

# Factors associated with care partner identification and education among hospitalized persons living with dementia

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## ABSTRACT

**Objective:** Care partners of persons living with dementia (PLWD) often feel unprepared to care for their loved ones. Improving PLWD care partner identification and education during hospital stays can improve preparedness. This retrospective EHR study investigated PLWD characteristics that may relate to care partner identification, education, and teaching methods during hospital stays.

**Methods:** Encounters from a Midwestern academic healthcare system were used. Patients were over 18, had a documented dementia diagnosis, were admitted to the hospital for at least 24 h, and had information documented in care partner or education data fields ( $N = 7982$ ). Logistic regressions assessed patient's demographics, care partner identification and education. Chi-square tests compared education teaching methods and patient discharge location.

**Results:** PLWD's who were unmarried, discharged to other care facilities, or received the diagnosis "degeneration of nervous system due to alcohol" were associated with lacking care partner identification. Care partners of unmarried PLWDs or those with the diagnosis "Alzheimer's disease, unspecified" received less education. Multiple teaching methods were associated with discharge location.

**Conclusion:** Multiple characteristics were related to PLWD care partner identification and education differences during hospital stays.

**Innovation:** Novel analyses highlight need for a protocol to systematically prepare dementia care partners.

## 1. Introduction

An estimated 11 million Americans provide care for persons living with dementia (PLWD), amounting to over 18 billion hours of unpaid care valued at nearly \$340 billion dollars annually [1]. These 'care partners' are often expected to assist PLWD with a range of tasks, including financial, household, health management, and self-care. Unfortunately, care partners often report feeling unprepared for their caregiving responsibilities [2-4], which is associated with overall poorer health outcomes for PLWD [5], higher rates of hospital stays with durations of more than one day [6], and hospital readmissions [7].

To combat these negative outcomes, healthcare systems can include care partners in hospital care processes. Increased care partner inclusion is mutually beneficial, being associated with decreased readmission rates and increased hospital net savings [8,9]. In 42 states and territories, the Caregiver Advise, Record, and Enable (CARE) Act is law and

requires hospitals to better include care partners. Specifically, hospitals must provide opportunities for patients to identify a care partner and provide education to patients and their care partners regarding any specific healthcare tasks to be done at home [10].

Despite the widespread enactment of the CARE Act across the United States, many hospitals are overburdened and understaffed, limiting the ability of clinicians to adequately identify and educate care partners of PLWD [11,12]. Further, specific practices surrounding dementia care partner identification and education in the hospital setting are not well documented or understood [13]. Therefore, we sought to answer the following research questions:

1. What patient characteristics, if any, are associated with dementia care partner identification rates?
2. What patient and care partner characteristics, if any, are associated with how care partners of PLWD receive education?

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3. Is there a relationship between the type of teaching method a care partner of PLWD receives during professional education and the patient's discharge disposition?

Information gleaned from this study can bring awareness to current care partner inclusion trends within the hospital setting for PLWD. This awareness could then improve inclusion methods for dementia care partners, increasing care partner preparedness which could in turn lead to better health outcomes for loved ones.

## 2. Methods

This retrospective electronic health record (EHR) study was approved by the necessary Institutional Review Board.

### 2.1. Data collection

De-identified EHR data from a large academic healthcare system in the Midwest collected between January 1, 2019 to August 1, 2022 were used. Hospital research data services electronically delivered the data as a limited dataset, as defined under the Health Insurance Portability and Accountability Act (HIPAA). The date range included encounters admitted before, during, and after the use of COVID-19 safety regulations within the hospital. Encounters in the specified date range were selected for this study if 1) the patient was aged 18 or older with a documented dementia diagnosis (see Supplementary Table S1 for list of ICD-10 codes and definitions), 2) the patient was admitted to an inpatient unit with a length of stay of at least 24 h, and 3) care partner identification or education was documented during the patient's stay. Due to the wide selected date range, some encounters captured readmissions of the same patient. Since the purpose of this study was to assess care partner inclusion, and these outcomes could vary between each hospital stay, all encounters fitting the inclusion criteria were included in analyses.

The dataset included patient demographic data, admission information (admitting symptoms, admitting hospital unit, dementia-specific ICD-10 diagnosis codes), discharge location, and care partner identification or education. To better utilize admitting hospital unit data, individual units were combined into six categories as defined by the hospital system from which the present data were gathered. These categories were medical, critical care, intermediate care medical/surgical, heart and vascular, surgical inpatient, and other. Due to its broad coverage of admission symptoms, the medical department was selected as the reference category for analyses. The EHR system used in this study allowed for documentation of up to four unique care partners per encounter, one field for each potential care partner. For the present study, we utilized the data fields identifying the care partner's relationship to the patient. These fields contained potential relationship identifiers such as "Significant other," "Family," or "Caregiver" more broadly. However, these data fields also included "patient" as an input option, resulting in that identified care partner being the patient themselves. No further identifiers, such as names or contact information, appeared in these data fields. If fewer than four care partners were identified, at least one of the four data fields would be empty. The system also allowed for documentation of specific education topic(s) provided to care partners and the teaching method in which the education was provided (verbal, audio/visual, written materials, etc.).

### 2.2. Data analysis

Descriptive and inferential statistics were performed in SAS 9.4 [14]. Initial analyses showed data met necessary testing assumptions to conduct logistic regressions and chi-square tests (e.g., independence, lack of multicollinearity, sufficiently large sample sizes, etc.). We first explored what patient characteristics related to care partner identification rates. Encounters were coded based on the presence of care partner

documentation. In some instances, the EHRs indicated that the only documented care partner was the patient themselves. That is, only one care partner was identified among the four care partner data fields, and "Patient" was listed in the care partner relationship field. To address this problem, encounters were designated as "lacking care partner identification" if a) no care partners were documented, or b) the patient was the only documented care partner. To answer the first research question, a logistic regression was conducted with "lacking care partner identification" as the outcome of interest to understand characteristics that may be associated with the likelihood of an encounter lacking care partner identification. All possible variables of interest were included in the initial model (demographic, admission, and discharge), and a backward regression method was used until only variables significant at  $p < 0.05$  would be present in the final model.

A similar analytic method was used to identify what patient and care partner characteristics, if any, are associated with how care partners receive education. During the PLWD's hospital stay, clinicians could select from thousands of unique educational titles to provide information to care partners based on the reason for the patient's hospital stay, improving at-home care following discharge, or meeting specific care partner requests. The desired topics on which care partners received education were selected from the full list and uploaded to a specific cell in the EHR. The method in which clinicians provided this education was also selected from a list and uploaded to a unique cell within the EHR. Since this analysis was focused on education care partners received, encounters deemed as "lacking care partner identification" were excluded from analysis.

The total number of unique education topics care partners received was used to quantify amount of education received. Due to the nature of the data being positively skewed (i.e., many low amounts of education), we utilized a median split of education status as the outcome variable for analyses. Specifically, the variable was coded as "0" for those below the median and "1" for those above the median. Dichotomizing encounters' education status allowed for 1) the inclusion of potential outliers without skewing analyses, and 2) consistency of result interpretation, as statistically significant characteristics in this analysis could be understood in similar ways to characteristics from the first logistic regression. Using encounters above the education median (i.e., having a value of "1" from the dichotomized education variable) as the outcome of interest, a second logistic regression was conducted in the same manner as the previous analysis to find characteristics that were independently associated with encounters receiving more education prior to the patient's hospital discharge.

Finally, we wanted to determine if there was a relationship between the type of teaching method a care partner received during professional education and the patient's discharge disposition. To answer this, all encounters with a documented care partner were separated into two groups: patients discharged home or patients discharged to another facility (nursing home, assisted living, hospital transfer, etc.). Using chi-square statistics, this discharge variable was compared to all teaching method options to investigate trends between these variables.

## 3. Results

### 3.1. Care partner identification

The sample of hospitalized PLWD used for analysis 1 ( $n = 7982$ ) was predominantly White and female, with mean age of 75. See Table 1 for more details on sample descriptive statistics. Initial analyses showed 6352 of the 7982 encounters (79.6%) were lacking care partner identification. The following demographic, admission and discharge variables reached significance in the backward regression model: discharge location, PLWD marital status, and admitting hospital unit. Five dementia diagnostic codes were also found to be significantly associated with care partner identification. From largest adjusted odds ratio to smallest, the diagnostic code descriptions were 1) degeneration of

**Table 1**  
Patient demographics.

Variable	Full Sample N = 7982	With Identified Care Partner N = 1630
	M ± SD / n (%)	M ± SD / n (%)
<b>Age</b>	74.9 ± 14.16	74.6 ± 15.14
<b>Sex</b>		
Female	4306 (53.95%)	860 (52.76%)
Male	3676 (46.05%)	770 (47.24%)
<b>Race</b>		
White	7306 (92.14%)	1486 (91.90%)
Black	457 (5.76%)	89 (5.50%)
Asian	88 (1.11%)	22 (1.36%)
American Indian/Alaska Native	62 (0.78%)	19 (1.18%)
Native Hawaiian or Other Pacific Islander	16 (0.20%)	1 (0.06%)
Care Partner Documented	1630 (20.42%)	1630 (100%)

nervous system due to alcohol, 2) unspecified dementia with behavioral disturbance, 3) unspecified dementia without behavioral disturbance, 4) dementia in other diseases classified elsewhere without behavioral disturbance, and 5) other specified degenerative diseases of nervous system. Table 2 shows adjusted odds ratios with confidence intervals and specific ICD-10 codes while Fig. 1 provides a forest plot of all variables included in the final model.

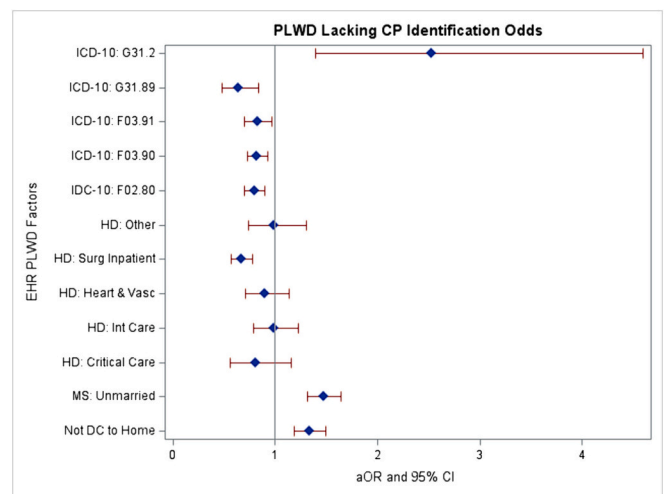
**3.2. Care partner education and training methods**

Only encounters from the cohort with a documented care partner were used to answer the questions of care partner education and teaching methods (N = 1630). See Table 1 for the descriptive statistics of this subsample. This subsample of hospitalized PLWD was also predominantly White and female with an average age of 74. Three variables

**Table 2**  
Adjusted odds ratios (aOR) for variables associated with lacking CP identification.

Variable	aOR	95% CI	p
Not discharged to home	1.329	[1.185, 1.490]	<0.001
PLWD Marital Status: Not currently/never married	1.471	[1.315, 1.646]	<0.001
Hospital Department: Critical Care	0.81	[0.56, 1.16]	0.24
Hospital Department: Int. Care Med/Surg	0.98	[0.79, 1.23]	0.87
Hospital Department: Heart & Vascular	0.89	[0.70, 1.14]	0.37
Hospital Department: Surgical Inpatient	0.667	[0.569, 0.782]	<0.001
Hospital Department: Other	0.98	[0.74, 1.31]	0.91
ICD-10 F02.80: Dementia in other diseases classified elsewhere w/o behavioral disturbance	0.792	[0.703, 0.893]	<0.001
ICD-10 F03.90: Unspecified dementia w/o behavioral disturbance	0.820	[0.725, 0.928]	0.002
ICD-10 F03.91: Unspecified dementia with behavioral disturbance	0.825	[0.702, 0.970]	0.020
ICD-10 G31.89: Other specified degenerative diseases of nervous system	0.635	[0.479, 0.841]	0.002
ICD-10 G31.2: Degeneration of nervous system due to alcohol	2.525	[1.389, 4.592]	0.002

Note. For hospital department analyses, the “medical” department was used as the reference category. Int. Care Med/Surg = Intermediate care medical/surgical.



**Fig. 1.** Forest plot for PLWD EHR factors associated with lacking CP identification.

Note. HD = Hospital Department; Surg. = Surgical; Vasc. = Vascular; Int. Care = Intermediate care medical/surgical; MS = PLWD Marital Status; ICD-10: G31.2 - Degeneration of nervous system due to alcohol; ICD-10: G31.89 - Other specified degenerative diseases of nervous system; ICD-10: F03.91 - Unspecified dementia with behavioral disturbance; ICD-10 F03.90 - Unspecified dementia without behavioral disturbance; ICD-10: F02.80 - Dementia in other diseases classified elsewhere without behavioral disturbance; for hospital department analyses, the “medical” department was used as the reference category.

were found to be associated with care partner education: PLWD marital status, admitting hospital unit, and the ICD-10 diagnostic code of unspecified Alzheimer's disease. Specific admitting hospital units associated with care partner education, from largest adjusted odds ratio to smallest were 1) heart and vascular, 2) intermediate care medical/surgical, and 3) units termed “other” by the hospital system. Table 3 and Fig. 2 shows adjusted odds ratios with confidence intervals and a forest plot of all variables included in the final model, respectively.

From the 1630 encounters, 288 had missing data for teaching methods, resulting in a subsample of N = 1342 to assess differences in teaching method rates by discharge location. Four teaching methods were significantly related to discharge location: verbal, written materials, demonstration, and teach back. Table 4 showcases the  $\chi^2$  and p-values for each teaching method of significance. Teaching methods were more present when patients were being discharged home. Namely, care partners of returning home patients received education at higher rates than those discharged to other locations for verbal, written materials, demonstration, and teach back. See Table 4 for the percentage of

**Table 3**  
Adjusted odds ratios (aOR) for variables associated with increased CP education.

Variable	aOR	95% CI	p
PLWD Marital Status: Not currently/never married	0.778	[0.638, 0.949]	0.013
Hospital Department: Critical Care	0.76	[0.39, 1.46]	0.41
Hospital Department: Int. Care Med/Surg	0.596	[0.393, 0.904]	0.015
Hospital Department: Heart & Vascular	1.722	[1.109, 2.675]	0.016
Hospital Department: Surgical Inpatient	1.19	[0.89, 1.59]	0.23
Hospital Department: Other	0.529	[0.308, 0.909]	0.021
ICD-10 Code: G30.9: Alzheimer's disease, unspecified	0.723	[0.566, 0.924]	0.010

Note. For hospital department analyses, the “medical” department was used as the reference category. Int. Care Med/Surg = Intermediate care medical/surgical.

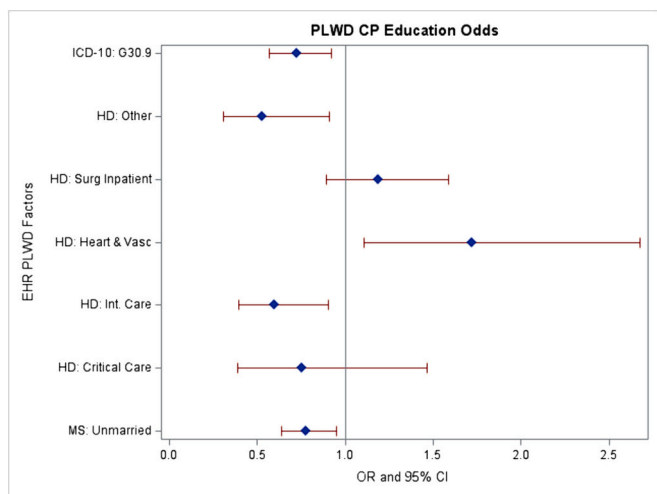


Fig. 2. Forest plot for predictor variable and covariates associated with increased CP education.

Note. HD = Hospital Department; Surg. = Surgical; Vasc. = Vascular; Int. Care = Intermediate care medical/surgical; MS = PLWD Marital Status; ICD-10: G30.9 - Alzheimer's disease, unspecified; for hospital department analyses, the "medical" department was used as the reference category.

Table 4 Presence of education teaching methods (%) by discharge location.

Teaching Method	% receiving education DC to home	% receiving education not DC to home	$\chi^2$ (df)	p
Verbal	98.6%	91.4%	37.80 (1)	<0.001
Written Materials	62.6%	54.6%	8.92 (1)	0.003
Demonstration	21.5%	13.8%	13.42 (1)	<0.001
Teach Back	25.7%	13.7%	30.29 (1)	<0.001

encounters receiving education via each of these four teaching methods separated by discharge location. The other forms of teaching methods - audio/visual, therapeutic play, group/class, and interpreter – were not found to be related to discharge location.

However, when comparing occurrence percentages for each teaching method, regardless of discharge location, there were large differences in teaching method rates. Verbal education and written materials occurred in 95% and 59% of all encounters, respectively, but the next most common method was teach back at 20%. All other methods (audio/visual, demonstration, therapeutic play, group/class, and interpreter) occurred in <20% of all patient encounters.

#### 4. Discussion and conclusion

The present study sought to understand aspects PLWD care partner identification and education in the hospital setting. Our findings indicate that 1) most PLWD did not have documented care partners, with multiple patient characteristics being related to lacking care partner identification, 2) PLWD demographic, admission, and diagnosis factors were associated with differences in care partner education rates, and 3) four teaching methods were related to PLWD discharge location.

##### 4.1. Discussion

##### 4.1.1. Care partner identification

Identification analyses illustrate most (79.6%) encounters in the

dataset were lacking care partner identification, of which not being discharged to home and the PLWD being unmarried were associated with lacking care partner identification. Previous literature highlights transitioning from a hospital stay to a nursing facility can be extremely distressing for PLWD, which could lead to increased risk of harm or rehospitalization [15]. However, Gilmore-Bykovski and colleagues' findings also indicate care partner inclusion in the hospital setting during discharge was associated with more positive outcomes for the PLWD following nursing home admission. Further, findings from prior work provide evidence that married PLWD and those who lived with their care partner were at decreased risk of nursing facility admission [16], while single and widowed PLWD tended to be admitted to nursing facilities sooner than their married counterparts [17]. Current findings mirror those of other authors who have identified unmarried PLWD being at risk of poorer health outcomes. As such, intentionally seeking out care partners for PLWD prior to discharge to other care facilities could lead to improved communication between families and care facility personnel, as well as better health outcomes for unmarried PLWD following discharge to their home. These care partner identification findings also showcase the importance of passing legislation such as the CARE Act, enforcing compliance to the tenets of the law [10], or creating protocols clinicians in hospitals can use to streamline care partner identification processes [18].

Further, those with a diagnosis "degeneration of nervous system due to alcohol" were over 2.5 times as likely to lack care partner identification. Previous literature has suggested patients with alcohol-dependence are perceived more negatively, where increased levels of blame for the patient's current state are placed on the patient themselves [19]. Further, perceived clinician strain has been associated with negative attitudes towards care of older adult patients with cognitive impairment [20]. By combining increased level of strain expected on clinicians with a tendency for negative perceptions of alcohol dependence, it is possible those suffering from alcohol-related dementia may receive less attention from clinicians compared to their peers living with other forms of dementia. This discrepancy in care could then lead to lower levels of care partner identification during hospitalizations. Being aware of possible differences in beliefs surrounding diagnostic perceptions, potentially leading to disparities in care partner identification, could be valuable for clinicians so all PLWD receive as many opportunities for care partner identification as possible.

##### 4.1.2. Care partner education and training methods

Unmarried PLWD were also found to be at risk of having reduced care partner education compared to those with significant others. Due to the nature of being unmarried, it is understood the PLWD's documented care partners are other family members, friends, or another third party, which could lead to unique education needs for care partners to feel prepared compared to spousal care partners. Specifically, adult children care partners may have other responsibilities, such as full-time jobs or caring for their own children, which could limit their physical presence in the hospital and reduce a clinician's ability to provide care partner education. Previous research indicates adult-child care partners often feel more burdened while simultaneously providing less care compared to spousal care partners [21]. As such, being attentive to non-spousal care partners and their needs could allow for increased education rates, improved preparedness, lower health service utilization, and better health outcomes for their loved one. Under the HIPAA Family and Friends Rule, though, health care providers exercise substantial discretion in determining what, if any, health information can be shared [22]. This discretion can impede care partners' access to needed information and, subsequently, their ability to receive adequate education. This could be especially true for those providing care while not holding certain legal authority, such as a non-spousal care partner who is not acting as the PLWD power of attorney. Variability in disclosure can also depend on the health care provider's professional knowledge, familiarity with the family, personal attitudes, and perceptions. As such, it is



paramount health systems provide education to clinicians on what information can and should be shared to non-spousal care partners to improve care partner education practices.

Care partners of PLWD admitted to heart and vascular hospital units also received more education compared to those in medical units. Conversely, those admitted to intermediate care – medical/surgical and “other” units had care partners who received less education. As treatment related to the cardiovascular system could require increased amounts of long-term care, such as changes in physical activity or diet, it is possible that care partners required more education compared to their “medical unit” counterparts, leading to this increase in education rates. Stated simply, the amount of education provided by the hospital may be dependent on the reason for hospitalization. With evidence suggesting care partners feel unprepared post-discharge [2], though, providing consistent education across all hospital units could improve confidence in their ability to care for their family members or friends, regardless of reason for hospitalization. In addition to training on post-operation procedures, providing care partners with materials specifically designed for PLWD could better prepare care partners for the challenge of caring for their family member or friend who is healing while also living with dementia. While care partners have expressed standard, patient-nonspecific education is adequate, care partners also express a lack of preparation post-discharge, often leading to readmissions [23]. By incorporating patient-centered education practices, such as the Include, Discuss, Educate, Assess, and Listen (IDEAL) method for discharge, these post-discharge education gaps could be alleviated [24].

Care partners of those diagnosed with “Alzheimer’s disease, unspecified” also received less education compared to other encounters. However, policies such as the CARE Act have been enacted across the country to eliminate potential discrimination based on diagnoses [10]. Additionally, literature has shown that increased care partner education is positively correlated with increased rates of responding to health system surveys such as the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Hospice Survey [25]. With the legal expectation that hospitals provide consistent and comprehensive education to all patients, combined with the internal motivation of improving hospital satisfaction surveys post-discharge, clinicians should attempt to increase their efforts in providing education and reducing potential disparities in care partner education rates.

Of all possible teaching methods, verbal and written were found to be the most used, which is in line with previous literature [26]. However, many unique characteristics of caring for PLWD may require other forms of education that may be more time consuming or hands-on. While the less common methods (i.e., audio/visual, demonstration, therapeutic play, group/class, and interpreter) may be more challenging to implement in a fast-paced hospital setting, it could prove useful to care partner education. Increasing diversity of training methods could improve understanding for care partners who may prefer different teaching methods over the more convenient written and verbal methods.

#### 4.1.3. Strengths, limitations, & future directions

The results of this study should be considered in light of certain limitations. First, and most notable, is that the dataset did not include the encounter’s date of hospital admission. Because of this, it is not possible to differentiate encounters taking place before, during, or after COVID-19 hospital safety guidelines were put in place. As these guidelines often put limitations on visitors, this could have had significant impacts on care partner identification, which could in turn skew findings. Despite technologies such as virtual meetings and telephone calls or techniques like social distancing which could have theoretically allowed for care partners inclusion during the pandemic, overwhelmed healthcare systems, care partners avoiding hospitals for fear of contracting COVID-19, and imperfect transitions to telemedicine may have reduced abilities to include care partners in reality from both the patient’s and hospital’s perspective. The existence of technologies that could have promoted care partner inclusion virtually does not always

match the ability of our healthcare system to meet these needs for inclusion, thus highlighting the complex and nuanced impact of the COVID-19 pandemic on care partner inclusion.

Another potential limitation was inconsistencies found within care partner documentation. As noted previously, identification analyses highlighted almost 80% of encounters lacked care partner identification. However, some of these encounters lacked care partner identification via missing documentation, while other encounters had the PLWD listed as the only documented care partner. Further, many encounters had at least one documented care partner, but also had the PLWD listed as a care partner. These inconsistencies in care partner documentation could have impacted results and may limit generalizability. Previous research has shown implementing system-wide change to abide by CARE Act guidelines can take time, though, and care partner identification is continually improving [27]. Lastly, the present sample was predominantly White (>90%), which limits generalizability to other demographics.

Despite these limitations, this study was robust in its large sample sizes, small number of exclusion criteria, and broad admission date range. This study was novel in covering multiple aspects of care partner inclusion during the hospital stay of a PLWD. Further, the present health system contained hospitals with significant regional variability. With this increased generalizability, these analyses could be conducted in other health systems for replication. However, regional differences between hospitals could not be accounted for, due to the limited nature of the data set, so the strength of regional variability should be taken with this fact in mind. Future qualitative and quantitative studies should aim to better understand how certain PLWD, as well as care partner, characteristics each impact the nature and quantity of patient and family-centered care. Possible avenues of future research include replicating results with data that were fully collected after the lifting of COVID-19 restrictions, comparing patient admitting location to their discharge location and resulting care partner inclusion rates, analyzing patient admitting symptoms for differences in care partner inclusion, or collecting care partner demographic information and comparing these variables to inclusion rates. Additionally, future research could include qualitative observations of PLWD hospital stays from admission to discharge. Conducting observations could complement the present study by 1) disentangling the limitations within this study regarding care partner identification, 2) clearly documenting which care partners receive education and at which stages of the hospital stay, and 3) establishing timelines of when education occurs, allowing for a stronger understanding of temporal precedence.

Also, since the present study did not distinguish between encounters of a patient’s first hospitalization and encounters where a previous hospitalization was recorded, future analyses would benefit from controlling for this potential confound. While changes in care partners, working clinicians, and reason for admission could impact care partner inclusion, having been previously admitted could also impact inclusion as care partner contact information could already be in the EHR system. This, in turn, could have inflated values in the present analyses.

#### 4.2. Innovation

The present study was innovative in its approach to assess dementia care partner inclusion in multiple domains. In particular, the study was novel in the wide-reaching analysis of care partner identification, education, and training through a large EHR dataset. These analyses also sought to understand contextual, diagnostic, and hospital factors documented within EHR data and how their relationship with care partner inclusion for persons living with dementia, further widening the scope of the present study. Finally, the present findings speak to the potential for future innovation. Opportunities for system improvement arise through the development and implementation of a novel toolkit to assist dementia care partner inclusion. Creating a clear, concise, and refined document that clinicians can utilize to more systematically

identify, educate and train care partners, regardless of presenting risk factors identified in this study, could improve inclusion rates. This would lead to overall better health outcomes for the person living with dementia, the care partner, and the health system as a whole.

#### 4.3. Conclusions

The present study sought to understand factors contributing to dementia care partner identification, education, and teaching methods using de-identified EHR data from a large academic healthcare system. Findings indicate there are patient characteristics associated with care partner identification and education for PLWD during their hospital stay. By acknowledging possible risk factors for reduced care partner inclusion, through identification and education, health systems can be aware of areas in which they are successfully including care partners, and areas for conscious awareness and improvement. Consideration of these factors could lead to improved inclusion during a PLWD's initial hospital stay, reducing readmission rates and lessening hospital burden. Further, these findings could prove useful in the production of a protocol health care professionals can use to more clearly, systematically, and consistently document dementia care partner identification and education.

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#### CRediT authorship contribution statement

**Austin R. Medlin:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization. **Nicole E. Werner:** Writing – review & editing, Validation, Supervision, Funding acquisition, Data curation, Conceptualization. **Catherine Z. Still:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Andrea L. Strayer:** Writing – review & editing, Conceptualization. **Beth E. Fields:** Writing – review & editing, Supervision, Project administration, Methodology, Funding acquisition, Data curation, Conceptualization.

#### Declaration of competing interest

The authors have no conflicts to declare.

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#### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.pecinn.2024.100320>.

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