is limited research on using EHR to identify persons with Alzheimer's disease (AD) and related dementias (RD). In a data-driven approach, we used all ICD-9 diagnosis and CPT procedure codes from statewide inpatient, ambulatory surgery, and Medicare records, in addition to age at baseline and gender, to detect AD/RD from the Cache County Study on Memory in Aging (1995–2009). After removing participants diagnosed with dementia at baseline (n=335), 3882 (82%) Cache County Study participants could be linked to inpatient, ambulatory surgery, and/or Medicare EHR records; 484 (12.5%) of these 3882 had incident all-cause dementia, with 308 (7.9%) having AD/AD comorbid with RD; and 176 (4.5%) having RD without AD. We removed participant's ICD-9 codes occurring after first AD/RD diagnoses. EHR features (~2000) along with gold-standard diagnoses as class labels were then used to train and detect AD and/or RD using a Gradient Boosting Trees machine learning algorithm. Models evaluated with nested cross-validation yielded AUCs of 0.70 for all-cause dementia, 0.69 for AD/AD comorbid with RD, and 0.67 for RD without AD. Key factors detecting AD/RD included age at enrollment, cardiovascular, metabolic, and kidney disease, and sleep disturbances, with feature importance varying by record type and time frame prior to dementia onset. Our findings suggest that a patient's health status up to 12 years prior may be useful in identifying individuals at-risk for dementia development.

EFFECTS OF CAREGIVER INTERVENTIONS FOR INFORMAL CAREGIVERS OF OLDER ADULTS WITH COGNITIVE DECLINE

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Objectives: To identify baseline factors and process factors, which indicate changes that are associated with caregiving confidence improvement attributed to caregiver support.

Methods: An intervention study using 35 informal caregivers (ICG) of older adults (≥65 years old) with cognitive decline. Recipients of ICGs belonged to the Programs of All Inclusive Care for the Elderly (PACE). Interventions were occupational therapy (OT) support or education about illness and effective caregiving methods, which took place in ICGs' homes. OT interventions included training to reduce physical strain, and improve time and task organizations, and providing assistive devices). Caregiver confidence was measured using a Visual Analog Scale. Data were divided into two groups: improved confidence and decreased/no-change confidence. Eleven baseline data of care recipients (CRs) and ICGs as well as five process data were analyzed using logistic regression.

Results: Baseline factors that differentiated the two groups were ICG's age, caregiving confidence level, and CR's cognitive status, of which classification accuracy was 94.3%. Only Zarit Buren Interview (ZBI) score was associated with caregiving confidence change, of which classification accuracy was 74.3%. Younger ICGs, lower cognition, and lower caregiving confidence among baseline factors, and improved ZBI among the process factors were associated with improved confidence.

Discussion: Although our interventions prevented 65.7% of caregivers form declining their caregiving confidence, improving caregiving confidence was difficult while CRs' cognition continued to decline. However, this positive change was possible even CRs had moderate dementia, on average. Personal interventions may be necessary to improve caregiving confidence and reduce ICG's burden.

HORTICULTURE-BASED INTERVENTIONS TO ENHANCE HEALTH AND WELLBEING OF PEOPLE LIVING WITH DEMENTIA IN THE COMMUNITY

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The majority of people living with dementia in the early and middle stages are cared for at home by family caregivers. Participation in meaningful activities is important for good quality of life. Recreation based on horticulture is beneficial for people living with dementia in residential settings, yet evidence within community settings is less clear. The aim of this research was to examine the existing evidence for the impact of using contact with nature, gardens and plants to enhance well-being of people living with dementia in the community. Our secondary aim was to explore the outcome domains and instruments that were employed in the existing research studies, to inform future research efforts and guide clinical practice. A systematic search was conducted covering several databases and gray literature. Original studies that examined group or individual horticulture-based activities or interventions were included. Of 2127 articles identified through searching, 10 were selected for full review. The findings reveal that horticulture-based intervention showed positive impacts on food intake, social interaction, and well-being in older adults with dementia. Some evidence shows that horticulture-based activities may alleviate stressful symptoms associated with living with dementia. Future research may further evaluate the effect of the interventions on cognitive function, physical function, and behavioral symptoms in a more rigorous intervention design.

IMPLICATIONS OF RACIAL DIFFERENCES IN THE SHIFTS IN THE SETTING OF CARE FOR ALZHEIMER'S DISEASE AND RELATED DEMENTIAS

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The prevailing setting of care has strong associations with the progression of a disease at time of first diagnosis, subsequent treatment, resulting health outcomes as well as both long-term and short-term costs. The care of Alzheimer's Disease (AD) and Related Dementias (ADRD) has been experiencing a shift from skilled nursing facility to home health care. However, changes in practice do not disseminate equally across the race/ethnicity spectrum of the U.S. and disadvantaged race/ethnicity-related groups often encounter differing conditions from those experienced by the majority. In this study, we calculated the race/ethnicity-related direct healthcare costs of individuals with AD and ADRD, stratified by care-provider structure (physician, inpatient, outpatient, skilled nursing facility, home health, hospice),