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Feature Article

Development and testing of the Dementia Symptom Management at Home (DSM-H) program: An interprofessional home health care intervention to improve the quality of life for persons with dementia and their caregivers

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ABSTRACT

Home health care agencies are increasingly taking care of sicker, older patients with greater comorbidities. However, they are unequipped to appropriately manage these older adults, particular persons living with dementia (PLWD). We therefore developed the Dementia Symptom Management at Home (DSM-H) Program, a bundled interprofessional intervention, to improve the care confidence of providers, and quality of care delivered to PLWD and their caregivers. We implemented the DSM-H with 83 registered nurses, physical therapists, and occupational therapists. Overall, there was significant improvement in pain knowledge (5.9%) and confidence (26.5%), depression knowledge (14.8%) and confidence (36.1%), and neuropsychiatric symptom general knowledge (16.8%), intervention knowledge (20.9%), attitudes (3.4%) and confidence (27.1%) at a statistical significance of ($P < .0001$). We also found significant differences between disciplines. Overall, this disseminable program proved to be implementable and improve clinician's knowledge and confidence in caring for PLWD, with the potential to improve quality of care and quality of life, and decrease costs.

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Introduction

Home health care (HHC) providers, including registered nurses, and physical and occupational therapists, play a major role in caring for older adults after discharge home from the hospital and may be essential in keeping readmission rates low. Currently, 22% of HHC patients return to the ER after discharge and 29% are readmitted.[1] Over two thirds of HHC patients are over the age of 65[2] and approximately 36% have some form of cognitive impairment[3] including dementia. This number is expected to increase significantly given the aging of the population and rise in life expectancy.[4] There are currently no treatments available to prevent or cure Alzheimer's disease and related disorders, and current symptomatic medications do not alter the disease trajectory. However, according to the Institute of Medicine, the number of providers trained to properly care for the older adult, including those with dementia and in the HHC setting is inadequate.[5]

Furthermore, the role of the interprofessional HHC team in treating persons living with dementia (PLWD) has not been clearly defined, despite the potential to identify and significantly improve the quality of life of both the PLWD and the caregiver. Dementia care can best be provided over time by an interprofessional team, defined as 'a partnership between a team of health providers and a client in a participatory collaborative and coordinated approach to shared decision making around health and social issues'.[6] Each discipline provides a distinct and complimentary set of skills to the team.[7] The registered nurse is an expert in therapeutic communication and coping strategies, as well as caregiver education and provision of pharmacologic and non-pharmacologic interventions. The occupational therapist focuses on preserving functional capacity and determining the types of compensatory strategies,

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assistive devices and environmental modifications that are appropriate. The physical therapist focuses on mobility, reducing risk of injuries and falls, and maximizing completion of activities of daily living. Additional skilled disciplines that can be involved in HHC though are much less frequently used as part of the interprofessional team in this setting are the social worker and speech language pathologist.

Various successful interventions have been implemented in the community using non-pharmacologic strategies, performed by single disciplines such as nurses,[8,9] occupational therapists,[10] and physical therapists[11] as well as by interprofessional teams.[12–14] However these interventions have often been created through research projects and not scaled up and integrated into existing models of care, especially those with interprofessional HHC teams.

Moreover, limited research has been performed in how to best implement evidence-based programs in HHC.[15] Given that clinicians in HHC work in the community and may spend limited time at a home office,[16] there are different challenges with both training of a workforce with members from different disciplines, and conducting an interprofessional education intervention compared to institutional settings such as hospitals and nursing homes.[17,18] Similarly, in-person training requires clinicians in HHC to leave the field and therefore productivity can be effected at a greater level than in institutional settings where they may have to leave a patient assignment and receive coverage but do not have to travel far from their practice setting. The authors have previously tested an online educational intervention in HHC on geriatric pain and depression, finding that it is feasible to implement online educational interventions in this setting.[19] However, without additional resources such as protocols, care plans, sustained mentorship and quality improvement initiatives, there is limited potential for long-term efficacy.[20,21]

The Dementia Symptom Management at Home (DSM-H) Program was designed to provide a multi-modal behavioral intervention that includes education, mentorship, and workflow changes to an interprofessional team with the intent of improving outcomes for PLWD and their caregivers. The DSM-H provides a structured way for HHC professionals to assess and manage pain and neuropsychiatric symptoms (NPS) such as agitation, aggression and psychosis in PLWD and decrease burden, stress and burnout in caregivers of PLWD. The DSM-H was developed primarily for the HHC interprofessional team of registered nurses, physical therapists, and occupational therapists, as they are the largest provider groups in HHC and provide complimentary but different care to PLWD utilizing different bases of knowledge and expertise.[7]

The aim of this study was to test the ability of the DSM-H Program to improve the knowledge, confidence, and attitudes of HHC registered nurses, physical therapists, and occupational therapists in assessing and managing pain, depression, and other NPS in PLWD. This study also sought to examine if this is a feasible resource to be used by interprofessional teams as we explore ways to improve the outcomes in PLWD and their caretakers.

Methods

Development of the DSM-H

The DSM-H was created by combining complementary elements of two interprofessional educational and training programs developed and validated by one of the authors (JEG),[22,23] the Nurses Improving Care for Healthsystems Elderly program[24] developed by the Hartford Institute for Geriatric Nursing at NYU, the NIA/NINR developed and VA implemented Resources for Enhancing Alzheimer's Caregiver Health (REACH) program,[25] and the Care of Persons with Dementia in their Environments (COPE) intervention developed by Gitlin and colleagues.[26] The content was further informed by a systematic review conducted using the Cochrane Handbook methodology,[12] and through examining current evidence-based guidelines and translating them for use in the HHC setting. Additionally, a structured communication module using the Situation-Background-Assessment-Recommendation (SBAR) technique[27] was developed in order to ensure appropriate communication between HHC clinicians and the primary care provider. This was included as research suggests that poor communication is a major stumbling block to effective and coordinated provision of HHC services.[28] Through this exhaustive process, the DSM-H was developed as an interprofessional, multimodal, training and behavior change intervention using elements as described in the next sections.

Online training

A set of interactive, online training modules for nurses, physical and occupational therapists was developed. The learning objectives were to: 1) Recognize and assess pain, depression, and other NPS in PLWD; 2) Identify, recommend, and implement evidence-based non-pharmacologic and pharmacologic treatments for these conditions; 3) Educate the primary informal caregivers on how to manage these symptoms on a day-to-day basis; 4) Perform clear and concise communication with other home health care clinicians and primary care providers using the SBAR technique.

The training modules were broken up into 45–90 min blocks (total training time 4.5 h) for ease of learning and to limit interference with work hours. There are four modules: 1) Assessment and management of pain in the PLWD; 2) Assessment and management of depression in the PLWD; 3) Assessment and management of NPS in the PLWD; 4) Effective communication with health care professionals. Each module, included a mixture of imagery and text with narrative voiceover. The modules were interactive in that users had to click on different portions of a slide to open the content and voiceover for those areas, or to overlay additional information such as how to utilize and score a particular assessment instrument. Content-specific questions that users had to correctly answer in order to proceed were included to reinforce the learning objectives of the modules.

Clinician champions

As multiple studies have shown that education alone does not change practice,[20,21] two other components were developed for use in the DSM-H to reinforce the evidence-based practices taught in the online training program. The first was a "champions program." The goal of this program was to develop champions to serve as clinical leads and mentors within the agency. Champions were to be identified not as experts in geriatric or palliative care, but as those with an interest in the clinical care of dementia patients, who were well-respected role models to their peers within their respective fields and organizations, analogous to the Geriatric Resource Nurse model used by the NICHE Program.[24] Champions received 14.5 h of in-person training provided by two experts in the assessment and management of dementia (AAB and JEG). This format of the training sessions included a mixture of didactic (approximately 2/3 of time) and case-based work with group discussions (approximately 1/3 of time). The content included more in-depth symptom management and communication content than what was covered in the online modules, as well as training in other areas of dementia care including advanced care planning, palliative care, and maximizing functional capacity. Champions also received training in peer mentorship skills to reinforce the online program with peers and answer questions from their peers as resources. All clinicians receiving the online training were notified of the identity and role of the champions within the online training program.