

2025 CEAL@UNC Research Award

**Recognizing innovative and rigorous research
that has promise to advance the well-being of those
who live and work in assisted living**

Overview

The CEAL@UNC Research Award recognizes innovative and rigorous research published in the past calendar year that has promise to inform practice or policy to advance the well-being of those who live and work in assisted living.

Each year, CEAL@UNC staff identify ten finalists based on:

- ❖ Innovation
- ❖ Methodological rigor
- ❖ Alignment with the CEAL@UNC mission

The recipient is chosen by members of the CEAL@UNC Advisory Board and Research Core.

The 2025 finalists conducted research relating to resident care and outcomes, caregivers, and other supportive and long-term care services and settings.

2025 CEAL@UNC Research Award Finalists: Resident Care and Outcomes

- ❖ **Award Recipient: Changes in nursing staff levels and injury-related emergency department visits among assisted living residents with Alzheimer's disease and related dementias**
– Dr. Hua and colleagues
- ❖ Prevalence and correlates of antipsychotic medication use in Oregon assisted living
– Dr. Dys and colleagues
- ❖ Assisted living residents with dementia: Disparities in mental health services pre and during COVID-19
– Dr. Temkin-Greener and colleagues
- ❖ Evacuation and health care outcomes among assisted living residents after Hurricane Irma
– Dr. Hua and colleagues

2025 CEAL@UNC Research Award Finalists: Caregivers

- ❖ The prevalence and benefits of self-compassion among professional caregivers
– Dr. Lathren and colleagues
- ❖ A collaborative approach to improving care outcomes for residents in assisted living
– Dr. Morgan and colleagues
- ❖ Family involvement among Oregon adult foster home residents, 2018-2023
– Dr. Tunalilar

2025 CEAL@UNC Research Award Finalists: Other Supportive and Long-Term Care Services and Settings

- ❖ Do end-of-life outcomes differ by assisted living memory-care designation?
– Dr. Wang and colleagues
- ❖ Hospice providers serving assisted living residents: Association of higher volume with lower quality
– Dr. Guo and colleagues
- ❖ Transitions to nursing homes among residents of assisted living and community-dwelling home care recipients
– Dr. Manis and colleagues

2025 CEAL@UNC Research Award Recipient and Finalists

Resident Care and Outcomes

Changes in nursing staff levels and injury-related emergency department visits among assisted living residents with Alzheimer’s disease and related dementias

Significance

Assisted living residents with Alzheimer’s disease and related dementias (AD/ADRD) are at an increased risk of injury-related emergency department (ED) visits.

In nursing homes, higher nursing staffing levels are associated with lower rates of resident injuries.

Little research has examined the relationship between changes in nurse staffing levels and injury-related ED use in assisted living.

Findings

An increase in one RN hour per resident day was associated with a 53% decrease in the risk of an injury-related ED visit (but changes in RN hours were not associated with injury-related inpatient hospitalizations).

Changes in total nursing, LPN, and personal care assistant hours were not associated with changes in the risk of injury-related ED visits or inpatient hospitalizations.

Methods

Retrospectively examined the relationships of personal care aide, registered nurse (RN), licensed practical nurse (LPN), and total nursing hours with injury-related ED visits.

Data type: Secondary (12,144 fee-for-service Medicare beneficiaries with AD/ADRD living in 455 assisted living communities in Ohio from 2007-2015).

Conclusions

RNs may influence the likelihood of injury and decisions to transfer by providing oversight on care planning, fall and injury risk assessments, medication management, and early identification of changes in resident condition. The findings align with recommendations that endorse the presence of an RN in assisted living.

Better data systems are needed to capture staffing levels and resident outcomes for assisted living communities to inform staffing policies.

Prevalence and correlates of antipsychotic medication use in Oregon assisted living

Significance

Some assisted living communities offer memory care to meet the needs of residents with Alzheimer's disease and related dementias (AD/ADRD).

The use of antipsychotic medications for residents with AD/ADRD has been associated with adverse resident outcomes.

There is a need to better understand antipsychotic medication use for assisted living residents with AD/ADRD.

Methods

Explored the extent to which organizational characteristics (e.g., size, rurality, non-profit status, Medicaid census) are associated with antipsychotic medication use, accounting for resident case mix characteristics.

Data type: Secondary (932 observations in 463 assisted living settings in Oregon from 2017-2019).

Findings

The average 90-day antipsychotic use prevalence in Oregon assisted living settings was 30.7 percent.

Antipsychotic medication use was higher in assisted living communities with a memory care designation.

For profit settings and those with high proportions of Medicaid residents were associated with higher rates of antipsychotic use.

Conclusions

Policy makers, long-term care advocates, and assisted living organizations might consider how organizational resource capacity and resident population needs influence antipsychotic medication use in assisted living communities.

Further understanding medication administration and prescription decision making is necessary to contextualize variable rates of antipsychotic use in assisted living.

Assisted living residents with dementia: Disparities in mental health services pre and during COVID-19

Significance

Assisted living residents with Alzheimer’s disease and related dementias (AD/ADRD) experience high levels of depression, anxiety, and other psychiatric disorders, yet access to mental health services for assisted living residents is often limited.

Little is known about the use of mental health telemedicine services among residents with AD/ADRD, and the extent to which it varies.

Methods

Examined ambulatory use of mental health services (in-person and virtual) by assisted living residents with AD/ADRD; explored how mental health and telemedicine use varied by individual and community level characteristics; assessed the impact of COVID-19 on mental health service use in assisted living.

Data type: Secondary (102,758 fee-for-service Medicare beneficiaries with AD/ADRD within 13,400 communities in the U.S. from 2019-2020).

Findings

Twenty percent of residents with AD/ADRD had mental health visits prior to COVID-19; Black residents and dual Medicare/Medicaid eligible residents (dual status) were less likely to use mental health services prior to and during COVID-19 compared to white and Medicare-only residents.

No significant differences were found in mental health telemedicine visits related to race/ethnicity or dual status.

Conclusions

Assisted living communities may not be currently equipped to provide necessary mental health services to residents with AD/ADRD.

Research is needed to understand the use of telehealth mental health visits among assisted living residents after COVID-19 and its potential for reducing racial disparities in access.

Evacuation and health care outcomes among assisted living residents after Hurricane Irma

Significance

As hurricanes and other natural disasters increase in frequency and intensity, decisions to evacuate or shelter-in place will become increasingly common in assisted living.

Little is known about associations between evacuation versus sheltering-in-place and assisted living resident health outcomes.

Methods

Retrospectively examined health outcomes of assisted living residents exposed to Hurricane Irma who evacuated compared to a matched sample of residents who sheltered in place.

Data type: Secondary (25,130 Medicare fee-for-service beneficiaries living in assisted living communities in Florida in 2017).

Findings

Evacuation was associated with 16% greater odds of emergency department visits and 51% greater odds of nursing home visits within 30 days of the event.

No association was found between evacuation and mortality.

Most associations between evacuation and health care outcomes were no longer significant 90 days following the event.

Conclusions

Accounting for the immediate health related impacts of evacuation should be taken into consideration when designing emergency preparedness plans.

Future research is needed to better understand the relationship between evacuation and adverse resident outcomes.

2025 CEAL@UNC Research Award Finalists

Caregivers

The prevalence and benefits of self-compassion among professional caregivers

Significance

Professional caregivers provide essential services to residents, yet may experience inadequate compensation, verbal and physical aggression, and demanding schedules, often compounded by personal life stressors.

Self-compassion as a coping mechanism may be beneficial to professional caregiver well-being and job satisfaction.

Little is known about variations in self-compassion and its relationship to well-being and job satisfaction.

Methods

Described professional caregivers' self-compassion; examined how self-compassion varies by demographic characteristics; examined associations among self-compassion, anxiety and depressive symptoms, and job satisfaction.

Data type: Primary (391 professional caregivers in 3 assisted living communities and 10 nursing homes in California, New York, and North Carolina).

Findings

Older, non-US born, professional caregivers and those with college education had the highest self-compassion; White caregivers had the lowest.

Self-compassion was negatively associated with anxiety and depressive symptoms, and positively associated with job satisfaction.

Conclusions

Additional research is needed to clarify the directionality of the relationship between self-compassion and well-being.

Professional caregivers' use of self-compassion to cope with challenges may depend on characteristics and life experiences influenced by their sociocultural background; these differences can provide guidance on protocols for designing and implementing interventions and self-compassion training.

A collaborative approach to improving care outcomes for residents in assisted living

Significance

Assisted living residents often have care needs related to multiple chronic conditions and functional and cognitive decline.

Residents are embedded in “care convoys,” dynamic networks of formal (e.g., physicians) and informal (e.g., family) care partners.

Common person-centered care planning and goal setting practices often fail to focus on processes of care, such as the structure and function of these convoys.

Methods

Used the *convoys of care* model, a multi-level framework connecting care convoy properties to resident outcomes, to examine healthcare management and communication between convoy members.

Data type: Primary (50 assisted living residents and their care convoys [n=169] within eight communities in Georgia over 2 years).

Findings

Residents experienced a “healthcare mosaic” resulting in variability in care arrangements over time.

Accessibility to healthcare providers and collaborative communication between the healthcare point person and informal care partners facilitated quality care and better health outcomes.

Conclusions

As formal and informal care intersect in assisted living, healthcare providers can use the convoy of care model (and the study-developed Provider Assessment of Care Convoy), to assess the strengths and weaknesses of a resident’s care convoy, endorse clear and collaborative goals, and plan individualized care.

As telehealth use increases, healthcare providers may have greater opportunities to directly communicate with care convoy members and increase collaboration with informal care partners and staff.

Family involvement among Oregon adult foster home residents, 2018-2023

Significance

Family members play an important role in providing social support and personal care to assisted living residents.

Family involvement can contribute to resident well-being.

Although most assisted living research is focused on larger communities, over 60,000 residents reside in small-scale, community-based communities (referred to as adult foster homes in Oregon).

Methods

Studied the dynamics of and factors associated with family involvement in adult foster homes before, during, and after the COVID-19 pandemic.

Data type: Secondary (7,649 residents within 2,027 adult foster home assisted living communities in Oregon from 2018-2023).

Findings

Family members generally provided more social and instrumental support than assistance with medication and activities of daily living.

While families' social visits to adult foster home residents recovered post-COVID-19, familial help getting to medical appointments remained lower than pre-COVID-19 levels.

Residents in rural adult foster homes and communities with higher Medicaid use experienced significantly lower family involvement.

Conclusions

The purposeful involvement of family members in developing care plans may contribute to a more person-centered approach to care.

Future research is needed to understand the ongoing effects of COVID-19 on familial assistance with medical appointments.

Targeted interventions such as providing transportation support or access to virtual visits may be beneficial to overcoming barriers to social visits, particularly in rural communities.

2025 CEAL@UNC Research Award Finalists

**Other Supportive and Long-Term Care Services and
Settings**

Do end-of-life outcomes differ by assisted living memory-care designation?

Significance

Assisted living communities are an increasingly common place for end-of-life care for persons living with Alzheimer’s disease and related dementias (AD/ADRD); in addition, nearly a quarter provide memory care services.

Hospice use has been associated with high-quality end-of-life care and dying in place.

Little is known about end-of-life outcomes and hospice use relative to residence in assisted living providing specialized memory care.

Methods

Described mortality rates and hospice use among residents with AD/ADRD in memory care assisted living communities compared to those in general assisted living settings; examined the association between memory care and hospice use.

Data type: Secondary (15,152 fee-for-service Medicare beneficiaries with AD/ADRD who moved to U.S. assisted living communities with more than 25 beds between 2016 and 2018).

Findings

Residents with AD/ADRD who moved to memory care assisted living had a 9.7% higher relative mortality rate, and a 17.5% higher relative rate of hospice use, compared to those who moved to assisted living without memory care.

Residents with AD/ADRD in memory care utilized hospice for an average 1.4 more days in the last month of life than AD/ADRD residents in non-memory care assisted living settings.

Conclusions

Further study is needed to understand how factors such as staffing levels, care processes, varying state regulations, and resident profiles differ between memory care and general assisted living settings, and their impact on end-of-life outcomes for residents with AD/ADRD.

Findings suggest that memory care may attract residents closer to the end-of-life and/or promote hospice use and quality of life over prolongment of life.

Hospice providers serving assisted living residents: Association of higher volume with lower quality

Significance

Hospice is an important end-of-life service for many assisted living residents.

Assisted living residents and caregivers have reported lower quality hospice care compared to other long-term settings.

Little is known about hospice providers serving assisted living residents.

Methods

Examined the relationship between the number of assisted living residents served by hospice providers and hospice provider quality.

Data type: Secondary (Data from the Centers for Medicare and Medicaid Care Compare and Medicare Enrollment Database related to 2877 hospices from 499 counties in the U.S.).

Findings

Hospice providers serving high volumes of assisted living residents had lower quality scores than those with low volumes of assisted living residents as related to team communication; training family members; and assessment and treatment.

Quality differences persisted after controlling for profit status.

Conclusions

Further research is needed to understand why providers serving greater volumes of assisted living residents have lower quality scores than those serving lower volumes of assisted living residents.

Additional research is also needed to explore opportunities for quality improvement efforts in hospice providers serving assisted living residents.

Transitions to nursing homes among residents of assisted living and community-dwelling home care recipients

Significance

Assisted living communities provide a residential long-term care alternative to nursing homes.

Many assisted living residents receive additional home care services from external providers.

There is a need for increased knowledge surrounding the relationship of assisted living residence to transition to a nursing home.

Findings

Compared to individuals living in the community, residence in assisted living related to a 12.7% relative decrease in the 5-year risk of transition to a nursing home for nursing home eligible individuals.

Methods

Examined whether nursing home eligible residents of assisted living communities who made an application for a nursing home bed had a lower risk of transition relative to community-dwelling nursing home eligible home care recipients making applications for a nursing home bed.

Data type: Secondary (10,012 assisted living residents and 131,679 home care recipients in Ontario, Canada from 2014-2019).

Conclusions

Expanding options for residential care and integrating assisted living into the continuum of healthcare may allow for greater residential care options for older adults who may otherwise live in a nursing home.

Future research is needed to understand the cost differences and population level outcomes of assisted living combined with additional home care services relative to nursing home settings.

**Center for Excellence
in Assisted Living**

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