2021-2022 USDEN Pilot Award Application - Letter of Intent (Applicant: [redacted])

OBJECTIVES: The **objective** of this proposal is to develop a home-based deprescribing intervention for older persons with Alzheimer's disease and related dementias (ADRD) across the continuum of acute, post-acute care and primary care. This deprescribing intervention is interdisciplinary in nature and will be led by a community-based nurse practitioner (NP) with pharmacist input, assisted by home health (HH) nurses, and facilitated by telehealth. **Specific Aims** include 1) identify the components, 2) determine the format, and 3) strategize the delivery of the intervention, considering existing education, training and workflow of NPs and HH nurses and their collaboration with primary care providers. **Future work** will focus on testing the feasibility, acceptability, and effects of this intervention on deprescribing and related outcomes in older adults with ADRD.

SIGNIFICANCE: Deprescribing is critical to optimizing health outcomes for older adults with ADRD, who often have multiple chronic conditions (multimorbidity)[1-4] and take multiple medications,[5] giving rise to inappropriate polypharmacy that is a major predictor of medication-related adverse events,[6,7] geriatric syndromes,[8] hospitalizations,[9-14] and even death.[15] Deprescribing is an effective way to improve outcomes among older adults with polypharmacy.[16] Persons with ADRD have frequent transitions of care between home and acute care facilities.[17] These transitions represent a high-risk period for deprescribing, because multiple medication changes are made during hospitalization[18,19] and following hospital discharge,[20] causing confusion and precipitating medication errors.[21] These transitions are also a high-reward period for deprescribing, because providers already prioritize medication reconciliation after acute care and can be motivated to initiate deprescribing. Over half of community-dwelling older adults with ADRD return home after acute care with skilled HH care,[17,22] highlighting the importance of home-based medical care (NP) and HH care (nurses) to effective deprescribing of these patients during care transitions. **Impact:** This intervention will capitalize on existing, adequately trained workforce and telehealth-based delivery, thus having a great potential for making a sustainable impact on deprescribing and related outcomes in older adults with ADRD and multimorbidity.

INNOVATION: The intervention will be the **first** home-based, telehealth-facilitated deprescribing intervention for persons with ADRD, and the **first** to utilize well positioned, and adequately trained workforce (NP, HH nurse and pharmacist) to improve deprescribing for community-dwelling older adults with ADRD. NPs are the largest group of home-based advanced clinical care providers[23-26] and are trained to manage medications,[27] thus they can lead home-based deprescribing, particularly with input from pharmacist on complex cases. HH nurses are uniquely positioned to assist with deprescribing,[28-31] as they 1) routinely reconcile medications,[22,31-35] 2) conduct a complete medication review during home visits, particularly medications that may be unknown to prescribers (expired medications, duplicates for prescriptions with changed dosage, and over-the-counter medications that may cause harm [vitamins, supplements, pain and sleep aides]), and 3) coordinate care[30] and facilitate communication among providers,[30] as well as 4) monitor symptoms[36,37]; all are critical to effective deprescribing. Thus, the intervention has the potential to be highly feasible and sustainable in future studies.

APPROACH: We propose a qualitative formative study to develop the intervention. Three stakeholder panels will be interviewed in focus groups (10 each): 1) patients and family caregivers; 2) health care providers in the continuum of acute, post-acute and primary care (hospitalists, primary care physicians, pharmacists, NPs, HH nurses); and 3) HH case managers and administrators. Table 1 lists the proposed activities in 3 stages.[38]

Table 1, Stages of Deprescribing Intervention Development

Stages	Activities
I. Planning and Data Collection	
Review evidence on effective deprescribing interventions and deprescribing theories to map ideas	Literature review
Engage and partner with stakeholder panels	Recruitment
Understand perspectives and preferences on medication use and deprescribing (Panel 1)	Focus Groups
Understand deprescribing processes, training, and workflow of providers in care transitions (Panel 2)	
Strategize ways to close gaps in deprescribing via the NP-HH nurse collaboration (Panels 2-3)	
Solicit feedback on the use of telehealth (Panels 1-3)	
II. Designing and Data Analysis	
Identify themes and ideas on the content, delivery, and format of interview based on focus group interview data	Qualitative Data Analysis
Generate ideas on key components, features, and delivery solutions of intervention	Team Discussion
III. Refining, Documenting, and Prototyping	
Refine details in the scope, content, format, and delivery of intervention (Panels 1-3)	Focus Group
Finalize the intervention protocol	Team Discussion & Advisory Panel Consultation
Develop a prototype of intervention	
Design an implementation plan of intervention	
Disseminate protocol and prototype	Publications

TEAM: The team includes [redacted] (PI) - an early-stage nurse researcher with a focus on improving outcomes of older adults during care transitions[36,39-55] and [redacted] – an academic hospitalist who works closely with older inpatients.

STAKEHOLDERS: Stakeholders will be recruited locally ([redacted]) and join the focus group interviews. We also have an advisory panel of experts from primary care ([redacted]), intervention development ([redacted]), pharmacy ([redacted]) and community-based NP care delivery ([redacted]).

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References

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