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Team-Based Interprofessional Competency Training for Dementia Screening and Management

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As many as 50% of people satisfying diagnostic criteria for dementia are undiagnosed. A team-based training program for dementia screening and management was developed targeting four professions (medicine, nursing, pharmacy, social work) whose scope of practice involves dementia care. An interprofessional group of 10 faculty members was trained to facilitate four interactive competency stations on dementia screening, differential diagnoses, dementia management and team care planning, and screening for and managing caregiver stress. Registrants were organized into teams of five members, with at least one member of each profession per team. The teams rotated through all stations, completing assigned tasks through interprofessional collaboration. A total of 117 professionals (51 physicians, 11 nurses, 20 pharmacists, 24 social workers, 11 others) successfully completed the program. Change scores showed significant improvements in overall competence in dementia assessment and intervention (very low = 1; very high = 5; average change 1.12, $P < .001$), awareness of importance of dementia screening (average change 0.85, $P < .001$), and confidence in managing medication (average change 0.86, $P < .001$). Eighty-seven participants (82.9%) reported feeling confident or very confident using the dementia toolkit at their home institution. In a survey administered 3 months after the session, 48 respondents reported that they had changed their approach to administering the Mini-Cog test (78%), differential diagnosis (49%), assessment of caregiver stress (74%), and accessing community support and services (69%). In

conclusion, team-based interprofessional competency training is a team teaching model that can be used to enhance competency in dementia screening and management in medical, nursing, pharmacy, and social work practitioners. *J Am Geriatr Soc* 2016.

Key words: dementia; interprofessional; education; team

An estimated 5.2 million people in the United States have Alzheimer's disease (AD). With the aging of the population, the total number of people with AD or other dementias is projected to be 13.8 million by 2050, over half of whom will be aged 85 and older.¹ Despite the high prevalence and disease burden, dementia remains an underdiagnosed, underrecognized condition. A review of dementia in primary care revealed that their primary care physicians did not diagnose an estimated 50% of individuals aged 65 and older with dementia.² Although it is likely that there are multiple reasons for this problem, it is likely that the deficiency of healthcare professionals' knowledge and skills in dementia diagnosis and management is involved. Clinicians who care for older adults have been shown to have difficulty diagnosing dementia^{3,4} and distinguishing between dementia and delirium⁵ and lack confidence in managing cognitive and behavioral problems associated with the disease.⁶

Dementia is a complex disease that requires medical, behavioral, and psychosocial interventions to provide effective, high-quality care. The skills and knowledge base needed to deliver such interventions are broad, and is it likely that they fall outside the scope of practice of any single health profession, so an interprofessional, team-based approach to dementia screening and management makes sense. A systematic review of interprofessional educational interventions for recognizing and managing dementia found that few studies have examined how to effectively disseminate findings of research on dementia

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assessment and management and that even fewer have examined how to do so in an interprofessional manner.⁷

A novel educational program was created to teach and disseminate evidence-based information on the screening, assessment, and management of dementia through a team-based collaborative approach among four health professions: medicine, nursing, social work, and pharmacy.

METHODS

Identification of Competencies

An interprofessional group of faculty members (ZST, MC, JD, SS) of the University of California Los Angeles California Geriatric Education Center was convened to define the scope of dementia-related practice of four health professions (medicine, nursing, social work, pharmacy). The four professions were chosen because their scopes of practice place them in direct contact with older persons with cognitive impairment. The group reviewed the minimum geriatric competencies for trainees as described in consensus-based guidelines for medicine,⁸ nursing,⁹ social work,¹⁰ and pharmacy¹¹ and identified those that are pertinent to dementia screening and management. The profession-specific core competencies and their sources are presented in Table 1. Particular attention was placed, during the

review, on identifying the cross-disciplinary skills and the distinct contributions and limits of and overlaps in the dementia-related competencies to highlight opportunities for interprofessional collaboration and group problem solving. Across the disciplines, assessment and use of standardized instruments were identified as core for practice. Distinct contributions according to discipline were recognized; for example, for physicians, the emphasis was on differential diagnosis and medical treatment regimens. Nursing, social work, and pharmacy all related their practice to the family or caregiver as well as the individual with dementia. The interventions that each of the professions offered varied: case management and education for social work, managing geriatric syndromes within the patient environment for nursing, and evaluation of medication interventions and goals for pharmacy.

Workshop Development

Based on the identified competencies, an interactive, team-based workshop on dementia screening and management was developed with input from and review by the interprofessional faculty group. The workshop was divided into the following four stations.

Station 1. Dementia Screening. Skill: Administer and interpret a dementia screening instrument. Task: Team

Table 1. Profession-Specific Competencies Related to Dementia

	Medicine	Nursing	Social Work	Pharmacy
Competency	Minimum Geriatric Competencies for IM-FM Residents	Recommended Baccalaureate Competencies and Curricular Guidelines for Geriatric Nursing Care	Hartford Practicum Partnership Program Geriatric Social Work Competency Scale	Pharmacy Practice Competencies Across Three Core Domains
Source	IM/FM Geriatrics Competencies Working Group, American Geriatrics Society, American Medical Association, Society of General Internal Medicine, American Board of Family Medicine Foundation	American Association of Colleges of Nursing, John A. Hartford Foundation Institute of Geriatric Nursing	John A. Hartford Foundation	American Association of Colleges of Pharmacy
Elements	Appropriately administer and interpret results of at least one validated screening tool for each of the following: delirium, dementia, depression, substance abuse. Recognize delirium as a medical urgency, promptly evaluate and treat underlying problem. Evaluate and formulate differential diagnosis and examination for individuals with changes in affect, cognition, and behavior (agitation, psychosis, anxiety, apathy). In individuals with dementia or depression, initiate treatment and refer as appropriate.	Incorporate valid, reliable tools to assess the functional, physical, cognitive, psychological, social, and spiritual status of older adults into daily practice. Assess older adults' living environment, with special awareness of functional, physical, cognitive, psychological, and social changes common in old age. Assess family knowledge of skills necessary to deliver care to older adults. Recognize and manage geriatric syndromes common to older adults. Recognize benefits of interdisciplinary team participation in care of older adults.	Assess cognitive functioning and mental health status of older clients (e.g., depression, dementia). Administer and interpret standardized assessment and diagnostic tools appropriate for use with older adults (e.g., Geriatric Depression Scale, Mini-Mental State Examination). Provide social work case management to link elderly adults and families to resources and services. Use educational strategies to provide older adults and families with information related to wellness and disease management (e.g., Alzheimer's disease, end-of-life care).	Ensure individuals with dementia and caregivers can adhere to the drug regimen (including administration techniques) included in their therapeutic plan(s). Develop monitoring plans to determine whether therapeutic objectives being achieved. Evaluate actual or potential effect of drug–drug, drug–disease, and drug–food interactions on outcomes.

members demonstrate to faculty their ability to administer and interpret the Mini-Cog,¹² a brief, validated dementia screening tool.

Station 2. Differential Diagnosis. Skill: Differentiate between dementia and delirium. Task: Team members view a video case presentation of a postoperative older adult with confusion. They discuss the case and list the key differentiating points for the dementia, delirium, and depression and administer the Confusion Assessment Method (CAM),¹³ a brief, validated delirium screening tool.

Station 3. Management and Interprofessional Team Care Plan. Skill: Generate a dementia care plan using an interprofessional approach. Task: Interview a standardized patient with dementia and propose an appropriate team-based care management plan.

Station 4. Caregiver Stress. Skill: Identify and provide interventions for caregiver stress. Task: Interview a standardized caregiver who presents with caregiver stress and strain, administer the Modified Caregiver Strain Index (MCSI),¹⁴ and provide team-based interventions to reduce caregiver stress.

Faculty Training

An interprofessional group of 10 faculty members received training on how to facilitate the four interactive competency stations, including fostering team interaction and ensuring individual participation. Three team-based interprofessional competency (TIC) workshops were held as half-day preconference sessions for three subsequent offerings of the annual University of California Los Angeles Intensive Course in Geriatric Medicine and Pharmacy.

Workshop Deployment and Assessment

Each TIC workshop was divided into three main activities: an introductory presentation and overview, the interactive team-based stations, and a summary presentation and evaluation. The brief introductory presentation on interprofessional dementia screening and management included a comparison of minimum competencies in dementia care for the various health disciplines; instructions on how to administer and interpret screening instruments including the Mini-Cog, CAM, and MCSI; and the importance of working as an interprofessional team. Participants were then organized into teams of five including at least one member of each of the target professions. Teams rotated through the four stations, spending 20 minutes per station, facilitated by 10 faculty members representing the four target professions. Each station required participants to complete the assigned task collaboratively by drawing upon their collective experience and expertise. The summary presentation outlined the main learning points from the workshop. Participants were given recommendations on how to share the skills acquired at the workshop with their colleagues in their respective institutions.

Participants were asked to rate their knowledge, competence, and confidence in dementia screening and management on a 10-item retrospective pre/postsession survey. A 5-point Likert scale was used (1 = very low, 2 = low, 3 = fair, 4 = high, 5 = very high). After the program, participants were provided access to the Dementia Workshop

Toolkit Essentials to implement the program at their own institution. This toolkit includes the slide sets used for the introductory and concluding talks and learner and faculty guides for each of the four stations. An e-mail survey administered 3 months after the session assessed change in participants' clinical and teaching practice after completing the training program.

RESULTS

Fifty-one physicians, 11 nurses, 20 pharmacists, 24 social workers, and 11 from other professions attended the workshop (N = 117). Change scores on the retrospective pre/postsurvey (5-point Likert scale: very low = 1, very high = 5) showed significant improvements in awareness of the importance of dementia screening (change 0.85, $P < .001$), knowledge of the prevalence of dementia (change 0.77, $P < .001$), knowledge of interventions for individuals with dementia (change 1.12, $P < .001$), ability to administer and interpret the Mini-Cog (change 1.59, $P < .001$), ability to administer and interpret the CAM (change 1.60, $P < .001$), ability to prescribe a care plan for an individuals with dementia (change 0.99, $P < .001$), confidence in screening for dementia in older adults (change 1.15, $P < .001$), confidence in assessing caregiver stress (change 1.22, $P < .001$), confidence in managing medication (changes 0.86, $P < .001$), and overall competence in dementia assessment and intervention (average change 1.12, $P < .001$). Eighty-seven (83.7%) participants who responded reported feeling confident or very confident using the Dementia Workshop Toolkit Essentials at their home institutions. Ninety-seven (89%) participants said they would make the toolkit available to colleagues.

Forty-eight participants responded to follow-up questions administered 3 months after the training sessions. Based on their participation in the dementia screening and management workshop, the following proportion of respondents reported that they had modified their approach to administering the Mini-Cog test (78%, $n = 40$), differential diagnosis (49%, $n = 37$), assessment of caregiver stress (74%, $n = 43$), and accessing community support and services (69%, $n = 44$). In addition, 29% ($n = 45$) reported initiating related education programs or activities, and 89% ($n = 45$) reported that they were somewhat or a lot more confident in teaching about dementia. The following percentages of participants reported how they had used the workshop toolkit: 95% ($n = 44$) used it for their own reference, 81% ($n = 43$) shared the materials with others at work, 20% ($n = 40$) shared the materials with other institutions, and 48% ($n = 42$) used the materials to train others.

DISCUSSION

Interprofessional team-based care is defined as care delivered by a small group of health professionals from different disciplines who share the responsibility of caring for a group of patients.¹⁵ It represents a paradigm shift from single-profession healthcare delivery to integrated models of practice in which several disciplines work together in interprofessional teams to address an individual's needs.¹⁶ The goal of interprofessional team care is to produce the

maximum attainable outcome through cooperation among the various healthcare team members.¹⁷ The essential elements of effective team-based care are communication, collaboration, teamwork, shared value system, complementary roles, therapeutic relationship, and knowledge.¹⁸ As the population ages, health professionals must learn to work effectively in a team-based environment to meet the challenges of increasing workload demands and caseload complexity. To accomplish this, interprofessional education must be integrated into the training of current and future health professionals.

A novel program for teaching interprofessional team-based dementia screening and management that fulfills the core profession-specific dementia-related competencies for medicine, nursing, social work, and pharmacy was presented herein. These skills, related to assessment, use of standardized instruments, diagnosis, treatment planning (specific to different disciplines), and inclusion of family and caregivers in dementia care, were integrated into four interprofessional team stations focused on dementia screening, dementia diagnosis, interprofessional team-based care plans, and assessment and interventions for caregivers. The results show that this instructional approach effected significant improvements in health professionals' self-rated awareness of the importance of dementia screening, knowledge of the prevalence of and interventions for dementia, ability to administer and interpret validated dementia and delirium screening tools, and ability to prescribe an interprofessional team-based care plan for an individual with dementia. The workshop also increased their confidence in screening for dementia, assessing caregiver stress, and managing dementia-related medication problems. A proportion of participants also reported a change in their practice for dementia screening, assessing for caregiver stress, and accessing community support and services for persons with dementia that lasted up to 3 months after participation in the workshop. Finally, participants reported using the workshop toolkit to educate themselves and their colleagues about interprofessional team-based dementia screening and management at their home institutions.

A team-based approach to health care has been shown to improve person-centered outcomes and chronic disease management and to prevent medical errors.^{19–22} More specifically, collaborative team-based care for older adults with Alzheimer's disease has been shown to effect significant improvements in the quality of care and in behavioral and psychological symptoms of dementia in individuals in primary care and their caregivers.²³ There is also evidence that primary care-based interprofessional memory clinics can provide high-quality collaborative dementia care while increasing capacity for dementia management.²⁴ A systematic review of interprofessional educational interventions for recognizing and managing dementia suggests that greater emphasis needs to be placed on disseminating existing evidence-based care and ensuring that programs are interprofessional in nature so that excellent person-centered care is provided.⁷ A competency-based workshop aimed at medical students, residents, and other health professionals showed high satisfaction ratings and significant gains in overall confidence in gait and falls risk evaluation.²⁵ The team-based interprofessional competency training described in this article offers a similar collaborative approach but is aimed at teaching practicing health

professionals in medicine, nursing, social work, and pharmacy about evidence-based screening and management of older adults with cognitive and behavioral disorders.

The strengths of this study include the integration of dementia-related competencies for four health professions in the cases and clinical skills stations, the organization of interprofessional teams and their engagement in collaborative case-based discussion and problem solving, the use of standardized patients in two of four stations, and the high faculty-to-learner ratio. Limitations of the study include the lack of baseline skill assessment, team collaboration measures (e.g., team effectiveness questionnaire, interprofessional collaboration scale), and direct measure of practice change, although the pre- and postsession survey and the e-mail survey 3 months after the session obtained information on self-reported change in skills and practice change in dementia screening and management for a proportion of the attendees.

TIC training is a novel model for the teaching and dissemination of evidence-based information on dementia screening, assessment, and management through a team-based collaborative approach between practicing health professionals. Future research studies should focus on the effectiveness of the TIC model when applied to the instruction of interprofessional students and when adapted to other conditions such as falls, delirium, polypharmacy, and elder abuse and neglect. The effectiveness of the training in achieving core competencies for interprofessional collaborative practice¹⁵ warrants further investigation.

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Author Contributions: Drs. Tan and Merkin had full access to all of the data and take responsibility for the data integrity and analytical accuracy. Tan, Damron-Rodriguez, Cadogan, Price, Shimomura: study concept and design, data acquisition. Tan, Merkin, Gans: data analysis and interpretation. Jennings, Schickedanz, Osterweil, Chodosh: data acquisition, critical review of manuscript. Tan: drafting the manuscript. All authors: substantial revisions, approval of final version of manuscript.

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