

Using Artificial Intelligence to Identify and Support Caregivers of Persons Living with Dementia

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PennAITech AD/ADRD Focus Pilot Core

Background

- Caregivers for people living with dementia (PLWD) make up a diverse group of individuals and can include family, friends, and paid direct care workers.
- PLWD and their caregivers often receive health care services within the same healthcare system and their data hosted within the same electronic medical record (EMR).
- Our previous work found that health outcomes, such as hospitalization, for caregiver-PLWD dyads living in the same household are linked.
- Caregiver-specific interventions are beneficial for improving mental health, confidence in caregiving, and self-care.
- Caregivers are difficult to identify systematically and often experience barriers to interventions such as time and access.

Alzheimer's Association, 2013 Alzheimer's Disease Facts and Figures; www.alz.org

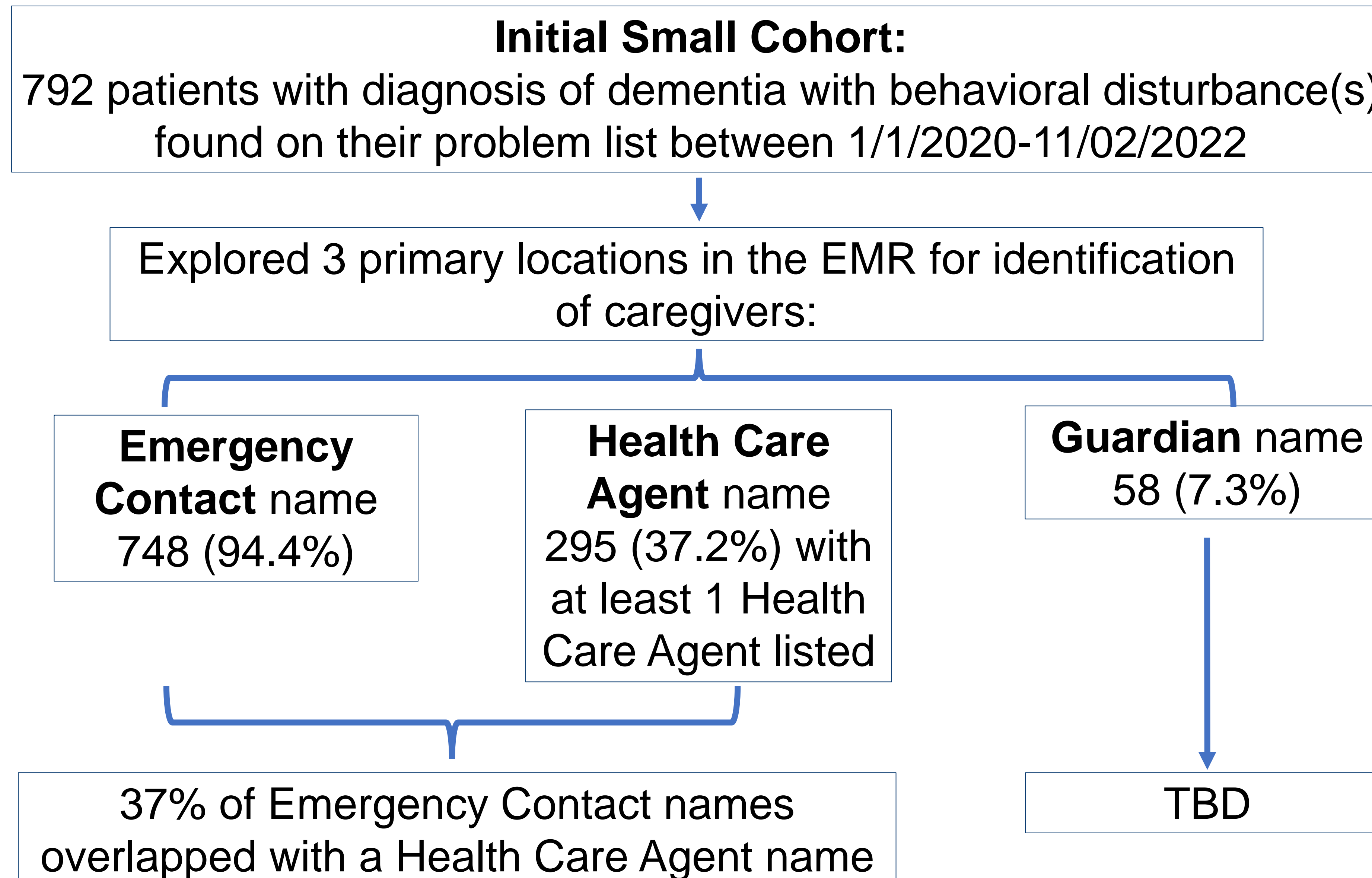
Our Goal

To systematically identify caregivers to ultimately improve intervention delivery for caregivers of PLWD and study the bi-directional effects on health outcomes for both PLWD and their caregivers.

Objective

1. Examine

Examine provider free-text notes and patient portal to find diverse types of caregivers.



2. Conduct

Conduct an exploratory analysis of patient portal use patterns among caregivers.

3. Develop

Develop a framework for best analyzing this unstructured EMR and patient portal data to automate a prediction model for caregiver identification.

Implications

- Natural language processing can analyze unstructured EMR data to find patterns among caregivers.
- This will allow us to systematically identify non-traditional caregivers (e.g., friends, neighbors) and caregivers outside the home (e.g., adult children, extended family members).
- By automating the process of caregiver identification through the EMR, interventions can be more easily delivered to engage and support the caregiver.



Caregiver.com, Inc. 1995-2023

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