INTERPROFESSIONAL CURRICULUM APPROACH TO ALZHEIMER'S AND OTHER DEMENTIAS

Evaluation Report

Co-Principal Investigators:

Alyssa Aguirre, MSW, The University of Texas Dell Medical School at Austin

Jung Kwak, PhD, MSW, FGSA, The University of Texas School of Nursing

Project Coordinator:

Sydney Silverman, MHA, The University of Texas Dell Medical School at Austin

Research Assistant:

Kwaku Duah Oppong, PhD Candidate, MPH, BSN, RN, The University of Texas School of Nursing

IRB Protocol Number: *STUDY00007103*

July 31, 2025

Contents

Executive Summary

This project 'Interprofessional Curriculum Approach to Alzheimer's and Other Dementias' examined the feasibility, acceptability, and educational impact of a novel online interprofessional education (IPE) curriculum focused on Alzheimer's Disease and Related Dementias (ADRD). Designed for undergraduate and graduate health professional students at The University of Texas at Austin, the curriculum consisted of three asynchronous, self-paced modules: (1) a 15-minute introductory IPE module and two 60-minute discipline-specific modules on (2) brain health and risk reduction and (3) early detection and treatment, followed by a virtual synchronous, three-hour IPE Experience Day. The curriculum was tailored to five professional tracks; communication, social work, nursing, medicine and pharmacy, and emphasized team-based person-centered care for individuals living with ADRD. Fifty-eight students enrolled, with 42 completing the asynchronous content and 30 participating in the IPE Experience Day. Pre- and post-surveys assessed learners' knowledge, attitudes, and interprofessional collaboration skills. Statistically significant improvements were observed across nearly all domains, including ADRD knowledge, preparedness to support families, recognition of professional roles, and interprofessional competencies. Qualitative feedback highlighted the curriculum's strengths in case-based learning, simulation, and accessibility, while also suggesting enhancements to interactivity, case complexity, and time management. Findings demonstrated that a brief, scalable, online IPE curriculum can improve students' readiness to deliver coordinated, dementia-informed care. The findings support the effectiveness of our curriculum to improve knowledge, attitudes, and interprofessional collaboration skills. These results are particularly relevant for Texas, where the aging population is growing rapidly and workforce shortages in dementia-capable care are acute. Scalable and accessible training approaches such as this are essential to preparing a diverse pipeline of healthcare professionals across urban, rural, and underserved areas of the state.

Introduction

Overview

Alzheimer's disease and related dementias (ADRD) pose a growing public health challenge nationally and in Texas, with rising prevalence, care demands, and significant gaps in workforce preparedness. Despite national and state efforts to expand ADRD education, most healthcare professionals report limited training and confidence in dementia care, especially in culturally responsive and team-based approaches. Scalable, interprofessional education (IPE) models offer a promising solution to build a more competent and collaborative dementia care workforce—particularly critical in Texas, where demographic diversity and rural health disparities intensify the need for accessible, tailored training.

The main purpose of this evaluation was to assess the acceptability and feasibility of an online curriculum focused on Alzheimer's Disease and Related Dementias (ADRD), developed from an interprofessional educational (IPE) lens, on learners' attitudes, knowledge, and skills. The evaluation targeted undergraduate and graduate students enrolled in health professional degree programs, specifically communication, social work, nursing, medicine, and pharmacy, or students of any major with interest in learning about ADRD. While our primary focus was on students enrolled in health professional degree programs, we included students outside of these five specific programs, as many students from other majors (e.g., biology or psychology) may pursue health professions in the future.

Main hypotheses of this evaluation were:

1. There would be significant differences between pre- and post-test self-evaluation results in the following areas among learners:
    a. Attitudes toward aging
    b. Knowledge about brain health and ADRD
    c. Skills in interprofessional communication and collaboration for person-centered care with patients, families, and other professionals
2. Learners would find the curriculum to be acceptable in terms of content and delivery method.

Public Health Significance of ADRD Education and Training

National Context

Alzheimer's disease and related dementias (ADRD) continue to escalate as they represent as one of the most pressing and rapidly increasing public health challenges in the United States. As of 2024, approximately 6.9 million Americans aged 65 and older were affected by Alzheimer's disease, and this number is projected to nearly double to 13.8 million by 2060. (Alzheimer's Association, 2024). This trend places a substantial burden not only on

patients and families but also on the healthcare system, which is often unprepared to meet their complex needs.

Healthcare professionals, particularly in primary care, play a crucial role in identifying, diagnosing, planning care, and providing support to caregivers. However, the national workforce remains underprepared. According to the Alzheimer's Association's (2024) special report, only 55% of primary care physicians report receiving adequate training in dementia care, and fewer than 40% feel very confident in diagnosing or managing ADRD. These gaps contribute to delayed diagnosis, fragmented care, and sub-optimal patient outcomes. Additionally, these deficiencies are particularly harmful, given that early detection and ongoing care coordination are crucial to improving outcomes (Alzheimer's Association, 2024).

National efforts have acknowledged the importance of enhancing education about dementia. The U.S. Department of Health and Human Services' *National Plan to Address Alzheimer's Disease* and the CDC-supported BOLD Infrastructure for Alzheimer's Act highlight training and workforce development as core strategies. Emphasis has been placed on improving dementia-specific content across undergraduate, graduate, and continuing education, particularly through interprofessional and culturally responsive approaches (The U.S. Department of Health and Human Services (HHS), 2024 Update)

Interprofessional education (IPE) models, where students and professionals from different health disciplines learn together, have shown promise in enhancing health professionals' understanding and collaboration around dementia care. The Institute of Medicine's 2015 report confirmed that well-designed IPE improves collaborative behaviors, team efficacy, and care outcomes (Institute of Medicine, 2015). More recent studies across Europe and North America have demonstrated that IPE significantly enhances attitudes toward teamwork, self-reported competencies, and confidence in dementia care (Mattiazzi et al., 2024). Regarding dementia care, evidence suggests that structured IPE activities improve knowledge, increase confidence, and enhance teamwork in delivering person- and family-centered dementia care (Ferrell et al., 2023). Despite these efforts, the scale and consistency of ADRD education remain highly variable across the nation. Policy support and funding at the federal and state levels have begun to improve scalability (e.g., CDC BOLD initiative), yet continued investment is required to mainstream interprofessional, culturally tailored ADRD training for upcoming health professionals.

Texas-Specific Context

Texas, home to the third-largest population of adults aged 50 and older in the U.S. (9 million older adults in 2020), faces unique challenges and opportunities in addressing the growing impact of ADRD. As of 2024, an estimated 459,000 Texans aged 65+ were living with Alzheimer's, with nearly 17% of those aged 45+ reporting subjective cognitive decline (Texas Alzheimer's Association, 2024). Approximately 1.1 million family caregivers provided 1.9 billion hours of unpaid care, translating to $33.1 billion in economic value, and costing Texas Medicaid about $4.3 billion annually (Texas Alzheimer's Association, 2024). By 2050, nearly 490,000 Texans aged 65 and older are expected to be living with

Alzheimer's by 2025 (Texas Council on Alzheimer's Disease and Related Disorders, 2023). However, the state had only 431 geriatricians in 2021, and would need a 150.1% increase to meet projected demand by 2050. This stark gap underscores the urgent need for workforce expansion to support the growing number of people living with ADRD (Texas Alzheimer's Association, 2024).

In response, the Texas State Plan on Alzheimer's Disease (2023–2027) and the Texas Council on Alzheimer's Disease and Related Disorders identify training healthcare professionals as a statewide priority. It calls for comprehensive and accessible training for professionals across health, social service, and long-term care settings. Specific goals include increasing ADRD-related knowledge, fostering interprofessional teamwork, promoting culturally competent care, and embedding ADRD content into academic and workforce development systems.

Given the state's geographic diversity and workforce shortages, particularly in rural areas, the need for scalable, flexible, and interdisciplinary training models is urgent. Community-based and academic partnerships will be essential to reaching underrepresented providers and populations throughout the state.

Current Status of ADRD Training Curriculum: Needs and Future Directions

Despite growing national and state-level recognition of the importance of ADRD training, existing curricula across health professions remain inconsistent in both content and delivery. Studies have found wide variation in the extent to which ADRD-related topics are integrated into undergraduate and graduate training for medicine, nursing, social work, pharmacy, and allied health programs (Aljezawi et al., 2022; Cariñanos-Ayala et al., 2022; Williams et al., 2021).

A key limitation is the lack of standardized, interdisciplinary, and competency-based approaches. In many cases, ADRD is either underrepresented or taught in isolated modules without contextual relevance or team-based learning. Williams and colleagues (2021) noted that few undergraduate healthcare programs offered experiential or interprofessional training components, despite evidence that such methods improve student engagement and preparedness for clinical settings. In addition, Weiss and group (2020) make mention of critical workforce gaps in education in dementia, including IPE for dementia care management and coordination (Weiss et al., 2020).

Innovative models of ADRD education have begun to address these gaps. For instance, newer programs are incorporating asynchronous modules aligned with students' professional tracks, followed by synchronous interprofessional simulations that mimic real-world clinical scenarios. These blended approaches enhance learning flexibility while reinforcing collaboration and application of dementia care principles in team settings (Ferrell et al., 2023). However, challenges remain. Existing programs often lack rigorous evaluation of learning outcomes, sustainability, and scalability.

To move forward, curriculum development must:

- Prioritize interdisciplinary and experiential learning
- Recognize cultural diversity and emphasize cultural humility in dementia care
- Develop flexible, modular formats for broader dissemination
- Include robust evaluation plans for continuous improvement

This evolving landscape offers a critical opportunity to align academic training with the competencies needed for a dementia-capable workforce.

Curriculum Development

Task Force

A task force was established to lead the project (see Figure 1 for member list). Serving as the central leadership group, the task force provided strategic oversight across all phases—guiding curriculum development, implementation, and dissemination; identifying collaborators; selecting target learners; and setting dissemination goals.

Figure 1: Task Force Members (pictured left to right: Alyssa Aguirre, LCSW-S- Assistant Director of Dementia Care Transformation, CO-PI; Jung Kwak, PhD, MSW, FGSA, Associate Professor, School of Nursing - CO-PI; Lauren El Assad, LCSW, Assistant Director, Center for Health Interprofessional Practice and Education; Veronica Young, PharmD, Director, Center for Health Interprofessional Practice and Education; Sydney Silverman, MHA, Program Coordinator; Kwaku Duah Oppong, DipEd, RN, MPH, PhD Candidate; Jeanine Menczywar Donnelly, MPH, Senior Associate Director of Public Health Programs, Alzheimer's Association)

During their inaugural meeting on August 9th, task force members engaged in foundational planning activities including reviewing initial module content outlines, exploring opportunities to expand the content creation team through additional expert contributors, and brainstorming innovative dissemination approaches such as micro-credentialing options. The task force also established ongoing, monthly meeting schedules to ensure consistent progress monitoring and collaborative decision-making throughout the project timeline. This multifaceted oversight structure ensured that curriculum development remained aligned with educational best practices, incorporated diverse expert perspectives, and positioned the final product for maximum impact and reach within the project goals.

Content Creators

The task force engaged a multidisciplinary team of content creators representing major healthcare professions involved in dementia care (see Figure 2). Lindsey Wineholt, a Speech Pathologist from the Moody College of Communication at UT-Austin, provided expertise in communication disorders and speech-language interventions for individuals with cognitive impairment. Dr. Farya Phillips from the UT School of Social Work at UT-Austin contributed her specialized knowledge in social work practice and education, focusing on psychosocial support systems and family dynamics in dementia care. Dr. Li-Chen Lin, a nursing professional from the School of Nursing at UT-Austin, offered clinical nursing perspectives on comprehensive patient care and care coordination for persons living with Alzheimer's disease and related dementias. Dr. Stephen R. Saklad, representing the pharmacy profession from UT Health Science Center in San Antonio, and Samantha Catanzano a pharmacy professor from The University of Texas at Austin College of Pharmacy, provided critical insights into medication management, drug interactions, and pharmaceutical care considerations specific to dementia treatment. Dr. Steve Steffensen, MD, a neurologist from Dell Medical School, served as the medical content expert, ensuring clinical accuracy and providing neurological perspectives on diagnosis, treatment, and disease progression. This interprofessional team of content creators ensured that the curriculum authentically represented each profession's unique contributions to dementia care while promoting collaborative, team-based approaches to patient management.

Figure 2: Content Creators (from left to right: Lindsey Wineholt, CCC-SLP; Samantha Catanzano, PharmD, BCCP; Steve Steffensen, MD; Stephen Saklad, PharmD, BCCP (The University of Texas Health Science Center at San Antonio, TX); Li-Chen Lin, PhD, RN, CNRN; Farya Phillipps, PhD, CCLS. All are affiliated with the University of Texas at Austin, except where noted.)

Based on their respective areas of expertise, each content creator developed comprehensive PowerPoint presentations and detailed scripts tailored to students in their specific professional disciplines. These materials were designed to highlight each profession's unique scope of practice, clinical responsibilities, and collaborative contributions to interprofessional dementia care teams while maintaining consistency with overall curriculum learning objectives.

The project team convened a comprehensive retreat on Monday, November 25th, 2024, bringing together content creators and task force members for collaborative curriculum refinement. During this intensive working session, the group engaged in strategic discussions regarding target student populations for the study, conducted thorough

reviews of potential case studies for inclusion in the curriculum, and explored necessary modifications to enhance educational effectiveness. The retreat generated valuable feedback that directly informed curriculum improvements, including the decision to focus on the daughter of a young-onset individual living with Alzheimer's as a central figure within the early detection module to provide a family caregiver perspective as well as highlight unique needs of younger patients. Additionally, the group recommended adopting a step-by-step approach for presenting case studies to improve learner comprehension and suggested simplifying the case study complexity to enhance accessibility across diverse learner populations. These collaborative discussions and resulting recommendations provided essential guidance for finalizing curriculum content and ensuring alignment with interprofessional education best practices and learner needs.

Design

The project team collaborated with the Liberal Arts Instructional Technology Services (LAITS) media production specialists to develop comprehensive multimedia educational materials for the curriculum. Principal Investigators and study team met with key LAITS personnel including Kayla Galang (Head Producer), Mike Heidenreich (Director of Studio audio/video field group), and De'sha Bass McClellan (Design Specialist) and Matthew Busby (Media Specialist) to establish the technical framework and production timeline for creating interactive online learning modules. Through these collaborative meetings, LAITS demonstrated their capacity to develop educational content including animations, infographics, short videos, embedded quizzes, and interactive materials using text and images for the online modules, and AI-narrated PowerPoint video presentations. The LAITS team committed to supporting the project through all phases of media development, including pre-production (November 11-15, 2024), two production windows (November 18-27 and December 2-6, 2024), client review and feedback period (December 16, 2024 - April 16), Canvas implementation (March 31, 2025 – April 23, 2025), and final submission for state review (January 31 – March 20). Critical design decisions were finalized during these meetings, including the establishment of project branding and style elements such as color palette selection, character details and illustrations, button design, hosting websites and learner experiences, while also considering important technical elements including audio versus video recording options for PowerPoint lectures and potential AI narration tools integration.

Curriculum

As described in more detail below, the final curriculum consisted of three asynchronous, self-paced modules: (1) a 15-minute introductory IPE module and two 60-minute discipline-specific modules on (2) brain health and risk reduction and (3) early detection and treatment. Each module is tailored for five disciplines; communication, social work, nursing, medicine, and pharmacy; and includes preparatory readings, videos, narrated PowerPoint presentations, knowledge checks, and case scenarios (Figure 3). The curriculum culminated in a three-hour synchronous IPE Day experience, where participants engaged in collaborative case-based learning.

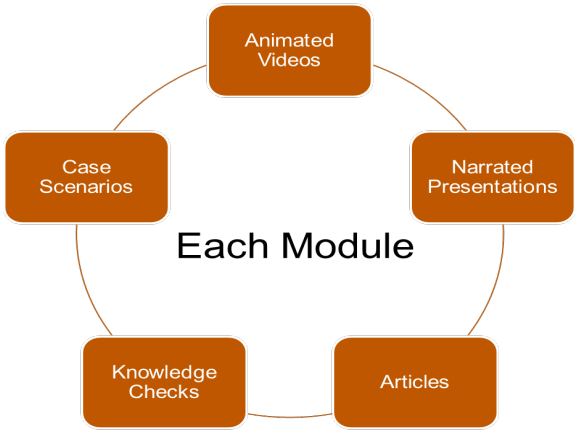


Figure 3: Instructional Design Framework: an integrated curriculum model incorporating animated videos, narrated presentations, articles, knowledge checks, and case scenarios to promote comprehensive learning and applied understanding.

Asynchronous Curriculum

The asynchronous curriculum is structured around two comprehensive modules designed to enhance learners' knowledge and skills in promoting brain health and managing cognitive decline. The curriculum was delivered online, allowing students the flexibility to complete the modules at their convenience, fitting them into their existing schedules without conflict with other coursework. The curriculum was developed with particular emphasis on promoting interprofessional practice. An interprofessional education (IPE) curriculum is an integral part of health professions training. IPE aims to improve collaboration across disciplines, reflecting educational best practices endorsed by professional accrediting bodies (e.g., AACN, AAMC, CSWE). The asynchronous curriculum includes a faculty guide, preparatory materials for students, presentation slides, and knowledge check questions.

Module 1 focuses on the fundamentals of brain health, emphasizing risk reduction strategies and the biological, psychosocial, and social determinants influencing cognitive function. This module provides education about brain health as a comprehensive, lifelong approach to maintaining cognitive function and reducing dementia risk, with an emphasis on interprofessional collaboration.

Module 2 centers on the early detection and management of Alzheimer's disease and related dementias (ADRD), equipping learners with the ability to identify various types of dementia, recognize early warning signs, and apply screening, assessment, and treatment techniques.

Both modules integrate discipline-specific knowledge with a team-based approach, preparing learners to provide compassionate, coordinated care that enhances patient outcomes and supports caregivers.

Synchronous IPE Day Experience

The asynchronous curriculum culminated in a virtual IPE day experience where students were given the opportunity to apply the skills and knowledge learned in the asynchronous environment in an interdisciplinary team-based approach.

At the start of the 3-hour virtual session delivered via Zoom, students were given an overview of the activity schedule and reviewed expectations of engagement (see Appendix A). Following the initial orientation, students broke out into pre-assigned Zoom rooms to complete an icebreaker activity in a small group. The icebreaker activity served as a foundational component of the interprofessional learning experience, designed to foster initial engagement, build rapport among participants, and establish a collaborative environment. This set the stage for deeper interprofessional collaboration by allowing participants to become more comfortable sharing perspectives, asking questions, and working across disciplines during the remainder of the session.

Following the icebreaker, participants reconvened in the main session and received a refresher of the two case studies drawn from the asynchronous curriculum and enhanced with google worksheets (Appendix B). These materials supported structured, interdisciplinary collaboration among participants.

Next, the students returned to their small groups and were assigned a facilitator to guide discussion and address questions related to each case study in the google worksheet. Students engaged in the two case studies, providing an opportunity to apply their knowledge in realistic, interdisciplinary scenarios. Each case study was divided into four components: care plan development, care plan simulation, a facilitator-led debrief, followed by a large group discussion.

During the large group discussion, participants reflected on the challenges encountered while collaboratively developing a care plan, the unique contributions of each professional role to patient care, and the ways in which interprofessional teams enhance patient outcomes. At the end of the IPE Day Experience, students completed evaluation surveys.

Curriculum Workflow

Participants selected one of five curriculum tracks aligned with their academic major or professional interest: communication, social work, nursing, medicine, or pharmacy. Following informed consent, each student completed pre-evaluation surveys, self-paced online learning modules, a synchronous IPE day and post-evaluation surveys (see Figure 4).

1. Pre-Evaluation Survey
   Participants completed a 15-minute survey via Redcap assessing demographic and

academic background (e.g., major) along with baseline measures of attitudes toward aging, knowledge of brain health and ADRD, and interprofessional practice competencies.

2. IPE Overview Module
   Participants then completed a 15-minute asynchronous module introducing the principles of interprofessional education (IPE) and its relevance to brain health and ADRD care. This module was standardized across all academic tracks.

3. Modules 1 and 2
   Participants completed two asynchronous modules tailored to their selected health discipline. Each module was approximately 60 to 90 minutes in length and included (a) preparatory materials such as readings and short videos, (b) narrated PowerPoint lecture with embedded knowledge-check questions and (c) case study. At the conclusion of each module, students completed a brief 12-item module evaluation via Redcap.
   - **Module 1:** Brain Health and Risk Reduction
   - **Module 2:** Early Detection and Treatment

4. Virtual Synchronous IPE Day
   Participants completed a three-hour virtual, synchronous IPE Day facilitated by the principal investigators and faculty from the Center for Health Interprofessional Practice and Education. This live session brought together students from all tracks to engage in interdisciplinary case discussions and apply IPE principles in real-time.

5. Post-Evaluation Survey
   After completing the IPE Day, students completed a post-evaluation via Redcap. These surveys mirrored pre-evaluation measures and included additional structured and open-ended questions to evaluate the IPE Day experience.

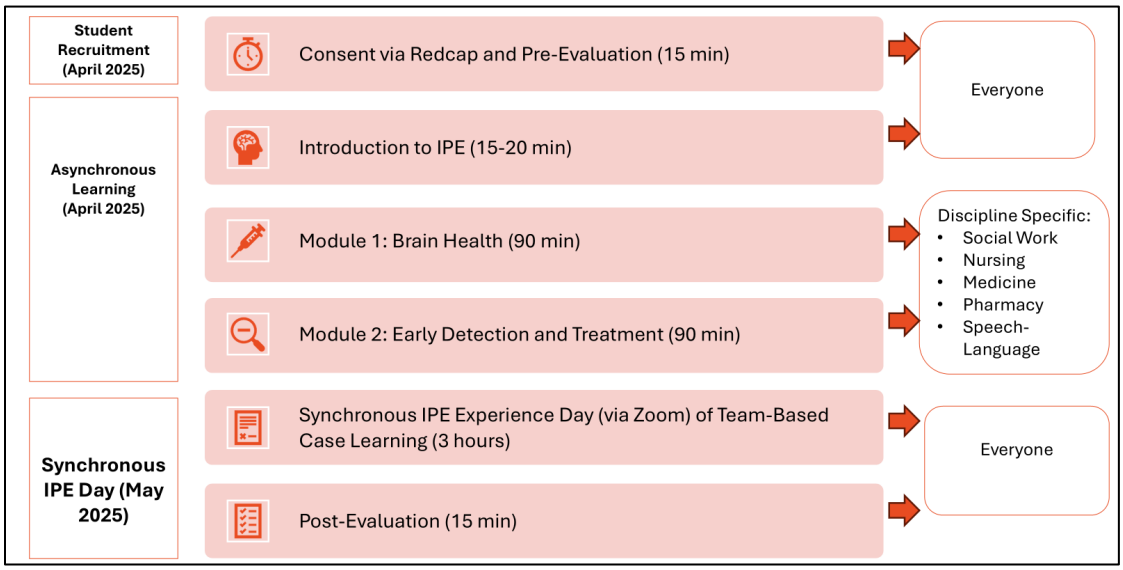


Figure 4: Curriculum Workflow

Evaluation Methods

IRB approval (Exempt) was obtained from The University of Texas at Austin Institutional Review Board (approval number STUDY00007103). Informed consent was obtained from all participants. The project used mixed-methods approach using pre- and post-surveys with structured and open-ended questions to ask students to assess their attitudes and knowledge about aging, brain health, ADRD and interprofessional care practice as well as the ADRD online curriculum.

Participants

The study targeted undergraduate and graduate students aged 18 and older majoring in communication, social work, nursing, medicine, and pharmacy at The University of Texas at Austin (UT Austin). These students represented the primary audience for the curriculum; however, students from other majors (e.g., biology or psychology) who expressed interest in the program were also accepted and enrolled.

Eligibility Criteria and Recruitment

Participation in the curriculum was entirely voluntary. Students who chose to participate did so based on their interest in learning about Alzheimer's Disease and Related Dementias (ADRD) within an interprofessional education (IPE) context (see Table 1). The study was advertised across colleges and schools at The University of Texas at Austin using IRB-approved communication materials between April 1st-May 2nd, 2025, and at the *Center for Health IPE Showcase* on April 18th, 2025 (see Figure 5 pictured below). Enrolled participants were able to view the online modules on Canvas between April 24th-May 7th, 2025. The virtual, synchronous IPE Day Experience took place on May 8th, 2025.

Table 1. Eligibility Criteria

Inclusion Criteria
• Enrolled as an undergraduate or graduate student in any degree program at UT Austin. • Age 18 or older. • Able to read and respond to questions in English. • Access to the internet.

Figure 5: Task Force Members recruiting students at the 7th Interprofessional Health Showcase, April 18, 2025. (Pictured from left to right: Lauren El-Assad, LMSW, Assistant Director, Center for Health Interprofessional Practice and Education; Kwaku Duah Oppong, PhD Candidate, MPH, BSN, RN, DipEd, Research Assistant; Alyssa Aguirre, LCSW-S- Assistant Director of Dementia Care Transformation, CO-PI; Veronica Young, PharmD, Director, Center for Health Interprofessional Practice and Education)

Measures

The evaluation utilized both standardized and custom-developed instruments to assess learner outcomes and perceptions (Table 2). Detailed description of assessment instruments is provided in Appendix C (Evaluation Guide).

Table 2. Assessment Instruments

Pre- and Post-Test Evaluation	IPE Curriculum Assessment Instruments
• Demographic and academic background • The Interprofessional Collaborative Competency Attainment Scale (ICCAS; Schmitz et al., 2017) • A series of items developed by the research team to assess knowledge gained and changes in attitudes toward ADRD	• Structured and open-ended questions developed by the research team to evaluate the asynchronous modules (e.g., content clarity, usability, length, alignment with learning objectives) and the synchronous IPE Day (e.g., perceived value, interprofessional collaboration experience)

Analysis

For closed-ended survey, we conducted descriptive statistical analyses with SPSS/WIN 28.0. For open-ended responses, a Co-PI (Kwak) developed an initial list of categories and codes based on curriculum design and ADRD literature. Both Co-PIs (Kwak and Aguirre) coded each student response individually and discussed to resolve. Co-PIs then mapped the codes as emergent themes.

Evaluation Results

Participant Characteristics

As shown in the Figure 6, of the 58 students who consented and completed the pre-survey, 72.4% (n=42) completed both Module 1 and Module 2. Of the 42 students who completed both modules, 71.4% (n=30) participated in the IPE day.

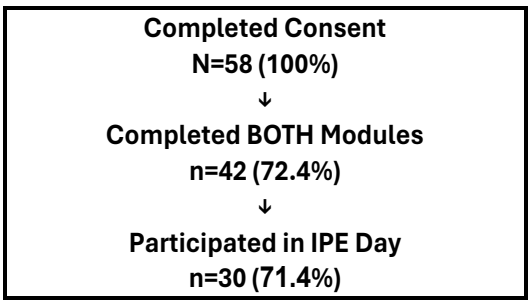


Figure 6: Participant Recruitment Flowchart

Participants who completed the online modules came from diverse healthcare disciplines across multiple educational levels, with greater representation from graduate than undergraduate programs (Table 3). The sample was predominantly female (88%) and racially diverse (31% Asian, 55% White, 7% Black/African American, 7% Other), with 28% identifying as Hispanic or Latino/Latina.

Table 3. Background Characteristics of Participants

Participant Characteristics	Consented and Completed Pre-Survey (N=58)	Completed Both Modules (1 &2) (N=42)	Completed Both Modules & IPE Day (N=30)
		mean (SD)	
Age	24.34 (6.846)	25.31 (7.691)	26.31 (8.775)
		n (%)	
Race			
Asian	21 (36.2)	13 (31.0)	7 (23.3)
Black/ African American	4 (6.9)	3 (7.1)	3 (10.0)
White	30 (51.7)	23 (54.8)	17 (56.7)
Other	3 (5.2)	3 (7.1)	3 (10.0)
Hispanic or Latino/Latina	17 (29.3)	12 (28.6)	10 (33.3)
Gender			
Male	11 (19.0)	5 (11.9)	3 (10.0)
Female	47 (81.0)	37 (88.1)	27 (90.0)
Primary language: English	47 (81.0)	33 (78.6)	24 (80.0)
Degree Program (Major)			
Nursing	12 (20.3)	7 (16.7)	3 (13.3)
Comm	6 (10.2)	5 (11.9)	4 (12.9)
Social Work	8 (13.6)	7 (16.7)	6 (20.0)
Pharmacy	13 (22.0)	9 (21.4)	5 (16.7)
Medicine	11 (18.6)	8 (19.0)	7 (23.3)
Other	8 (13.6)	6 (14.3)	5 (16.7)

Participant Characteristics	Consented and Completed Pre-Survey (N=58)	Completed Both Modules (1 &2) (N=42)	Completed Both Modules & IPE Day (N=30)
Undergraduate level			
Freshman / Sophomore	13(43.3)	9 (50)	6(60.0)
Junior / Senior	17 (56.7)	9 (50)	4 (40.0)
Graduate level			
Masters	10 (34.5)	10 (41.7)	9 (45.0)
PhD	7 (24.1)	6 (25.0)	5 (25.0)
Med School 1st yr	2 (6.9)	2 (8.3)	1 (5.0)
Med School 3rd yr, Pharmacy, other	9 (32.1)	6 (25.0)	5 (25.0)

Knowledge and Attitudes about ADRD

Students were asked to assess their own levels of knowledge, attitudes and competency in ADRD before and after completing the modules on a Likert scale of Not at all (1) to Very much (7). Student responses (frequency, percentage and mean scores) are shown at pre-test (Table 4) and post-test (Table 5). Paired t-test results showing differences between pre- and post- test among 30 students are summarized in Table 6. Statistically significant improvements were found in knowledge, preparedness and attitude.

The largest improvements were found in: accurate knowledge about ADRD (Mean increase = 1.40, $p < .001$), preparedness to assist families with community support resources (Mean increase = 1.63, $p < .001$), preparedness to discuss brain health and risk reduction (Mean increase = 1.36, $p < .001$), and familiarity with professional roles in dementia care (Mean increase = 1.54, $p < .001$). Participants also showed increased recognition that people with ADRD can experience enjoyment in daily life (Mean increase = 1.00, $p < .001$), suggesting a more strengths-based and person-centered understanding.

Table 4. Pre-Test Survey (T1) Self-Assessed Knowledge, Attitudes and Competency about ADRD (N=58)

	Not at all ----------Moderately---------- Very Much							
	1	2	3	4	5	6	7	
				N (%)				Mean (SD)
K1. Having ADRD causes a great deal of suffering.	0	0	1 (1.7)	4 (6.9)	11 (19.0)	18 (31.0)	24 (41.4)	6.03 (1.02)
K2. A person with ADRD can experience enjoyment in daily life.	0	1 (1.7)	2 (3.4)	13 (22.4)	17 (29.3)	11 (19.0)	14 (24.1)	5.33 (1.26)
K3. I have accurate knowledge about ADRD.	0	5 (8.6)	11 (19.0)	18 (31.0)	10 (17.2)	11 (19.0)	3 (5.2)	4.34 (1.35)
K4. I am concerned about developing ADRD when I am older.	3 (5.2)	4 (6.9)	6 (10.3)	16 (27.6)	6 (10.3)	13 (22.4)	10 (17.2)	4.67 (1.73)
K5. ADRD is a normal part of aging.	14 (24.1)	14 (24.1)	15 (25.9)	7 (12.1)	1 (1.7)	4 (6.9)	3 (5.2)	2.84 (1.69)
K6. I am prepared to assist families in discussing brain health and risk reduction strategies.	5 (8.6)	3 (5.2)	11 (19.0)	15 (25.9)	11 (19.0)	6 (10.3)	7 (12.1)	4.21 (1.69)
K7. I am prepared to assist families in connecting with community support resources for dementia care.	7 (12.1)	7 (12.1)	8 (13.8)	17 (29.3)	6 (10.3)	7 (12.1)	6 (10.3)	3.91 (1.80)
K8. I am familiar with the roles of professionals such as social worker, nurses, speech-language pathologists, pharmacists and physicians in dementia care.	2 (3.4)	4 (6.9)	8 (13.8)	16 (27.6)	14 (24.1)	6 (10.3)	8 (13.8)	4.48 (1.55)

Table 5. Post-Test Survey (T1) Self-Assessed Knowledge, Attitudes and Competency about ADRD (N=30)

	Not at all ----------Moderately---------- Very Much							
	1	2	3	4	5	6	7	
				N (%)				Mean (SD)
K1. Having ADRD causes a great deal of suffering.	0	0	1 (3.3)	5 (16.7)	8 (26.7)	9 (30.0)	7 (23.3)	5.53 (1.13)
K2. A person with ADRD can experience enjoyment in daily life.	0	0	0	2 (6.7)	4 (13.3)	7 (23.3)	17 (56.7)	6.30 (.95)
K3. I have accurate knowledge about ADRD.	0	0	0	0	13 (43.3)	11 (36.7)	6 (20.0)	5.77 (.77)
K4. I am concerned about developing ADRD when I am older.	3 (10.0)	1 (3.3)	4 (13.3)	6 (20.0)	4 (13.3)	4 (13.3)	8 (26.7)	4.70 (1.96)
K5. ADRD is a normal part of aging.	16 (53.3)	4 (13.3)	1 (3.3)	4 (13.3)	2 (6.7)	1 (3.3)	2 (6.7)	2.43 (1.96)
K6. I am prepared to assist families in discussing brain health and risk reduction strategies.	0	0	1 (3.3)	7 (23.3)	5 (16.7)	9 (30.)	8 (26.7)	5.53 (1.22)
K7. I am prepared to assist families in connecting with community support resources for dementia care.	0	0	3 (10.0)	5 (16.7)	7 (23.3)	7 (23.3)	8 (26.7)	5.40 (1.32)
K8. I am familiar with the roles of professionals such as social worker, nurses, speech-language pathologists, pharmacists and physicians in dementia care.	0	0	0	4 (13.3)	6 (20.0)	13 (43.3)	7 (23.3)	5.77 (.97)

Table 6. Paired-Test Results of Self-Assessed Knowledge, Attitudes and Competency about ADRD between Pre- and Post-Test

	Pre-Test Mean (SD)	Post-Test Mean (SD)	Mean Difference	p-value
K1. Having ADRD causes a great deal of suffering.	5.90 (.960)	5.53 (1.137)	-0.37	.155
K2. A person with ADRD can experience enjoyment in daily life.	5.30 (1.291)	6.30 (.952)	1.00	**< .001*** **
K3. I have accurate knowledge about ADRD.	4.37 (1.351)	5.77 (.774)	1.40	**< .001*** **
K4. I am concerned about developing ADRD when I am older.	4.43 (1.851)	4.70 (1.968)	0.27	.463
K5. ADRD is a normal part of aging.	2.70 (1.393)	2.43 (1.960)	-0.27	.482
K6. I am prepared to assist families in discussing brain health and risk reduction strategies.	4.17 (1.533)	5.53 (1.224)	1.36	**< .001*** **
K7. I am prepared to assist families in connecting with community support resources for dementia care.	3.77 (1.695)	5.40 (1.329)	1.63	**< .001*** **
K8. I am familiar with the roles of professionals such as social worker, nurses, speech-language pathologists, pharmacists and physicians in dementia care.	4.23 (1.382)	5.77 (.971)	1.54	**< .001*** **

* p<0.05, **<0.01, *** p<0.001

Interprofessional Practice Competency

Students were asked to assess their own competency levels of different domains of interprofessional practice – communication, collaboration, responsibilities, patient centered care, and conflict management, team functioning. Student responses (frequency, percentage and mean scores) at pre-test and post-test are shown in Table 7 and Table 8. Paired t-test results showing differences between pre- and post- test among 30 students are summarized in Table 9.

Statistically significant improvements were found in almost all areas of communication, collaboration, roles/responsibilities, patient centered care, and conflicts resolution, indicating that the IPE training meaningfully enhanced students' perceived interprofessional skills.

Communication: Students reported notable improvements in their ability to express themselves clearly and constructively within interprofessional (IP) teams. The largest gains were in the ability to express ideas clearly and concisely (Mean difference = 0.60, $p = .004$) and to provide constructive feedback (Mean difference = 0.43, $p = .025$). Statistically significant gains were also observed in nonjudgmental communication ($p = .003$) and active listening ($p = .026$).

Collaboration: Collaboration skills demonstrated strong improvements including their tendency to seek out team members to address issues (Mean difference = 0.74, $p < .001$) and work effectively as a team (Mean difference = 0.40, $p = .005$). Perceived gains in learning with, from, and about team members also showed a significant increase ($p = .032$).

Roles and Responsibilities: Students gained clarity in recognizing and articulating their role within a team. The most significant improvement was in identifying their own contributions (Mean difference = 0.60, $p < .001$). Understanding of others' roles and overlapping competencies also increased significantly ($p = .010$).

Patient-Centered Care: IPE participation strengthened students' ability to use team-based approaches in patient care. Significant gains were reported in using an IP approach to assess health situations (Mean difference = 0.57, $p < .001$) and provide whole-person care ($p = .007$).

Conflict Management and Team Functioning: Students improved in managing team dynamics such as actively listening to team perspectives ($p = .018$), respectful conflict resolution ($p = .039$), and negotiating overlapping responsibilities ($p = .007$). The ability to develop an effective care plan and consider others' ideas also improved significantly ($p = .016$ and .001, respectively).

Table 7. Pre-Test Survey (T1) Evaluation of Interprofessional Education (IPE) Competency [n=58, n (%), mean (SD)]

	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5	
			n (%)			Mean (SD)
Communication						
C1. Promote effective communication among members of an interprofessional (IP) team	0	5 (8.6)	23 (39.7)	18 (31.0)	12 (20.7)	3.64 (.91)
C2. Actively listen to IP team members' ideas and concerns	0	0	8 (13.8)	26 (44.8)	24 (41.4)	4.28 (.69)
C3. Express my ideas and concerns without being judgmental	0	4 (6.9)	12 (20.7)	22 (37.9)	20 (34.5)	4.00 (.91)
C4. Provide constructive feedback to IP team members	0	10 (17.2)	17 (29.3)	19 (32.8)	12 (20.7)	3.57 (1.01)
C5. Express my ideas and concerns in a clear, concise manner	0	10 (17.2)	18 (31.0)	18 (31.0)	12 (20.7)	3.55 (1.01)
Sub-scale score						**3.81 (.768)**
Collaboration						
C6. Seek out IP team members to address issues	0	8 (13.8)	14 (24.1)	23 (39.7)	13 (22.4)	3.71 (.97)
C7. Work effectively with IP team members to enhance care	0	2 (3.4)	16 (27.6)	22 (37.9)	18 (31.0)	3.97 (.85)
C8. Learn with, from and about IP team members to enhance care	0	6 (10.3)	7 (12.1)	23 (39.7)	22 (37.9)	4.05 (.96)
Sub-scale score						**3.91(.844)**
Roles and responsibilities						
C9. Identify and describe my abilities and contributions to the IP team	0	6 (10.3)	17 (29.3)	21 (36.2)	14 (24.1)	3.74 (.94)
C10. Be accountable for my contributions to the IP team	0	2 (3.4)	13 (22.4)	22 (37.9)	20 (34.5)	4.05 (.85)
C11. Understand the abilities and contributions of IP team members	0	3 (5.2)	11 (19.0)	22 (37.9)	21 (36.2)	4.07 (.88)
C12. Recognize how others' skills and knowledge complement and overlap with my own	0	1 (1.7)	12 (20.7)	23 (39.7)	22 (37.9)	4.14 (.80)
Sub-scale score						**4.00 (.766)**
Patient-centered care						

	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5	
			n (%)			Mean (SD)
C13. Use an IP team approach with the patient to assess the health situation	0	1 (1.7)	21 (36.2)	22 (37.9)	14 (24.1)	3.84 (.81)
C14. Use an IP team approach with the patient to provide whole-person care	0	5 (8.6)	14 (24.1)	23 (39.7)	16 (27.6)	3.86 (.92)
C15. Include the patient/family in decision-making	0	2 (3.4)	14 (24.1)	20 (34.5)	22 (37.9)	4.07 (.87)
Sub-scale score						**3.93 (.805)**
Conflict management, team functioning						
C16. Actively listen to the perspectives of IP team members	0	1 (1.7)	7 (12.1)	23 (39.7)	27 (46.6)	4.31 (.75)
C17. Take into account the ideas of IP team members	0	0	10 (17.2)	24 (41.4)	24 (41.4)	4.24 (.73)
C18. Address team conflict in a respectful manner	0	1 (1.7)	16 (27.6)	22 (37.9)	19 (32.8)	4.02 (.82)
C19. Develop an effective care plan with IP team members	0	4 (6.9)	15 (25.9)	22 (37.9)	17 (29.3)	3.90 (.91)
C20. Negotiate responsibilities within overlapping scopes of practice	0	7 (12.1)	16 (27.6)	21 (36.2)	14 (24.1)	3.72 (.97)
Sub-scale score						**4.04 (.700)**

Overall Mean (SD) = 3.94 (.705), Note: 1 Poor - 5 Excellent

TABLE 8. Post-Test Survey (T2) Evaluation of Interprofessional Education (IPE) Competency [n=30, n (%), mean (SD)]

	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5	
			n (%)			Mean (SD)
Communication						
C1. Promote effective communication among members of an interprofessional (IP) team	0	0	7 (23.3)	15 (50.0)	8 (26.7)	4.03 (.71)
C2. Actively listen to IP team members' ideas and concerns	0	0	0	12 (40.0)	18 (60.0)	4.60 (.49)
C3. Express my ideas and concerns without being judgmental	0	0	2 (6.7)	12 (40.0)	16 (53.3)	4.47 (.62)
C4. Provide constructive feedback to IP team members	0	2 (6.7)	4 (13.3)	12 (40.0)	12 (40.0)	4.13 (.90)
C5. Express my ideas and concerns in a clear, concise manner	0	1 (3.3)	5 (16.7)	11 (36.7)	13 (43.3)	4.20 (.84)
Sub-scale score						**4.29 (.572)**
Collaboration						
C6. Seek out IP team members to address issues	0	0	2 (6.7)	15 (50.0)	13 (43.3)	4.37 (.61)
C7. Work effectively with IP team members to enhance care	0	0	0	15 (50.0)	15 (50.0)	4.50 (.50)
C8. Learn with, from and about IP team members to enhance care	0	0	4 (13.3)	11 (36.7)	15 (50.0)	4.37 (.71)
Sub-scale score						**4.44 (.535)**
Roles and responsibilities						
C9. Identify and describe my abilities and contributions to the IP team	0	0	2 (6.7)	14 (46.7)	14 (46.7)	4.40 (.62)
C10. Be accountable for my contributions to the IP team	0	0	2 (6.7)	9 (30.0)	19 (63.3)	4.57 (.62)
C11. Understand the abilities and contributions of IP team members	0	0	1 (3.3)	16 (55.3)	13 (43.)	4.40 (.56)
C12. Recognize how others' skills and knowledge complement and overlap with my own	0	0	2 (6.7)	14 (46.7)	14 (46.7)	4.40 (.62)
Sub-scale score						**4.43 (.561)**

	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5	
			n (%)			Mean (SD)
Patient-centered care						
C13. Use an IP team approach with the patient to assess the health situation	0	0	0	10 (33.3)	20 (66.7)	4.67 (.47)
C14. Use an IP team approach with the patient to provide whole-person care	0	0	1 (3.3)	9 (30.0)	20 (66.7)	4.63 (.55)
C15. Include the patient/family in decision-making	0	0	6 (20.0)	7 (23.3)	17 (56.7)	4.37 (.80)
Sub-scale score						**4.43 (.575)**
Conflict management, team functioning						
C16. Actively listen to the perspectives of IP team members	0	0	6 (20.0)	11 (36.7)	13 (43.3)	4.23 (.77)
C17. Take into account the ideas of IP team members	0	0	7 (23.3)	15 (50.0)	8 (26.7)	4.03 (.71)
C18. Address team conflict in a respectful manner	0	0	0	12 (40.0)	18 (60.0)	4.60 (.49)
C19. Develop an effective care plan with IP team members	0	0	2 (6.7)	12 (40.0)	16 (53.3)	4.47 (.62)
C20. Negotiate responsibilities within overlapping scopes of practice	0	2 (6.7)	4 (13.3)	12 (40.0)	12 (40.0)	4.13 (.90)
Sub-scale score						**4.43 (.543)**

Table 9. Paired-Test Results of IPE between Pre- and Post-Test

ITEMS	Pre-Test Mean (SD)	Post-Test Mean (SD)	Mean Difference	p-Value
Communication				
C1. Promote effective communication among members of an interprofessional (IP) team	3.70 (.915)	4.03 (.718)	0.33	.057
C2. Actively listen to IP team members' ideas and concerns*	4.30 (.651)	4.60 (.498)	0.30	**.026***
C3. Express my ideas and concerns without being judgmental	4.03 (.809)	4.47 (.629)	0.44	**.003****
C4. Provide constructive feedback to IP team members	3.70 (.952)	4.13 (.900)	0.43	**.025***
C5. Express my ideas and concerns in a clear, concise manner	3.60 (.932)	4.20 (.847)	0.60	**.004****
Collaboration				
C6. Seek out IP team members to address issues	3.73 (.907)	4.47 (.629)	0.74	**< .001*****
C7. Work effectively with IP team members to enhance care	3.97 (.765)	4.37 (.615)	0.40	**.005****
C8. Learn with, from and about IP team members to enhance care	4.27 (.640)	4.50 (.509)	0.23	**.032***
Roles and responsibilities				
C9. Identify and describe my abilities and contributions to the IP team	3.77 (.935)	4.37 (.718)	0.60	**< .001*****
C10. Be accountable for my contributions to the IP team	4.20 (.761)	4.40 (.621)	0.20	.184
C11. Understand the abilities and contributions of IP team members	4.23 (.728)	4.40 (.621)	0.17	.231
C12. Recognize how others' skills and knowledge complement and overlap with my own	4.23 (.679)	4.57 (.626)	0.34	**.010***
Patient-centered care				
C13. Use an IP team approach with the patient to assess the health situation	3.83 (.699)	4.40 (.563)	0.57	**< .001*****
C14. Use an IP team approach with the patient to provide whole-person care	3.97 (.718)	4.40 (.621)	0.43	**.007****
C15. Include the patient/family in decision-making	4.20 (.761)	4.50 (.682)	0.30	.071
Conflict management, team functioning				
C16. Actively listen to the perspectives of IP team members	4.40 (.675)	4.67 (.479)	0.27	**.018***

ITEMS	Pre-Test Mean (SD)	Post-Test Mean (SD)	Mean Difference	p-Value
C17. Take into account the ideas of IP team members	4.33 (.661)	4.63 (.556)	0.30	**.001****
C18. Address team conflict in a respectful manner	4.03 (.809)	4.37 (.809)	0.34	**.039***
C19. Develop an effective care plan with IP team members	3.83 (.791)	4.23 (.728)	0.40	**.016***
C20. Negotiate responsibilities within overlapping scopes of practice	3.73 (.868)	4.23 (.774)	0.50	**.007***

* p<0.05, **<0.01, *** p<0.001

Table 10. Comparison of Subscales of Pre-Test Survey (T1) and Post-Test Survey (T2) Results

Subscales	Pre-Test Mean (SD)	Post-Test Mean (SD)	Mean Difference	p-Value
Communication	3.81 (.768)	4.29 (.572)	0.48	**.003***
Collaboration	3.91 (.844)	4.44 (.535)	0.53	**<.001*****
Roles & Responsibilities	4.00 (.766)	4.43 (.561)	0.43	**.005***
Patient-centered care	3.93 (.805)	4.43 (.575)	0.50	**.002***
Conflict management, team functioning	4.04 (.700)	4.43 (.543)	0.39	**.001****

Evaluation of Module 1, Module 2, and IPE Day

At the end of each module and IPE day, students were asked to evaluate the module and learning experiences. Student responses are summarized in Tables 11, 12, and 13.

Across Modules 1 and 2 and the Virtual Interprofessional Education (IPE) Day, student feedback was overwhelmingly positive, with a high proportion of participants reporting agreement or strong agreement with key evaluation statements related to organization, content relevance, and skill development.

Module 1 Evaluation (N = 42)

A large majority of students agreed or strongly agreed that the module was well-organized and supported their learning (100%), videos and case studies were useful (92.9%), and that the module improved their knowledge and skills related to brain health (92.9%).

Module 2 Evaluation (N = 42)

Positive response patterns continued, with particularly high percentages of students agreeing or strongly agreeing that the module was well-organized (100%), videos and case study were useful (95.3%), and the module helped apply content to their degree program (92.9%).

Virtual IPE Day Evaluation (N = 30)

Participants also gave highly favorable feedback on the Virtual IPE Day. 96.7% agreed or strongly agreed it was well organized and supported learning, 93.4% would recommend it to others, and 93% agreed it improved their understanding of ADRD and professional skills.

Table 11. Module 1 Evaluation (N=42)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
			n (%)			Mean (SD)
This module was well-organized and supported my learning.	0	0	0	17 (40.5)	25 (59.5)	4.60 (.497)
The advanced preparatory work enhanced my learning experience	0	0	5 (11.9)	20 (47.6)	17 (40.5)	4.29 (.673)
The knowledge check questions helped me understand key concepts	0	0	4 (9.5)	18 (42.9)	20 (47.6)	4.38 (.661)
Videos and case study were useful for learning	0	0	3 (7.1)	13 (31.0)	26 (61.9)	4.55 (.633)
The module improved my knowledge and skills related to brain health	0	1 (2.4)	2 (4.8)	16 (38.1)	23 (54.8)	4.45 (.705)
This module increased my interest in brain health.	0	0	8 (19.0)	15 (35.7)	19 (45.2)	4.26 (.767)
This module improved my understanding of key ideas related to risk reduction strategies for cognitive impairment.	0	1 (2.4)	2 (4.8)	16 (38.1)	23 (54.8)	4.45 (.705)
This module gave me confidence to pursue more advanced work in brain health.	0	1 (2.4)	9 (21.4)	18 (42.9)	14 (33.3)	4.07 (.808)
This module helped me see how this content applies to my degree program.	0	0	4 (9.5)	14 (33.3)	24 (57.1)	4.48 (.671)
This module helped me develop professional skills to support the brain health of my patients and their care partners	0	1 (2.4)	4 (9.5)	20 (47.6)	17 (40.5)	4.26 (.734)
This module met my expectations.	0	0	0	23 (54.8)	19 (45.2)	4.45 (.504)
I would recommend this module to others.	0	0	4 (9.5)	16 (38.1)	22 (52.4)	4.43 (.668)

Table 12. Module 2 Evaluation (N=42)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
			n (%)			Mean (SD)
This module was well-organized and supported my learning.	0	0	0	16 (38.1)	26 (61.9)	4.62 (.492)
The advanced preparatory work enhanced my learning experience	0	0	5 (11.9	16 (38.1)	21 (50.0)	4.38 (.697)
The knowledge check questions helped me understand key concepts	1	0	2 (4.8)	16 (38.1)	2 (4.8)	4.43 (.801)
Videos and case study were useful for learning	0	0	2 (4.8)	13 (31.0)	27 (64.3)	4.60 (.587)
The module improved my knowledge and skills related to brain health	0	1 (2.4)	2 (4.8)	14 (33.3)	25 (59.5)	4.50 (.707)
This module increased my interest in brain health.	0	0	4 (9.5)	19 (45.2)	19 (45.2)	4.36 (.656)
This module improved my understanding of key ideas related to risk reduction strategies for cognitive impairment.	0	0	3 (7.1)	18 (42.9)	21 (50.0)	4.43 (.630)
This module gave me confidence to pursue more advanced work in brain health.	0	0	10 (23.8	19 (45.2)	13 (31.0)	4.07 (.745)
This module helped me see how this content applies to my degree program.	0	0	3 (7.1)	13 (31.0)	26 (61.9)	4.55 (.633)
This module helped me develop professional skills to support the brain health of my patients and their care partners	0	1 (2.4)	6 (14.3	16 (38.1)	19 (45.2)	4.26 (.798)
This module met my expectations.	0	0	1 (2.4)	22 (52.4)	19 (45.2)	4.43 (.547)
I would recommend this module to others.	0	1 (2.4)	2 (4.8)	15 (35.7)	24 (57.1)	4.48 (.707)

Table 13. Evaluation of Virtual IPE Day (N=30)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
			n (%)			Mean (SD)
1. The virtual IPE day was well organized and supported my learning.	0	0	2 (6.7)	15 (50.0)	13 (43.3)	4.37 (.615)
2. The virtual IPE day improved my knowledge and skills related to brain health, early detection and treatments of ADRD, and interprofessional practice	0	0	4 (13.3)	10 (33.3)	16 (53.3)	4.40 (.724)
3. The virtual IPE day helped me see how this content applies to my degree program.	0	0	3 (10.0)	11 (36.7)	16 (53.3)	4.43 (.679)
4. The virtual IPE day helped me develop professional skills to support the brain health of my patients and their care partners.	0	0	2 (6.7)	13 (43.3)	15 (50.0)	4.43 (.626)
5. The virtual IPE day met my expectations.	0	0	1 (3.3)	13 (43.3)	16 (53.3)	4.50 (.572)
6. I would recommend the virtual IPE day to others.	0	1 (3.3)	1 (3.3)	11 (36.7)	17 (56.7)	4.47 (.730)

Qualitative Responses from Students

Students also provided open-ended feedback on the curriculum, including asynchronous modules and the interprofessional (IPE) simulation experience. Analysis results draw from coded responses across multiple categories, such as active learning strategies, clinical and team practice, curriculum design, instructional methods, and time management. Learners provided thoughtful and constructive feedback on both the strengths and areas for improvement (Table 14).

Active Learning and Case-Based Learning

Participants consistently praised the use of role play, case-based learning, group debriefs, and simulation as effective instructional strategies. These interactive formats were seen as critical in enhancing engagement and reinforcing content. Tools such as Google worksheets and online modules were also positively noted. Importantly, learners appreciated opportunities for interprofessional collaboration and active skill application.

Suggestions for improvement for future curriculum focused on increasing the complexity of case scenarios and providing clear examples of care plans to better align with real-world clinical decision-making.

Clinical and Team Practice

Strengths in this domain centered on delegation skills, real-world applicability, and the integration of simulation and teamwork. Learners found the modules professionally relevant and appreciated the emphasis on case studies and interprofessional interaction.

Areas for improvement included a need to clarify team roles and dementia diagnosis steps, enhance content depth with more advanced and complex cases, and provide concrete examples (e.g., full care plans, sample dialogues). Additionally, participants called for longer post-simulation debriefs and more activities to build empathy and communication skills, particularly when engaging with cognitively impaired patients.

Curriculum Design and Content

Respondents recognized the curriculum as comprehensive, well-organized, and self-paced. Modules were appreciated for their focus on whole-person and person-centered care, inclusion of ADRD content, and practical elements such as knowledge checks, case studies, and instructional videos. Flexibility of delivery was a noted strength.

Nevertheless, feedback indicated a need to enhance interprofessional education, improve accessibility (e.g., reducing medical jargon), and optimize workload by reducing preparation work volume. Suggestions also included adjusting content difficulty to better fit learners' backgrounds and improving video interactivity.

Instructional Methods and Interprofessional Education

The virtual format, small group discussions, and role-play outside one's discipline were viewed as engaging and effective. Icebreaker activities, knowledge checks, and well-structured modules fostered active participation and broadened learner perspectives.

Feedback for improvement included improving interactivity, particularly by replacing passive elements (e.g., long readings) with video examples, games, or team-based activities. Participants asked for clearer role instructions during IPE day and more diverse professional representation (e.g., neuropsychologists, dietitians, Pas). There was also a suggestion to consider in-person delivery for deeper connection.

Time Management

The curriculum was largely seen as well-organized, with the structure of the IPE Day receiving positive feedback. However, many participants found the IPE day pace rushed, particularly during simulations, care planning, and team activities. There was a strong request for more preparation time, extended sessions, and a better balance between icebreakers and skill-building. Feedback emphasized the need for clearer session structure and activity timing.

Cross-Cutting Themes

A few broad themes emerged across all categories. Role play and simulation were universally valued, while interprofessional learning was seen as underdeveloped in some modules. Other areas for improvement included reduced preparation workload, video pacing, and the clarity of expectations and roles across disciplines.

Summary

Overall, learners responded positively to the interactive, case-based design of the modules and the emphasis on real-world, person-centered care. High-value teaching strategies like role play, simulation, and small group discussions were repeatedly recognized for fostering active engagement and reinforcing learning. The curriculum's virtual format and self-paced structure were noted as convenient and accessible, especially for students balancing multiple commitments.

At the same time, students offered thoughtful suggestions to enhance the curriculum's depth, clarity, and inclusivity. Core areas for improvement included expanding interprofessional content, adjusting workload and pacing, and clarifying team roles and expectations, particularly within simulation activities. Learners also expressed a desire for more complex case scenarios, additional opportunities for reflection and debrief, and clearer guidance during team-based exercises.

Table 14. Summary of Qualitative Feedback on Strengths and Areas for Improvement

Category	Strengths	Areas for Improvement
Active Learning / Case-Based Learning	Role play, case-based learning, group debrief, simulation; Interprofessional engagement; Use of tools (e.g., worksheets, modules)	Increase complexity of cases; Add care plan examples
	Exemplary Quotes "I enjoyed seeing how other professional roles affect patient care. As a future pharmacist we are usually detached from the care team, like a different floor of the hospital. It is nice to see how pharmacists can contribute in more personal ways with patients." "As a medical student with interest in neurology, it is wonderful to have interprofessional curriculums where I can learn more about providing comprehensive dementia care. It was helpful to see the roles that the other professions play like social work and speech/language pathology when helping patients navigate a complex diagnosis like AD."	Exemplary Quotes "I could see the benefit in having only one case study with a more complex patient. I think IPE is very easy when a patient's needs are relatively simple, but having more complex medical needs and care partner dynamics is probably what we need more practice with." "I think having video examples of what these conversations with patient and their family may look like would be helpful in preparing."
Clinical and Team Practice	Delegation, real-world relevance, teamwork, simulation, case studies	Clarify team roles and diagnosis steps; Use more complex cases; Add empathy exercises and post-simulation debriefs
	Exemplary Quotes "I thought collaborating with different professional roles on what the patient's immediate concerns to be addressed was illuminating and helped me recognize the various needs of a	Exemplary Quotes "In the final debrief, having time to hear best practices for how you guys run them would be insightful. The only thing I might have liked to learn more about in the modules is exactly how the different dementia's are

	patient. I liked that the curriculum emphasized whole person and person centered care. It was very obvious in the simulations that each role in the care team aided in delivering comprehensive care. The simulations were extremely helpful in practicing building off of each care team role, knowing each person's role and responsibilities so that we contribute effectively to addressing any gaps or concerns brought up by the patient." "I learned how to communicate with a patient regarding a cognitive diagnosis and learned how to delegate tasks to an interdisciplinary team"	diagnosed. It was touched on, but the exact steps and who to see for diagnosis is something I'm still unsure about." "To make this a better learning experience, I would provide more roles and the ability to change or choose roles throughout the discussion."
Curriculum Design and Content	Comprehensive and organized; Strong content on ADRD, person-centered care; Diverse tools (videos, quizzes); Self-paced design	Add interprofessional content; Reduce prep load; Adjust difficulty; Improve video interactivity
	<u>Exemplary Quotes</u> "I enjoyed being connected to other resources such as research articles and videos through the modules, and I believe that the quizzes were essential in reinforcing the topics learned." "Connecting the modules to case studies was excellent. I also appreciated the use of videos for instruction because the visuals were helpful and I could easily pause and go back,	<u>Exemplary Quotes</u> "If you include too much pre-reading and modules, participants will not do any of them. Instead I would put maybe one article or one video and then participants are more likely to actually do the pre-lesson materials." "I would include more examples of how to directly communicate with a patient experiencing cognitive decline, as well as their families. I would have more activities in the modules for engagement and collaboration with other healthcare professionals."

	as well as read the subtitles to take notes.”	
Instructional Methods / Interprofessional Education	Virtual format, small group engagement, icebreakers, knowledge checks; Role-play outside discipline improved perspective	Add interactive activities; Clarify roles and expectations; Broaden professional representation; Improve video engagement
	Exemplary Quotes “I enjoyed the module videos since they did a nice job in connecting everything. Another good thing was the group debrief since everyone had a chance to voice their opinions and concerns without judgment since its just practice. The best thing that I thought was a great strength of the program was the roleplay. It made everyone be more prepared and see what areas we can improve on.” “I enjoyed the presentation videos provided in the modules. They were presented clearly for understanding and at a pace that didn't require me to continuously rewind. The lengths of the videos were also good to retain the watcher's attention. The knowledge checks were also a good addition because it gave me a "break" but also to show that I was understanding what I was learning to ensure the content was absorbed.”	Exemplary Quotes “Emphasis on defining team roles - have participants verbalize what they are bringing to the interdisciplinary table in terms of perspectives, priorities and skills. Present a model of what a "care plan" looks like for everyone - I feel like our group never presented a care plan.” “I would love to see more professions included, mine, dietetics! Also, allotting more time for the role-playing activity would be super beneficial.”
Time Management	Recognized for overall structure and organization	Rushed pacing; Need more time for simulations, care planning, and icebreakers; Improve session balance and prep time

	Exemplary Quotes "This module was very nicely organized. I liked that the modules could be completed on my own." "I think the virtual format was an effective way of making this possible. It was convenient and not overly burdensome."	Exemplary Quotes "If possible, an in-person version of the IPE would be amazing, as the participants would be able to truly connect and converse with more flow. Also, more time to do the simulations would be helpful." "I think having more time or another practice session for us to continue making care plans would be great."

Discussion

This pilot evaluation of an online interprofessional education curriculum focused on Alzheimer's Disease and Related Dementias (ADRD) demonstrates promising evidence for the feasibility, acceptability, and educational effectiveness of brief, scalable IPE interventions for health professional students. The findings support our primary hypotheses that learners would demonstrate significant improvements in knowledge, attitudes, and interprofessional collaboration skills, while finding the curriculum acceptable in terms of content and delivery methods.

These results are particularly relevant for Texas, where the aging population is growing rapidly and workforce shortages in dementia-capable care are acute. Scalable and accessible training approaches such as this are essential to preparing a diverse pipeline of healthcare professionals across urban, rural, and underserved areas of the state.

Learner Outcomes

The statistically significant improvements observed across nearly all measured domains provide compelling evidence for the curriculum's educational effectiveness. The largest gains in accurate ADRD knowledge (mean increase = 1.43, $p < .001$) and preparedness to assist families with community resources (mean increase = 1.49, $p < .001$) address key gaps in health professional training highlighted in national and state-level workforce reports. These findings have direct implications for Texas, where healthcare professionals—particularly in primary care and social service roles—often report limited knowledge of available dementia resources. Enhancing workforce capacity in this area supports statewide goals identified in the Texas State Plan on Alzheimer’s Disease and the Aging Texas Well Strategic Plan to promote community-based, person-centered care for older Texans.

The substantial improvement in participants' recognition that people with ADRD can experience enjoyment in daily life (mean increase = 0.97, $p < .001$) represents a particularly meaningful finding, suggesting a shift toward more person-centered, strengths-based understanding of dementia. This attitude change is crucial for reducing stigma and promoting dignity in dementia care, addressing concerns raised in recent gerontology education literature about healthcare students' negative preconceptions regarding cognitive impairment. In Texas, where culturally responsive and dignity-affirming care is an identified priority, this change in mindset is especially valuable for combating stigma in both clinical practice and public health messaging.

Regarding interprofessional collaboration competencies, the comprehensive improvements across communication, collaboration, roles and responsibilities, patient-centered care, and conflict management domains demonstrate the curriculum's effectiveness in developing essential teamwork skills. The most substantial gains in seeking out team members to address issues (mean difference = 0.76, $p < .001$) and identifying personal contributions to teams (mean difference = 0.63, $p < .001$) suggest that brief IPE interventions can meaningfully enhance students' understanding of collaborative

practice principles, underscoring the value of collaborative training models in enhancing team-based dementia care delivery across Texas's health and social service sectors.

Virtual IPE Day Experience Effectiveness

The overwhelmingly positive evaluation of the virtual IPE Day Experience, with over 96% of participants agreeing it was well-organized and recommending it to others, demonstrates the feasibility of delivering effective interprofessional education in online environments. This format holds particular promise for scaling dementia training to reach students and practitioners across Texas, especially in rural and resource-limited regions where in-person training opportunities may be scarce.

Overall, the virtual IPE Day provided a meaningful capstone experience that reinforced the principles introduced in the asynchronous curriculum through applied, team-based learning. By engaging in structured case studies, guided reflection, and collaborative dialogue, participants were able to deepen their understanding of interprofessional roles, enhance communication skills, and recognize the value of coordinated care in improving patient outcomes. The integration of preparatory materials, active facilitation, and intentional team-building fostered a dynamic learning environment that supported the development of essential competencies for effective interprofessional practice.

The success of case-based, simulation-enhanced learning activities aligns with current best practices in IPE methodology. Participants' qualitative feedback highlighting the value of role-playing, small group discussions, and collaborative care planning reinforces evidence from recent systematic reviews demonstrating superior outcomes for active, experiential learning approaches compared to traditional didactic methods in interprofessional education.

However, the consistent feedback regarding rushed pacing and requests for extended session time suggests that even brief IPE interventions require adequate time allocation for meaningful collaborative learning. The balance between accessibility (shorter sessions) and depth (sufficient time for skill development) represents an ongoing challenge in scalable IPE curriculum design that warrants continued attention in future implementations.

Curriculum Design and Implementation Insights

The high completion rates for asynchronous modules (72.4% completing both modules) compared to synchronous participation (51.7% attending IPE Day) reflects common patterns in online health professions education. The compressed recruitment timeline coinciding with final examinations likely exacerbated attrition, highlighting the importance of strategic scheduling in curriculum implementation.

Qualitative feedback revealed important tensions between content comprehensiveness and learner burden. Students appreciated the self-paced, flexible design while simultaneously requesting reduced preparatory workload and increased interactivity.

The positive reception of discipline-specific content tailored to five professional tracks demonstrates the value of targeted approaches that acknowledge unique professional perspectives while maintaining shared interprofessional learning objectives. This finding supports theoretical frameworks emphasizing the importance of professional identity development alongside collaborative competency acquisition in IPE curriculum design.

Qualitative Insights

Qualitative themes further supported quantitative outcomes, that is, enhanced professional understanding and collaborative confidence in learners, highlighting the curriculum's effectiveness. Participants' specific examples of learning to "delegate tasks to an interdisciplinary team" and appreciating "how other professions play like social work and speech/language pathology" provide concrete evidence of interprofessional learning beyond abstract competency measures.

The qualitative feedback categories also reveal important implementation insights that quantitative measures alone could not capture. Requests for more complex case scenarios, enhanced empathy exercises, and clearer professional role definitions suggest opportunities for curriculum refinement that could enhance learning outcomes. The emphasis on wanting "more time to hear best practices" during debriefing sessions indicates that reflective processing represents a critical but potentially underdeveloped component of the current design. Overall, these refinements could strengthen the curriculum's relevance and resonance with students preparing to work with diverse populations across Texas.

Dissemination

Preliminary results of this curriculum were presented at the regional conference, *10th annual Health Care Institute* on May 1, 2025 in San Antonio, Texas by the core research team (pictured next). An abstract was also accepted to a national conference, *The National Center for Interprofessional Practice and Education Nexus Summit 2025*.

Figure 7: Project team members at the 10th Annual Health Care Institute Conference, May 2025. (Pictured left to right: Sydney Silverman, MHA; Kwaku Duah Oppong, DipEd, RN, MPH, PhD Candidate; Jung Kwak, PhD, MSW, FGSA, Co-PI; Alyssa Aguirre, MSW, Co-PI)

Limitations and Methodological Considerations

Several limitations warrant acknowledgment and influence interpretation of findings. The small sample size (N=30 completing all components), while typical for pilot evaluations, limits generalizability and statistical power for detecting smaller effect sizes. The compressed recruitment timeline coinciding with academic

stressors likely contributed to both limited enrollment and higher attrition rates, suggesting that implementation timing significantly affects participation.

The single-institution design limits transferability to different academic contexts, student populations, and institutional cultures. The predominantly female and racially diverse but academically select sample may not represent broader health professional student populations, particularly regarding baseline interprofessional attitudes and ADRD knowledge.

The reliance on self-reported competency measures represents a common limitation in IPE evaluation research. While validated instruments like the ICCAS provide standardized assessment, the relationship between perceived competency improvements and actual collaborative behavior remains unclear. Future evaluation would benefit from behavioral assessments or longitudinal follow-up to examine skill transfer to clinical practice.

The brief time interval between pre- and post-assessment (approximately two weeks) captures immediate learning effects but cannot assess retention or sustained attitude changes. The lack of a control group limits causal inference, though the magnitude and consistency of improvements across multiple domains suggest meaningful educational impact beyond natural maturation.

Implications for Practice and Future Research

These findings demonstrate that a brief, online IPE curriculum can produce measurable improvements in knowledge, attitudes, and perceived interprofessional competencies. For educators, the results suggest that 6-8 hours of total time investment (including both asynchronous and synchronous components) represents a feasible approach for integrating IPE into health professional curriculum.

The success of the virtual delivery model has important implications for IPE accessibility, particularly for institutions with limited resources or geographically distributed students. However, the consistent feedback regarding time constraints suggests that future implementations should prioritize adequate session duration over content compression, even if this requires reducing overall curriculum scope.

Future studies should examine the relative effectiveness of different curriculum modifications, particularly regarding case complexity, interprofessional content integration, and assessment approaches.

Future Directions

Based on pilot evaluation feedback from students and three content experts who conducted a comprehensive review of the curriculum from both instructional design and content expertise perspectives, several key areas for curriculum improvement have been identified for future iterations.

The expert review process involved detailed examination of all curriculum components, including pre-reading materials, video components, knowledge assessments, case

studies, and interprofessional activities across all healthcare disciplines represented in the program. Reviewers evaluated the curriculum through multiple lenses, assessing effectiveness, content accuracy, alignment with learning objectives, appropriateness of assessment strategies, and overall coherence of the educational experience. Student feedback provided valuable insights into the learner experience, including engagement levels, comprehension challenges, and perceived relevance to their professional development.

This multi-source feedback approach revealed both strengths in the curriculum's interprofessional focus and brain health content, as well as specific areas requiring refinement to enhance educational outcomes and learner satisfaction in subsequent implementations. Based on feedback from student participants and comprehensive expert reviews, several potential directions have been identified for the next phase of the project and summarized in Table 15.

Table 15. Potential Directions for the Next Phase of the Project

Refine and Expand Case-Based Learning • Revise existing cases to increase complexity and cultural relevance, and develop new cases that reflect Texas's diverse populations and care settings (e.g., rural clinics, community health centers, and bilingual family dynamics). • Include more nuanced scenarios involving common ethical dilemmas and care coordination challenges faced by Texas-based healthcare professionals working with persons living with ADRD.
Develop Advanced Level Modules • Create targeted modules that explore advanced assessment and care strategies across different stages and types of dementia, including behavioral management, comorbidities, and end-of-life decision-making. • Emphasize clinical reasoning and discipline-specific competencies needed for complex dementia care in real-world Texas practice settings.
Strengthen Role Clarity and Interprofessional Integration • Incorporate clearer guidance on each profession's role in ADRD care to improve interprofessional understanding and teamwork. • Adjust activities and knowledge checks to more explicitly connect student learning to team-based care practices aligned with the Texas State Plan on Alzheimer's Disease priorities.
Tailor Dissemination and Faculty Development for Texas Contexts • Develop a faculty training toolkit to support broader implementation of the curriculum in Texas-based nursing, social work, pharmacy, and medical schools. • Identify opportunities for embedding the curriculum into existing statewide initiatives, including partnerships with the Texas Health and Human Services.

Conclusion

This pilot evaluation provides encouraging evidence that brief, online IPE curriculum can effectively enhance health professional students' ADRD knowledge, interprofessional attitudes, and collaborative competencies. The positive reception of virtual delivery methods, combined with statistically significant improvements across multiple outcome domains, demonstrates the feasibility of scalable approaches to interprofessional education. While limitations regarding sample size, study design, and assessment methods require acknowledgment, the magnitude and consistency of observed improvements suggest meaningful educational impact.

The integration of asynchronous, self-paced learning with synchronous, case-based collaboration appears to represent an effective model for virtual IPE delivery. As health professional education continues adapting to technological capabilities and accessibility demands, this curriculum approach offers a promising framework for institutions seeking to integrate brain health and interprofessional learning into existing programs.

In sum, with the older adult population expected to grow by 82% by 2050 and significant shortages in geriatric-trained professionals, accessible, modular IPE curricula like this offer a practical mechanism to scale dementia-capable training across the healthcare pipeline. By prioritizing culturally responsive, person-centered, and team-based approaches, this curriculum can serve as a model for statewide dissemination, helping Texas prepare a workforce equipped to meet the needs of persons living with ADRD and their families.

References

Aljezawi, M. E., Al Qadire, M., Suliman, M., Al Omari, O., & Khalaf, A. (2022). Undergraduate nursing students' knowledge of and attitudes toward people with Alzheimer's disease. *BMC geriatrics*, *22*(1), 691.

Alzheimer's Association. (2024). *2024 Alzheimer's Disease Facts and Figures*. https://www.alz.org/media/documents/alzheimers-facts-and-figures.pdf

Cariñanos-Ayala, S., Arrue, M., & Zarandona, J. (2022). Teaching and learning about dementia care among undergraduate nursing students: A scoping review. *Nurse education in practice*, *61*, 103326.

Djukic, M., Adams, J., Fulmer, T., Szyld, D., Lee, S., Oh, S. Y., & Triola, M. (2015). E-Learning with virtual teammates: A novel approach to interprofessional education. *Journal of Interprofessional Care*, *29*(5), 476-482.

Evans, S. M., Ward, C., & Reeves, S. (2019). Online interprofessional education facilitation: A scoping review. *Medical teacher*, *41*(2), 215-222.

Ferrell, B. R., et al. (2023). Interprofessional education in geriatrics: A model to enhance team communication and patient-centered care. *Journal of Interprofessional Care*, 37(2), 291–298.

Institute of Medicine. (2015). *Measuring the impact of interprofessional education on collaborative practice and patient outcomes*. National Academies Press. https://doi.org/10.17226/21726

Interprofessional Collaborative Competency Attainment Scale (Schmitz, C. C., Radosevich, D. M., Jardine, P., MacDonald, C. J., Trumpower, D., & Archibald, D. (2017). The Interprofessional Collaborative Competency Attainment Survey (ICCAS): A replication validation study. *Journal of interprofessional care*, *31*(1), 28–34. https://doi.org/10.1080/13561820.2016.1233096)

Mattiazzi, S., Cottrell, N., Ng, N., & Beckman, E. (2024). Behavioural outcomes of interprofessional education within clinical settings for health professional students: A systematic literature review. *Journal of Interprofessional Care*, *38*(2), 294-307

McCabe, C., Patel, K. D., Fletcher, S., Winters, N., Sheaf, G., Varley, J., & McCann, M. (2021). Online interprofessional education related to chronic illness for health professionals: a scoping review. *Journal of Interprofessional Care*, *35*(3), 444-453.

Texas Council on Alzheimer's Disease and Related Disorders. (2023). *Texas State Plan on Alzheimer's Disease 2023–2027*. https://www.dshs.texas.gov/sites/default/files/aging/pdf/tx-state-plan-alzheimers.pdf

The U.S. Department of Health and Human Services (HHS). (2024). *National Plan to Address Alzheimer's Disease: 2024 Update*.

Weiss, J., Tumosa, N., Perweiler, E., et al. (2020). Critical workforce gaps in dementia education and training. *Journal of the American Geriatrics Society*, 68(3), 625–629. https://doi.org/10.1111/jgs.16341

Williams, C., Fleming, V., & Hudson, K. (2021). Innovation in dementia education within undergraduate healthcare programmes: A scoping review. *Nurse Education Today*, 98, 104669.

Appendices

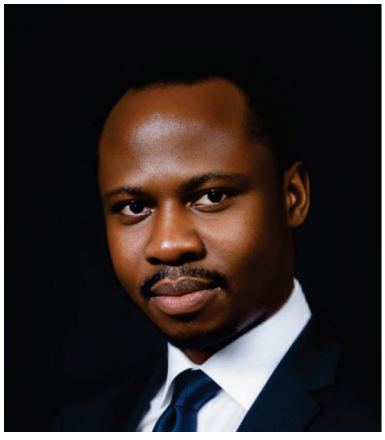
Appendix A: IPE Day Overview

Welcome to IPE Day

Student overview






Task Force

Schedule

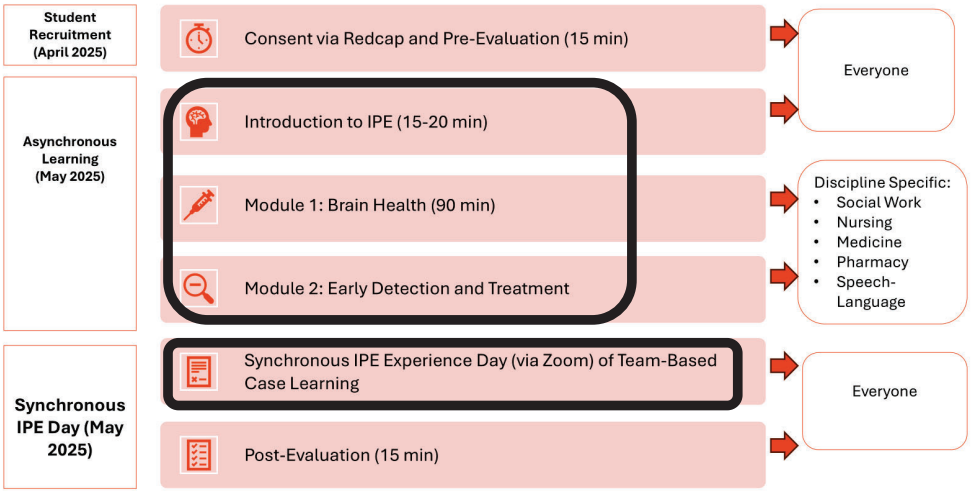
9:00 - 9:25	Introductions + Icebreaker
9:25 - 10:30	Module 1 Exercise
10:30 – 10:40	Break
10:40 - 11:45	Module 2 Exercise
11:45 – 12:00	Evaluation

Housekeeping

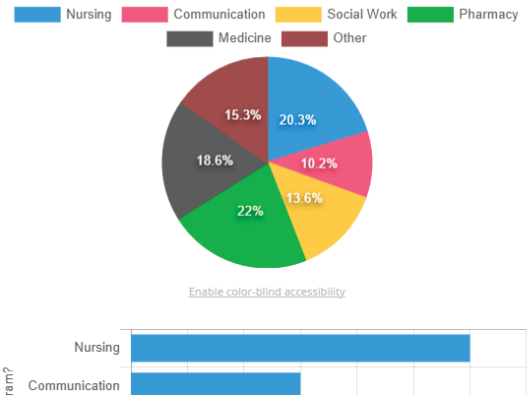
- Overview of IPE day
- Student participants
- Rules of Engagement
- Breakout Groups and Facilitators

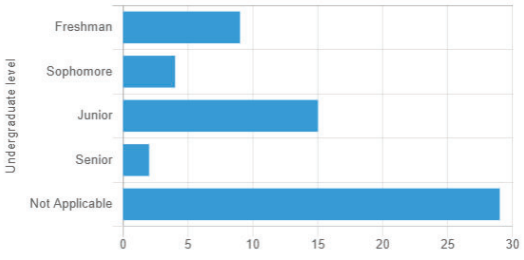
ADRD Curriculum Goals

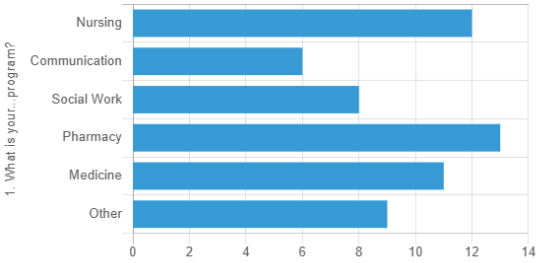
1. To enhance the students' **understanding** of brain health, ADRD risk reduction, early detection, treatment, and interprofessional collaboration.
2. To increase **confidence** and **readiness** to work in collaborative, team-based care settings.

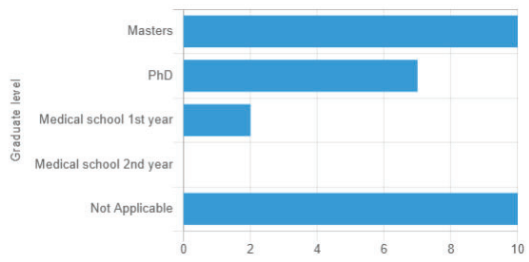


Student Participation









General rules of engagement

- Practice active listening, encourage everyone to speak
- Keep the audio and video on
- Everyone must speak and contribute
- Respect other's opinions and roles
- Be mindful of your own assumptions of the roles and responsibilities of other professions

"The Mystery of the Missing Artifact"

A valuable artifact has gone missing from a virtual museum, and you have been called in as a team of investigators. You must solve clues and complete challenges within 10 minutes to discover where the artifact is hidden and escape before time runs out.

Head into your breakout rooms and open your group's Google Doc to begin

Module 1

Rules of engagement – Module

- Practice active listening, encourage everyone to speak
- Keep the audio and video on
- Everyone must speak and contribute the chosen (assigned role) profession's perspective
- Be mindful of your own assumptions of the roles and responsibilities of other professions
- Change Zoom name to represent role
- Identify a note taker and a lead for the family conference (or care plan meeting with the family)

Activity Schedule

9:30 – 9:50

Develop care plan for family conference

- Prioritize goals and recommendations
- Review question prompts and preparation tasks

9:50 – 10:00

Care plan simulation

10:00 – 10:10

Debrief in group with facilitator

10:10 – 10:30

Large group discussion

Remember Mr. Robert Martinez?

About

72-year-old Hispanic retired male and speaks English as his primary language. After being referred to a neurologist by his nurse practitioner, Robert was recently diagnosed with Mild Cognitive Impairment (MCI).

Chief Complaint

Mild cognitive decline noted by his family. Mr. Martinez has experienced memory difficulties, such as forgetting appointments, familiar names and misplacing objects.

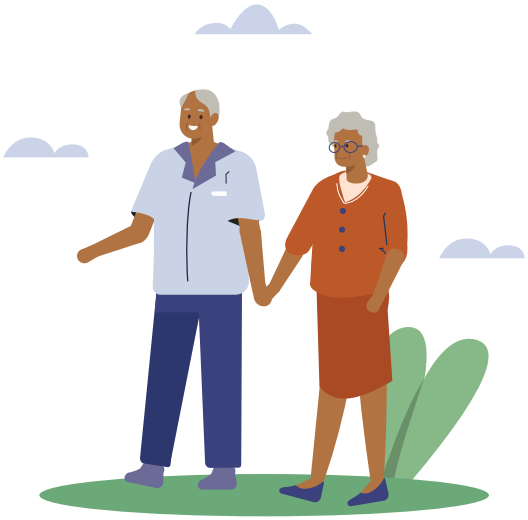
Social History

He is married to his wife Sofia, and has two adult children, Elena (38) and Phillip (35). He lives at home with his wife.

Medical History

Hypertension, Type 2 diabetes, obesity, hearing loss.

Mr. Robert Martinez (Cont.)



Family History

Alzheimer's disease (mother and maternal aunt).

Emotions

He feels overwhelmed by the risk of Alzheimer's due to his family history and the possibility of losing his independence. Since retiring, Mr. Martinez has expressed feelings of isolation and has limited social support beyond his immediate family.

Strengths

Robert has a moderately active lifestyle—he enjoys taking walks with Sofia but does not engage in structured exercise or cognitive stimulation activities. Robert enjoys spending time with his children, Elena and Phillip, as well as his grandchildren.

Setting

You are a professional working on an interprofessional team in an outpatient setting. Mr. Martinez is returning for a follow-up appointment after being diagnosed with MCI and will meet with the interprofessional team to develop a care plan.

See you at 10:10am!

Activity Schedule

Large Group De-brief

Groups present to the larger group. Questions to address for debrief:

- What challenges did you face in working together to create a care plan?
- How did each role contribute to the holistic care of Mr. Martinez?
- How can interprofessional teams improve patient outcomes?
- Did anything surprise you?

Mute/ turn off video. Return at 10:40

10-minute break

Module 2

Activity Schedule

10:45 – 11:05

Develop care plan for family conference

- Prioritize goals and recommendations
- Review question prompts and preparation tasks

11:05 – 11:15

Role play

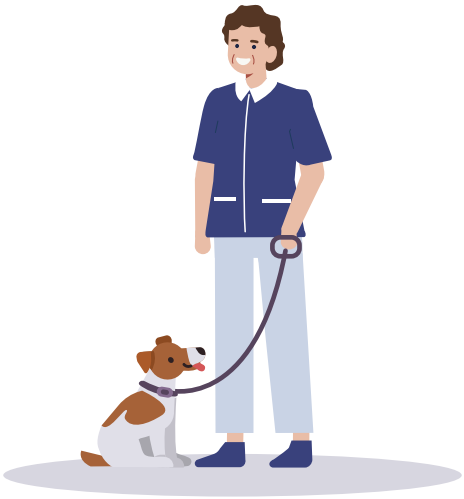
11:15 – 11:25

Debrief in small group with facilitator

11:25 – 11:45

Wrap up in Large group (each group 2-minute summary)

Recall Ms. Julie Stein?



About

62-year-old, right-handed woman recently diagnosed with young-onset, early-stage Alzheimer's disease. Julie is partially retired, working part-time as a financial advisor for long-time clients.

Chief Complaint

Forgetting to pay bills, getting lost while driving, missing medication doses. Having trouble using technology, such as navigating apps on her phone.

Social History

Lives alone with her dog and enjoys attending synagogue, yoga classes, book club activities. Regularly sees her daughter Clara (30), a graphic designer who lives nearby.

Medical History

Depression (which has been controlled with medication since age 30). Hypothyroidism, high cholesterol, moderate alcohol use, and a remote history of smoking.

Ms. Julie Stein (cont.)

Family History

- Julie's mother diagnosed with young-onset Alzheimer's at age 60

Strengths

- Cognitive reserve
- Strong support system
- Adequate financial resources

Emotions

- Julie experiences sadness, confusion, and anxiety about the future
- Clara is juggling caregiving responsibilities with her full-time job

Goals

- Independence
- Safety with driving and housing
- Better understanding of dementia, managing caregiving, and access to available resources

Setting

You are a professional working on an interprofessional team in an outpatient setting. Ms. Stein is returning for a follow-up appointment after being diagnosed with early onset Alzheimer's disease and will meet with the interprofessional team to develop a care plan.

See you at 11:25am!

10:45 – 11:05

Develop care plan for family conference

- Prioritize goals and recommendations
- Review question prompts and preparation tasks

11:05 – 11:15

Role play

11:15 – 11:25

Debrief in small group with facilitator

11:25 – 11:45

Wrap up in Large group (each group 2-minute summary)

Large Group De-brief

Groups present to the larger group: Reporters share their breakout room debrief summaries

- 2 minutes per group

Questions to address for debrief:

- What challenges did you face in working together to create a care plan?
- How did each role contribute to the holistic care of Mr. Stein?
- How can interprofessional teams improve patient outcomes?
- Did anything surprise you?

Post-Evaluation

- You should have received a link in your e-mail, please use the next 15 minutes to complete the online surveys regarding your feedback on this curriculum. After completion, you will be e-mailed a $25 gift card.

Appendix B: IPE Day Case Study Review

Case Study:
Professional Role Info Sheet

Nurse (RN)- Module 1

1. **Setting**: You are working on an interprofessional team in an outpatient clinical setting, with a physician, nurse, social worker, pharmacist and speech-language pathologist. Mr. Martinez is returning for a follow-up appointment after being diagnosed with MCI and will meet with the interprofessional team to develop a care plan.
2. **Your role:** As a registered nurse, you will be responsible for gathering detailed information about Mr. Martinez's day-to-day health and providing ongoing education and support. You will assess his functional status, monitor his vital signs, and ensure he's taking prescribed medications. You will also discuss his support system at home, considering his wife and children's involvement in his care.
3. **Key profession goals to share with the team during planning meeting:**
    - Share that you plan to assess Mr. Martinez's current health conditions (blood pressure, blood sugar levels, weight). Suggest strategies be put in place to monitor Mr. Martinez's chronic conditions: taking daily blood pressure, family monitoring medications, regular doctor appointments for weight-checks
    - Share your goal to educate Mr. Martinez and his family about managing hypertension, diabetes, and obesity.
    - Share concerns with the team about hearing loss and adherence to hearing aids.
    - Suggest referrals to dietician and audiology
    - Suggest using smart watch to monitor sleep quality and quantity

Registered Nurse: Module 2

1. **Setting**: An outpatient clinical setting with an interprofessional care team that includes a physician (neurologist), nurse, social worker, pharmacist, and speech-language pathologist.
2. **Patient**: Ms Stein is returning for a follow-up appointment after being diagnosed with early-stage Alzheimer's disease and will meet with the interprofessional team to develop a care plan.
3. As the nurse, your role will be to monitor Julie's health, educate both Julie and her daughter Clara about managing Alzheimer's, and offer practical solutions for memory challenges. You will also assess her medication adherence, general well-being, and cognitive function. It's essential to understand Julie's daily living activities and help manage any practical concerns she might have.
4. **Key contributions the registered nurse may bring to the care planning meeting include:**

    - Assessing Julie's ability to manage her medications, finances, and daily tasks.
    - Educating Julie and Clara on Alzheimer's disease, medication management, and safety issues (e.g., driving, falls).
    - Providing strategies to improve medication adherence and daily routines (e.g., setting up reminders for bills, appointments, etc.).
    - Discussing her physical and emotional well-being and any concerns about depression.

Pharmacist (PharmD): Module 1

1. **Setting**: You are working on an interprofessional team in an outpatient clinical setting, with a physician, nurse, social worker, pharmacist and speech-language pathologist. Mr. Martinez is returning for a follow-up appointment after being diagnosed with MCI and will meet with the interprofessional team to develop a care plan.
2. **Your role:** As the pharmacist, your role will focus on evaluating Mr. Martinez's medication regimen, checking for any potential drug interactions, and providing advice on medications that may benefit his cognitive health. You will also discuss supplements or alternative therapies for cognitive improvement and recommend any adjustments to his current medications for conditions like hypertension or diabetes. During the family meeting, ask if Mr. Martinez has strategies to manage his medications (such as a pillbox).
3. **Key profession goals to share with the team during planning meeting:**
    - Share your goal to review Mr. Martinez's medications and potential interactions.
    - Suggest checking Vitamin B, Vitamin D and thyroid regularly.
    - Share that you plan to educate Mr. Martinez and his family about the importance of medication adherence.
    - Suggest using pillbox for managing medications and family oversight for medication adherence.

Pharmacist (PharmD): Module 2

1. **Setting**: An outpatient clinical setting with an interprofessional care team that includes a physician (neurologist), nurse, social worker, pharmacist, and speech-language pathologist.
2. **Patient**: Ms Stein is returning for a follow-up appointment after being diagnosed with early-stage Alzheimer's disease and will meet with the interprofessional team to develop a care plan.
3. As the pharmacist, your role will be to review Julie's current medication regimen, including her medications for depression, hypothyroidism, high cholesterol, and any Alzheimer's medications. You will identify potential drug interactions and recommend treatments that could improve her cognitive function and quality of life.
4. **Key contributions the pharmacist may bring to the care planning meeting include:**
    - Reviewing Julie's current medications for any potential interactions.
    - Recommending Alzheimer's medications that could help manage her symptoms (e.g., cholinesterase inhibitors).
    - Providing advice on medication management to prevent missed doses.
    - Discussing supplements or alternative therapies that might aid her cognitive health.

Physician (MD) – Module 1

1. **Setting**: You are working on an interprofessional team in an outpatient clinical setting, with a physician, nurse, social worker, pharmacist and speech-language pathologist. Mr. Martinez is returning for a follow-up appointment after being diagnosed with MCI and will meet with the interprofessional team to develop a care plan.
2. **Your role:** As a primary care physician, you will focus on Mr. Martinez's physical health, reviewing his medical history and diagnosis of mild cognitive impairment. You will assess his chronic conditions like hypertension, diabetes, and obesity, and consider how they may be contributing to his cognitive decline. You will also help identify appropriate medical treatments and interventions to manage these issues. During the care planning meeting, ask if Mr. Martinez is willing to wear hearing aids.
3. **Key profession goals to share with the team during planning meeting:**
    - Provide overview of Mr. Martinez's medical history and medications
    - Voice desire to collaborate with other team members to brainstorm holistic treatment
    - Suggest medical interventions that can be implemented to manage his cognitive impairment (lecanamab).
    - Suggest referral to neurology specialist for further testing
    - Suggest lifestyle changes for chronic conditions such as 180 minutes of physical activity per week
    - Suggest referrals to physical therapy and audiology

Physician (MD): Module 2

1. **Setting**: An outpatient clinical setting with an interprofessional care team that includes a physician (neurologist), nurse, social worker, pharmacist, and speech-language pathologist.
2. **Patient**: Ms. Stein is returning for a follow-up appointment after being diagnosed with early-stage Alzheimer's disease and will meet with the interprofessional team to develop a care plan.
3. As the physician, your focus will be on managing Julie's Alzheimer's disease. You will assess her overall physical health, review her medications, and ensure that her medical conditions, such as hypothyroidism and high cholesterol, are well-controlled. You'll also address any potential concerns regarding her depression, which may interact with her cognitive symptoms, and you'll help guide her treatment plan for Alzheimer's disease.
4. **Key goals the physician may bring to the team care planning meeting include:**
    - Reviewing the diagnosis and progression of Julie's Alzheimer's disease.
    - Assessing her physical health, managing hypothyroidism, cholesterol, and depression.
    - Providing information on current treatments for Alzheimer's and considering medication to support her cognitive function.
    - Discussing and monitoring any safety concerns related to her living situation and driving.

Social Worker (LCSW):

1. **Setting**: You are working on an interprofessional team in an outpatient clinical setting, with a physician, nurse, social worker, pharmacist and speech-language pathologist. Mr. Martinez is returning for a follow-up appointment after being diagnosed with MCI and will meet with the interprofessional team to develop a care plan.
2. **Your role:** As the clinical social worker, you will address the emotional and psychosocial aspects of Mr. Martinez's care. You will focus on his emotional well-being, support network, and any barriers to accessing care. You will also work with the family to ensure they are involved in his care plan and help them manage the challenges of caring for someone with mild cognitive impairment. During the family meeting, ask if Mr. Martinez has completed a medical power of attorney.
3. **Key profession goals to share with the team during planning meeting:**
    - Share your plan to assess Mr. Martinez's psychosocial needs, including feelings of isolation.
    - Express your goal to discuss options for social support and community resources.
    - Provide insight about concerns the family might have, particularly about the long-term implications of his diagnosis and finances
    - Suggest that you can provide counseling or support to the family to manage stress, possible referral to Alzheimer's Association
    - Suggest a peer support group with others who have been diagnosed with mild cognitive impairment to reduce social isolation
    - Suggest referral to elder law attorney for completion of estate planning and advanced directives

Social Worker: Module 2

1. **Setting**: An outpatient clinical setting with an interprofessional care team that includes a physician (neurologist), nurse, social worker, pharmacist, and speech-language pathologist.
2. **Patient**: Ms Stein is returning for a follow-up appointment after being diagnosed with early-stage Alzheimer's disease and will meet with the interprofessional team to develop a care plan.
3. **Social Worker:** As the social worker, your role will be to provide emotional and social support to Julie and Clara. You will address their emotional needs, concerns about caregiving, and any social resources available. You will also help them navigate caregiving responsibilities and connect them with community services, such as support groups or respite care.
4. **Key contributions the social worker may bring to the care planning meeting include:**
    - Assessing the emotional well-being of both Julie and Clara, particularly Julie's sadness and anxiety about the future.
    - Discussing available community resources, support groups, and services for individuals with Alzheimer's and their families.
    - Providing education on caregiving strategies and managing the emotional and physical demands on Clara.
    - Discussing long-term planning, including advanced directives, financial planning, and housing options if necessary.

Speech-Language Pathologist (SLP): Module 1

1. **Setting**: You are working on an interprofessional team in an outpatient clinical setting, with a physician, nurse, social worker, pharmacist and speech-language pathologist. Mr. Martinez is returning for a follow-up appointment after being diagnosed with MCI and will meet with the interprofessional team to develop a care plan.
2. **Your role:** As the speech-language pathologist, your focus will be on Mr. Martinez's cognitive health, especially related to communication, memory, and daily functioning. You will assess his cognitive and language abilities and design activities to help him maintain or improve his cognitive function. During the family meeting, suggest that the patient take notes to help him record and organize the team's recommendations.
3. **Key profession goals to share with the team during planning meeting:**
    - Share your goal to assess Mr. Martinez's cognitive-linguistic abilities and memory.
    - Suggest cognitive communication therapy for Mr. Martinez.
    - Share your plan to work with the family to provide practical strategies for communication; family google calendar, reminders on Alexa
    - Suggest enrolling in research studies for digital health management
    - Suggest referral to audiologist for hearing test.

Speech Language Pathologist: Module 2

1. **Setting**: An outpatient clinical setting with an interprofessional care team that includes a physician (neurologist), nurse, social worker, pharmacist, and speech-language pathologist.
2. **Patient**: Ms Stein is returning for a follow-up appointment after being diagnosed with early-stage Alzheimer's disease and will meet with the interprofessional team to develop a care plan.
3. **Speech-Language Pathologist (SLP):** As the speech-language pathologist, your focus will be on Julie's cognitive and communicative abilities. You will assess her language and memory skills and offer strategies to help her maintain these abilities. You'll also assist Clara with communication strategies to support her mother.
4. **Key contributions the SLP may bring to the care planning meeting include:**
    - Assessing Julie's cognitive function, particularly her memory, language, and executive functioning (e.g., planning and organizing tasks).
    - Providing strategies to help her manage memory loss (e.g., reminders, lists, technology aids).
    - Helping Clara understand how to communicate more effectively with her mother as her cognitive function changes.
    - Suggesting cognitive exercises or activities to support her cognitive reserve.

Appendix C: Evaluation Guide

Evaluation Guide

1. Purpose of the Evaluation

The primary objective of this evaluation plan is to assess the effectiveness, relevance, and impact of the developed curriculum on learners' knowledge, skills, and attitudes regarding brain health and Alzheimer's Disease and Related Dementia (ADRD).

2. Target Student Participants

Undergraduate and graduate students aged 18 and older majoring in communication, social work, nursing, medicine, and pharmacy.

3. Evaluation Structure

- **Pre-Test Survey:** Includes demographic and academic background questions and short scales assessing attitudes toward aging, knowledge about brain health and ADRD, and IPE competency. (Approx. 15 minutes)
- **Asynchronous Module Evaluation**: A 10-minute survey at the end of each asynchronous module.
- **Post-Test Survey:** Administered after the IPE Day, using the same scales as the pre-test, plus structured and open-ended questions evaluating the IPE Day experience. (Approx. 15 minutes)

4. Evaluation Objectives

- Measure knowledge acquisition and skill development among participants.
- Assess the applicability and relevance of curriculum content to real-world settings.
- Gather feedback on instructional design, content clarity, and delivery methods.
- Evaluate learner engagement and satisfaction.
- Identify areas for curriculum improvement.

5. Evaluation Methods

Participants will complete assessments before and after the curriculum to measure changes in knowledge and skills. Learners will provide feedback through structured surveys focusing on content relevance, instructional quality, and overall satisfaction.

- **Pre- and Post-Test Survey**
  - Demographic Questions
  - Interprofessional Collaborative Competency Attainment Scale (ICCAS)
  - Questions on knowledge gained and attitudes toward ADRD
- **IPE Curriculum Assessment**
  - Questions evaluating asynchronous modules (e.g., content length, usability, relevance) and synchronous IPE day experience.
- **Participation Data**
  - Module and IPE day completion rates will be analyzed to assess learner interaction with the curriculum.
- **Analysis:**
  - Quantitative data will be analyzed using descriptive and inferential statistics to measure learning outcomes and satisfaction. Qualitative data from open-

ended responses to questions will be thematically analyzed to uncover insights and improvement areas.

6. Evaluation Questions

Pre- and Post-Test Survey

Knowledge about Dementia and Alzheimer's Disease	**1 (Not at all) – 7 (Very much so)**
1. Does having Alzheimer's or other dementia causes a great deal of suffering for a person?	1-7
2. Can a person with Alzheimer's or other dementia experience enjoyment in daily life?	1-7
3. Do you think you have accurate knowledge about Alzheimer's or other dementias?	1-7
4. How concerned are you about developing Alzheimer's or other dementia when you are older?	1-7
5. Is Alzheimer's or other dementia normal part of aging?	1-7
6. How prepared are you to assist families in discussing brain health and risk reduction strategies?	1-7
7. How prepared are you to assist individuals and their family caregivers in connecting with community support resources for dementia care?	1-7
8. How familiar are you with the roles of professionals such as social workers, nurses, speech-language pathologists, pharmacists and physicians in dementia care?	1-7

NOTE: q1-4 are from Dr Montepare, and q5-8 self-developed based on the state's ADRD priority.

ICCAS	**1=Poor, 2=Fair, 3=Good, 4=Very Good, and 5=Excellent**				
	1	**2**	**3**	**4**	**5**
1. Promote effective communication among members of an interprofessional (IP) team					
2. Actively listen to IP team members' ideas and concerns					
3. Express my ideas and concerns without being judgmental					
4. Provide constructive feedback to IP team members					
5. Express my ideas and concerns in a clear, concise manner					
6. Seek out IP team members to address issues					
7. Work effectively with IP team members to enhance care					

8. Learn with, from and about IP team members to enhance care					
9. Identify and describe my abilities and contributions to the IP team					
10. Be accountable for my contributions to the IP team					
11. Understand the abilities and contributions of IP team members					
12. Recognize how others' skills and knowledge complement and overlap with my own					
13. Use an IP team approach with the patient to assess the health situation					
14. Use an IP team approach with the patient to provide whole person care					
15. Include the patient/family in decision-making					
16. Actively listen to the perspectives of IP team members					
17. Take into account the ideas of IP team members					
18. Address team conflict in a respectful manner					
19. Develop an effective care plan with IP team members					
20. Negotiate responsibilities within overlapping scopes of practice					

Compared to the time before the learning activities, would you say your ability to collaborate interprofessionally is… (circle one):
1 = Much better now; 2 = Somewhat better now; 3 = About the same; 4 = Somewhat worse now; 5 = Much worse now

Module and IPE Evaluation Questions

Acceptability	**1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree**				
	1 (SD)	**2(D)**	**3(N)**	**4(A)**	**5(SA)**
1. This module *(or IPE Day Experience)* was well-organized and supported my learning.					
2. The advanced preparatory work enhanced my learning experience.					

3. The knowledge check questions helped me understand key concepts.					
4. Videos and case study were useful for learning.					
5. The module *(or IPE Day Experience)* improved my knowledge and skills related to brain health.					
Student Learning	**1 (SD)**	**2(D)**	**3(N)**	**4(A)**	**5(SA)**
6. This module *(or IPE Day Experience)* increased my interest in brain health.					
7. This module *(or IPE Day Experience)* improved my understanding of key ideas related to risk reduction strategies for cognitive impairment.					
8. This module *(or IPE Day Experience)* gave me confidence to pursue more advanced work in brain health.					
9. This module *(or IPE Day Experience)* helped me see how this content applies to my degree program.					
10. This module *(or IPE Day Experience)* helped me develop professional skills to support the brain health of my patients and their care partners.					
Overall Evaluation	**1 (SD)**	**2(D)**	**3(N)**	**4(A)**	**5(SA)**
11. This module *(or IPE Day Experience)* met my expectations.					
12. I would recommend this module *(or IPE Day Experience)* to others.					

Reference

Interprofessional Collaborative Competency Attainment Scale (Schmitz, C. C., Radosevich, D. M., Jardine, P., MacDonald, C. J., Trumpower, D., & Archibald, D. (2017). The Interprofessional Collaborative Competency Attainment Survey (ICCAS): A replication validation study. *Journal of interprofessional care*, *31*(1), 28–34. https://doi.org/10.1080/13561820.2016.1233096)