which also gives junior faculty an opportunity to meet other junior faculty from other departments or sites.
- The Dean's Innovative-Collaborations Prize, which is targeted exclusively toward junior faculty engaged in a cross-department collaboration
- Courses and workshops on a variety of subjects, including lunches with an NIH Program Officer, team management courses, workshops on grant-writing, and more.
- Workshops – Three to four workshops per year are offered on topics that are of interest to junior faculty. Recent examples include: Scientific Lab Leadership; Management and Responsible Conduct of Research; Conflict Resolution

Office for Diversity and Inclusion

The Mount Sinai Health System comprises seven member hospitals and a medical school in New York City, where the communities we serve throughout the five boroughs and beyond are becoming increasingly diverse. As the largest health system in New York State, we recognize the opportunity to ensure that our clinical and research leadership, administrative leadership, staff, residents and students represent the vastly diverse communities we serve, and that we deliver patient-centered care. In response to this unique opportunity, the Office for Diversity and Inclusion (ODI), under the leadership of Gary Butts, MD, Chief Diversity and Inclusion Officer, was established to support the Mount Sinai Health System in embracing the principles of diversity and inclusion as key drivers for excellence and innovation for unrivaled health care service delivery, medical and health education, and research. We are proud that Mount Sinai Health System is at the national and global forefront among health care providers with its comprehensive approach to delivering culturally competent patient care, and promoting a diverse and inclusive workforce throughout the system. Our mission is one that champions a culturally diverse workforce, strives to create a multicultural environment that draws on our unique experiences and fosters an inclusive setting to ensure delivery of high-level care to the diverse patient populations in New York City and beyond. In addressing diversity-related challenges, we have established initiatives and programs, partnered with community organizations and made diversity educational opportunities available to the Health System staff at large. We aim to carry out our mission in partnership with System leadership by focusing on the following areas throughout the Mount Sinai Health System: Recruitment, Retention and Advancement; Leadership/Talent Development; Education and Training; Research on Workforce and Health Disparities; Compliance and Data Collection & Reporting; LGBT Programs and Policy;

Advocacy for Women; ADA/Disabilities; Diversity Councils/Employee Resource Groups; Communications and Community Engagement

Center for Multicultural and Community Affairs

The Center for Multicultural and Community Affairs (CMCA) provides an environment which nurtures students, faculty, and trainees from groups underrepresented in the medical and biomedical research workforces at the ISMMS. Student and faculty alike see the Center as a haven where camaraderie and education go hand in hand. In the classroom, the laboratory, and within the Center, each is encouraged to succeed and given tools to succeed. The high school experience in the summer science programs has opened the way for many who consider medicine as a career option. Those who select to study medicine at Mount Sinai are embraced by the faculty of CMCA and guided through their medical school and residency experiences. Faculty are able to serve as much needed mentors while, they themselves are given protected time to embark on research that impacts health care disparities. The testimonials from students and physicians alike confirm what is unique about this program. A core activity of the CMCA is to support the career development of URM faculty and trainees. By equipping clinical and basic science URM junior faculty and trainees with the tools to be successful in academic medicine we are able to impact the level diversity in the clinical and biomedical research workforce and address health disparities issues with rigorous and innovative research approaches. Further, having a diverse workforce in academic medicine allows for additional opportunities for role models with a shared background and experience to mentor URM students in the education pipeline and in medical and graduate school. The clinical and biomedical research that URM faculty perform has led to several nationally recognized scientific achievements that have provided public policy experts with key information regarding the health care delivery of underrepresented minority groups.

The Faculty Diversity Council

The Faculty Diversity Council's mission is to promote diversity in faculty recruitment, retention, development and inclusion at the Icahn School of Medicine at Mount Sinai. In an effort to support institutional excellence, the Council will support the development, implementation and monitoring of specific activities to increase the representation and advancement of faculty from groups underrepresented in medicine and research, as well as women faculty in all departments, institutes and the medical school administration. The Council includes senior-level faculty representatives from all departments and institutes, and will address faculty diversity at all levels. The Council will also monitor and support diversity among medical students, graduate students and trainees from all disciplines to strengthen the faculty pipeline.

Community Resources

New York City Housing Authority

The New York City Housing Authority's mission is to increase opportunities for low- and moderate-income New Yorkers by providing safe, affordable housing and facilitating access to social and community services. More than 400,000 New Yorkers reside in NYCHA's 328 public housing developments across the City's five boroughs. Another 235,000 receive subsidized rental assistance in private homes through the NYCHA-administered Section 8 Leased Housing Program. To fulfill this mission and better serve residents while facing dramatic reductions in traditional government funding, NYCHA is developing new financing options and building innovative partnerships across the public, private, and non-profit sectors. These strategies help NYCHA address many key challenges, from preserving aging housing stock through timely maintenance and modernization of buildings to increasing resident access to a multitude of community, educational and recreational programs, and job readiness and training initiatives.

NYCHA is the largest public housing authority in North America. NYCHA's Conventional Public Housing Program has 177,666 (as of March 1, 2015) apartments in 328 developments throughout the City in 2,553 residential buildings containing 3,314 elevators. A total of 607,399 New Yorkers are served by NYCHA's Public Housing and Section 8 Programs. If NYCHA was a city, it would rank 30th in population size in the United States, with New York City ranked first (as per July, 2013 U.S. Census Estimate). Based upon the 2014 NYC Housing and Vacancy Survey (HVS), NYCHA Public Housing represents 8.1 percent of the City's rental apartments and, based on the July, 2013 Census Estimate, is home to 4.8 percent of the City's population. Working families account for 46.9% of NYCHA families and 11.7% of NYCHA families receive Public

Assistance. Older adults makeup a significant proportion of the NYCHA population; 37.2% of the households are headed by persons age 62 and older and 19.2% of the NYCHA population is age 62 or older. The Bronx has 89 developments with 44,423 apartments. Brooklyn has 99 developments with 58,454 apartments. Manhattan has 98 developments with 53,113 apartments. Queens has 22 developments with 17,126 apartments. Staten Island has 10 developments with 4,502 apartments. Forty-one developments are for seniors only; 15 seniors only buildings exist within mixed-population developments.

Resident Associations

Most NYCHA developments have resident associations, also known as tenant associations, resident councils, or tenant councils. These democratic organizations are dedicated to improving the quality of life in NYCHA developments and the surrounding neighborhoods. They work with NYCHA management at every level, giving residents a real voice in the operation of their developments. Each resident association's executive board is elected by association members and typically consists of a president, vice-president, secretary, treasurer, and sergeant-at-arms. NYCHA helps residents create a resident association if their development does not already have one.

The Citywide Council of Resident Association Presidents

Every president of a recognized resident association is a member of one of nine Citywide Council of Presidents (CCOP) districts in the city. Resident association presidents elect a Chair to represent their district. Members of the CCOP automatically become members on the Resident Advisory Board, described below. CCOP works with senior NYCHA staff on the issues affecting life in NYCHA developments, engaging with government at all levels (local, state, and federal). CCOP Executive Board officers were elected to serve an approximate three-year term. This current Board will serve from July 21, 2014, through December 2016, or until succeeding officers are elected.

The Resident Advisory Board

The Resident Advisory Board (RAB) consists of public housing and Section 8 residents. It primarily addresses various aspects of NYCHA's annual and five-year agency plans, which set forth NYCHA's priorities and policies in 18 core areas and chart the course for NYCHA's short-term and long-term future. RAB members express concerns, make recommendations, and advise NYCHA management as the plans are drafted. RAB's recommendations for the final plan are incorporated when the plan is submitted to the U.S. Department of Housing and Urban Development. RAB members are responsible for informing residents in each development/district about the plans' development at both the draft and final stages. There are more than 80 RAB members, consisting of 45 elected resident association presidents, 5 Section 8 representatives, and 31 alternates.

The Resident Associations, Citywide Council of Presidents and Resident Advisory Board will be the main conduits for facilitating participant recruitment in all study aims. We have relationships with a former resident association president (see Sarah Martin letter of support) who has agreed to help us gain access to the council of presidents and advisory board. In addition, NYCHA has also agreed to provide contacts to help us access the resident board and council of presidents for recruitment (see letter of support).

New York City Department for the Aging

The mission of the Department for the Aging (DFTA) is "to work for the empowerment, independence, dignity and quality of life of New York City's diverse older adults and for the support of their families through advocacy, education and the coordination and delivery of services." As an agency of City government and an Area Agency on Aging under the federal Administration on Aging, DFTA receives federal, state and city funds to provide essential services for seniors. It channels these monies to community-based organizations that contract with the Department to provide needed programs locally throughout the five boroughs. Hot meals and activities at senior centers, home-delivered meals, case management, home care, transportation and legal services are among the services these programs provide. DFTA manages the contracts with these programs and ensures service quality. DFTA also provides services directly through its Senior Employment Services Unit, Elderly Crime Victims Resource Center, Alzheimer's and Caregiver Resource Center, Foster Grandparent Program, Grandparent Resource Center, Health Insurance Information Counseling and Assistance Program, and Health Promotion Unit. The Department's community presentations and other public outreach activities

educate New Yorkers on aging issues and on City services and resources for seniors and their families. Through testimony at public hearings and legislative advocacy, DFTA serves as a major voice for the concerns of New York's seniors. Currently DFTA is the lead agency for implementation of the 59 strategies for improving the City's livability for older persons that comprise Age Friendly NYC, an initiative launched by Mayor Bloomberg, the City Council and the New York Academy of Medicine in August 2009. This blueprint to transform NYC builds on the World Health Organization's *Global Age-Friendly Cities* initiative and links New York to sister cities throughout the world working to promote the well-being of their growing older populations. The Department is proud to be in the forefront of this effort. *DFTA work closely with NYCHA and the resident associations and advisory board and is willing to facilitate introductions with the appropriate leaders in both groups.*

We thank the reviewers for their thoughtful critiques of the application. These comments have been extremely useful in revising the research and training plan. Changes are underlined throughout the revised grant.

Candidate: Concerns about modest publication history; no first-author publication since 2013; not currently on a tenure track but one goal during the award period is to be promoted to a tenure-track assistant professor. Response: XXX has had two first author publications in 2014 and four first author publications in 2015. Additionally five first author publications are under review. One of her short term goals is to be promoted to assistant professor, a goal shared by her mentor and Sinai leadership. The additional mentoring and training provided through the award are essential to her goals and have been noted in her letters of support.

Career Plan: Concerns about relatively generic career goals that seem to overlap with previous experience; no formal courses included; limited scope of training that does not fill five years of funding; and no training geared toward designing R01 trials. Response: XXX training aims will now focus on: 1) Social Network Analysis, 2) Multi-level Modeling, 3) Health Policy, 4) Intervention Development and Randomized Clinical Trial Design. Thus, the qualitative training goal has been replaced. The revised training plan also now includes more formal coursework (semester-long and online courses at local universities; 16 courses over five years; see revised training plan).

Research Plan: Reviewers' overall concerns included lack of preliminary data, description of recruitment procedures and eligibility criteria (i.e., age, language, race/ethnicity), race concordance between interviewers and participants; description of the community structure in NYC public housing, lack of in-depth discussion of intervention dissemination potential and potential pitfalls and alternatives. Aim 2 concerns included lack of clarity of the overall goal of Aim 2; lack of integration of mediation and multi-level modeling training aim into Aim 2; how Aim 2 results will inform intervention development and what the intervention will look like; questions about what other factors would be assessed in Aim 2 and the quantitative evaluation of the role of social networks' influence on screening behavior; also that race/ethnicity should be controlled for rather than explored. Aim 3 concerns included overly ambitious data collection timeline; and single arm preliminary study. Response: Preliminary data is included to demonstrate our success in recruitment of minority and public housing participants, and social network analysis. Recruitment of housing residents will be aided by resident association presidents and other partners. Participants will randomly in selected buildings, with 50% expected response rate. Additional details about study outcomes and the community structure of the NYC housing authority have been added. This study takes a community engaged (hybrid community based participatory research) approach to the development of the intervention which will focus on building a community advisory board comprised of key stakeholders with interests in cancer prevention and control, NYC public housing, aging populations, and health promotion and education. These stakeholders will be interviewed to gather qualitative data about the social network structures and affiliated alters (who an individual is directly connected to) as well as current state and city policies regarding cancer screening. The interviews will guide the development/implementation of Aims 2 and 3. Race concordance between interviewers and participants is an interesting question and this will now be explored (especially since English and Spanish speaking individuals will be included). Individuals 50-75 years old will now be included and age differences in adherence rates will be explored because research shows that, in general, individuals over the age of 65 are more likely to be adherent to recommended cancer screening examinations. Limitations and alternative strategies are now described. Some limitations include random selection of Aim 2 participants and intervention contamination. The proposed intervention has the potential to be widely disseminated (with appropriate adaptations) to other public housing settings. Quantitative analysis using multi-level modeling will assess how social networks and social capital are related to cancer prevention behaviors; the assessment battery for Aim 2 has been expanded to measure cancer prevention behaviors, including cancer screening, psychosocial and sociocultural factors associated with screening. The intervention will be fully developed in Aim 3 (in line with Training Goal #4) and will include the use of a peer educator. The timeline has been revised with 12 months (Aim 1), 20 months (Aim 2), and 18 months (Aim 3) devoted to participant recruitment and data collection. Aim 3's experimental design now includes two arms – the intervention (i.e., peer educator) and a control condition (i.e., education brochure).

Mentors: Concerns about the mentors' letters not explicitly listing their time commitment; no clinician involved; primary mentor Jandorf does not hold a doctorate. Response: The frequency of mentor meetings is described in the career development plan (See table) and noted in the mentors' revised letters. The entire mentoring team will meet (via teleconference) quarterly. We agree and have added a clinician with expertise in health policy to the mentoring team (Dr. Nina Bickell). Jandorf is an experienced researcher and has mentored more than eight PhD-level junior faculty and is currently mentoring two PhD-level early career investigators.

Environment: There is no plan to promote the candidate to Assistant Professor in the Institutional Support Letter. Response: There is a plan to promote XXXX to Assistant Professor within the next two years regardless of obtaining the K01 award and this is now reflected in Dr. Parson's revised Institutional Support Letter, The Department of Oncological Sciences is very committed to XXX career development.

My research and academic training experiences have led me to recognize that, in addition to examining the biological determinants of cancer disparities, research that critically examines and elucidates the function of the social determinants of health behaviors is indispensable to the elimination of racial and ethnic disparities in cancer. Throughout my academic and professional career, my research has focused on examining the role of race and culture within the areas of psychology and racial and ethnic minority health disparities. The experiences outlined below demonstrate my commitment to health disparities research as well as my potential to conduct the proposed research successfully.

As an undergraduate, I was accepted as a Ronald E. McNair Scholar at the University of South Florida. This program targets first-generation college students and prepares them for graduate school and academic research careers. I completed a senior research thesis under the supervision of Dr. Vicky Phares that compared interpersonal relations of African American and white families and found that there were no significant differences among levels of parental anger, inter-parental conflict, stress and (child's) perceived emotional availability. In 2004, I enrolled in the doctoral program in community psychology at Wichita State University. I chose to pursue a degree in community psychology because I was passionate about investigating, understanding, and, ultimately, eradicating social problems and injustices, particularly within racial and ethnic minority populations. In an effort to better understand the role of culture and behavioral outcomes, my master's thesis extended my undergraduate research focus and examined the impact of parenting styles among African Americans and whites. I conducted a secondary analysis of previously-coded observational analyses of "live" parent-child interactions among 85 African American and white American parents of children 5-7 years old. Results showed that white parents had statistically significant higher scores on the following factors: teaching skill, effective discipline, and positive interaction but that there were no racial differences found within the ineffective discipline construct. During my second year of graduate school, I worked as a research assistant at the University of Kansas-School of Medicine (Wichita) and I co-authored four publications with Dr. Angelia Paschal and her colleagues related to various health behaviors such as substance use, nutrition and physical activity, and epilepsy (see biosketch). A common theme emerged within many of these health behaviors: racial and ethnic minorities were being negatively affected at disproportionate rates. This experience led me to shift my research interests toward the examination of health disparities among racial and ethnic minorities. My dissertation (chaired by Dr. Rhoda Lewis) focused on investigating the relationship between racial identity and health behaviors among African American emerging adults (i.e., 18-25 years old) for which I was awarded a small research grant. My dissertation has resulted in three manuscripts, two of which are first author publications (one under review; see biosketch).

While completing my dissertation, I also worked as project coordinator on a Komen grant-funded project aimed at increasing breast and cervical cancer education and outreach to low-income, racial/ethnic minority women in Wichita, Kansas. I presented information about breast and cervical cancer screening to over 500 women at different community functions and noticed that many women were unaware of the racial disparities in breast and cervical cancer mortality rates and were generally reluctant to address the possibility of being diagnosed with cancer. During this time, I became a member and was trained as a lay health advisor, of an organization called the Witness Project of Kansas. The Witness Project is a theory-based, culturally competent, breast and cervical cancer education program through which cancer survivors and lay health advisors increase awareness, knowledge, screening, and early detection behaviors in the African-American population in an effort to reduce the mortality and morbidity from cancer. As a lay health advisor, I participated in many educational programs and heard these breast cancer survivors speak to women about their very personal journey with cancer and encourage women to get screened regularly to increase early detection and prevention. This experience was my first real exposure to the specific problem of cancer disparities among racial and ethnic minorities and the stories of the cancer survivors resonated with me. The women demonstrated the value and expertise that community members bring to research endeavors and I wanted to understand more about the underlying factors which make the Witness Project successful. These experiences led me to seek further specialized training in cancer prevention and control and, thus, I sought additional training in cancer prevention and control at the Icahn School of Medicine at Mount Sinai (ISMMS), in New York City.

I was funded as a postdoctoral fellow under Drs. Guy Montgomery and William Redd's NCI Cancer Prevention and Control Postdoctoral Training Grant (2010-2012). Since then, I have worked in collaboration with Professor Lina Jandorf, my primary mentor, in the Department of Oncological Sciences at the ISMMS and have had the opportunity to find my research niche in several of her projects related to cancer screening and prevention among low-income, racial and ethnic minorities in the New York City area. During the NCI postdoc fellowship period, I authored and co-authored eight publications of secondary analyses of Professor Jandorf's and

colleagues' research projects. Working on these secondary data analyses strengthened my interest in understanding barriers to cancer screening in low-income, underserved populations. In addition to conducting secondary analyses of my mentors' work, I also completed a small pilot project within Professor Jandorf's lab, which was aimed at testing the feasibility and acceptability of using text messages to remind older low income adult minority patients, involved in an on-going patient navigation intervention, of their colonoscopy appointments. The results of the pilot showed that text messaging has potential to be an efficacious approach for use within patient navigation interventions for screening colonoscopy (XXXX et al., 2014). Along these lines of research, I have also first-authored two other manuscripts (i.e., peer patient navigation and evaluation of the process of patient navigation) that are currently under review.

Last year, in pursuit of my own research agenda, under the mentorship of Professor Jandorf, I completed a 2-year American Cancer Society (ACS)-funded postdoctoral fellowship. This study aimed to culturally adapt a peer navigation training program for colon cancer screening among Latinos and test its efficacy compared to professional navigation assistance. I received training in cultural adaptations of interventions; focus group methodology and intervention development to successfully complete this project. I also trained and supervised a total of seven members of the Latino community (who had successfully undergone a screening colonoscopy) to deliver navigation assistance via telephone to patients referred for a screening colonoscopy. A total of 85 participants were recruited and enrolled in the study and the results showed that the trained peers are as effective as the professionals in successfully helping patients to complete their appointments. An abstract describing the results of this study was recently accepted for presentation at the International Agency on Cancer Research. A full description and analysis of the project has also been submitted for publication to the Journal of Cancer Education.

I also secured additional funding from the National Cancer Institute through a Diversity Supplement Award. This study aims to evaluate the capacity and variations among community- and faith-based organizations for recruiting research participants for cancer prevention and other health-related intervention studies and education programs and provides additional mentorship and training in program evaluation using both quantitative and qualitative data collection methods and community-based participatory research towards my independence as a health disparities researcher. Data collection (i.e., program evaluation data) for this research study is currently underway and will continue through 2016. To date 30 interviews have been conducted, transcribed and nearly half have been double-coded. It is anticipated that these results will be demonstrated later this year.

Professionally, I have achieved several accomplishments that provide further evidence of my commitment to a health disparities research career and my potential for developing an independent program of research. First, I was awarded a two-year National Institutes of Health Loan Repayment Award from the National Institute of Minority Health Disparities. This award recognizes research scholars committed to careers studying health disparities by repaying the student loans of awardees. Second, I accepted a leadership role within the Society of Behavioral Medicine's (SBM) Ethnic Minority and Multicultural Health (EMMH) Special Interest Group (SIG). The goal of the EMMH SIG is to advance the field of ethnic minority and multicultural health through education and training; networking; mentorship of ethnic minorities and non-minorities; conducting research in ethnicity, culture and health; and to increase the involvement of ethnic minorities in SBM committees, councils and the peer-review process. I was nominated by members of the EMMH SIG to serve as the co-chair (with Dr. Clement Gwede) for the SIG for the next two years and have shared the responsibility of planning and coordinating scientific workshops, symposia and roundtable discussions held at the annual meeting. The scientific sessions held at the annual meetings focus on culturally relevant cancer interventions, dissemination and implementation research for health equity, and developing effective mentoring relationships for racial and ethnic minorities. I am also the second co-author of a manuscript that describes a new paradigm to advance behavioral medicine and practice to address health inequities. Furthermore in pursuit of my goal to reduce cancer health inequities broadly, I also recently submitted a manuscript (as first-author; revised and resubmitted) with a multidisciplinary team of researchers of a pilot study that explored pregnant women's knowledge of the link between breastfeeding and breast cancer risk. Collectively, these research and professional experiences demonstrate that I am the ideal candidate for the NCI K01 award. My previous training and research experiences have logically progressed to the proposed project and based on this trend, I am certain that I will develop a cohesive program of independent research. As evidenced by my publication record, ability to obtain grant funding and leadership capabilities, I have great potential to develop an independent research career and should I be awarded the NCI K01, I am committed to devoting at least 90% full-time professional effort to the proposed career development award.

My primary mentor (Professor Jandorf) and I have worked together to develop a thorough and directed plan for my career development that utilizes the myriad resources available to me at the Icahn School of Medicine at Mount Sinai (ISMMS) and the Mount Sinai Health System (MSHS). This plan will allow me to achieve the research and training aims of the proposed project as well as my long-term career objectives. My prior research and training has focused on examining racial/ethnic health disparities, including racial identity in African Americans and barriers to colorectal cancer screening among Latinos. In my doctoral dissertation, I conducted a cluster analysis and identified four racial identity patterns/groups among African American emerging adults and then compared the health behaviors of each identity groups. I found that individuals who did not endorse or identify with any racial identity dimensions (i.e., centrality, regard or ideology; I called them the “marginalized group”) were more likely to participate in unhealthy behaviors (e.g., less physical activity, more substance use) and demonstrated higher levels of negative affect. During my postdoctoral fellowship, I received training in the cultural adaptation of interventions, health and culture within Latino subgroups, training manual development and qualitative methods. The goal of my postdoctoral research project was to culturally adapt and implement an existing training manual to teach peers to be patient navigators for colon cancer screening for use within a Latino population. The peer patient navigation training program was successfully implemented and was shown to be as effective as professional peer navigation. This research led me to want to further explore social environments, social connections and the impact that individuals can have on others in their social networks, especially in terms of cancer prevention and control behaviors.

My doctoral and postdoctoral training have given me a basic foundation in the conducting research in cancer prevention and control and led me to pursue the proposed research project. In order to further understand the impact that social connections and interactions can have on the prevention and control of cancer, particularly in underserved, minority populations, I require additional focused training in social network analysis, advanced multi-level modeling strategies, health policy and intervention development and randomized clinical trial design. These training areas are aligned with my proposed research aims and thus are critical to the successful execution of the project. More importantly, I am lacking skills in these areas. My proposed project follows a logical progression that builds upon the research and training I have already acquired (qualitative methods, minority populations, peer patient navigation, cultural adaptation) and moves me forward in laying the groundwork for intervention development and pilot testing that is needed for a future randomized clinical trial (RCT) and consequently, an independent research career.

This award is critical to my ability to have protected research time to develop an independent program of research. I expect that, if awarded, this NCI K01 award will greatly benefit my academic career development in the following ways: 1) specialized training in social network analysis, multi-level modeling, health policy and intervention development and RCT design, 2) increasing my publication record and further establishing me as an expert in social network analysis, health disparities and cancer prevention and control, 3) disseminating my research both locally and nationally at conference meetings and (4) competing for funding for large-scale research trials (i.e., NCI R01). The results of the proposed research have the potential to contribute important information about how social contexts can influence participation in cancer screening in underserved communities. I will further accomplish my training and research aims by utilizing the numerous resources offered at the MSHS and the ISSMS. The career development of diverse junior faculty is a priority for ISMMS and thus they have instituted several programs and resources to support diverse junior faculty during the transition from training to independence. For example, I will utilize ISMMS' Office of Academic Development and Enrichment and participate in professional development courses and workshops on topics such as scientific research team/lab management, and management and responsible conduct of research.

My long term career goals are to develop an independent program of research focused on utilizing information from underserved, minority populations' social networks to understand disparities in cancer prevention and control (i.e. screening, reducing risk through behavior change) and developing, implementing and disseminating appropriate interventions in partnership with community organizations, public health and other government agencies to reduce inequities in cancer mortality. At the conclusion of the five-year NCI K01 funding period, having obtained additional necessary training and professional development, I plan to pursue a career as an tenure-track, independent behavioral researcher (at the Associate Professor level) with expertise in health disparities, qualitative methods, social networks, multi-level modeling, intervention development and RCT design. Overall, the research and training experiences outlined here and throughout the application will provide me with the skills necessary to continue my research career beyond the NCI K01 award and help enable me to become a successful independent scholar.

The proposed research project builds upon XXX existing knowledge base in colorectal cancer (CRC) screening mechanisms, barriers to CRC faced by racial/ethnic minorities and CRC disparities in minorities and also adds new areas of research in social network analysis (SNA), multi-level modeling, health policy and advocacy, intervention development and randomized clinical trial (RCT) design. Throughout the five-year period, she will be actively involved in a variety of training activities including: ongoing mentorship with leading researchers in the field (i.e., mentors Jandorf, Bickell, Winkel and Latkin), formal coursework, and scholarship (i.e., manuscripts and grant applications). She will remain up to date on the current literature on health disparities/inequities, cancer prevention and control, and attend relevant conferences so that she maintains a comprehensive understanding of these evolving fields. She will receive intensive mentoring and training in four new areas of research: SNA, multi-level modeling, health policy and advocacy, and intervention development and RCT design. XXX four training goals, which will provide the skills needed to become a successful independent minority researcher, are outlined below.

Training Goal #1: Social Networks Analysis. A major focus of the proposed research is to describe the social networks of older adults (Study Aim 2) and XXXX has had no formal training in SNA. Therefore, as part of her career development plan, she will receive focused training in this area. As shown in Table 2, XXX will participate in three courses in the first year to gain a fundamental understanding of the empirical background on social networks and network formation models, concepts used to describe and measure networks, and begin to understand how networks impact behavior, including contagion, diffusion, learning and peer influences. She will take an introductory SNA course to learn quantitative and qualitative methods for describing, measuring and analyzing social networks. This will allow her to learn how to identify influential individuals, track the spread of information through networks and to apply these methods to study design including participant recruitment and survey administration (Aim 2). She will then begin to learn UCINET software to analyze these data. Her training will be complimented by bi-weekly teleconferences with co-mentor Latkin, an expert in SNA. She will also visit Latkin's community-based research clinic to be trained to conduct social network interviews and to observe intervention sessions in Latkin's behavioral network-oriented RCT in the first year of the project. This will allow hands-on experience with administering, managing and SNA.

Training Goal #2: Multi-level Modeling. During her doctoral and postdoctoral training, XXX acquired a basic foundation in biostatistics. She completed two courses/workshops that focused on fundamental statistical analyses. However, she has had no formal training in more advanced statistical methodologies. To strengthen her ability to accurately evaluate the relationships of the social networks identified in Aim 2, XXX will undertake formal coursework in multi-level modeling. The nature of the research design is such that nested or group-level (i.e., apartment building or housing development) data will need to be analyzed using multi-level modeling techniques. Taken together, the social networks and related cancer screening behavior of the public housing residents will inform the development of the Aim 3 proposed intervention. Therefore, it is imperative that she learns multi-level modeling. Broadly, she will learn how to model the complex correlational structures induced by nested designs, develop, fit and interpret models for explaining behaviors within the public housing residents' social networks (Aim 2) and then use those results to guide the development of the Aim 3 intervention and its outcomes. To achieve this goal, she will complete formal coursework and have focused one-on-one instruction with Winkel (co-mentor) on a bi-weekly basis.

Training Goal # 3: Health Policy and Advocacy. With a background in community psychology, XXX research interests have been grounded in themes (i.e., advocacy, prevention-orientation) that are complementary to health policy; however, she has not had any formal education or training in health policy. XXX would benefit from health policy and advocacy training as her proposed research will lead to the development of an intervention that will be implemented in public housing. The goal is for XXX proposed intervention to be disseminated into multiple housing developments in NYC and eventually in other regions of the country. Training in health policy will help XXX learn about the health policy-making process, government structure, laws and regulations, implementation of health programs in organized settings, planning, administration, management evaluation and policy analysis of public health agencies (i.e., Dept. of Health), how to appropriately analyze the costs and benefits of health policies related to cancer screening, and advocate for policies that promote cancer screening in underserved populations. She will also receive focused, bi-weekly mentoring from Bickell (co-mentor), who is an expert in health policy and health disparities.

Training Goal #4: Intervention Development and RCT Design. While she has had training in the cultural adaptation of behavioral interventions (Postdoctoral Fellowship), XXX lacks formal training in intervention development and RCT design. To strengthen her ability to develop the intervention (Aim 3) (and eventually test it in an RCT), XXX will receive formal training and mentorship in these areas. She will begin with training on the development of interventions where she will learn the about the continuum of intervention research (from efficacy to implementation and sustainability), strategies to enhance and measure treatment fidelity, strategies for advancing an intervention protocol and involving community partners. She will also learn about intervention mapping and use this approach to develop the Aim 3 intervention. RCT design training will focus on the principles for design of RCTs, common designs (e.g., parallel and cross-over designs) and mechanisms of RCTs (e.g., randomization and blinded treatments), how to report (e.g., CONSORT table), analyze and

interpret RCTs. At the end of this coursework she will be able to prepare and submit a protocol for the future proposed RCT (R01 application). This formal coursework will be enhanced with weekly meetings with her primary mentor Jandorf, who has significant expertise and experience in these areas.

Training Activities and Timeline. The NCI K01 will provide XXX with a variety of avenues to achieve her training goals, enhance her expertise and prepare her for an independent career as a health disparities researcher. First, she will have ongoing one-on-one weekly meetings with primary mentor Jandorf and bi-weekly meetings with each of her co-mentors. In addition, Jandorf will chair a quarterly meeting of XXX mentoring team. The meetings' foci will change over the funding period, initially focusing on pragmatic challenges to the study and later on the analysis and interpretation of the results, manuscript publications, and grant submissions. XXX will complete formal coursework/workshops (see Table 2) and will continue to be actively involved in professional and interactive training activities offered at Icahn School of Medicine at Mount Sinai (ISMMS). Finally, she will attend nationally recognized scientific meetings to foster national networks with researchers in the field of cancer disparities and SNA. This multimodal training plan will provide comprehensive skills needed to execute the research aims and her professional goal of independent research.

Mentoring Team. The interdisciplinary mentoring team consists of four expert mentors who will provide focused guidance in

Table 1. Mentoring Team: Expertise and Focus and Frequency of Training

Mentoring Team Member and Role	Expertise	Focus and Frequency of Training	Training Goal	Study Aims
Lina Jandorf (Primary Mentor): Professor, Oncological Sciences, ISSMS; Director, Cancer Community Outreach, ISMMS; Director, Minority, Outreach, Recruitment and Education, Tisch Cancer Institute at ISMMS	Cancer prevention and disparities, Intervention development, RCT design	Mentorship in all aspects of study design and conduct. Focused mentorship in health disparities, cancer prevention, intervention development, community engaged research. <i>Weekly 1-hr mentoring meetings; quarterly team meetings (yrs 1-5)</i>	4	1-3
Nina Bickell (Co-Mentor): Professor, Population Health Science & Policy; Medicine; Co-Director, Center for Health Equity & Community Engaged Research, ISMMS	Health Policy	Mentorship in health policy, health care disparities, intervention development. <i>1-hr phone conferences (bi-weekly). Quarterly team meetings; consultation</i>	3	2-3
Gary Winkel (Co-Mentor): Professor, Oncological Sciences, ISMMS	Biostatistics	Mentorship in multi-level modeling. <i>1-hr meetings (bi-weekly); quarterly team meetings; consultation as needed. (yrs 1-5)</i>	2	2-3
Carl Latkin (Co-Mentor): Professor, Medicine, Johns Hopkins University	Social Network Analysis	Mentorship in SNA, data collection & recruitment strategies. <i>1-hr phone conferences (bi-weekly); quarterly team</i>	1	2-3

their areas of expertise (see Table 1). Professor Lina Jandorf is the ideal researcher to serve as XXX primary mentor on this project as her research expertise lies in cancer disparities, intervention development/RCT design and community engaged research, and she has over 16 years of experience conducting community-based educational outreach and disparities research

with minority populations. She has mentored 32 undergraduate, graduate, and postdoctoral trainees and has served as a mentor or co-mentor on nine training grants and awards. She currently mentors one junior faculty investigator K07 award) and XXX will be her second K-award mentee. She has had multiple R01 level grants and has published over 160 manuscripts in peer reviewed, high impact journals. She will provide support staff to assist in XXX project as needed (i.e., bilingual research assistant). She has also committed to weekly one-hour mentoring meetings to ensure high quality mentoring in all aspects of the study development, design, and analyses. Dr. XXX also has assembled an interdisciplinary team of co-mentors to help her achieve all of her research and training objectives outlined in this application. The three co-mentors will provide focused mentorship in these training content areas: SNA (Latkin), multi-level modeling (Winkel), health policy (Bickell). **Formal Coursework/Workshops, Professional Development and Interactive Trainings.** XXX will actively participate in formal didactic coursework/workshops, scientific meetings, and interactive activities at ISMMS. The majority of this coursework will be taken during the first four years of the grant in order to receive the intensive training needed to submit an R-01 application. Formal Coursework/Workshops: To obtain training in SNA (Training Goal 1), in Year 1, XXXX will enroll in four SNA courses (see Table 2) that will align with the research study timeline. For example, before recruiting participants for Aim 2, XXX will be equipped to revise and refine the social network assessment battery based on the new skills she acquires. She will first participate in theoretical foundation courses and attend workshops on SNA in years 1 and 2. In the first workshop she will learn how to analyze network data using UCINET software, and in year 2, she will participate in the hands-on, advanced SNA workshop using data from Aim 2 to work with UCINET. She will also participate in one-on-one consultation with the course instructor regarding her study data. To obtain training in multi-level modeling (Training Goal 2), in Years 2 and 3, XXX will take three courses at New York University to strengthen her ability to analyze the nested social network data (Aim 2). She will also begin establishing skills in health policy (Training Goal 3) with four courses in Health Policy at the Hunter College School of Public Health in Years 3 and 4. These courses will focus on theoretical concepts, practice, and implementation of health programs in organized settings, challenges and opportunities for delivering health care in urban settings, including the planning, administration, management, evaluation, and policy analysis of public health agencies, which will be highly relevant to the design and implementation of the Aim 3 intervention development as well as the future large scale RCT. Her coursework will also focus on advocating for policies that promote public health. Finally,

Table 2. Training Activities and Corresponding Study Aim with Timeline

	Study Aim	Year				
		1	2	3	4	5
Training Goal #1: Social Network Analysis						
Social and Economic Networks: Models and Analysis (Stanford University via Coursera)	1-2	X				
Introduction to SNA, 4-week online course taught by Dr. Jennifer Golbeck	1-2	X				
QMSS G4062 - Social Network Analysis, Quant.Methods in the Social Sciences, Columbia Univ.	1-2	X				
Summer Workshop on Social Network Analysis (2 courses: Analyzing Network Data, Networks and Health), LINKS Center for Social Network Analysis, University of Kentucky	1-2	X				
Summer Workshop on Social Network Analysis (1 course: Advanced Social Network Analysis + One-on-One Consultation), LINKS Center for Social Network Analysis, University of Kentucky	1-2		X			
Training Goal #2: Multi-level Modeling						
APSTA-GE 2997 Advanced Methodology in Health and Policy Research: Generalized Linear Models, Steinhardt School of Culture, Education and Human Development, New York University	2-3		X			
APSTA-GE 2042 Advanced Topics in Quantitative Methods: Multi-Level Modeling - Nested Data, Steinhardt School of Culture, Education and Human Development, New York University	2-3		X			
APSTA-GE 2041 Practicum in Multi-level Models, Steinhardt School of Culture, Education and Human Development, New York University	2-3			X		
Training Goal #3: Health Policy and Advocacy						
PH 75600 - Fundamentals of Health Policy and Management, Hunter College Sch of Public Health	1-3			X		
HPM 75200 - Comparative Analyses of Urban Health Care Systems, Hunter College	1-3			X		
HPM 75400 - Public Health Advocacy, Hunter College School of Public Health	1-3			X		
HPM 75300 - Public Health Policy Analysis, Hunter College School of Public Health	1-3					X
Training Goal #4: Intervention Development and Randomized Clinical Trial Design						
Design and Interpretation of Clinical Trials (Johns Hopkins University via Coursera)	3				X	
Advanced Intervention Design, Mailman School of Public Health, Columbia University	3				X	
Summer Research Institute on Developing Behavioral Interventions, Center for Innovative Care in Aging, Johns Hopkins University School of Nursing	3					X
PS8140 - The Randomized Clinical Trial, Mailman School of Public Health, Columbia University	3					X
Professional Development Activities						
Society of Behavioral Medicine Annual Conference			X	X	X	X
American Association for Cancer Research Conference on the Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved			X		X	
Society for Community Research and Action Biennial Conference			X			X
American Aging Association Annual Meeting				X		
National Research Mentoring Network Proposal Preparation Program (NRMN-P3)						X
Early Career Reviewer Program, Center for Scientific Review, National Institutes of Health					X	X
Interactive Training Activities						
Health Disparities Journal Club, ISMMS, Department of Oncological Sciences		X	X	X	X	X
Social Determinants/Health Journal Club, ISMMS, Dept of Population Health Science and Policy		X	X	X	X	X
Cancer Prevention and Control Grand Rounds, ISMMS, Department of Oncological Sciences		X	X	X	X	X
Work-in-Progress Research Meetings, ISMMS, Department of Oncological Sciences		X	X	X	X	X

in Years 4 and 5, XXX will receive training in intervention development and RCT design (Training Goal 4). First, to learn about intervention development, she will attend a summer institute at Johns Hopkins University to gain hands-on practical knowledge and skills to develop a testable intervention that will have the potential for implementation in public housing. Next she will enroll in an advanced intervention design course, where she will learn and practice intervention mapping, a complex, theory- and evidence-based approach to designing multi-level, community-

based health promotion programs. Finally, she will learn about the basic principles for designing and interpreting RCTs including protocol development, randomization, blinding, patient recruitment, informed consent, compliance, sample size determination, and collaborative trials. Then she will enroll in a semester-long course (The RCT) at Columbia University where she will learn how clinical trials are analyzed and interpreted and review essential ethical considerations involved in conducting research. *Professional Development and Group Training Activities:* XXX will attend scientific conferences to enhance her understanding behavioral medicine, cancer health disparities, SNA and community research and to foster local and national research networks. During the fourth and fifth year of the training award, she will disseminate the study's research results via abstract and symposia presentations at scientific conferences. In preparation for an R01 grant submission in years 4 and 5 of the grant, she will participate in the National Research Mentoring Network's 5-month, writing-intensive, small group workshop experience, designed to refine the proposal writing skills of junior investigators, which will greatly increase her chances of successfully obtaining an R01 award. She will also apply to become man NIH Early Career Reviewer, to become more educated about the scientific peer review process. These coaching and mentoring activities will allow XXX to her refine her grant-writing skills and successfully obtain R01 funding. She will also attend group training activities at ISMMS including: grad rounds, work-in-progress meetings, and health disparities journal clubs.

Plans for Scholarship and Publication Timeline. XXX will submit a minimum of ten first author manuscripts in high impact, peer-reviewed journals over 5 years. First, she will publish outcomes from her NCI diversity supplement project (N=2) and ACS fellowship award (N=2). Throughout her training, she will publish secondary disparities focused data analyses on Jandorf and co-mentors' existing datasets (N=3). She will focus on publishing the outcomes from the proposed research (N=3). Additionally, she will apply for grant funding, including an NCI R01 to conduct a large scale study testing the efficacy of the developed intervention. She will prepare and submit NCI applications and resubmissions during the last two funding years.

TRAINING IN RESPONSIBLE CONDUCT OF RESEARCH

Mount Sinai has a strong commitment to providing excellent and ongoing instruction in the Responsible Conduct of Research (RCR) for all students, postdocs and faculty involved in biomedical research. Since the previous award, the RCR curricula at Mount Sinai has been considerably expanded, and now surpasses the guidelines described in NIH issued NOT-OD-10-019 "Update On The Requirement For Instruction In The Responsible Conduct Of Research". Reginald W. Miller, DVM, DACLAM, was appointed in 2009 as the Mount Sinai Research Integrity Officer in the Office of the Dean. He has overseen a coordinated increase in RCR education at all levels of the institution that adds even greater vitality to a program that has been a long-standing institutional commitment. All trainees will participate fully in these RCR course offerings upon entrance to the training program, and will partake in the bi-annual refresher course required by the school.

Format: The graduate course in the Responsible Conduct of Research (RCR) is offered annually to each incoming class of PhD and MD/PhD students as an integral part of their core curricula. Trainees from this program will participate in this mandatory graduate course. Qualified trainees must participate in a biannual refresher course offered specifically for postdoctoral trainees and junior faculty, which also ensures a more closely matched peer group to facilitate discussions and relevant experience. This rigorous 16-hour (8 x 2 hour sessions) RCR course encompasses a series of presentations in different formats that include presentations by guest speakers, panels of faculty members and videos. This material is supplemented by additional assigned reading, use of selected videos, and other special materials. Each session has an hour devoted to small group discussion of specific pre-assigned case studies with a faculty mentor. These discussions are followed by a full class wrap-up in which the groups compare notes on their conclusions, insights and remaining questions. Each trainee is required to submit a report discussing the assigned case study each week, and at the end of the course is required to submit a real-life case study of an ethical research dilemma encountered by the trainee, and an analysis of the resolution of the dilemma.

Subject Matter: 1) Specific topics for the eight two hour classroom sessions include: (i) Conflicts of Interest; Intellectual property, (ii) Protection of Human Subjects; (iii) Welfare of Laboratory Animals; (iv) Mentor and Trainee Responsibilities; Collaborative Research; (v) Research Misconduct; (vi) Experimental Design and Data Management Practices; (vii) Publication, Authorship, and Peer Review; (viii) Peer Review, the Grant Process, and Fiduciary Responsibility. The main resources for this course are the materials on the NIH Office of Research Integrity (ORI) website, which presents the most recent official NIH positions on most of the issues covered in the course. At the end of the course trainees are required to take and pass (>85% correct answers) an online test produced by the Collaborative Institutional Training Initiative (CITI) to ensure that the trainees meet the broad standards for RCR.

Faculty Participation: Charles Mobbs, PhD, Professor of Neuroscience and Geriatrics, directs the RCR course. Guest lecturers have included the Executive Director and Chair of the IRB (Jeff Silverstein, MD, CIP), the Chairman of our IUCAC (Giorgio Martinelli, DSc, PhD), a representative from the Office of Industrial Liaison (Rajesh Udupa, PhD), and the Mount Sinai Ombudsperson. Small group discussion leaders are knowledgeable faculty at Mount Sinai who serve on a rotating basis, and research mentors from this training program will be included (Drs. Desnick, Diaz, and Peter) as small group discussion leaders. In addition to this formal training, XXX primary mentor, Professor Jandorf, has committed to provide on-going guidance related to the ethical conduct of the proposed research study.

Duration of Instruction: The Graduate RCR course is composed of 8 two hour sessions over the course of eight weeks. The refresher course is composed of 4 two hour sessions. The first hour of each session is lecture format or faculty panel discussion, followed by a second hour with faculty mentors in small group discussions of a preassigned case relevant to the lecture topic. These discussions are followed by a full class wrap-up in which the groups compare notes on their conclusions, insights and remaining questions. Each trainee is required to submit a report discussing the assigned case study each week, and at the end of the course is required to submit a real-life case study of an ethical research dilemma encountered by the trainee, and an analysis of the resolution of the dilemma.

Frequency of Instruction: Mount Sinai is committed to recurring and ongoing instruction in RCR for all students, postdocs and faculty. All first year PhD and MD/PhD graduate students, along with all new trainees, participate in the mandatory graduate course in RCR, and are required to take the refresher course after 2-4 years of training. All postdocs and junior faculty, including the trainees in this program, are required to take the biannual refresher RCR course in order to maintain the NIH mandated instruction in RCR every 4 years. Because our RCR courses are continually updated, with variation in lectures, case studies, and group discussions to reflect important issues and current cases, our RCR course is a valuable and fresh learning experience each time it is taken throughout a scientific career.

Other RCR training and resources at Mount Sinai: It is recognized that proper instruction in RCR requires an ongoing dialogue about these important issues that is not satisfied by recurring course work. Informal instruction in RCR occurs normally in the course of laboratory instructions and mentor/trainee interactions and other informal situations during training. In addition, Mount Sinai has had an ongoing program in bioethics since 1980. The Bioethics program includes several semester long courses offered to trainees. Trainees will participate in ethics seminars and luncheons which have been ongoing at Mount Sinai for many years as an integral part of our training program.

Cancer disparities continue to persist among underserved populations (e.g., racial/ethnic minorities, individuals with low-incomes) despite widely available screening examinations and novel treatment regimens that can lead to early detection and remission of cancer. Moreover, cancer risk is increased with age. With longer life spans and the aging of the baby boomer generation (i.e., 1946-1964), it is estimated that by 2040, older adults will account for about 20% of the total U.S. population. Growth in the older adult population is predicted to overwhelm the healthcare system in terms of cost and capacity due to higher incidence of multiple, chronic conditions, including cancer, diabetes, and obesity. Moreover, only one in four adults aged 50-64 have received the core set of preventive services (e.g., mammography, colonoscopy) and more than half of older adults do not meet recommendations for diet and physical activity, further exacerbating burden to the healthcare system. This is especially true for minority and low-income populations. The growth of the older adult population calls for a greater understanding regarding *how* people “age in place” and for interventions to support healthy aging in place, especially among low-income individuals and minorities. Research is needed to better understand this population’s social environments so that interventions can be developed to encourage preventive health behaviors, like cancer screening, balanced diet and physical activity, before becoming major burdens to the healthcare system.

Social connections through interpersonal social networks (i.e., web of social ties) have important implications for shaping health outcomes (e.g., cancer and cardiovascular risk and mortality) and influencing and promoting health behaviors (e.g., exercise, screening). Social networks may affect health through processes including facilitating healthcare access, sharing of information and resources, and psychosocial processes such as social support and social norms. Few studies have explored how social networks can best be leveraged to promote healthy behavior change among underserved communities. Social network analysis provides a framework for studying the complexities of a social system such as public housing. Investigating the interpersonal relationships among a set of individuals can provide a detailed map of the social environment within which older adults interact and can identify the constructs of social capital available within a public housing environment to influence more individuals to discuss and participate in cancer prevention behaviors.

Few studies have examined the impact of residency in public housing on social networks, social capital and health promotion, particularly as it relates to cancer prevention. The public housing setting is a unique opportunity to access what can be considered a vulnerable population. The goals of the proposed study are to: 1) understand the social networks among public housing residents, 2) how social capital is leveraged to promote (or suppress) cancer prevention behaviors in these environments and 3) how to collaborate with key stakeholders to develop a cost-effective peer-led intervention to increase participation in cancer prevention behaviors and social capital in public housing communities. The specific aims are:

Aim 1. Identify barriers and facilitators to social capital for cancer screening among public housing residents from the perspective resident leaders. In-depth qualitative interviews will be conducted with resident leaders (i.e., resident association presidents, resident advisory board members) to understand how they perceive social capital as it relates to cancer screening among residents. Resident leaders (N=30) will be recruited from five New York City Housing Authority (NYCHA) developments.

Aim 2. Describe the social networks and social capital of low-income public housing residents aged 50-75 years old for cancer screening. Participants (N=150) recruited from five different NYCHA developments will complete an assessment describing the quantity and quality of their social interactions with others in their network as well as their cancer prevention behaviors (i.e., cancer screening, current weight, participation in regular physical activity) and social capital facilitators/barriers.

Aim 3. Develop and pilot test a peer-led intervention to promote cancer prevention behaviors among public housing residents. Qualitative (i.e., social capital in public housing) and quantitative (map of social networks in public housing) data will inform the content of an intervention developed in collaboration with key stakeholders (e.g., resident leaders, public health agencies). The developed intervention will be pilot tested (N=100) to assess feasibility and gather sample size estimates for a future randomized clinical (RCT) trial.

The long term goal will be to develop an intervention to promote cancer screening among older adult minorities in low-income, community-based settings, thereby reducing cancer mortality. The award will provide training in the design and implementation of a peer led intervention to promote cancer screening among NYC public housing residents aged 50-75 years old. XX career development plan includes mentors in the fields of cancer prevention and disparities, intervention development and RCT design (Lina Jandorf), multi-level modeling (Gary Winkel), social network analysis (Carl Latkin), health policy and health services research (Nina Bickell) and strong institutional support including career advancement. In addition to regular meetings with her mentoring team, the training plan includes: (1) formal course work; (2) participation in seminars and national conferences; and (3) professional development. The combination of XXX prior training, the expertise of her mentoring team, and the research environment at her institution will facilitate the successful implementation of the proposed study. The results of this study will be used to test a future RCT of the developed intervention aimed at addressing cancer disparities in urban, minority populations.

SIGNIFICANCE. Growth and Health of Older Adult Population. By 2040, older adults will account for 20% of the total US population.¹ The baby boomer generation is living longer than any other age cohort before it.² As they age there will be a need for greater understanding regarding how people “age in place” and for interventions to support healthy aging in place, especially among the most vulnerable of our society. The growth of the aging population has major implications for cancer prevention and control. The number of middle and older age people who are at risk for developing cancer will increase as the population grows. The population aged 45-64 years old grew 31.5% to 81.5 million between 2000 and 2010 and currently represents 26.4% of the total US population.³ Several researchers have argued that the midlife period (ages 45-64 years old) is a critical point for primary cancer prevention as it represents a period when positive behavior change is possible and when adults are able to focus their behavior change efforts to reduce their risk for developing cancer, fostered by access to venues and supports for substituting healthful for less healthful behaviors.^{4,5} Thus, targeting midlife for prevention of cancer during older adulthood is crucial to reduce the burden of cancer incidence and treatment costs to the health care system. Little is known about how age, cancer risk and cancer prevention function among members of racial and ethnic minority groups and lower-SES populations.

Receipt of routinely recommended clinical preventive services (i.e. cancer screening, vaccinations) among 50-64 year olds decreased to a strikingly low level (25%) between 1997 and 2004.^{6,7} Older adults are also more affected by cancer risks such as tobacco use; physical inactivity; poor nutrition; and alcohol use.^{8,9} In addition, there are significant disparities in both cancer risk and preventive screening by race and ethnic group, level of education and insurance status^{6,7,10} as well as differences in barriers to cancer screening such as fear, fatalism, lack of knowledge, lack of physician recommendation.¹¹⁻¹⁴ Minorities, lower-SES persons and older adults represent important populations that may be particularly vulnerable to increased cancer risk and suboptimal cancer care, because of multiple chronic conditions (i.e., diabetes, overweight/obesity)^{4,15}, and untimely cancer screening and treatment.^{16,17} Between 2010 and 2030, a 67% increase in cancer incidence is anticipated for individuals age 65 years or older and a 99% increase in cancer incidence is anticipated for minorities, compared with only a 31% increase for non-Hispanic whites.¹⁸ Unless substantial improvements in cancer prevention strategies emerge, cancer deaths may also dramatically increase in these populations.

Social Networks and Social Capital for Health. Social capital refers to the quality and quantity of resources available in one's social network.¹⁹ Social capital can provide access to health information or access to better health care.²⁰ The pathway between social capital and health behavior is hypothesized to occur through three mechanisms: promoting more rapid diffusion of health information, increasing the likelihood that healthy norms of behavior are adopted and exerting social control over deviant health behaviors²¹, but the casual pathway requires further investigation. The relationship between social capital and health behaviors may be mediated by other psychosocial variables such as self-efficacy, which ultimately influence the uptake or avoidance of health behaviors.²² Evidence indicates that network data are effective in directing health behavior change efforts²³⁻²⁵. Several approaches to applying network data to health promotion interventions have been tested²⁶, including identifying opinion leaders that can act as change agents²⁷, subgroups in the social network and approaching them with behavior change promotions²⁸ and key players (i.e., those who optimally reach others, but are not necessarily popular opinion leaders).²⁹

Public Housing Environments and Health. Public housing was established to provide decent and safe rental housing for eligible low-income families, the elderly, and persons with disabilities. More than 1.2 million households live in public housing in the United States.³⁰ African Americans and Hispanics make up 65% of the national public housing population and about one-third is comprised of elderly adults.³⁰ In New York City more than 400,000 people live in New York City Housing Authority (NYCHA) public housing developments, with over 300 NYCHA public housing developments. The racial makeup of NYCHA is predominantly African American (45.2%) and Hispanic/Latino (45.0%).³¹ About 13% of the NYCHA public housing population is 50-61 years old and 19% are individuals over the age of 62³¹, suggesting that many people who live in public housing have decided to “age in place” and developed social networks within their developments.

Given that cancer risk is associated with aging, it is imperative to intervene at developmental life periods earlier. The age group between 45-64 years old is ideal for instituting cancer prevention behaviors to detect and possibly cure cancers at earlier stages. Yet a significant proportion of individuals aged 50-64 are not up-to-date for recommended preventive screening exams like colorectal cancer screening. When race/ethnicity and SES/income are considered among this age cohort, the rates of adherence are even lower. Research is needed to develop interventions to encourage participation in cancer prevention in these underserved, vulnerable populations. Leveraging the positive benefits of social capital and social networks in these groups may be useful in the promotion of cancer screening interventions, but little research has examined and tested this hypothesis. Using a multilevel approach can address individual behaviors and include strategies to support and reinforce healthy behaviors and reduce cancer risk. Thus, the purpose of the proposed study is to: 1) understand the social networks in public housing environments and how social capital is leveraged to promote

cancer screening in these environments and 2) to collaborate with key stakeholders to develop a cost-effective, intervention to increase participation in cancer screening and social capital in public housing communities. If successful, this project will lead to refining and then testing the intervention in a randomized clinical trial (RCT).

INNOVATION. The proposed application seeks to describe the social networks and social capital of adults aged 50-75 living in NYCHA housing developments for cancer screening behaviors. This research study is innovative in at least three ways. **First**, the study will utilize a community-based approach to achieve the study aims. Including resident leaders, NYCHA representatives and other community stakeholders will allow the research to be informed from multiple perspectives. The participation of the community partners in participant recruitment, interpretation of results, and development of the intervention in Aim 3 is particularly innovative. **Second**, the proposed study will describe the social networks and social capital for cancer screening among individuals living in public housing developments. This is to our knowledge, the first study that will describe and analyze the social network connections of public housing residents specific to cancer screening. The results of the social network analysis have the potential to contribute important information about the social context of cancer screening behaviors within the most vulnerable and underserved populations in our society. **Finally**, this study proposes to develop and test a peer-led intervention to promote cancer prevention behaviors based on the social network structure of public housing environments, which is a novel approach.

PRELIMINARY STUDIES. *Training Latino peers as patient navigators for colonoscopy screening.* XXX (PI) et al.³² culturally adapted an intervention to train Latino community members as patient navigators for screening colonoscopy and piloted with 75 Latino participants referred for a screening colonoscopy. Participants received navigation assistance from a professional navigator (n=36) or (2) a trained peer navigator (n=39). In the peer group (intervention) 53.7% completed compared to 46.3% in the control group (p=0.80). *Text message reminders for screening colonoscopy appointments.* XXX and colleagues³³ conducted a pilot study to determine whether the use of mobile phone text message appointment reminders was an acceptable form of communication about colonoscopy appointments in the context of patient navigation 46.2% participants completed a colonoscopy compared to 72.7% of participants in the text group (p=0.19). *Culturally targeted patient navigation for increasing African Americans' adherence to screening colonoscopy.* Primary mentor Jandorf and colleagues have conducted two RCTs with low-income, African Americans³⁴ and Hispanics^{35,36} (50 years plus) randomized to receive: peer-patient navigation, professional-led patient navigation, or usual care. Screening colonoscopy completion rate was 75.7% across all groups with no significant differences between the three study arms. *Tracking and Feedback Registry to Reduce Disparities in Breast Cancer Care.* Co-mentor Bickell and colleagues³⁷ implemented a registry designed to close the referral loop between surgeons and oncologists and avoid underuse of adjuvant treatment. Completed oncology consultations and use of adjuvant treatment among 939 newly diagnosed breast cancer patients who had surgery at one of six NYC hospitals were examined. After implementation of the tracking system, oncology consultations increased, frequency of adjuvant underuse decreased and the racial disparity in adjuvant underuse was eliminated. *A multicenter evaluation of acute pain care by age.* Winkel and colleagues conducted a multicenter, retrospective, cross-sectional observation study of five emergency departments and evaluated differences in acute pain care for older vs. younger patients. Multivariable adjusted hierarchical modeling clustered by clinician and site level with a total of 6,948 visits used mixed linear and general estimating equation regression models.³⁸ *Social capital in inner-city housing.* Co-mentor Winkel also has experience in conducting research in public housing environments.^{39,40} In one study, 2,985 public housing residents in 487 buildings were surveyed about social capital.⁴¹ *Social network analysis among drug users and men who have sex with me at high risk for HIV/AIDS.* Co-mentor Latkin has conducted social network analyses of inner city drug users. Participants were recruited using outreach and word of mouth.^{42,43} *Combined, these studies demonstrate the candidate and her mentoring team's ability to successfully recruit low-income and minority participants from various settings including public housing environments, implement system-level interventions, and analyze social networks using multi-level modeling techniques. They also point to the need for research in community-based settings.*

APPROACH. The goal of the proposed research is to understand social networks for cancer screening in low-income, 50-75 year old minorities as well as the social capital available in public housing. Campbell et al.⁴⁴ describe a framework for the design and evaluation of interventions to improve health. Following this framework, a phased iterative approach distinguishing the process of intervention development will guide the proposed research. According to the model, before conducting an RCT, it is imperative to first define the components of an intervention and then conduct feasibility and pilot testing of the intervention.⁴⁴ Drawing from this model, the proposed NCI K01 will conduct this necessary and critical formative work. The results from Aims 1 and 2 will directly inform the development of an intervention to promote cancer screening among older adults aged 50-75 living in public housing in Aim 3.

Aim 1. Identify barriers and facilitators to social capital for cancer screening among public housing residents (N=30) from the perspective resident leaders.

Model. We will use the phenomenological approach to finalize the interview guide and analyze the data. Phenomenology is a process in which researchers make an interpretation of the meaning of participants' lived experiences.⁴⁵ Phenomenology is best suited for research done to better understand individuals' common experiences of a phenomenon.⁴⁵ In this case, we are interested in the resident leaders' experiences and perceptions of the social network structure of the residents in their developments as well as barriers and facilitators to social capital for cancer screening. Data is collected from individuals who have experienced this phenomenon usually through in-depth interviews. To prompt participants to share their experiences, broad questions are asked such as: What have you experienced in terms of this phenomenon? What contexts or situations have typically influenced your experiences of the phenomenon?

Participants: Participants (N=30) will be recruited through community and professional networks. The primary recruitment setting will be NYCHA. NYCHA has 328 developments throughout NYC in 2,553 residential buildings. Most NYCHA developments also have resident associations (or tenant associations) which are dedicated to improving the quality of life in NYCHA developments and the surrounding neighborhoods. Every president of a recognized resident association is a member of one of nine Citywide Council of Presidents districts in the city. NYCHA also has the Resident Advisory Board (RAB) which consists of public housing and Section 8 residents who express concerns, make recommendations, and advise NYCHA management about NYCHA's annual and five-year agency plans, which set forth NYCHA's priorities and policies in 18 core areas. There are more than 80 RAB members, consisting of 45 elected resident association presidents, 5 Section 8 representatives, and 31 alternates. These will be the main conduits for facilitating participant recruitment (see letters of support) in all study aims. Eligibility requirement of participants will include: (1) current member of resident advisory board or resident association president; (3) access to a working telephone; (4) English or Spanish fluency; and (5) over the age of 17.

Procedures: Participants will be called or mailed a letter to participate in an interview. Interested participants will speak via telephone or meet with a member of the research team who will explain the study, provide a consent form, and answer any questions regarding study participation and patient risks/benefits. If consented, participants will complete a one-hour in-depth interview (See Appendix 1). All participants will be compensated \$40 for their time. Based on previous qualitative studies, we anticipate reaching saturation after 30 in-depth interviews; however, we will consider increasing the number of interviews, if needed, to reach saturation. Ten months will be allocated to recruitment, transcription, coding and analysis of the interviews. (See timeline).

Data Analysis: The in-depth interviews will be transcribed before analysis. Transcripts will be reviewed using N'Vivo qualitative data management software. Because the proposed study is focused on understanding the barriers and facilitators to social capital for cancer screening from the perspective of community leaders (i.e., tenant association presidents), a phenomenological approach⁴⁵ is best suited to guide data analysis and interpretation. We propose to interview a total of 30 community leaders within NYCHA housing which should achieve saturation of findings (i.e., when the addition of new data results in redundancy of themes). Qualitative guidelines suggest that a sample size between 5-30 participants for phenomenological research is adequate to achieve saturation.⁴⁶ Basic demographic data (including race/ethnicity – as identified by the participant) will be collected and analyzed for all participants. The PEN-3 model^{47,48} will be used as a guiding framework for the interpretation and analysis of responses. The PEN-3 is composed of three domains and dimensions which focus on how culture defines the roles of person and their expectations in social relationships (Relationships and Expectations), the ability of culture to have both positive and negative components (Cultural Empowerment) and how cultural identity influences decision making (Cultural Identity).^{47,48} Concepts that fall under Relationships and Expectations can be further categorized as Perceptions (i.e., individual beliefs), Enablers (i.e., social and structural influences), or Nurturers (i.e., influences of significant others) and Cultural Empowerment can be conceptualized as having Positive, Existential (i.e., not positive or negative), or Negative roles in individual's behavior regarding cancer prevention behavior. The study team will review the interview transcripts and highlight "significant statements", sentences or quotes that provide an understanding of how these leaders perceive the social networks and social capital of the residents in their housing developments. A textural description of participant's perceptions of barriers and facilitators will be created to present the essential, invariant structure⁴⁵ of social capital and social network connections in public housing. In addition, differences by race/ethnicity concordance between interviewers/interviewee and housing site will be explored.

Aim 2. Describe the social networks and social capital of low-income public housing residents aged 50-75 years old (N=150) for cancer screening.

Aim 2's goal is to describe the social network of five public housing sites to determine mechanisms of behavior change for cancer prevention. The results, along with Aim 1's qualitative findings, will aid in the development of an intervention to promote cancer prevention behaviors among older adult, public housing residents.

Participants. Trained, bilingual and culturally competent research assistant/staff will recruit and collect data from 150 public housing residents aged 50-75 who are living in NYCHA public housing (five different sites). Eligible individuals will be: (1) aged 50-75 years old; (2) current residents of a NYCHA housing development; and (3) have English or Spanish fluency. Exclusion criteria include: (1) participation in Aim 1 of the study.

Procedures. Five housing sites in Upper Manhattan and the Bronx will be selected as the primary recruitment sites. Working with the Council of Presidents, former resident association President Sarah Martin (see letter), and NYCHA (see letter), five sites of similar size and density will be selected. Secondary sampling units are individuals within each housing site. The target recruitment goal will be to conduct 30 questionnaires per housing site. The study will be introduced at each of the five housing sites' resident association meetings, community meetings and at each sites' management team. IRB approved flyers will be posted throughout the all of the buildings at each site with a phone number to contact the research assistant (RA). Interested participants can call the RA for more information and to meet with the RA to discuss informed consent and complete the assessment. In addition, participants will also be recruited via the random walk method.⁴⁹ In this method, once an individual describes their network, the investigator chooses at random one or more network members for the next round of recruitment. We will ask the participant to identify at least 3 other network members, asking them to contact us, that live in their housing development. This technique will allow true random selection of network members. The RA will administer the questionnaire which will assess socio-demographic characteristics as well as standardized measures of social capital and social networks, health status (i.e., weight, health conditions, physical activity), cancer knowledge, and cancer screening adherence (Appendix 2). Based on prior recruitment experience in community-based settings we anticipate that at least 70% of individuals approached to participate in the study will enroll. Thus, 20 months is allocated to participant recruitment, data collection and intervention development efforts in Aim 2 (see Timeline). Participants will receive \$40 for completing the survey.

Measures: The assessment will include: validated socio-demographic questions (including insurance status, race/ethnicity, whether participant has a primary care physician) used in previous studies^{34,50} and measures on social capital and social networks. Measures assessing social capital have been adapted from Onyx and Bullen.⁵¹ This measure has eight dimensions: 1) Participation in Local Community; 2) Social Agency; 3) Feelings of Trust and Safety; 4) Neighborhood Connections; 5) Family and Friends Connections; 6) Tolerance of Diversity; 7) Value of Life; and 8) Work Connections.⁵¹ This measure was developed in Australia and has been validated in the US.⁵² We will employ the Social Network Index developed and validated by Berkman and Syme.⁵³ This index takes into account four different types of social ties: 1) marital/partner status 2) sociability (frequency and contact with close friends and relatives); 3) religious group affiliation (yes or no); and 4) membership in other social or community organizations (yes or no).⁵³ Participants will be asked about their marital/partner status, number of close friends and relatives, number of friends and relatives they see at least once a month, frequency of religious service attendance, and hours spent each week participating in other social or community groups. The index also considers each social tie's relative importance. The index is scored 1 to 4 (indicating greater network size).⁵⁴ A modified version of the National Health Interview's Cancer Control Supplement will be used to assess participation in cancer prevention behaviors such as cancer screening, fruit and vegetable intake and physical activity and current weight.⁵⁵ Open-ended questions regarding barriers and facilitators to cancer screening will also be assessed. All measures are from previously published scales and have strong evidence for reliability and validity (see Appendix 2).

Data Analysis: Analysis of the social network data as well as multi-level modeling significant training components of the candidate's career development plan. The primary outcomes will be to evaluate the role of social networks structures public housing residents in the context of barriers and facilitators to participation in cancer prevention behaviors. We expect that there will be some minor missing data including missing values on individual questionnaire items. These individual items will be imputed (using the SAS Procedure, MI). The imputed data sets will then be used to estimate the parameter values for each of scales. First, bivariate and multivariate logistic regression examining the associations between individual-level factors (e.g., socio-demographic variables) will be conducted and then the association between each social network variable (e.g., total network size, density) will be examined with the outcome variables (e.g., screening adherence, social capital), constructing separate models for each. The number of social contacts eligible for screening will be controlled for and models for gender-specific tests will be limited to the appropriate gender group. *Expected Outcomes:* Aim 2 will allow us to map the social networks of five NYC housing sites and to understand the mechanisms of behavior change (i.e., through sharing information and resources, setting norms). At the completion of the social network analysis, we will understand whether public housing social networks facilitate the spread of cancer prevention information and behavior change, or whether they shape the norms that influence cancer prevention behaviors. These factors will inform the development of the intervention in Aim 3.

Aim 3. Develop and pilot test a peer-led intervention (N=100) to promote cancer prevention behaviors among public housing residents.

In Aim 3 of the study, an intervention will be developed and pilot tested with anticipated eligible participants (N=100) to assess the feasibility, acceptability and efficacy of the finalized intervention. The details of the intervention will be directly informed by the qualitative (i.e., social capital in public housing) and quantitative (map of social networks in public housing) data from Aims 1 and 2. The Social Ecological Model^{56,57} which assumes that people influence their settings, and the changed settings then influence health behaviors, will also be used as the guiding framework for the development of the intervention.

Participants: The developed intervention will be administered to residents of NYCHA public housing developments. In total, 100 participants will be enrolled in Aim 3 of the study (intervention or control condition). Eligibility criteria include: (1) aged 50-75 years old; (2) eligible for colorectal cancer screening, breast cancer screening, and/or cervical cancer screening; (3) current resident of NYCHA housing development; and (4) English or Spanish fluency. Exclusion criteria include: (1) participation in Aims 1 or 2 of the study.

Procedures: Participants will be randomly assigned to one of two study arms: a control condition (N=50) or the to be developed peer-led intervention (N=50). Control group participants will receive an educational pamphlet about cancer prevention behaviors and complete the pre- and post-intervention assessment. As intervention development and RCT design are a critical part of the candidate's proposed training, a full description of the intervention is not immediately available. However, based on the candidate's prior experience with peer-led interventions, the proposed study's focus on social connections and linkages, and the qualitative and quantitative social capital and social network data from Aims 1 and 2, it is anticipated that the intervention may have a peer-led, face-to-face counseling approach that is guided by the Social Ecological Model.^{56,57} That is, using data about social networks (e.g. density, number of connections) and social capital (i.e., quality of social network), we will first identify five older adult candidates that are highly connected and demonstrate high levels of social capital from the five housing sites. These individuals will be trained (and paid \$40 per participant) as health educators/health advocates for cancer prevention behaviors to teach others in their social networks about cancer screening, healthy eating, balanced diet and engaging in regular physical activity. For example, the intervention may incorporate aspects of peer modeling or peer-led discussions of the benefits and strategies for screening and other preventive health behaviors and may include telephone-based sessions where the peer explains how they shop for healthy foods on a budget. We anticipate that the finalized intervention will be dyadic (i.e. coaching or buddy system) or group-based due to the emphasis on social networks. The intervention content will include: (1) information about the benefits of early detection of cancer, (2) education about the disparities in cancer, (3) disparities in screening among racial and ethnic minorities and individuals in the 50-75 year old age cohort, and (4) will address the barriers and facilitators identified in Aims 1 and 2. Participants will be asked to complete a pre-intervention assessment and a post-intervention assessment three months post the intervention to assess changes in psychological variables, knowledge, prevention and screening behavior (i.e., intervention efficacy) as well the acceptability and sensitivity of the developed intervention (immediately after the intervention). Participants will be paid \$40 for each survey. Recruitment and intervention testing will occur over 18 months.

Measures: Feasibility, acceptability and cultural sensitivity of the developed intervention. The feasibility (i.e., recruitment rates, attrition rates), acceptability and cultural sensitivity of the intervention will be evaluated using a 10-item questionnaire (See Appendix 3). The items are ranked on a 5-point Likert scale (1=strongly disagree; 5=strongly agree). Drawing from published recommendations,⁵⁸⁻⁶¹ it will assess the intervention's utility, content/context, burden, and cultural sensitivity. Pre-and post-intervention assessment. Socio-demographic and health-care related questions (i.e., regular source of health care, perceived health status) will be included to assess patients' background information. A modified version of the NHIS' Cancer Control Supplement will be used to assess participation in cancer prevention behaviors such as cancer screening, fruit and vegetable intake and physical activity and current weight.⁵⁵ Psychosocial variables related to barriers/facilitators to cancer screening will be assessed including cancer fear⁶², fatalism⁶³, screening self-efficacy (modified for any cancer)⁶⁴, medical mistrust⁶⁵, and physician-patient communication.^{66,67} These items have been successfully used in other feasibility studies conducted within our group.

Data Analysis: Descriptive statistics will provide summary information about the feasibility of recruitment, acceptability and cultural sensitivity of the intervention and satisfaction with the intervention. An arbitrary cutoff value of 80% acceptance will determine the intervention's feasibility for the study parameters comparing pre and post intervention assessment (where applicable). Some parameters include the proportion of eligible participants who are contacted, enrolled, agree and disagree with the acceptability and cultural sensitivity of the intervention, and initiated screening uptake. Thus, if at least 80% of participants exceed the previous parameters, the developed intervention will be determined to be effective. To determine intervention efficacy and sample size estimates for a future intervention, a generalized linear multilevel-modeling approach will be

used with logistic regression. Participation in any type of cancer prevention behavior (i.e., cancer screening, recommended level of physical activity) will be evaluated as the primary outcome. In these analyses, each housing site will be modeled as a random effect nested within study condition to account for clustering, and the intervention condition will be modeled as a fixed effect. The regression coefficient associated with the intervention group variable in this analysis will represent the overall log odds of participating in cancer prevention behavior relative to control group. Race/ethnicity differences will also be explored. Changes from pre-and post-intervention to determine impact on attitude or behavior change (e.g., cancer screening, fruit and vegetable intake) will be evaluated. *Expected Outcomes:* The outcome of Aim 3 will tell us if the developed intervention is feasible and acceptable to our target audience, provide information about effect size and the sample size needed for a large scale RCT. The results will provide insight on the research design of the next iteration of the study. The pilot study will also provide preliminary results about the intervention's efficacy in changing cancer prevention behaviors (e.g., participation in screening, attitudes, beliefs and knowledge).

Rigor and Transparency: We have taken steps to enhance the reproducibility of research findings through increased scientific rigor and transparency. We have described the scientific premise of the proposed research, and discussed the strengths or weaknesses of both the published research and our preliminary data. This careful consideration has been critical in: 1) identifying the critical gaps apparent in research and public health practice in approaches to address disparities in cancer prevention and control; and 2) development of the proposed intervention. In the Approach section, we have described strategies to ensure a robust and unbiased approach (e.g. random selection and assignment of participants, psychometrically valid measures).

Potential Limitations and Alternative Approaches: Lack of race concordance between interviewers and interviewees is a potential limitation. The history of medical system mistrust within minority and low-income populations could influence answers provided; yet it is not feasible to match participants and interviewers however, this will allow us to explore potential differences by racial dis-concordance. Another limitation is the possibility of contamination wherein participants in the intervention group talk to and encourage others in the control group to change their behaviors. We will overcome this limitation by making sure that the groups do not interact (i.e., intervention groups and control groups at housing sites that are not close in proximity). Our recruitment approach for Aim 2 will use the random walk method, but this could potentially limit the number of participants we can randomly select in a network. Should this recruitment approach become unfeasible, we will employ a respondent driven sampling approach whereby participants are recruited and then identify other people in their networks that live in public housing (not necessarily in their complex). This research has great potential for behavior change and wide-spread dissemination, locally and nationally. Public housing developments are especially well-suited for dissemination because of the density and connectedness of the developments themselves. With the skills learned from mentoring and specialized training the candidate will be prepared to progress to the next stage of research and apply for funding to test a large-scale trial.

Activity	Year 1				Year 2				Year 3				Year 4				Year 5				
	Q1	Q2	Q3	Q4																	
Aim 1 - Qualitative Interviews and SNA Training (Months 1-12)																					
Research Assistant (RA) Training (1 mo)	X																				
Participant Recruitment and Conduct of interviews (N=30) (8 mos)	X	X	X																		
Transcription of Interviews (8 mos)	X	X	X																		
Coding of Interviews (10 mos)			X	X	X																
Interpretation of Codes for Themes (1 mo)					X																
Aim 2 – Social Network Analysis and Intervention Development (Months 14-40)																					
RA Social Network Interview Training (1 mo)					X																
Participant Recruitment and Data Collection (N= 150) (20 mos)					X	X	X	X	X	X	X										
Data Entry & Cleaning (on-going)					X	X	X	X	X	X	X	X									
Analysis and Interpretation of Results (4 mos)												X									
Intervention Development (6 mos)											X	X									
Aim 3 – Develop and Test Intervention (Months 33-60)																					
RA Training and Peer Training (3 mos)													X								
Participant Recruitment and Data Collection (N=100) (18 mos)													X	X	X	X	X	X			
Data Entry & Cleaning (on-going)													X	X	X	X	X	X			
Analysis and Interpretation of Results (4 mos)																			X		
Final Report/Manuscript/Dissemination (8 mos)																				X	X
On-going Research Activities																					
Annual/Final Progress Reports				X				X				X				X				X	
Manuscript Writing (N= 10, ~2/year)				X	X			X				X							X	X	
Grant Writing (R21, R01 w/resubmissions)												X	X							X	X
Bi-Annual Advisory Committee Meetings	X		X		X		X		X		X		X		X		X		X		
Quarterly Mentoring Meetings	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	