<u>Eugenie and Joseph Doyle Research Partnership Fund</u> (as of December 3, 2020)

Summary Statement: Doyle Partnership funds have been used to support 14 pilot projects to date. Numerous articles from these pilot projects have been published in peer reviewed scientific journals. Pilot data generated and collaborations built through Doyle awards have resulted in 4 National Institutes of Health (NIH) proposals submissions (Topaz, Chugtai, Luth, Cooley) and 1 Foundation proposal submission (O'Connor); 3 of these have been awarded (Topaz, Luth, O'Connor). Collaboration continues with many awardees to further develop their avenues of investigation. Funding has allowed us to begin or expand investigation on several important health care topics such as: potential service delivery improvements in hospice and home care, caregiver support, understanding the needs of limited English proficient patients, transitions in care, Medicare resource utilization in Home Care, and using artificial intelligence, primarily, Natural Language Processing (NLP), methods to leverage free-text data sources (e.g. nurses' free-text clinical notes) to better understand populations of interest and care provision trends.

Award Recipients
(order by most recent)

<u>2020 Awards (3)</u>

<u>Pilot #14</u>
Project Title: *Using artificial intelligence to identify homecare patient's risk of hospitalization and emergency department visits: speech-recognition feasibility study*

Awardee: Maryam Zolnoori, PhD, Postdoctoral Research Fellow, Columbia University School of Nursing.
VNSNY sponsor/collaborator(s): Maxim Topaz
Dates: 09/2020 – 08/2021
Description: This feasibility study is the first step in exploring an emerging and previously understudied data stream - verbal communication between health providers and patients. Every year, 30% of home health care (HHC) patients hospitalized or visit an ED during the 30-60 day HHC episode, out of which 40% are preventable with timely care. However, these numbers have not improved over the last several years despite national and local quality improvement efforts. Novel data science methods have been proven effective in generating early warning for identifying patients at risk of poor healthcare outcomes, helping clinicians to provide patients with preventable actions and appropriate timely care.
Methods: The investigators will first assess feasibility of a nurse-patient encounter audio recording during HHC, using the System Usability Scale and semi-structured interviews to evaluate the usability of the voice recorders. They will then evaluate the accuracy of commercial and open-source automated speech recognition methods, including for speaker recognition. Finally, they will explore whether features of audio recorded nurse-patient encounters can be used to predict patient hospitalizations or ED visits during HHC, using feature extraction artificial intelligence tools and machine learning to develop multiple predictive models, the performance of which will be compared.
Deliverables and Next Steps: Study in Progress. Results of this feasibility study will be used to support Dr. Zolnoori's K99/R00 applications to the National Library of Medicine to further build skills in speech processing. Additionally, the study will help Co-PI Dr. Topaz to expand automated speech

recognition approaches to evaluate the quality and effectiveness of end-of-life conversations between patients and health providers.

Pilot #13

Project Title: *Cognitive Impairment and Resource Utilization among Medicare Home Health Patients*

Awardee: Julia Burgdorf, PhD, Postdoctoral fellow, Johns Hopkins University School of Public Health
VNSNY sponsor/collaborator(s): Kathryn Bowles
Dates: 09/2020 – 05/2022
Description: Older adults with cognitive impairment have a high comorbidity burden, uniquely challenging care needs and are heavy users of health care. Medicare beneficiaries with cognitive impairment access home health at higher rates than those without such impairment, which has amplified interest in understanding how cognitive impairment affects home-based care utilization. The purpose of this study is to provide the first evidence regarding the impact of patients' cognitive impairment on resource utilization during Medicare-funded home health care.

Methods: The proposed study relies on a unique dataset linking four data sources: 1) the National Health and Aging Trends Study (NHATS), 2) OASIS data, 3) Medicare claims, including the number and type of home health visits billed by the provider during an episode and the number of episodes in a spell of care, and, 4) The Medicare Provider of Services file (POS), a listing of Medicare-certified providers, with information on home health provider characteristics.

Deliverables and Next Steps: Study in Progress. This study will be the first step in demonstrating a link between cognitive impairment and resource utilization among home health patients. Findings will support the importance and feasibility of investigating this relationship further, leading to an NIH-funded project that would rely on a larger sample of linked OASIS and claims data to examine the impact of cognitive impairment on patterns of home health utilization and related, policy-relevant outcomes, and to compare measures of cognitive impairment in the OASIS to those in claims data. Ultimately, study findings may inform future Medicare home health payment system revisions aimed at better aligning reimbursement with patient characteristics.

Pilot #12

Project Title: *Identifying documentation of workplace violence towards home healthcare nurses in clinical notes: a text mining study*

Awardee: Ha Do Byon, Assistant Professor, University of Virginia
VNSNY sponsor/collaborator(s): Maxim Topaz
Dates: 09/2020 – 08/2021
Description: Type II (customer-on-worker) workplace violence (WPV) is a serious threat to the health and safety of home healthcare nurses (HHNs). WPV is grossly underreported across healthcare settings. Type II WPV is a serious threat to HHNs, and violent incidents are underreported. HHNs are reporting Type II WPV using the EHR, and to reduce devastating consequences of WPV, we must better understand the context. In this pilot study, the investigators extract and classify Type II WPV-related information from HHNs' clinical notes using a novel word-embedding-based natural language processing (NLP) and machine learning (ML) approach. By doing so, they will reveal and describe Type II WPV toward HHNs, enabling better case detection and analysis. To assess the value of our approach, they will compare

the prevalence of the WPV identified from EHR clinical notes with that of incidents formally reported in the established reporting system (i.e. incident report)

Methods: The primary data for this study are HHNs' clinical visit notes extracted from EHR systems in two home healthcare agencies, VNSNY (~750,000 notes), and the University of Virginia (~20,000 notes). Machine learning (ML) and Natural Language Processing (NLP) methods will be used to identify type II WPV cases by type, and 12-month prevalence of type II WPV will then be assessed and compared to prevalence estimates from existing reporting systems.

Deliverables and Next Steps: Study in Progress. At least one manuscript from study findings will address the aims of this study, which will ultimately inform a comprehensive Type II WPV surveillance system in the home healthcare setting with planned R21 and R01 applications.

2019 Awards (1)

Pilot #11

Project Title: *Exploring prevalence of wound infections and related patient characteristics in homecare using natural language processing*

Awardee: Kyungmi Joanne Woo, Ph.D., RN, CCM, Postdoctoral Research Fellow, Columbia University School of Nursing
VNSNY sponsor/collaborator(s): Maxim Topaz
Dates: 09/01/2019 – 08/31/2020
Description: This study addresses the following research questions: what is the prevalence of wound infection among vulnerable older homecare patients and what patient characteristics are related to developing infections? Infections, including wound infections, are a substantial burden among vulnerable older homecare patients, but the prevalence of wound infections and related patient characteristics in homecare remains unknown. Estimating the prevalence of wound infections among vulnerable older homecare patients remains a challenge because a considerable amount of the relevant data is collected in an unstructured format (i.e., narrative notes), and new approaches are needed to extract them. Natural Language Processing is a method that the team will study to see how it can contribute to answering the research questions.

Methods: The study team will link the data on patients with wound infections extracted from OASIS data and VNSNY EHR narrative note data at the patient and episode levels.

Deliverables and Next Steps: This study will prepare Dr. Woo to seek subsequent NIH support for a larger study that proposes to identify wound infection risk factors using structured and unstructured data and develop a comprehensive predictive risk model of wound infection among homecare patients. The study findings will be disseminated through scientific presentations (e.g., American Medical Informatics Association conference) and publications.

- Song, J., Woo, K., Shang, J., Topaz, M. *Prediction of Wound Infection among Homecare Patients using Natural Language Processing and Machine Learning approach.* Submitted: Under review.
- Woo, K., Song, J., McDonald, M., Shang, J., Topaz, M. *Exploring Prevalence of Wound Infections and Related Patient Characteristics in Homecare Using Natural Language Processing.* Submitted: Under review.
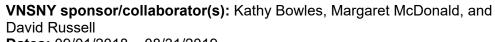
2018 Awards (5)

Pilot # 10

Project Title: *Assessing the need for clinical decision support for cancer pain and co-occurring symptoms at the end-of-life in home-based hospice*

Awardee: Mary Cooley, PhD, RN, Nurse Scientist, Dana Farber Cancer Institute

VNSNY sponsor/collaborator(s): Kathy Bowles, Margaret McDonald, and David Russell

Dates: 09/01/2018 – 08/31/2019

Description: The prevalence of pain among patients with advanced cancer was identified as 64% in a systematic review with more than a third of these patients reported moderate to severe pain. Despite significant innovations in hospice care, many patients experience substantial pain and distress at the end of life. Relief from pain is an important component of quality of life for dying patients and a central mission for hospice providers. However, multiple barriers exist including system and provider level barriers. These include lack of a standardized guideline-based approach to implement pain and co-occurring symptom management and provider reluctance to prescribe medications. Mary Cooley and investigators from the Dana Farber Cancer Institute have a treatment algorithm that may help to improve and standardize care at VNSNY. Pilot funds are being used to examine the VNSNY population that may benefit from this intervention and to inform decision making on protocol and proposal development.

Methods: Secondary data analysis of electronic health record data of patients admitted to the VNSNY hospice between January 2013-December 2017.

Deliverables and Next Steps: The main deliverable planned was an NIH proposal addressing the pain management needs of patients at the end of care. A proposal was submitted in June 2020. It was not funded. The team is currently preparing a revised submission.

Pilot # 9

Project Title: *Informal Caregivers' Experiences Managing Complex Care for Older Post-Acute Home Health Care Patients*

Awardee: Jo-Ana Chase, PhD, APRN-BC, Assistant Professor, University of Missouri

VNSNY sponsor/collaborator(s): Penny Feldman and David Russell

Dates: 09/01/2018 – 08/31/2019

Description: The pilot study aims to describe informal caregivers' (CGs) experiences providing medical/nursing care for an older adult who transitioned from hospital to home; along with exploring caregivers' perspective on their training and support. This qualitative study will advance clinicians' and researchers' understanding of how to best prepare CGs for the complex care needs of older post-acute home health care patients. Study findings will inform a future intervention incorporating CG preferences to enhance care planning and goal attainment for elders and their CGs, with the goals of improving patient- and CG-centered outcomes (e.g., increased engagement, shared decision-making) in the post-acute home health care setting.

Methods: Telephone interviews with 15-20 caregivers

Deliverables and Next Steps: The main deliverable for the Doyle Research Partnership Fund is the preliminary design of a CG training intervention. The intervention will focus on educating home care providers on how to integrate CGs' perspectives and training preferences into strategies to engage and prepare CGs of patients in the post-acute setting. Dr. Chase will then seek funding (e.g., R03, R21) to pilot test the intervention at VNSNY and determine its feasibility.

- Chase, J., Russell, D., Kaplan D., Bueno, M., Khiewchaum, R., Feldman, P. (2020: epublished ahead of print). *"Doing the right thing:" Caregivers managing medical/nursing tasks in the post-acute home health care setting.* Journal of Applied Gerontology.
- Chase, J., Russell, D., Rice, M., Abbott, C., Bowles, K., Mehr, D. (2019). *Caregivers' experiences regarding training and support in the post-acute home health-care setting.* Journal of Patient Experience.12(4): 174-183.

Pilot # 8

Project Title: *Perspectives of Patient, Caregiver and Healthcare Provider on Care Management and Shared Decision Making among Home Hospice Patients with Heart Failure*

Awardee: Ruth Masterson Creber, PhD, MSc, RN, Assistant Professor, Weill Cornell Medical College & Dawon Baik, PhD, RN, AGPCNP-BC, Postdoctoral Research Fellow, Weill Cornell Medical College
VNSNY sponsor/collaborator(s): Kathy Bowles and David Russell
Dates: 09/01/2018 – 08/31/2019
Description: Building on findings from on earlier Doyle Fund sponsored pilot study, this project explores the perspectives of patients, caregivers and healthcare providers who are caring for HF patients enrolled in the Cardiac Home Hospice care program.

Methods: Combining quantitative data from the earlier secondary data analysis pilot with clinician, patient, and caregiver interviews.

Deliverables and Next Steps: The long-term aim of this project is to be able to develop an intervention to support patients with HF at the end of life and to be able to apply for an NIH grant: PA-18-499, "End-of-Life and Palliative Care Health Literacy: Improving Outcomes in Serious, Advanced Illness," sponsored by the National Institute of Nursing Research (NINR).

- Baik D., Russell D., Jordan L., Masterson Creber R.M. (2020). *Building trust and facilitating goals of care conversations: A qualitative study of shared decision making in hospice patients with heart failure.* Palliative Medicine. 34(7): 925-933.
- Jordan, L., Russell, D., Baik, D., Dooley, F., Masterson-Creber, R. (2020) .*The development and implementation of a cardiac home Hospice program: Results of a RE-AIM analysis.* American Journal of Hospice and Palliative Medicine. 37(11): 925-935
- Russell, D., Luth, E., Baik, D., Jordan, L., Creber, R. (2020) *On Board: Interdisciplinary Team Member Perspectives of How Patients with Heart Failure and Their Families Navigate Hospice Care.* Journal of Hospice & Palliative Nursing. 22(5): 351-358.
- Russell, D., Luth, E., Baik, D., Jordan, L., Masterson-Creber, R. *Getting on board: cultural health capital and socioeconomic resources in hospice care.* Submitted: Under Review.

Pilot # 7
Project Title: *Provider insight on identification and management of urinary incontinence in home hospice*

Awardee: Bilal Chughtai, M.D., Associate Professor & Associate Attending Urologist, Weill Cornell Medical College
VNSNY sponsor/collaborator(s): Kathy Bowles and David Russell
Dates: 07/15/2018 – 7/14/2019
Description: Incontinence is a prevalent, debilitating, and embarrassing condition that afflicts patients at the end-of-life. Incontinence not only leads to falls, skin breakdown, ulcers, and other accidents, but also profoundly affects patient dignity, embarrassment, and suffering. To date, few studies have explored the rates, risks, and physical/psychosocial outcomes of incontinence in dying patients. The study aims to characterize the various methods of assessment, detection, and burden of UI and its sequalae. Specifically, the team will interview nurses about how UI is detected in the home hospice setting and about common management strategies; they will characterize which techniques are favored versus those that are avoided and the reasons behind it.
Methods: Structured interviews with 30 hospice nurses.
Deliverables and Next Steps: Results of this research will be used as preliminary studies for an NIH grant proposal.

- Chughtai, B., Thomas, D.M. Russell, D., Phongtankuel, V., Bowles, K.H., Prigerson, H. (2019). *Prevalence and risk factors for fecal incontinence in home hospice.* American Journal of Hospice and Palliative Care Medicine. 36(1): 33-37.
- Chughtai, B., Thomas, D., Russell, D., Bowles, K.H., Prigerson, H. (2019). Prevalence of and risk *factors for urinary incontinence in home hospice patients.* European Urology. 75(2): 268-271.
- Stoddard, M.D., Russell, D., McDonald, M.V., Dignam, R., Bowles, K.H., Prigerson, H.G., Chughtai, B. *Nurse perspectives on urinary incontinence in the home hospice setting.* (2020: in press). Journal of Pain and Symptom Management.

Pilot # 6
Project Title: *Examining the Relationships between Dementia, Race, Ethnicity, Socioeconomic Status and Late Referral to and Live Discharge from Hospice*

Awardee: Elizabeth Luth, PhD, Postdoctoral Associate, Weill Cornell Medical College
VNSNY sponsor/collaborator(s): Miriam Ryvicker and David Russell
Dates: 07/15/2018 – 7/14/2019
Description: The study objective is to better understand and address Alzheimer's Disease Relation Dementia (ADRD), racial/ethnic, and socio-economic status (SES) disparities in hospice care. This pilot study builds on Drs. Luth's and Russell's prior work identifying ADRD status and race differences in assessments of end of live (EOL) care quality, and as independent risk factors for live discharge from hospice by extending previous findings to a second unfavorable hospice use practice patterns: late referral. Second, it employs a more comprehensive assessment than prior studies of the relationship between SES and late referral and live discharge. Finally, it examines the unique relationships between different combinations of social and health factors and unfavorable hospice practices. Increasing our

understanding of the relationship between ADRD, race/ethnicity, and SES and unfavorable hospice practices is a crucial step in designing effective interventions tailored towards addressing and reducing disparities in care for groups with diverse needs and barriers.

Methods: The study is a secondary analysis of VNSNY Hospice electronic patient records from 2013-2017.

Deliverables and Next Steps: The Doyle funding supported the development of pilot data for the applicant's K99 award application to the NIA focused on reducing caregiver burden and improving care for ADRD patients nearing EOL, awarded in 2020. In addition to publication of study findings, it is anticipated that this pilot research will also be used as preliminary data for a joint (WCM and VNSNY investigators) R01 observational study of social and environmental disparities in live discharge from hospice.

- Russell, D., Luth, E., Ryvicker, M., Bowles, K., Prigerson, H. (2020). *Live discharge from hospice due to acute hospitalization: The role of neighborhood socioeconomic characteristics and race/ethnicity.* Medical Care. 58(4): 320-328.
- Russell, D., Luth, E., Baik, D., Jordan, L., Creber, R. (2020) *On Board: Interdisciplinary Team Member Perspectives of How Patients with Heart Failure and Their Families Navigate Hospice Care.* Journal of Hospice & Palliative Nursing. 22(5): 351-358.
- Luth, E., Russell, D., Brody, A., Dignam, R., Czaja, S., Ryvicker, M., Bowles, K., Prigerson, H. (2020) *Race, Ethnicity, and Other Risks for Live Discharge among Hospice Patients with Dementia.* Journal of the American Geriatrics Society. 68(3): 551-558.
- Russell, D., Luth, E., Baik, D., Jordan, L., Masterson-Creber, R. *Getting on board: cultural health capital and socioeconomic resources in hospice care.* Submitted: Under Review.

2017 Awards (2)

Pilot # 5
Project Title: *Survival Analysis of Urban Home Care Patients with HF Entering Hospice Using the Palliative Performance Scale as a Predictor of Mortality*

Awardee: Ruth Masterson Creber, PhD, MSc, RN, Associate Research Scientist, Columbia University (at the time of the award)
VNSNY sponsor/collaborator(s): Kathy Bowles and David Russell
Dates: 07/01/2017 – 06/30/2018
Description: This pilot study identified prognostic cut-points of the Palliative Performance Scale for predicting survival and predictors of discharge from hospice in a cohort of racially and ethnically diverse, urban sample of heart failure patients receiving hospice care; and to identify risk factors for live discharge
Methods: This study was a secondary analysis of retrospective VNSNY data on HF patients admitted to hospice from 2014-2016.

Deliverables and Next Steps: Analyses revealed that almost 3 in every 10 patients with HF have unplanned "live" discharges from home hospice. The discharge rate tends to be higher among racial minority groups, patients without advance directives, and those with higher Palliative Performance Scale (PPS) scores upon hospice admission. In addition to the final report submitted to the Research Center, additional dissemination activities include:

- Baik, D., Russell, D., Jordan, L., Dooley, F., Bowles, K.H., Masterson Creber, R. (2018). *Using the Palliative Performance Scale to Estimate Survival for Patients at the End of Life: A Systematic Review of the Literature.* Journal of Palliative Medicine. 21(11): 1651-1661.

- Masterson Creber, R., Russell, D., Dooley, F., Jordan, L., Baik, D., Goyal, P. Hummel, E.K., Bowles, K. (2019). *Use of the Palliative Performance Scale to Estimate Survival among Home Hospice Patients with Heart Failure.* European Society of Cardiology (ESC) Heart Failure. 6(2): 371-378.
- Russell, D., Baik, D., Jordan, L., Dooley, F., Hummel, S., Prigerson, H.G., Bowles, K.H., Masterson-Creber, R. (2019). *Factors Associated with Live Discharge of Heart Failure Patients from Hospice: A Multimethod Study.* Journal of the American College of Cardiology. 7(7): 550-557.

Pilot # 4
Project Title: *Exploring Medication Management with LEP patients in HHC*

Awardee: Sarah Miner, PhD, RN, Postdoctoral Fellow, New York University (at the time of the award)
VNSNY sponsor/collaborator(s): Margaret McDonald
Dates: 07/15/2017 – 08/15/2018
Description: The purpose of this pilot study was to explore the role of language concordance on the medication management of limited English proficient (LEP) population in home health care using both qualitative and quantitative data.
Methods: This study was a secondary data analysis of the AHRQ R01 "Language Barriers and Post-Acute Outcomes: A Mixed-Methods Study" (R01 HS023593). The original study has a database containing data collected from 175,000+ patients, including 17,000 LEP HHC patients. The database contains data collected from patient charts and agency administrative data between 2010-2015. The original study also conducted qualitative interviews with HHC workers and LEP HHC patients between 2015-2016. Transcripts from these interviews were available for analysis.

Deliverables and Next Steps:

The main finding indicate that LEP patients in home health care vulnerable to low medication literacy and that nurses are dedicating a tremendous amount of time to educating them about their medications. However they also indicate that LEP patients still do not benefit from HHC in the same way English proficient populations do. This study is one of the first to demonstrate that LEP patients experience disparities in their MM when compared to English speaking patients in HHC. In addition to the final report submitted to the Research Center, findings were presented at several conferences. Additional dissemination activities include:

- Miner, S., Squires, A., Ma, C., McDonald, M., Jones, A. (2020). *Detecting disparities in medication management with limited English proficiency home health patients.* Home Health Care Management & Practice. 32(1): 28-33.
- Squires, A., Ridge, L.J., Miner, S., McDonald, M.V., Greenberg, S.A., Cortes, T.A. (2020) *Provider perspectives about medication complexity in home care: A qualitative secondary analysis.* Medical Care Research and Reviews. 77(6): 609-619.

2015 Awards (2)

Pilot # 3

Project Title: *Rethinking Patient Prioritization During Homecare Admission: A Pilot Study*

Awardee: Maxim Topaz, PhD, RN, MA, Postdoctoral Research Fellow in Medicine, Harvard Medical School and Brigham Women's Health Hospital (at the time of the award)

VNSNY sponsor/collaborator(s): Kathryn Bowles

Dates: 10/15/2015 – 02/14/2017

Description: This pilot study examined current patient prioritization strategies at one of the largest homecare agencies in the US, the Visiting Nurse Service of New York (VNSNY) and pilot tested a previously constructed tool for homecare patient prioritization, PREVENT (Priority for Homecare Visit Tool).

Methods: Interviews with key stakeholders (representatives of the intake department, hospital liaisons, regional directors, local managers and practicing nurses) and pilot testing of the PREVENT tool with 100 VNSNY admissions to determine user satisfaction (via interviews with scheduler or managers) and effect on the timing of the first visit (i.e. whether high risk patients were prioritized for care).

Deliverables and Next Steps: Max joined as faculty of the VNSNY Research Center in September 2018 and was awarded an R01 by the National Institutes of Nursing Research in September 2019 to expand his work in this area. In addition to the final report submitted to the Research Center, findings were presented at several conferences. Other dissemination activities include:

- Topaz, M., Trifilio, M., Maloney, D, Bar-Bachar, O., Bowles, K.H. (2018) *Improving patient prioritization during hospital-homecare transition: a pilot study of a clinical decision support tool.* Research in Nursing and Health. 41(5): 440-447.
- Topaz, M., Naylor, M., Holmes, J., Bowles, K. (2020). *Factors Affecting Patient Prioritization Decisions at Admission to Home Healthcare: A Predictive Study to Develop a Risk Screening Tool.* Computer Informatics Nursing. 38(2): 88-98.
- Zolnoori, M., McDonald, M.V., Cato, K., Sockolow, P., Onorato, N., Barrón, Y., Bowles, K., Topaz, M. (2020: in-press). *Improving patient prioritization during hospital-homecare transition: A protocol of a mixed-methods study of a clinical decision support tool implementation.* Journal of Medical Internet Research.

Pilot # 2

Project Title: *Home Care Providers' Experience of Translating Evidence-based Fall Prevention Exercise into Practice*

Awardee: Kyeongra Yang, Phd, RN, MPH, Assistant Professor, Lienhard School of Nursing, Pace University

VNSNY sponsor/collaborator(s): Christopher Murtaugh

Dates: 10/15/2015 – 10/14/2016

Description: The study's had a two-fold objective: (1) to obtain exploratory, descriptive information that will provide insights into the barriers to and facilitators of the implementation of fall prevention programs in home care settings and (2) to collect stakeholders' feedback on the physical activity program which the Dr. Yang has developed through another initiative.

Methods: The study employed a qualitative, descriptive approach through a series of focus groups. Thirty-eight participants responded and accepted our invitation, and 26 of them (76.3%) participated in focus groups.

Deliverables and Next Steps: In addition to the final report submitted to the Research Center, findings were presented at a scientific conference and published in a peer review journal:

- Paper presentation in the Council for the Advancement of Nursing Science, State of the Science Congress in Nursing Research, Washington, DC, September 14-17, 2016
- Yang, K., Colorito, K.M., Bowles, K.H., Woomer, G.R., Murtaugh, C.M. (2019). *Home care providers' experience translating evidence-based fall prevention programs into practice*. Home Health Care Services Quarterly. 38(3): 182-193.

2013 Award

Pilot # 1
Project Title: *Identifying Critical Factors in Determining Readiness for Discharge from Skilled Home Health Services*

Awardee: Melissa O'Connor, PhD, MBA, RN, COS-C, Associate Professor of Nursing, Villanova
VNSNY sponsor/collaborator(s): Kathy Bowles
Dates: 10/01/2013-03/31/2014
Description: The purpose of this study was to garner interdisciplinary home health clinician and physician knowledge about the factors considered important to determine readiness for discharge from home health among older adults vulnerable for poor outcomes. After synthesizing data from nurses, physical therapists, occupational therapists, speech-language pathologists, medical social workers and physicians, Dr. O'Connor began to build a decision model associated with experts' recommendations for discharge from skilled home health services. Decision support in nursing is an understudied but emerging area of science that can have great impact.

Methods: This study convened focus groups with 32 interprofessional home health clinicians to elicit their knowledge about the patient characteristics (factors) considered important to determine readiness for discharge among older adults.

Deliverables and Next Steps: Qualitative analysis produced five themes: patient safety, having a long-term plan in place, reaching maximum self-care potential, presence of a willing and able caregiver, and certain patient attributes. This study improved understanding of how interprofessional HH clinicians (end-users) determine discharge readiness and informed the important factors to include as variables in our case studies. Two NIH proposals building on this work have been submitted (and then re-submitted respectively) for consideration, and in 2020 the latter was submitted to and funded by the Better Irene Moore Foundation: *Home Health Discharge Decision Support: Impact on patient outcomes (HEADS-UP)*

- O'Connor, M., Hanlon, A.L., Mauer, E., Meghani, S., Masterson-Creber, R., Marcantonio, S., Naylor, M.D., Bowles, K.H., Coburn, K., Van Cleave, J., Davitt, J., Riegel, B., Keim, S., Greenberg, S.A., Sefcik, J.S., Topaz, M., Kong, D. (2017). *Identifying distinct risk profiles to predict adverse events among community-dwelling older adults.* Geriatric Nursing. 38(6): 510-519.
- O'Connor, M., Hanlon, A., Naylor, M.D., Bowles, K.H. (2015) *The impact of home health length of stay and number of skilled nursing visits on hospitalization among Medicare-reimbursed skilled home health beneficiaries.* Research in Nursing and Health Care. 38(4): 257-267.