



Aging and Health Technology Watch

iN2L: Technology-enabled support and respite for dementia caregivers

Caring for a family member with dementia

Serving as a caregiver for a family member with dementia presents special challenges. Dementia care requires time, attention, physical effort, and emotional support—and these demands are known to impact the health and well-being of caregivers as well as care recipients. Dementia itself, even mild cognitive impairment, can produce anxiety, fear, and agitation that become especially acute at certain times of the day. While adult day centers and other support services have traditionally provided some caregiver relief, actual use of support services has never matched the level of need.

Dementia care can be emotionally and physically stressful. More than 5 million Americans have Alzheimer's disease or another dementia—a condition that places extraordinary demands on family members who are their caregivers. In fact, more than 16 million Americans provide an estimated 18 billion hours of unpaid care, and two-thirds of caregivers are women.¹ Compared with caregivers of people without dementia, twice as many caregivers of those with dementia indicate substantial emotional, financial, and physical difficulties.

About family caregivers

- **About 1 in 3 caregivers (30%) is age 65 or older.**
- **Approximately two-thirds of caregivers are women; more specifically, over one-third of dementia caregivers are daughters.**
- **Most caregivers (66%) live with the person with dementia in the community.**
- **Approximately one-quarter of dementia caregivers are “sandwich generation” caregivers—meaning that they care not only for an aging parent but also for children under age 18.**

Alzheimer's takes a devastating toll on caregivers. Compared with caregivers of people without dementia, twice as many caregivers of those with dementia indicate substantial emotional, financial, and physical difficulties.

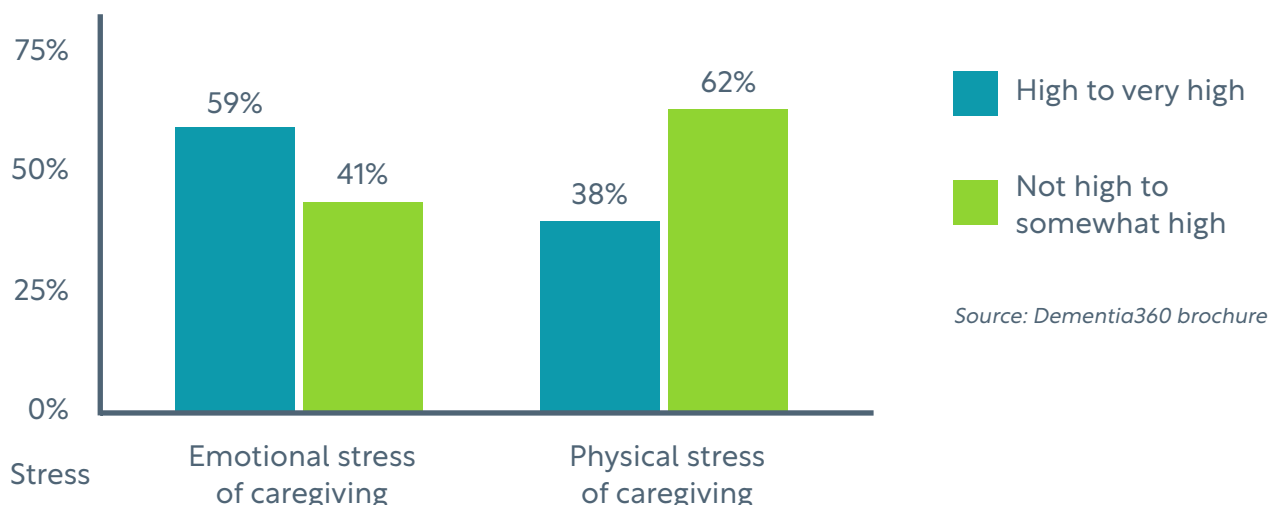
Of the total lifetime cost of caring for someone with dementia, 70% is borne by families—either through out-of-pocket health and long-term care expenses or from the value of unpaid care.

Source: Alzheimer's Disease Facts and Figures, 2021.

Dementia caregivers struggle with difficult work. Even without the classification of Alzheimer's, the caregiver alone with an individual who has dementia needs support for themselves—in addition to their family member. According to the 2020 Caregiving in the U.S. report, based on survey research conducted during 2019, respondents reinforced the difficulty of caring for someone with dementia and the impact on their own well-being.² Those caring for someone with memory problems provide more support for basic activities such as eating, bathing, dressing, and toileting (activities of daily living [ADLs]) than those caring for someone with a long-term or short-term physical condition. They also may be helping with financial and health management, driving, or shopping (instrumental activities of daily living [IADLs]). And the survey verified that providing this assistance to someone with dementia is more difficult work.

The role of caregiver can be an isolating experience. And that is in addition to the intensity and stress of caring for an individual living with dementia. Caregivers commonly experience the negative impacts associated with social isolation and loneliness. Studies have shown that as many as 40% to 70% of family caregivers may show signs of depression.³ Two-thirds of those surveyed by AARP Foundation in late 2020 reported heightened social isolation and anxiety. And aside from the emotional toll, the negative physical and mental health impacts of long-term social isolation are well-known and pervasive.⁴

Proportion of caregivers of people with Alzheimer's or other dementias who report high to very high emotional and physical stress due to caregiving



Offering dementia care recipients and family caregivers an in-home break

Surveyed caregivers underutilize services that could help them. The AARP and the National Alliance for Caregiving (NAC) 2020 Caregiving in the U.S. survey highlights a utilization gap between caregivers and resources potentially available to them. Surveyed caregivers recognized that some services and supports, like respite care, would be helpful to their own situation, though actual use of supports and services remains low. Just 14% of NAC responders report having used respite services, though 38% feel it would be helpful (up from 33% in 2015). For caregivers, the most common information and support needs are related to keeping their care recipient safe at home (26%) and managing their own stress (26%). With adult day and respite options diminished or eliminated during the pandemic, that stress undoubtedly grew.⁵

In addition to underutilizing respite services, caregivers did not indicate that technology played a key role as a caregiving tool. Only about half of caregivers in the NAC/AARP study reported using software or other technological tools to help them (53%). Only 6 in 10 caregivers reported going online to do something specific to help support the care they provide.⁵

Opportunities for purposeful and meaningful engagement and connection are critical. They matter to both caregiver and care recipient well-being but are often difficult to achieve in a home setting. For some families, keeping their loved ones at home is the best option, at least for a period of time. Achieving this objective could include obtaining additional support services from private-duty home care or home health care providers. However, caregivers can be the best option for the care recipient, especially in the early stages.

Caregivers are under a great deal of stress that comes from singlehandedly taking care of a person with dementia. And the isolation and lack of interaction outside the home can create stress for both caregivers and care recipients—who lack the peer support of senior living staff or interaction and connection with other dementia care families. Technology like the iN2L tablet can play a role in providing both engagement and connection, which can mitigate that stress.

iN2L powers dementia care support—which empowers the caregiver. iN2L’s content-driven engagement technology is a critical part of the resident experience in more than 3,700 nursing homes, assisted and independent living communities, CCRCs, life plan communities, memory care settings, and adult day programs across the U.S. and Canada. Use of this popular tablet in residential care settings is expanding to include in-home support. The iN2L tablet is part of the Dementia360 toolkit offered by the Presbyterian Senior Care Network—a provider of residential memory care services that offers in-home dementia care support as an alternative to their residential memory care options. They offer the tablet for in-home use in partnership with iN2L to enhance the dementia caregiving experience in several ways:

- **The tablet empowers the caregiver to fuel a care recipient’s days with purposeful engagement.** The iN2L tablet engages care recipients with more than 1,000 pieces of content—including games, puzzles, movies, and audiobooks—specially curated for seniors with varying levels of cognitive impairment. By using the content, caregivers can help reduce anxiety (suffered at some point by 80% of those with dementia, according to University of California at San Francisco researchers).⁶ iN2L content can also help relieve boredom, even when used by care recipients in the car or at medical appointments.
- **The tablet enables connection and more effective ways to interact.** Caregivers and recipients can use the tablet to initiate video calls with families and friends, who can also send photos, videos, and text messages from their own phones to the tablet, making them accessible for both the caregiver and care recipient to prompt reminiscence and support fellowship and relaxation.
- **The tablet can reduce isolation for the caregiver.** If offered as part of a broader home caregiving program, such as Dementia360, the tablet can be configured to include educational content and resources designed to support caregivers. Real-time sharing in peer group video calls (accessed from the tablet) further helps mitigate stress and allows caregivers to connect with other caregivers, as well as receive education and caregiving tips from supportive and knowledgeable care staff.

Caregiver spotlight

Area Agency on Aging of Broward County *Broward County, Florida*

A project with the Area Agency on Aging (AAA) of Broward County provides the iN2L tablet to increase client engagement, connection, and well-being, as well as decrease loneliness, feelings of depression and anxiety, and caregiver stress. iN2L tablets are currently being used by:

- **62** independent older adults living at home
- **67** individuals living with dementia and their family caregiver

Results

After only three months of using the iN2L tablet with their family member living with dementia, participating caregivers reported a 7-point decrease in their own feelings of loneliness. They also shared these perspectives on the iN2L tablet:

- **85%** strongly agree or agree that the iN2L tablet is easy to use with their family member with dementia
- **80%** strongly agree or agree that the iN2L tablet is another tool in their toolkit to engage their family member with dementia



In addition to Dementia360, other projects involving the use of the iN2L tablet as an in-home engagement and connection tool to support persons living with dementia and their caregivers are showing success in several areas that are critical to improving the experience for both care recipients and caregivers.

Four scenarios for caregiver use of the iN2L tablet

1. Maintaining cognitive abilities. Mrs. Smith, age 76 and a widow, has been living in her daughter Amy's home for the past few months. Mrs. Smith has grown increasingly frustrated with her inability to remember names, places, and family members.

How the iN2L tablet helps: Together, Mrs. Smith and her daughter enjoy using the tablet to peruse photo albums, naming each person as they go and sharing memories of that special time. Another favorite reminiscing activity is viewing slideshows and drone footage of Bethany Beach (a favorite family vacation spot). When they are not using the device for reminiscing, Amy encourages her mom to explore the tablet's rich selection of trivia and games. She enjoys the increasingly challenging games and is pleased with her progress. She also spends a lot of time working on the memory-focused HAPPYneuron activities.

"The user interface is much simpler. In particular, there are several games she really enjoys. She likes the puzzle app and has improved from simple to medium difficulty. She also enjoys using the Travel button, where she can view a lot of the places that we have visited together. It helps her recall her experiences."

2. Reducing confusion and restlessness. Elsie, age 75, has been caregiving for her brother, Bob, who is 80 and living with middle-stage Alzheimer's. She is exhausted and stressed out by the end of each day and wants to help Bob feel less anxious, especially during early morning and sundowning periods.

How the iN2L tablet helps: When Bob begins showing anxious behavior in the morning, Elsie uses the tablet to access a video about farming (marked as one of Bob's favorites). This particular video is relevant to Bob, as he and his wife had a small farm where he started his days very early tending to the animals. Bob immediately calms down, intently watching the animals in the video (sometimes on repeat), while Elsie goes about her morning tasks. His youngest daughter, who lives states away, sent a video to Bob from her cell phone, and it is saved in his personal album on the tablet. The routine of watching these videos is very comforting to Bob. Occasionally, instead of watching the video, Elsie uses the tablet to video call Bob's daughter.

"The tablet alleviates caregiver stress for me."



3. Providing distraction and calming during healthcare appointments. Samantha is a caregiver in need of more care herself. She has worsening arthritis and suffers from COPD. She lives with her aging mother, who can be anxious and irritable and needs to be better engaged while Samantha tends to her own health.

How the iN2L tablet helps: Samantha uses the tablet's "favoriting" capability to earmark some of her mother's most-loved content. During car rides to and from appointments, Samantha's mother can access these favorite items even while the tablet is not connected to WiFi. A lifelong bird watcher, she often peruses the slideshow of birds, or she might play solitaire or mahjong. During the appointment, her mother enjoys listening to a short story from the tablet's audiobook collection, using headphones to better focus. The tablet also helps prevent Samantha and her mother from too much disruptive travel related to appointments. For some of her mother's scheduled doctor appointments, Samantha uses the tablet's one-touch video call application to conduct the appointment as a telehealth visit. Samantha is also part of a special dementia care program, and she uses the tablet to connect with her peer support group and browse educational caregiver resources.

"The tablet has helped my mom and given me peace when she uses it."

4. Supporting ADLs. Margaret cares for her husband, James, who has dementia. He remains at home, despite the fact that both are in their mid-80s and James has worsening agitation. Both Margaret and the professional caregivers believe James would benefit from more engagement and distraction, enabling more hands-on care, including encouragement to eat.

How the iN2L tablet helps: Both Margaret and the home health aide utilize the tablet's therapeutic music playlists to support James in important daily activities. To help him remain focused and engaged during his morning routine of bathing and dressing, they use the tablet's Supportive Energy music to provide a tempo that encourages James' participation. James is a fan of jazz music, and the Classic Jazz supportive playlist is just the thing to get his day started off successfully. During each mealtime, Margaret or the aide switches to an appropriate Dining playlist, which encourages James to relax and focus on eating. Margaret also dedicates time each day in James' routine for relaxing with the tablet, so that he is not sitting idly or bored. They enjoy browsing the tablet's many slideshows together; James particularly enjoys checking out the Motorcycles and Automobiles.

"It's relaxing; it keeps us focused and engaged. The tablet layout and how you navigate content is perfect; very easy for both of us and not frustrating at all. I wish we would have had this tablet earlier; it makes everything easier. It's been a godsend; it helps put structure in our day. I have high praises for this—it's a stroke of genius for Alzheimer's patients and their caregivers, because it's respite care."



About the iN2L tablet

iN2L takes the guesswork out of selecting technology that best meets the needs of older adults living with dementia and their caregivers. The iN2L tablet is a digital care package for older adults, offering the ultimate personalized connection and engagement experience with an easy-to-use interface, senior-friendly connection tools, and an expansive content library curated specifically for senior adults that supports endless hours of enjoyment.



- Specially designed for seniors with simple picture-based screen layouts, easy navigation prompts, large font, and more
- Easy social connection features to enable seniors and their caregivers to video call family and friends, attend telehealth visits, and enjoy photo and message sharing
- Purposeful engagement content created specifically to help older adults with cognitive decline support learning, reminiscing, enjoyment, spirituality, and wellness, that is pre-loaded on the tablet, and regularly refreshed by iN2L
- A truly personalized experience including a tablet homepage customized for each user that offers centralized access to personal photos, contacts, and messages and the ability to save favorite content items



Bring the power of connection and engagement to older adults living with dementia and their caregivers. For more information on using the iN2L tablet as a caregiving tool, please visit lifeloop.com

Sources:

1. Alzheimer's Association, Alzheimer's Disease Facts and Figures, 2021.
2. AARP and National Alliance for Caregiving, Caregiving in the U.S.: 2020 Report, May 2020.
3. Family Caregiver Alliance, "Caregiver Statistics: Health, Technology, and Caregiving Resources," accessed August 12, 2021.
4. Michelle R. Davis, "Pandemic Has Created Loneliness Epidemic, New Report Shows," AARP, Oct. 8, 2020.
5. AARP and National Alliance for Caregiving, Caregiving in the U.S.: 2020 Report, May 2020.
6. Mary-Ellen Deily, "Anxiety complicates life for dementia patients — and their caregivers," Washington Post, August 10, 2019.