

Development of a Database of Non-pharmacological Interventions and Technology-mediated Supports for Individuals with ADRD

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The technology mediated, non-pharmacological intervention landscape for Alzheimer's Disease and Related Dementias (ADRD) is growing, but clinical evidence is thin and symptom coverage is incomplete.

Background

- Non-pharmacological interventions offer evidence-based approaches for managing the cognitive, neuropsychiatric, and functional symptoms of ADRD, yet no curated, clinically organized resource exists to help caregivers or clinicians identify and access them.

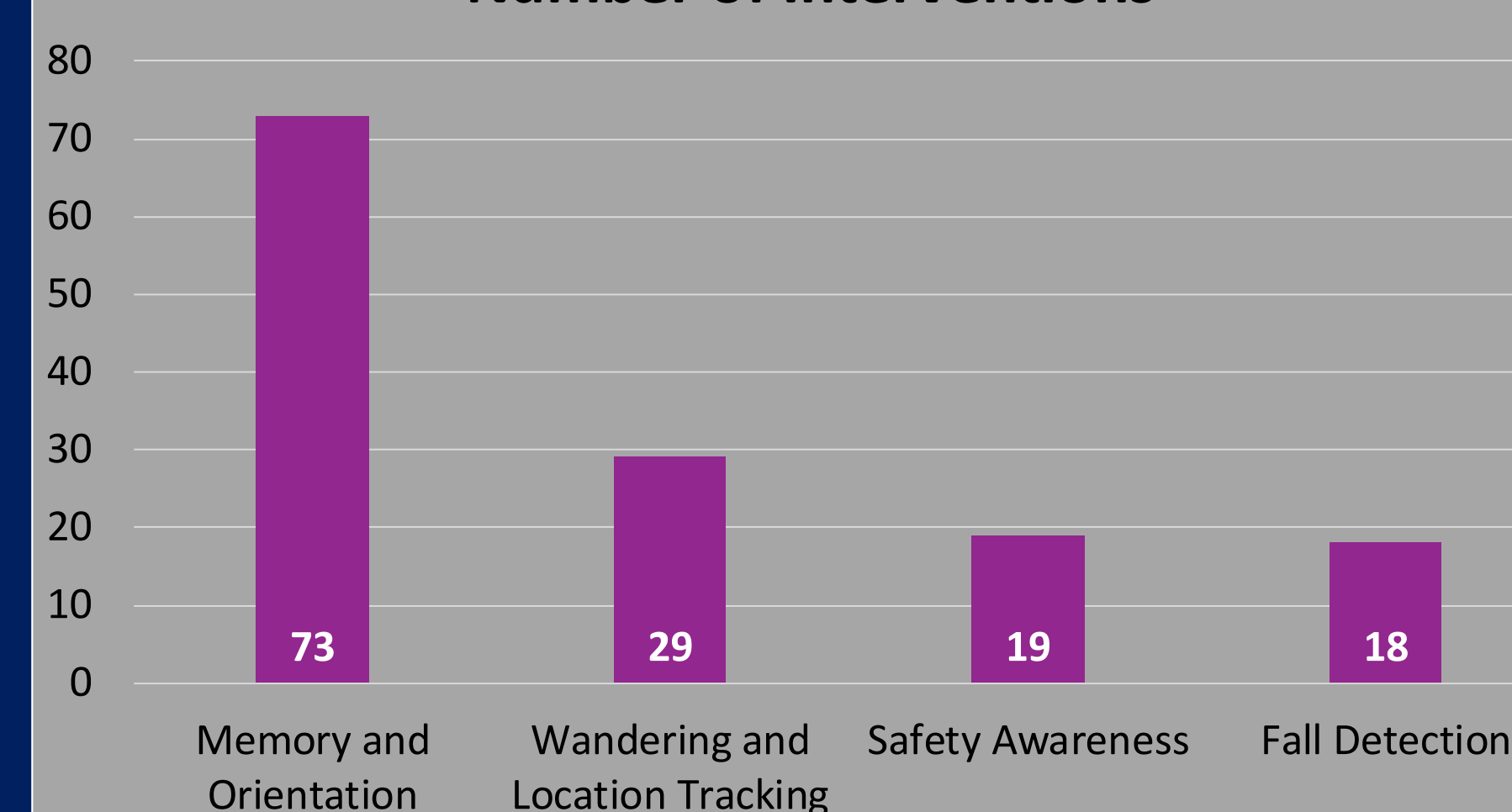
Objectives

- Establish a database of technology resources and supports for individuals living with ADRD and their caregivers as well as clinicians.

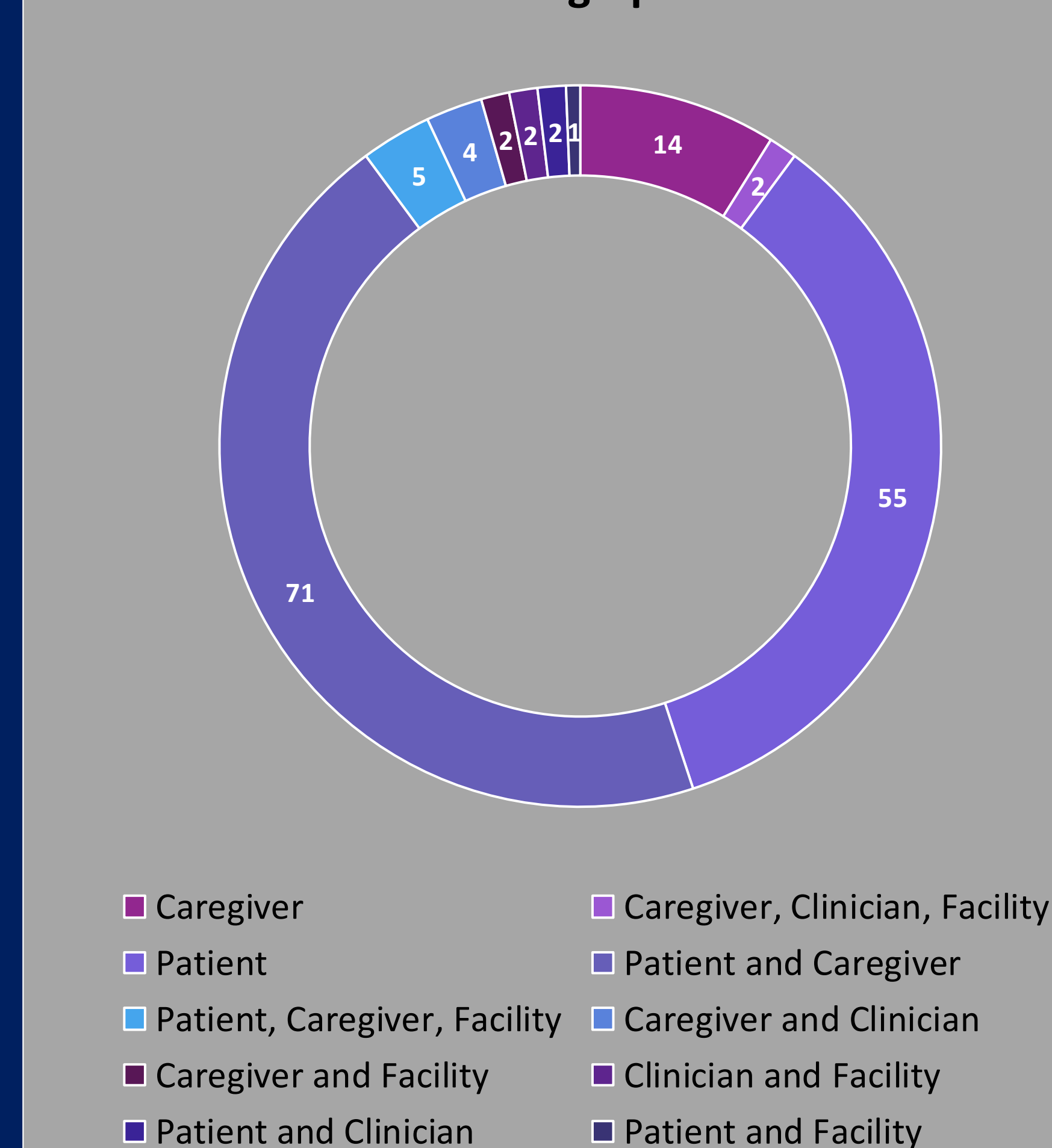
Methods

- Framework
 - The Person, Environment, and Occupation (PEO) model was used as the organizing framework.
- Systematic Approach
 - A systematic search of web sources, commercial databases, and app stores was conducted to identify non-pharmacological interventions and technology-mediated supports.
- Interventions are appraised across:
 - Symptom domain (i.e., cognition, BPSD, functional, etc.)
 - Four evidence tiers
 - ❖ RCT, observational, program report, or no clinical evidence
 - Price range
 - Subscription requirement
 - Intended user
 - ❖ Care recipient, caregiver, clinician, or combination
- Data is analyzed to identify gaps between available interventions and clinical need.

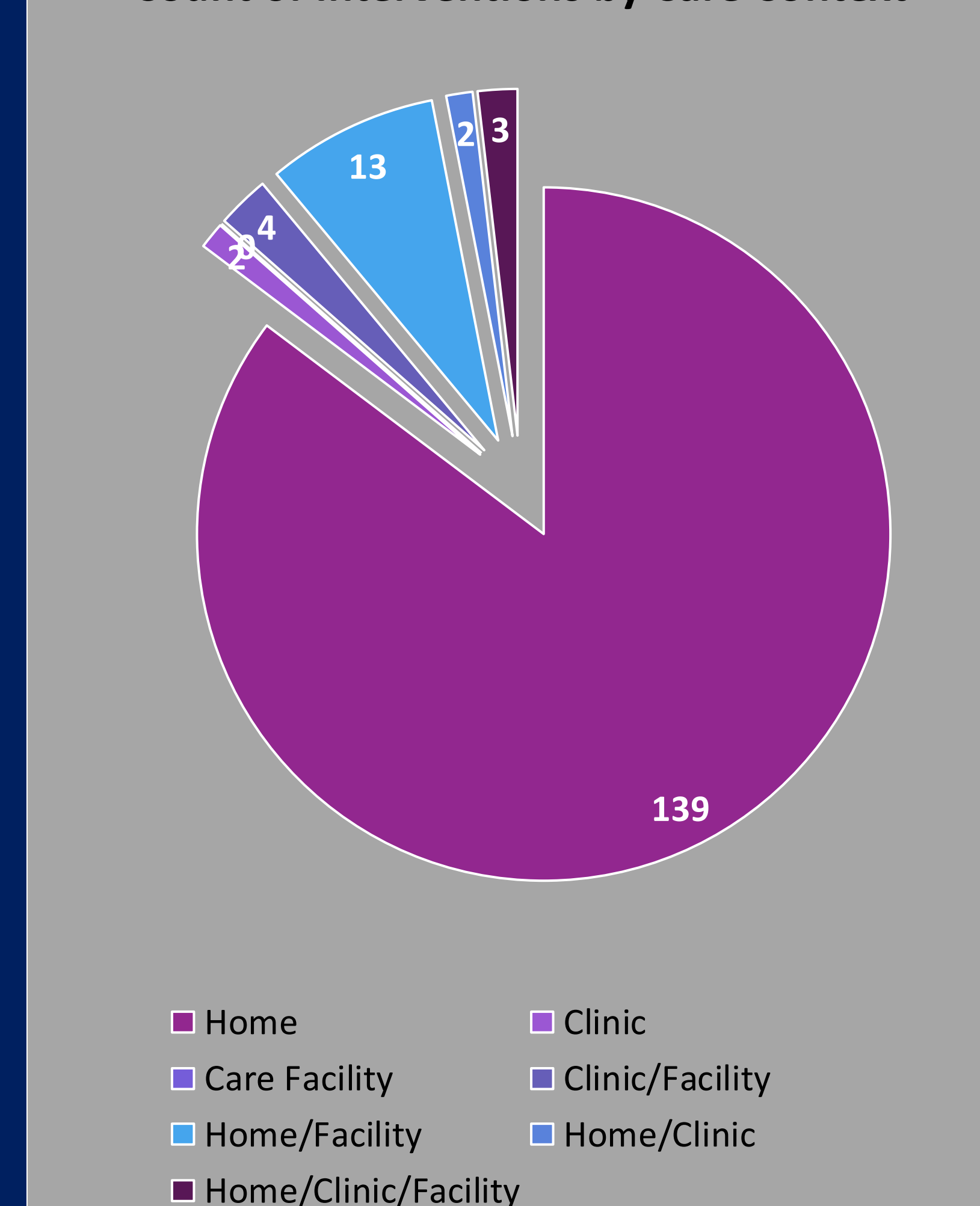
Most Represented Symptom Domains by Number of Interventions



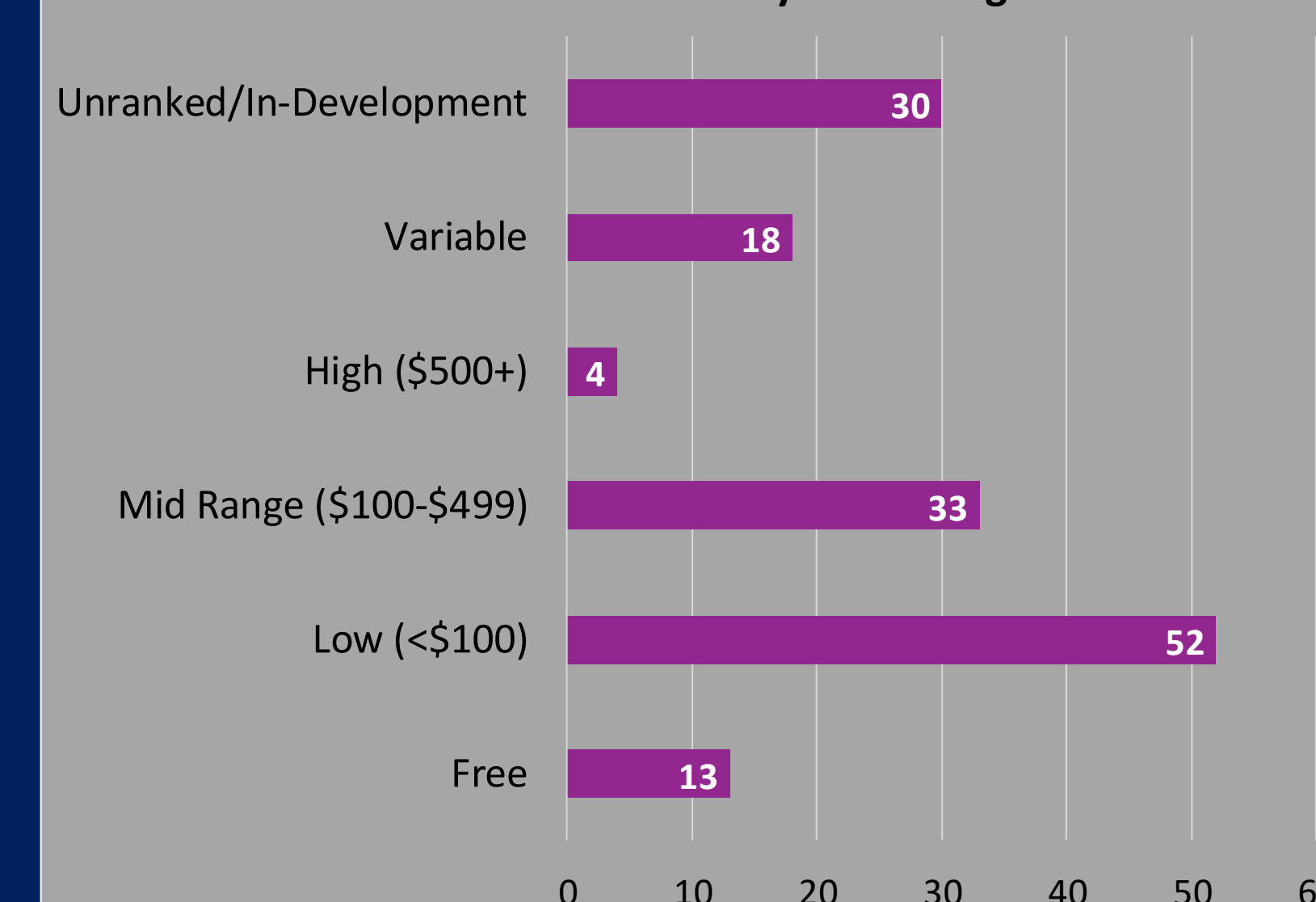
Intervention Count by Target User Demographic



Count of Interventions by Care Context



Intervention Count by Price Range



Results

- Of the 224 interventions analyzed to date:
 - The majority (**78%**) of products were designed for home use
 - Almost half (**44%**) targeted both the care recipient and caregiver, while a substantial proportion (**32%**) were designed for patient-only care
 - About a quarter (**24%**) required paid subscriptions
 - Only **7 (3%)** had RCT evidence support

Most represented symptom domains:

- Memory/orientation (n=73, 53%)
- Wandering/location tracking (n=29, 21%)
- Safety awareness (n=19, 14%)
- Fall detection (n=18, 13%)

Research Gaps

- Significant gaps between clinical need and available interventions were identified.
- Coverage of BPSD beyond wandering, including depression, anxiety, agitation, and apathy, remained sparse.
- Despite urinary incontinence affecting approximately 50% of individuals with ADRD, no dementia-specific urinary incontinence management technologies were identified.

Conclusions

- Although the market for non-pharmacological interventions continues to grow, products largely lack clinical validation and fail to address the full spectrum of ADRD symptoms and caregiver needs.
- This systematically curated, PEO-organized repository fills a critical gap in the ADRD care landscape.
- Future work will translate this foundation into a platform designed to deliver personalized, evidence-based care recommendations to individuals with ADRD and their caregivers, bridging the gap between early diagnosis and effective non-pharmacological support.

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