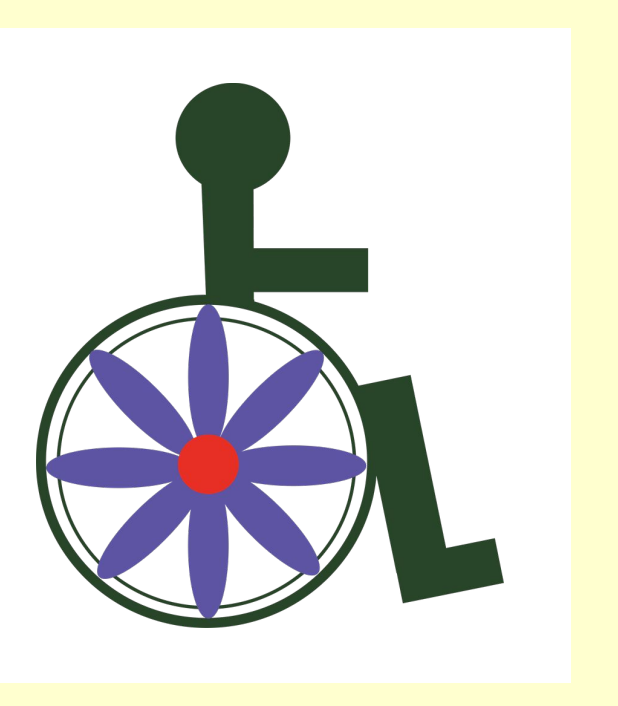


Guidelines & Strategies to Implement an Inclusive Garden for People with Dementia



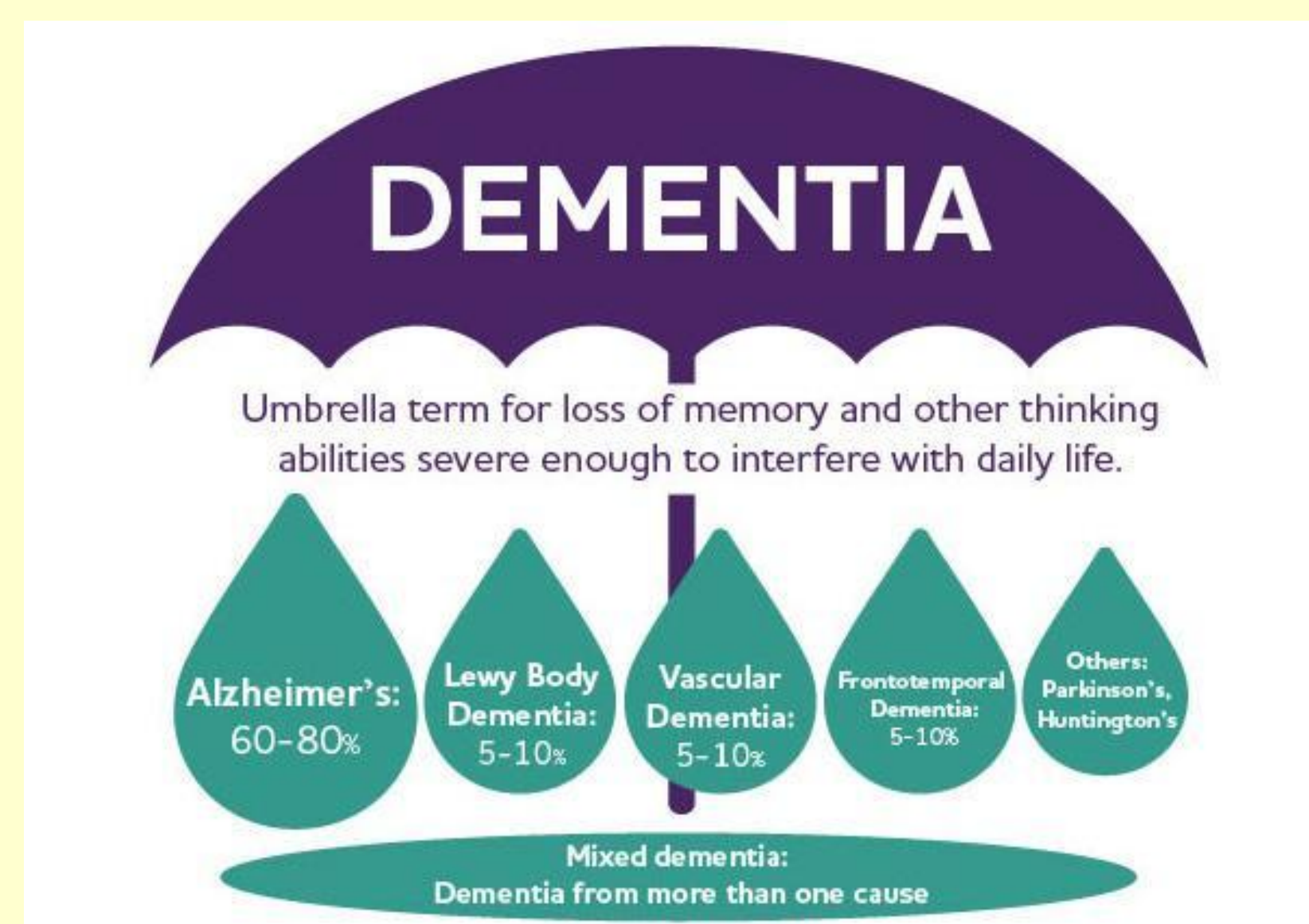
Melody Halzel, MPH, Christy Nishita, PhD, Summer Maunakea, PhD

Purpose of a Dementia-Friendly Garden

- **Dementia-friendly gardens** can impact health and the quality of life for an individual with Alzheimer's Disease and related dementias.
- A dementia-friendly garden is designed to ensure safety and accessibility to the garden beds and nature-based activities.
- Some of the many benefits of gardening for people with dementia include promoting physical activity, positive social interaction, a space for redirection, connection to nature, sensory stimulation, reduced stress, and overall well-being.

Public Health Priority

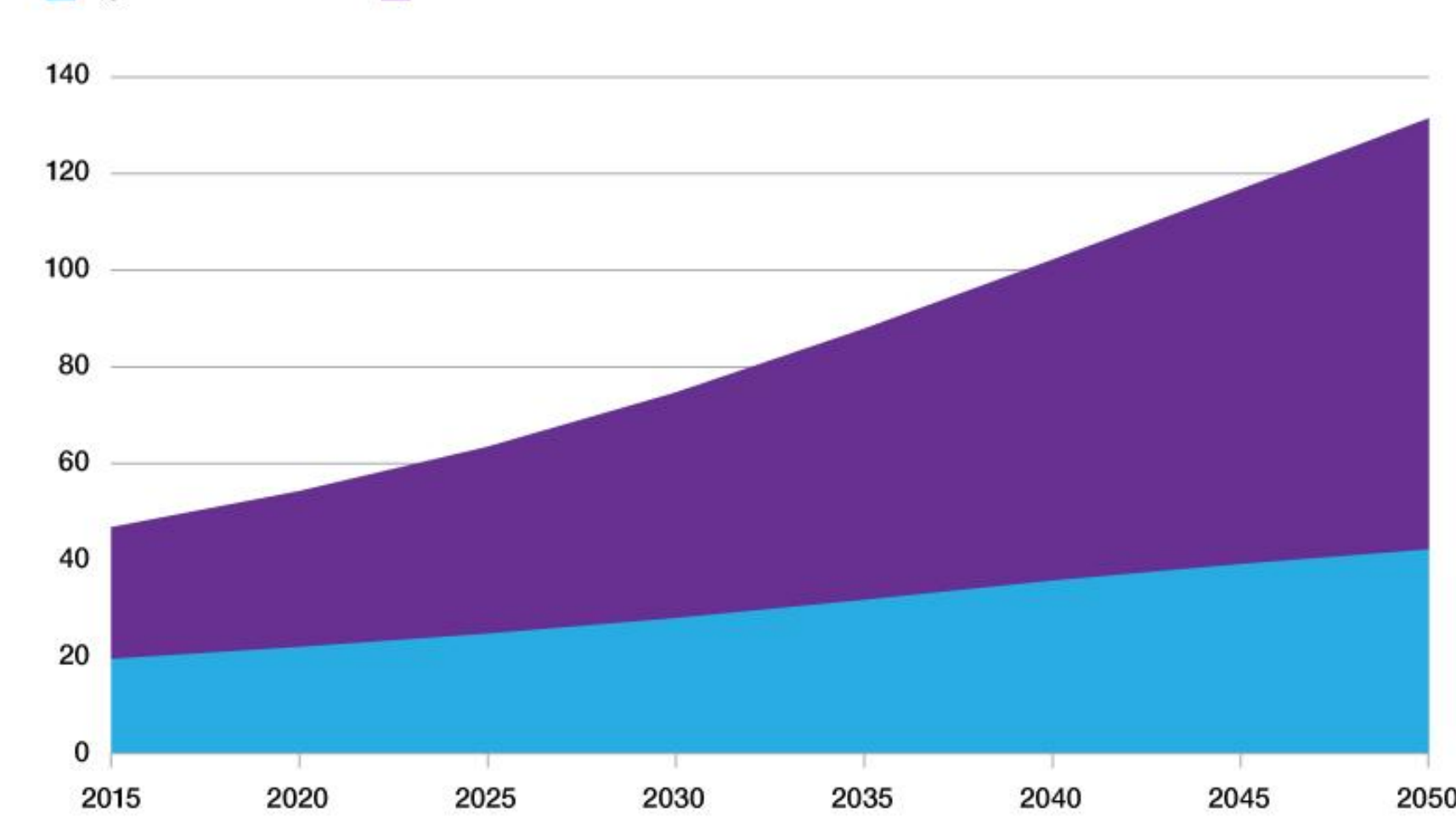
- Dementia describes a group of symptoms affecting memory, behavior, feelings, thinking, and social abilities severely enough to interfere with your daily life. While dementia is more common as people grow older, it is not a normal part of aging.



- Dementia is a **public health priority**, as the proportion of older adults in the U.S. (and globally) is increasing, and the expected number of people with dementia is expected to triple by the year 2050.
- The World Health Organization (WHO) states that dementia is currently the seventh leading cause of death among all diseases and one of the major causes of disability and dependency among older people worldwide.

A Growing Health Crisis

The projected number of people with dementia, millions



Source: Alzheimer's Disease International - World Alzheimer Report 2015

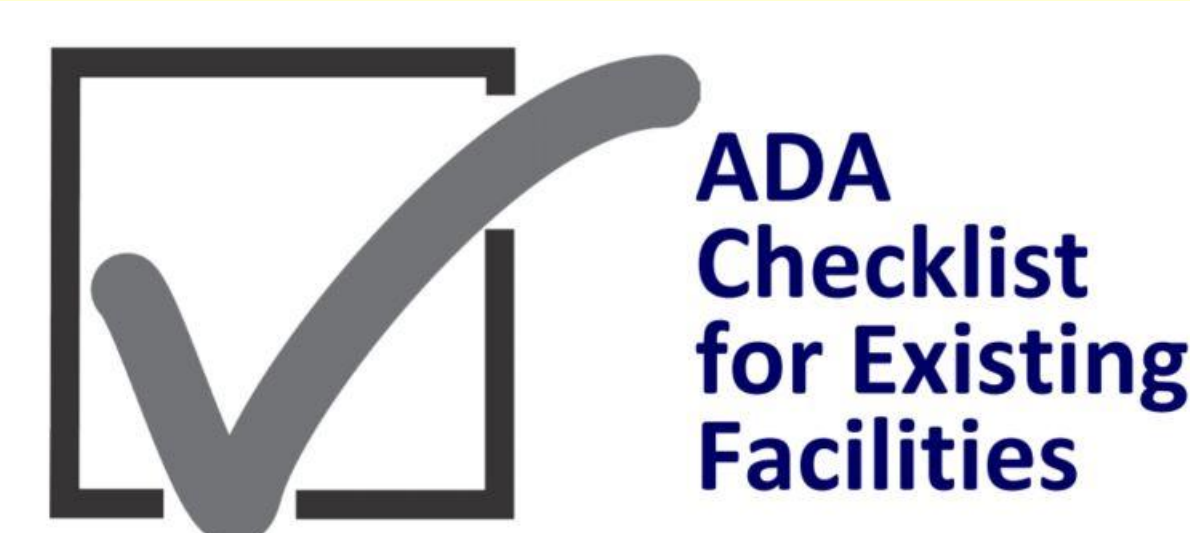
Common Barriers to Inclusion

- According to the [CDC](#), inclusion of people with disabilities into everyday activities involves practices and policies designed to identify and remove barriers.

Common barriers to inclusion in a garden setting	Strategies to address barriers to inclusion for an accessible garden
Attitudinal barriers include lack of awareness, stereotyping, stigma and not considering the social model of disability.	<ul style="list-style-type: none"> • Use person-first language (e.g. person with dementia) • Reduce stigma through community inclusion and education about dementia
Communication barriers such as written materials in small print with no braille version, lack of auditory messaging, & use of technical language.	<ul style="list-style-type: none"> • Ensure accessible signage with large font and simple language • Include multiple forms of visual communication and outreach
Physical barriers are structural obstacles in nature or manmade that prevent or block mobility or access to the environment.	<ul style="list-style-type: none"> • Provide an accessible entrance • Ensure access to garden beds with wide pathways and vertical/raised bed • Layout should be remove barriers to inclusion according to ADA guidelines
Programmatic barriers include inconvenient scheduling, lack of accessible equipment, and lack of awareness or enforcement of accessible laws and regulations.	<ul style="list-style-type: none"> • Include persons with dementia & their caregivers, family and loved ones in the design • Ensure programs and access to the site is communicated to all with convenient times • Provide accessible equipment such as tools, and water source
Transportation barriers such as a lack of accessible or convenient transportation, inconvenient distances, lack of ADA-accessible parking.	<ul style="list-style-type: none"> • Ensure access to garden (on bus route) • Location has accessible parking according to the ADA • Provide accessible route and enclosed, simple layout to the garden & garden beds

What are the ADA guidelines?

- The ADA guidelines provide a comprehensive list to support universal design and can be followed to create a garden environment that is safe and accessible for people with dementia, their caregivers, family members, and the community.



ADA Resources include:

- [2010 ADA Standards/ADA Regulations for Accessible Design](#)
- [ADA Checklist for Existing Facilities](#)
- [The Americans with Disabilities Act Checklist for Readily Achievable Barrier Removal](#)

Scaled Drawing of an Accessible Garden Design



- Specific design features for a dementia-friendly garden site: Ho'ola 'Āina Pilipili, at the College of Education, University of Hawai'i at Mānoa, Honolulu, Hawai'i. (Maunakea, S.)

Specific Design Features for an Inclusive Garden

- 1) The Accessible Entry to Project Site: The adjacent buildings' paved sidewalks provide unobstructed access to entering and exiting the project site.
- 2) Pathway to accessible restrooms, the ground will be covered with wheelchair accessible mat to create an enclosed layout. Ensure pathways are level, firm, and free of obstacles.
- 3) Raised wheelchair-accessible garden beds, with a recommended height of 24 to 32 inches (Dimensions 8 ft. long x 4 ft. wide x 2 ft. raised).
- 4) There will be bushes and perennial native medicinal plants planted at the site entrance along the paved pathways. There will be a variety of plants, vegetables, and herbs that are native, seasonal, and with a variety of colors, textures and scents.
- 5) Vertical container gardens for flowers that will attract butterflies, with various colors and scents to stimulate the senses. Avoid plants that are sharp or toxic.
- 6) Vertical trellis fencing to provide an enclosed garden space for safety, covered by climbing plants to serve as a natural barrier.
- 7) Fruit tree nursery for access to fresh fruits, vegetables, and medicinal plants for taste and to provide shade.
- 8) Wheelchair accessible pathway around the garden beds, at least 4 ft. wide, to ensure access for wheelchairs, walkers, and wheelbarrows.
- 9) Storage area with accessible tools, handwashing station and communication board and signage will have large print, accessible color contrast, and braille.
- 10) Seating area with shade to provide spaces to rest, relax, and enjoy nature and an area for interactive activities.

<p>Priority Area 1: Accessible Entrance ADA-accessible Parking, accessible route to entry, communication</p>
<p>Priority Area 2: Accessible Garden Beds Accessible pathways, ramps, raised garden beds & vertical gardening techniques</p>
<p>Priority Area 3: Safety Remove obstacles, enclosed layout, accessible tools, avoid sharp & toxic plants</p>
<p>Priority Area 4: Sensory Stimulation Hearing, Smell, Touch, Taste, Sight, Sense of self, community, place</p>
<p>Priority Area 5: Dementia-friendly Elements Gardens specifically designed to support the needs of people with dementia and their caregivers</p>

Sensory Elements

Touch

- Use plants with various textures, such as soft flowers, fuzzy leaves, rough bark, and smooth stones, that encourage participants to touch and compare the different plants. Provide accessible tools and water source.

Taste

- Include a wide variety of plants that are safe to eat, including fruits, vegetables, and herbs. Avoid toxic or poisonous plants.

Smell

- Plant fragrant flowers and herbs throughout the garden space to enhance the sense of smell, which can also trigger memories.

Sound

- For sound, incorporate features such as wind chimes, a water fountain (or a birdbath), use plants that attract winged creatures, listen for the wind blowing through the stems and leaves of plants and trees.

Sight

- Use visual cues and sight-driven elements, including accessible communication on signs. Enhance the garden with colorful plants and flowers, mirrors, and objects to trigger a memory. Create a balance between energizing colors and restful, soft colors to avoid overstimulation.

Additional Considerations

- Familiar items may be set up in the garden for memory. Adapt garden activities for inclusive participation. Include seating and shade in the layout for a safe place to rest and to promote social interaction and "space to get away".

Ho'ola 'Āina Pilipili- 'Dementia-Friendly' Community Garden



Creating a dementia-friendly garden will promote an accessible, usable, inclusive environment for people with dementia, their family members, caregivers, friends, and all in the community.

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Mahalo!