



THE AMERICAN COLLEGE OF PSYCHIATRISTS

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2024 Award for Creativity in Psychiatric Education Application Form

Please complete and return this application with any supporting materials (not to exceed 30 pages total) by email to nathan@acpsych.org by June 30, 2023

Guidelines

This Award is open to any creative/innovative program for psychiatric education that has been in operation for at least two years, includes program outcome data, and has been a part of a U.S. or Canadian psychiatric residency training program approved by ACGME or The Royal College. Trainees may include medical students, residents, other physicians, allied mental health professionals, or members of the community. The program and any contributors must be free from commercial interest or benefit. Applicants must submit a completed form and related documentation by June 30, with the total submission not to exceed 30 pages. Please include all relevant information about your program within these 30 pages; do not rely on hyperlinks as your program's primary source of information.

Applicant Information:

Name of person completing this application: Kristina Zdanys, MD

Title: Associate Professor, Department of Psychiatry, University of Connecticut School of Medicine

Name of educational program: (e.g., Diversity Training Program): Cognitive Disorders Elective

Institution: University of Connecticut School of Medicine

Address: 263 Farmington Ave

City: Farmington

State/Prov: CT

Zip/Postal Code: 06030

Country: USA _____

E-mail Address: zdanys@uchc.edu

Phone: 203-915-5265

Training Director: Surita Rao, MD

Department Chair: David Steffens, MD MHS

Program Information (use additional space as needed):

1. Brief description of program:

The Cognitive Disorders Elective (PSCH-8484) is a clinical elective at the University of Connecticut School of Medicine for fourth year medical students. The focus of the elective is the assessment and management of cognitive disorders, with emphasis on the multidisciplinary approach that is needed to work with patients and their families. Although the elective is listed as an elective in psychiatry, students also spend time in neurology, geriatric medicine, radiology, neuropsychology, and speech-language pathology clinics. Additionally, they get exposure to assisted living and skilled nursing levels of care. Students see patients with a variety of cognitive disorders including Alzheimer's disease, frontotemporal dementia, dementia with Lewy Bodies, alcohol-related dementia, vascular dementia, normal pressure hydrocephalus, and depression-related dementia. Typically a student will be exposed to all of these types of dementias in a clinical setting during their rotation, but as some of these forms of dementia are less common, the readings, memory rounds, and didactic sessions supplement their learning. Students complete a pre-test to assess knowledge gaps and have guided readings to foster their learning during the elective. They participate in didactic sessions with the geriatric psychiatry / geriatric medicine fellows and multidisciplinary memory rounds through the UConn Memory Assessment Program. At the end, they complete a post-test to assess what they have learned. Students may participate in the elective for 2, 3, or 4 weeks. Since it was approved as a formal course in 2019, 36 students have enrolled, and only one student is enrolled at a time to maximize individual attention and learning opportunities.

2. In what way is your program creative and innovative?

Emphasis on the multidisciplinary approach separates this elective from many other psychiatry electives. One strength of this is that it draws students who may not be planning to pursue careers in psychiatry to learn about cognitive disorders. In the past few years, students who have completed the elective went on to pursue residencies in psychiatry, family medicine, internal medicine, neurology, and radiology. Understanding how an approach to cognitive disorders may be different depending on specialty enriches the student's understanding of what characterizes cognitive disorders and gives them tools from a variety of disciplines to approach patients. For example, in a geriatric medicine clinic the student may pay more attention to comorbid coronary artery disease and diabetes as contributing to vascular risk factors. In a psychiatry clinic, the chief complaint may be largely related to depression, sleep disturbance, agitation, or psychosis associated with the cognitive disorder. In neurology clinic, an emphasis on the overlap of cognitive decline with movement disorders such as Parkinson's disease may be the focus. By participating in multidisciplinary memory rounds, students are able to see the attendings they work with in each of these settings come together and synthesize their impressions to narrow the differential diagnosis and develop an effective treatment plan. They then learn that all these perspectives are relevant and necessary.

3. What significant educational issue is addressed by your program?

- 6.7 million Americans are currently living with Alzheimer's disease, and this number is expected to reach 13.8 million by 2060¹. With this impending wave of patients and no current cure for Alzheimer's, it is important for medical students to be familiar with the assessment and treatment of Alzheimer's and other neurocognitive disorders.
- There is a severe shortage of medical students and residents choosing to pursue careers in geriatric medicine and geriatric psychiatry². The majority of older-age mental health care is provided by primary care physicians and general psychiatrists³, and neurologists also provide much of the assessment and treatment of cognitive disorders. While it would be great for all the students who participate in the elective to go into geriatric psychiatry, having them expand their toolkit for use in whatever future practice they pursue is the next best outcome to help address the shortage.

- 1. Alzheimer's Association. 2023 Alzheimer's Disease Facts and Figures. *Alzheimers Dement* 2023;19(4). DOI 10.1002/alz.13016.
- 2. Accreditation Council for Graduate Medical Education. Number of accredited programs and on-duty residents for the academic year by specialty, 2002-2003. 2020. Available at: <https://apps.acgme-i.org/ads/Public/Reports/Report/3>. Last updated 2023. Accessed June 1, 2023.
- 3. Cohen D & Cairl R. Mental health care policy in an aging society.in: Levin B.L. Petril J. *Mental Health Services: A Public Health Perspective*. Oxford University Press, New York 1996: 301-324

4. What year did your program begin? 2019

5. Have other academic centers created similar programs modeled on yours? If yes, please specify:

I have spoken with Dr. Michelle Conroy and Dr. Kirsten Wilkins extensively about the program as they expressed interest in setting up a similar elective at Yale School of Medicine. I do not believe they have created it yet. At the ADMSEP (Association of Directors of Medical Student Education) Annual Meeting June 22-24, 2023 I presented the elective as a poster and met faculty from around the country during the poster session. Several faculty expressed interest in starting similar electives.

6. Has your program been presented at a national meeting, won awards from other organizations, or been accepted for publication?

It was presented as a poster at the ADMSEP (Association of Directors of Medical Student Education) Annual Meeting June 22-24, 2023 in San Diego. The poster is included here in the addendum section, and the co-author is Grace Chan PhD who ran the statistics. I am also submitting an application for the American Association of Geriatric Psychiatry's 2024 Annual Meeting as both an educational innovations workshop and as a poster, but those applications have not been reviewed yet.

7. What method of self-evaluation is integrated into the program? Explain and provide a sample of the evaluation tool as well as any outcome data that the program has generated:

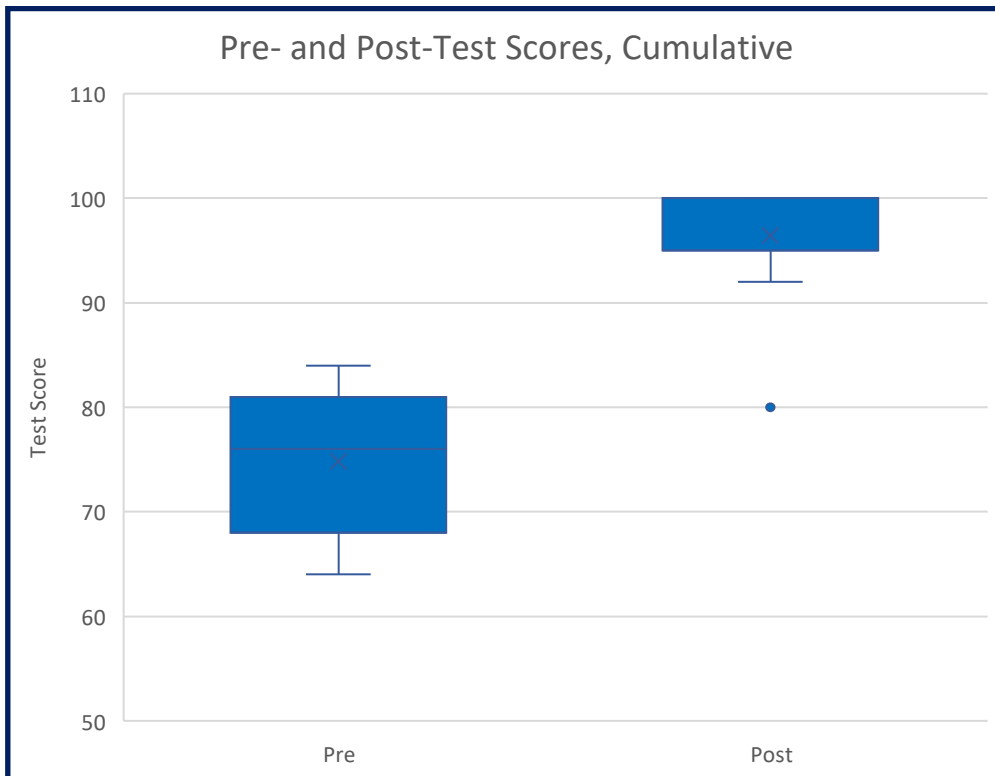
Students are administered a pre-test to identify knowledge gaps, and their learning is tailored to address those. For example, a student who gets a question wrong about Alzheimer's biomarkers may learn about them from the readings and present a ten minute talk on Alzheimer's biomarkers in our resident clinic during supervision. The students complete a post-test at the end of the elective to assess their learning. Please see addendum for the 25-question tests.

Pre- and post-test scores were analyzed as follows:

This project qualified for "Exempt Status" by the University of Connecticut Health Center IRB, IRB Number 23X-199-1

Pre-test and post-test scores were deidentified from the course gradebook. Statistical analysis was completed using IBM SPSS Statistics for Windows, version 29.0 (IBM Corp., Armonk, N.Y., USA) to compare pre- and post-test scores by t-test. Scores were also compared for students who participated in the elective for 2 weeks separately from those who participated for 4 weeks.

		Paired Differences							Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
Pair	Post-test - Pre-Test				Lower	Upper				
1		21.600	5.719	1.809	17.509	25.691	11.943	9	<.001	<.001



- Statistically significant improvement was observed when comparing pre- and post-test scores for students who participated in the Cognitive Disorders Elective.

8. Please attach to this application any additional narrative description or other information that would assist the Committee in evaluating your program.

In the addendum is included:

- 1) Course description / application
- 2) Sample clinical schedule for one week (which would be repeated for 2-4 weeks)
- 3) Elaboration of goals for each clinical experience
- 4) Citations of example readings
- 5) Pre- and post-tests
- 6) Copy of poster presented at ADMSEP Annual Meeting June 2023

Addendum 1: Course description / application, including learning objectives

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UConn | SCHOOL OF MEDICINE
Clinical Elective Course

1) Official Course Title: Cognitive Disorders Elective

2) Department (select from drop down): Select from the below Psychiatry

3) Site(s): JDH, Outpatient Pavilion, 10 Talcott, off-site at assisted living / nursing facilities

5) Director Name & Title: Kristina Zdanys, MD Assistant Professor, Department of Psychiatry

6) Admin Name, Email & Phone: n/a, contact Dr. Zdanys at zdanys@uchc.edu / 860-679-5446

7) Typical maximum # of students per block: 2

8) Duration Options (select all that apply): 2 weeks 4 weeks Other:

9) Available to (select all that apply):
 3rd year UConn students 4th year UConn students Visiting 4th year students

10) Where/When (what time) to report on the first day: will depend on week that the rotation starts--contact Dr. Zdanys the week before

11) Learning Objectives:
1) Students will understand interdisciplinary approaches to diagnosing cognitive disorders. 2) Students will become familiar with different etiologies of cognitive disorders. 3) Students will learn approaches to management of cognitive disorders. 4) Students will understand pharmacological and non-pharmacological strategies for treatment of behavioral and psychological symptoms of dementia.


14) Official Catalog Description/Overview:
Assessment, diagnosis, and management of cognitive disorders is inherently an interdisciplinary process. This elective, in which students may participate for 2 or 4 weeks, is based in the specialty of geriatric psychiatry but also provides exposure to geriatric medicine, neuropsychology, neurology, and radiology. Students will see patients in multiple settings (inpatient psychiatry, outpatient clinics, assisted living and nursing facilities).

15) Method/s of instruction (patient care or clinical activities):
Students will rotate in each clinical setting either directly with an attending or with a resident under the supervision of an attending. In addition to seeing patients, the students will have supervision with the director once weekly in which relevant readings will be discussed. Students will also have the opportunity to attend the Memory Disorders Program, which is an interdisciplinary group that meets twice monthly to discuss complex cases.

16) Instructional hours per week (required conferences), if applicable: 1
*does not include site based grand rounds or resident conferences

17) Out-of-class hours per week (HW, assignments, exams, etc.): No "Out-of-class" hours required. This is a full time clinical elective. OR 2 hours

18) Any additional Notes:
Students with a particular clinical focus may discuss distribution of sub-specialty exposure to accommodate interests (e.g., students more interested in geriatric psychiatry may have more geriatric psychiatry half-day clinics than those interested in neurology, etc.).

Elective Director's Signature:  Date: 11/1/18

*Once signed, please return to Jenn Foster – jefoster@uchc.edu

Addendum 2: Sample clinical schedule for 1 week, to be repeated 2-4 weeks

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	Mon	Tues	Weds	Thurs	Fri
AM	Memory Clinic: Geri Psych Memory Rounds	Assisted Living Facility: Geri Psych	Observe Neuropsych Evaluation	Skilled Nursing Facility: Geri Med	Neurorad Fellowship Didactics
PM	Memory Clinic: Geri Med	Speech Language Pathology	Movement Disorders Clinic: Neurology	Reading Time	Geriatric Psychiatry Clinic

Addendum 3: Elaboration of goals of each clinical experience

Memory Clinic: Geriatric Psychiatry

Students work with geriatric psychiatrists, PGY3-4 psychiatry residents, and the geriatric psychiatry fellow who receive direct in-house referrals from geriatrician colleagues. The geriatricians have evaluated these patients previously for neurocognitive disorders. Typically, these referrals fall into one of two categories: either the patient's diagnosis is complicated by comorbid psychiatric symptoms (raising question of whether the cognitive changes are largely secondary to depression, anxiety, sleep problems, etc.), or the patients have an established diagnosis of a cognitive disorder and psychiatry is being consulted for management of neuropsychiatric complications ("behavioral disturbances" which may include apathy, depression, anxiety, psychosis, sleep disturbance, agitation, aggression, etc.).

Memory Clinic: Geriatric Medicine

Students work with geriatricians who have "first pass" doing the initial evaluation of patients presenting with cognitive disorders. The students learn the standard work-up for cognitive disorders including review of medical, psychiatric, and substance use history; review of medications and polypharmacy; labs; imaging; referrals for further investigation.

Assisted Living Facility: Geriatric Psychiatry

Students see patients in an assisted living facility with geriatric psychiatrists. In this level of care, patients often require assistance with some instrumental activities of daily living (e.g., housekeeping, transportation, food preparation, and medication management). Less commonly, they require help with activities of daily living such as bathing or dressing, usually because of physical limitations. The assisted living level of care is not a memory care facility, so patients with cognitive disorders usually are in the mild stages. The role of the geriatric psychiatrist in this setting is to assess patients with

memory impairment to determine if the patient is appropriate for this level of care, or if the patient might require transfer to memory care / skilled nursing. Additionally, neuropsychiatric symptoms frequently seen in early stage cognitive disorders (depression, anxiety, sleep disturbance) are assessed and treated.

Speech Language Pathology

Students work with a speech language pathologist at our institution who runs a cognitive rehabilitation program. Together they assess patients with mild cognitive impairment and early stage dementia to identify the patient's strengths and weaknesses across cognitive domains. Based on the patient's cognitive profile, a rehabilitation program is developed and implemented using a variety of tools and exercises in clinic and for the patients to do at home.

Neuropsychology Evaluation

Students shadow a neuropsychologist for a full assessment of the patient's performance across cognitive domains. They also participate in feedback sessions with the patient and caregiver, in which preliminary diagnostic impressions and suggestions for next steps are discussed.

Movement Disorders Clinic: Neurology

Students work with a neurologist who specializes in movement disorders. There is a large overlap among movement disorders and cognitive disorders. Students in this clinic gain particular exposure to dementia with Lewy Bodies, Parkinson's dementia, progressive supranuclear palsy, and normal pressure hydrocephalus. Students also become familiar with the cognitive and neuropsychiatric profiles classically associated with these diagnoses.

Skilled Nursing Facility: Geriatric Medicine

Students see patients at a skilled nursing facility together with a geriatrician. Most patients in this setting are in more advanced stages of dementia and require nearly full care with activities of daily living. Students have an opportunity to participate in discussions related to end-of-life decision-making and palliative care for patients with cognitive disorders.

Neuroradiology

Students spend a half day with a radiologist who teaches them indications for brain imaging for patients with cognitive complaints, and basic strategies for reading brain CT scans, MRIs, SPECT scans, and PET scans.

Geriatric Psychiatry Clinic

Students see patients with a PGY4 resident or geriatric psychiatry fellow in the outpatient psychiatry clinic. Most patients present to the clinic first with a primary psychiatric complaint (depression, anxiety, sleep disturbance, or new-onset psychosis). Because these symptoms may herald a developing cognitive disorder, students learn to synthesize psychiatric assessment and management with cognitive assessment.

Memory Rounds

Twice monthly, the multi-disciplinary memory program gathers to discuss complicated patients seen in our clinics. Participants include geriatric psychiatrists, neuropsychologists, geriatricians, neurologists, radiologists, speech language pathologists, social workers, physical therapists,

occupational therapists, and trainees at all levels. Students have an opportunity to present patients they assessed in clinic in order to get feedback from attendings and residents (many of whom have also seen the patients) on differential diagnosis and next steps. Participation also allows them to see how the experiences they have had in each clinical setting can be synthesized to understand the patients and provide effective, well-rounded care.

Fellowship Didactics

At our institution, geriatric medicine and geriatric psychiatry fellows have integrated didactics for one half day per week. This allows the geriatric medicine fellows to strengthen their knowledge of psychiatric illness among older adults, and allows the geriatric psychiatry fellows to strengthen their knowledge of frailty and medical comorbidity. Attending these lectures gives students the opportunity to further understand how integration of care is critical for our older adult patients, especially those suffering from cognitive disorders.

Addendum 4: Required readings

Readings are taken from the American Psychiatric Publishing Textbook of Geriatric Psychiatry 6th Edition (DC Steffens and KF Zdanys, Eds., American Psychiatric Publishing 2022). Students access free copies of the textbook through the institution's library website. The readings were selected to provide a foundation for the students' learning and clinical application. Readings are discussed during supervision on Friday afternoons during clinic.

Week 1: Chapter 2: Physiological and clinical considerations of geriatric patient care; Chapter 6: Neuropsychological assessment of late-life cognitive disorders

Week 2: Chapter 5: Use of the laboratory in the diagnostic work-up of older adults; Chapter 7: Delirium

Week 3: Chapter 8: Dementia and mild neurocognitive disorders; Chapter 19: Agitation in older adults

Week 4: Chapter 23: Working with families of older adults; Chapter 24: Clinical Psychiatry in the Nursing Home

Addendum 5: Pre- and Post-Tests

The following is a copy of the 25 question, multiple-choice pre-test. The pre-test is taken closed-book on the first day of the elective and the post-test is taken closed-book on the last day of the elective. The post-test is identical to the pre-test. When deciding whether to make the pre- and post-tests the same or different, I decided to make them the same because the pre-test targets many of the learning objectives of the elective and we use it as a way to identify knowledge gaps. Making the post-test identical shows students how they filled those knowledge gaps during the elective.

Topics covered on the pre-test include: terminology to define cognitive disorders; Alzheimer's disease biomarkers; clinical presentation of non-Alzheimer's dementias; FDA-approved therapeutics for Alzheimer's disease; imaging for cognitive disorders; non-pharmacological approaches for treatment of cognitive disorders; presentation and management of neuropsychiatric symptoms of dementia.

Name: _____

Cognitive Disorders Elective Pre-Test

Please don't use references! This is to help build a framework for / get excited about what to learn about during the elective, and also show me what we can talk about during our supervision so I'm not repeating stuff you already know. Low stress.

1. The difference between the term "dementia" and the term "major neurocognitive disorder" is:
 - a. Dementia is specific for Alzheimer's disease; MND can be any form of cognitive impairment
 - b. Dementia means any level of functional decline; MND requires both ADLs and IADLs are impaired
 - c. Dementia is a diagnosis based on clinical observation; MND requires neuropsychological testing
 - d. Dementia and major neurocognitive disorder mean the same thing
2. The difference between "major neurocognitive disorder" and "minor neurocognitive disorder" is:
 - a. In major, both ADLs and IADLs are impaired; in minor, only IADLs are impaired
 - b. In major, at least one IADL is impaired; in minor, there is no ADL or IADL impairment
 - c. In major, a patient must score below a 20 on Montreal Cognitive Assessment or equivalent test; in minor, the score must be above 20
 - d. Both show changes in IADLs, but major also includes changes in work or social functioning
3. What is the difference between the term "dementia" and the term "Alzheimer's disease"?
 - a. Dementia is an umbrella term to describe a variety of cognitive disorders; Alzheimer's disease is a specific diagnosis based on neuropathological features
 - b. Dementia is a form of Alzheimer's disease in which patients require a higher level of care
 - c. Dementia describes the early stages of Alzheimer's disease before a formal diagnosis is made
 - d. Dementia and Alzheimer's disease are the same thing
4. What is true about the ApoE ϵ 4 allele?
 - a. It has an autosomal dominant inheritance
 - b. Both patients who are heterozygous for ϵ 4 and patients who are homozygous for ϵ 4 are at increased risk of Alzheimer's
 - c. Patients who are homozygous for ϵ 4 are at increased risk of Alzheimer's, but not patients who are heterozygous
 - d. The ϵ 4 allele decreases risk of Alzheimer's, vs. the ϵ 2 allele which increases risk
5. What two neuropathological features are typical of Alzheimer's disease?
 - a. Amyloid plaques and tau neurofibrillary tangles
 - b. Amyloid plaques and alpha-synuclein bodies
 - c. Alpha-synuclein bodies and tau neurofibrillary tangles

Name: _____

- d. Amyloid plaques only, with tau neurofibrillary tangles sometimes observed
- 6. What protein is found in Lewy bodies?
 - a. Amyloid
 - b. Tau
 - c. Alpha-synuclein
 - d. Prion
- 7. What is the classic progression of vascular dementia?
 - a. Insidious and gradual
 - b. Sudden and step-wise
 - c. Waxing and waning
- 8. Which dementia is most likely to be associated with visual hallucinations?
 - a. Alzheimer's disease
 - b. Frontotemporal dementia
 - c. Normal pressure hydrocephalus
 - d. Dementia with Lewy bodies
- 9. Which dementia is most likely to be associated with the 3 "W" features—wet, wobbly, wacky?
 - a. Alzheimer's disease
 - b. Frontotemporal dementia
 - c. Normal pressure hydrocephalus
 - d. Dementia with Lewy bodies
- 10. How is dementia with Lewy bodies different from Parkinson's disease dementia?
 - a. Patients with DLB do not have motor symptoms
 - b. Patients with DLB have neuropsychiatric changes first; patients with PDD have motor symptoms first
 - c. Patients with DLB are sensitive to antipsychotic medications; patients with PDD can tolerate antipsychotics
 - d. DLB and PDD are the same
- 11. If an older adult with dementia presents with new-onset agitation, a helpful framework for approaching assessment and treatment is:
 - a. MIND approach
 - b. DICE approach
 - c. CRSD approach
 - d. ~~AvPD~~ approach
- 12. What are the two classic sub-types of frontotemporal dementia?
 - a. Aphasia variant and behavioral variant
 - b. Apathy variant and behavioral variant
 - c. Aphasia variant and apathy variant
- 13. What type of brain imaging would we order first in a patient presenting in clinic with a memory complaint?
 - a. Non-contrast head CT
 - b. Brain MRI with and without contrast
 - c. Brain MRI without contrast
 - d. Amyloid PET

Name: _____

14. Which member of the Memory Program team is most likely to meet with patients for cognitive rehabilitation?
 - a. Cognitive neurologist
 - b. Occupational therapist
 - c. Neuropsychologist
 - d. Speech language pathologist
15. What resource can be helpful in identifying medications that might alter mental status in our older adults?
 - a. FAST scale
 - b. Beers criteria
 - c. CAM scale
 - d. AIMS scale
16. What resource can help identify a patient's specific stage of Alzheimer's disease?
 - a. FAST scale
 - b. Beers criteria
 - c. CAM scale
 - d. AIMS scale
17. What sleep disorder is most often seen in dementia with Lewy bodies?
 - a. Circadian rhythm disturbance
 - b. Narcolepsy
 - c. Central sleep apnea
 - d. REM sleep disorder
18. Which of the following can manifest with agitation in a person with dementia?
 - a. Urinary retention
 - b. Urinary tract infection
 - c. Constipation
 - d. All of the above
19. When families ask about diets that might help people with cognitive changes, the diet with the most evidence is:
 - a. Paleo diet
 - b. Vegan diet
 - c. MIND diet
 - d. Intermittent fasting
20. Which of the following is *not* a modifiable risk factor for dementia?
 - a. Social isolation
 - b. Hypertension
 - c. Hearing loss
 - d. Age
21. Late-life depression:
 - a. Is a common symptom associated with cerebrovascular damage
 - b. Is a common symptom associated with neuropathological changes seen in Alzheimer's
 - c. Can be a harbinger of future cognitive decline
 - d. All of the above

Name: _____

22. Medicare will pay for an FDG-PET as part of a cognitive work-up for cases in which we are distinguishing between:
- Frontotemporal dementia and Alzheimer's disease
 - Alzheimer's disease and dementia with Lewy bodies
 - Alzheimer's disease and normal pressure hydrocephalus
 - Frontotemporal dementia and dementia with Lewy bodies
23. What biomarker changes do we see in CSF for patients with Alzheimer's disease?
- Increased tau, increased amyloid
 - Decreased tau, increased amyloid
 - Increased tau, decreased amyloid
 - Decreased tau, decreased amyloid
24. Aducanumab is a monoclonal antibody recently approved for treatment of:
- Mild cognitive impairment
 - Mild cognitive impairment and mild Alzheimer's disease
 - Mild to moderate Alzheimer's disease
 - Moderate to severe Alzheimer's disease
25. Aducanumab is a monoclonal antibody that targets:
- Amyloid
 - Tau
 - Amyloid and tau

Addendum 6: Copy of poster presented at ADMSEP Annual Meeting 2023

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Exposing Students to a Multi-Disciplinary Approach for Assessment and Treatment of Cognitive Disorders

Kristina Zdanys, MD & Grace Chan, PhD
Department of Psychiatry

University of Connecticut School of Medicine, Farmington, CT 06030

Background

- 6.7 million Americans are currently living with Alzheimer's disease (AD), and this number is expected to reach 13.8 million by 2060¹. It is important for medical students to be familiar with the assessment and treatment of AD and other neurocognitive disorders.
- There is a severe shortage of medical students and residents choosing to pursue careers in geriatric medicine and geriatric psychiatry². The majority of older-age mental health care is provided by primary care physicians and general psychiatrists³, and neurologists also provide much of the assessment and treatment of cognitive disorders.
- The Cognitive Disorders clinical elective (PSCH-8484) was developed to increase medical student exposure to the assessment and treatment of cognitive disorders, to improve their knowledge base and prepare them to enter the workforce irrespective of specialty.
- A multi-disciplinary approach highlights the applicability of this knowledge to a variety of disciplines: psychiatry, internal medicine, neurology, and radiology.
- The importance of a multi-disciplinary treatment team is emphasized, with clinical opportunities in neuropsychology and speech pathology as well.
- Students use a pre- and post-test model to enhance and assess their learning during the elective⁴.

Course Content

Example Weekly Schedule (for 2-4 weeks)

	Mon	Tues	Weds	Thurs	Fri
AM	Memory Clinic: Geri Psych Memory Rounds	Assisted Living Facility: Geri Psych	Observe Neuropsych Evaluation	Skilled Nursing Facility: Geri Med	Neurorad Fellowship Didactics
PM	Memory Clinic: Geri Med	Speech Language Pathology	Movement Disorders Clinic: Neurology	Reading Time	Geriatric Psychiatry Clinic

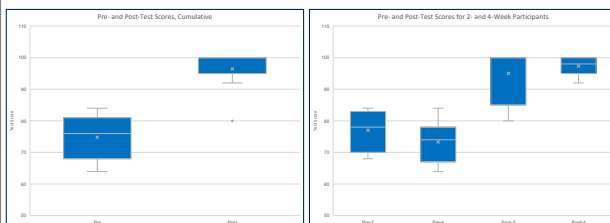
- Students are administered a pre-test to assess for knowledge gaps.
- Guided readings are provided from the *American Psychiatric Publishing Textbook of Geriatric Psychiatry*⁵.
- Students participate in Geriatric Psychiatry Fellowship didactics and multi-disciplinary Memory Rounds, in addition to the above clinics.
- Students complete a post-test to assess what they have learned.

Methods and Results

Pre-test and post-test scores were deidentified from the course gradebook. Statistical analysis was completed using IBM SPSS Statistics for Windows, version 29.0 (IBM Corp., Armonk, N.Y., USA) to compare pre- and post-test scores by t-test. Scores were also compared for students who participated in the elective for 2 weeks separately from those who participated for 4 weeks.

	Weeks	N	Mean	Std. Deviation	Std. Error Mean
Pre-Test	2	4	77.00	6.831	3.416
	4	6	73.33	7.005	2.860
Post-test	2	4	95.00	10.000	5.000
	4	6	97.33	3.266	1.333
diff	2	4	18.0000	5.16398	2.58199
	4	6	24.0000	5.05964	2.06559

Pair	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
				Lower	Upper				
1	21.600	5.719	1.809	17.509	25.691	11.943	9	<.001	<.001



The pre- and post-test scores were analyzed for n=10 students, who took the elective in the 2022-2023 academic year. There was statistically significant improvement (p < 0.001) in test scores. It was less clear whether course duration (2 weeks vs. 4 weeks) affects such improvement.

Conclusions

- Statistically significant improvement was observed when comparing pre- and post-test scores for students who participated in the Cognitive Disorders Elective.
- Due to the small number of students, the effect of course duration was unclear.
- Ongoing data collection will continue in the future to increase statistical power.
- The elective will be offered through the Visiting Student Learning Opportunities (VSL0) program starting in summer 2023 to increase student participation and allow students who might not otherwise have the opportunity to learn about a multi-disciplinary approach for the assessment and treatment of cognitive disorders.

References

- Alzheimer's Association. 2023 Alzheimer's Disease Facts and Figures. *Alzheimers Dement* 2023;19(4). DOI 10.1002/alz.13016.
- Accreditation Council for Graduate Medical Education. Number of accredited programs and on-duty residents for the academic year by specialty, 2002-2003. 2020. Available at: <https://apps.acgme-i.org/ads/PublicReports/Report/3>. Last updated 2023. Accessed June 1, 2023.
- Cohen D & Cairl R. Mental health care policy in an aging society. In: Levin B.L. Petrlia J. *Mental Health Services: A Public Health Perspective*. Oxford University Press, New York 1996: 301-324.
- Shivaraju PT, Manu G, Vinaya M, et al. Evaluating the effectiveness of pre- and post-test model of learning in a medical school. *National Journal of Physiology, Pharmacy and Pharmacology*. 2017, 7(9): 947-951. DOI 10.5455/njppp.2017.7.0412802052017.
- Steffens DC & Zdanys KF (Eds). (2022). *Textbook of Geriatric Psychiatry* (6th ed.). American Psychiatric Publishing.

This research project qualified for "Exempt Status" by the University of Connecticut Health Center IRB, IRB Number 23X-199-1