

CASE STUDY



Advocating for People with Developmental Disabilities

Noah Homes: Memory Care Homes

Noah Homes / HomeAid San Diego
Spring Valley, CA

Project Open: January 2017

Building Area: (2) 5,000 sqft
memory care home facilities

Number of Beds: 20
(10 per home)

Project Cost: \$6.7 Million

2017 Gold Nugget Grand Award,
Best Service-enriched Senior
Community, IL/AL/Memory Care

EXECUTIVE SUMMARY

Individuals with Down syndrome face an unprecedented need for specialized memory care as high rates of Alzheimer's disease and dementia amongst these individuals follow an increased life expectancy in recent decades. Noah Homes, a nonprofit providing residential services and opportunities to adults with special needs, and HomeAid San Diego, a nonprofit that supports organizations that provide housing services by helping them leverage in-kind donations of professional services and building materials, partnered to create and implement a best practices model for special needs memory care in response to this new issue.

The first of their kind in the nation, these innovative memory care homes are specifically designed for people with developmental disabilities.

CHALLENGES

When Noah Homes opened their doors in 1983 to provide supportive living in a residential environment for individuals with developmental disabilities, predominately Down syndrome, the life expectancy for such individuals was only 25 years. Thanks to medical care advancements over the years, the life expectancy is now more than 60 as individuals with Down syndrome are leading longer, fuller lives than ever before. However, this also means that for the first time they are experiencing age-related complications, specifically high rates of Alzheimer's disease and dementia-related memory issues. Recent research links the same genetic anomaly connected to Down syndrome to Alzheimer's disease, and as a result, **the rate of Alzheimer's disease in individuals with Down syndrome over the age of 65 is six times higher than the rate in the general population.**

This challenged Noah Homes to meet the unique care needs of residents with progressive age-related complications as they found their homes to be ill-suited to do so. Unfortunately, this led to the eventual transfer of one of their first residents to succumb to Alzheimer's disease to a facility that, while from a medical perspective was better equipped than Noah Homes, was understaffed and undertrained for the special needs of Noah Homes residents. According to a U.S. Department of Health and Human Services study, one-quarter of assisted living communities have a ratio of one Personal Care Assistant for each 23 or more residents, whereas Noah Homes maintains a staff to resident ratio of one to four (illustrated below). Furthermore, it exacerbated the resident's confusion to spend his final days in an unfamiliar environment surrounded by unfamiliar

people. Noah Homes needed a solution to this new, urgent and growing need for not only their residents, but many others among the larger community.

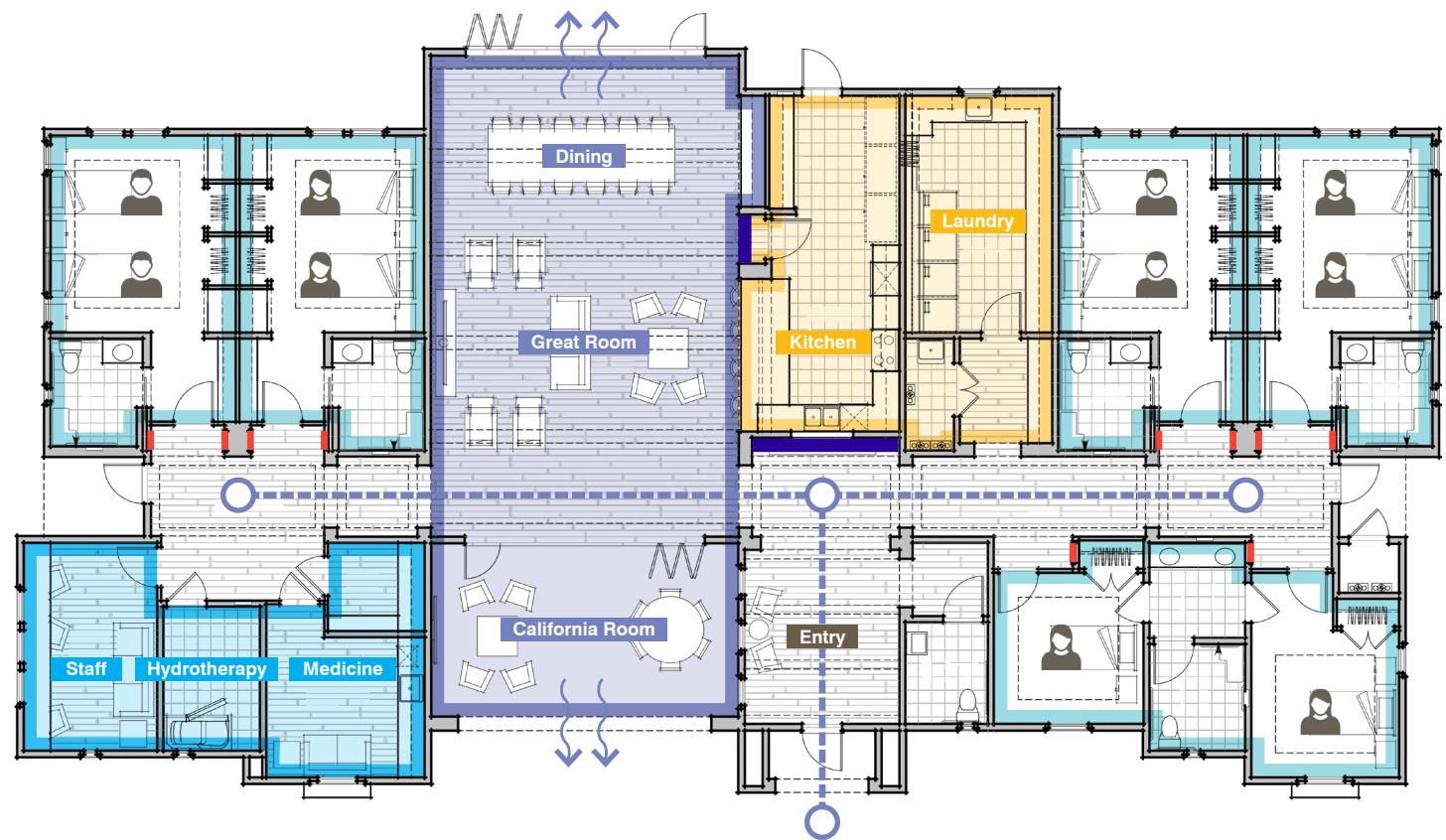
"Almost all people with Down syndrome will develop Alzheimer's as they live into their 60s, starting as early as their 40s, and yet there were no homes specialized for their needs as age-related illnesses like dementia and Alzheimer's have only recently affected the population of adults with developmental disabilities."

Molly Nocon, CEO, Noah Homes



Staff Ratios at Assisted Living Communities across the U.S.





Memory Care Home

■ Community Living
 ■ Kitchen / Laundry
 ■ Health + Wellness
 Bed / Bath

HOW DAHLIN HELPED

Rallied by HomeAid San Diego, DAHLIN joined over 60 community partners donating professional services and materials to design and build two new memory care specific homes for Noah Homes. DAHLIN's design intent was rooted in the vision to design homes, as opposed to institutional residences, that enhance residents' quality of life from the first signs of memory issues to their last moments.

"When I walk anybody into a house, I want them to know this is a *home* and not an institution. DAHLIN completely understood this and infused every detail with a sense of home."

Molly Nocon, CEO, Noah Homes

Understanding the brain's cognitive map of its environment when faced with memory loss.

DAHLIN integrated our passion and experience in residential design with the expertise and latest memory care research of Noah Homes' research partners, the National Task Group on Intellectual Disabilities and Dementia, UC San Diego Down Syndrome Center, and Alzheimer's San Diego, into every design detail.

Accordingly, the use of color in the design incorporates insights from studies that show the strategic use of specific colors helps residents to orient themselves within their environment and better perform daily functions. For example, to maximize awareness and orientation, key points of entry and transition like the entry hallway of each home and access to the kitchen, are color-blocked with a contrasting hue.

- Color-blocked Wall
- Memory Box
- - - Well-lit Corridors and Spaces



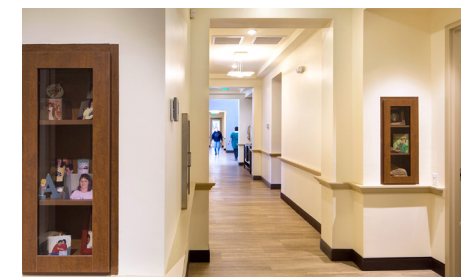
Each single- and double-occupancy bedroom also has dedicated bathrooms that feature the use of grey tiles on the wall behind the toilets. The bathrooms feature easy wheelchair maneuverability due to their spaciousness and curbless showers, while the bedrooms include personal desk and closet space, ceiling fans, and outstanding views of either the surrounding hills or the beautifully landscaped grounds.



The inclusion of personalized space to address their specific memory care needs extends outside of the bedrooms into the hall with memory care boxes by each door that residents can personalize as they please.

Providing positive sensory stimulation and calming.

Access to natural light and to well-lit interior spaces is important in minimizing the distress and confusion of residents. Thus, even and consistent lighting is provided throughout the homes to eliminate dark spots and ease navigation. In addition to bedrooms with window views that are more likely to promote positive stimulation and memories, bedroom ceilings have dimmable ambient LED cove lighting to help residents prepare to sleep at nighttime.



Each home also features a hydrotherapy room designed to provide therapy in a spa-like setting. This not only eases physical discomfort, it is also mentally and emotionally calming. The room includes a jetted tub specialized for accessibility, dimmable ambient cove lighting in the ceiling, and an area heating unit that controls room humidity. It will be fragranced and play soothing music, adding the final touches for a true spa experience.



Sustainable Design

These innovative memory care homes designed by DAHLIN for Noah Homes integrate state-of-the-art technology to achieve a sustainable design that meets California's Title 24 energy efficiency standards. This has been achieved with:

High-efficiency LED fixtures inside and out

R-19 walls and R-30 roof/attic insulation and radiant barriers

Solar energy

Low U-factor

Double-tinted Milgard windows and insulated exterior doors

High-efficiency tankless water heaters

SolaTube natural lighting

Energy Star appliances







LPG-fueled appliances

Split HVAC system with a two-stage compressor, variable-speed motor, and Infinity Controller

Additionally, the project features drought-tolerant landscaping with low-voltage lighting and a low-flow, drip irrigation system with self-sufficient well water that will not require County water usage. The landscape design integrates four efficient and elaborate bio-retention water basins, or swales, to capture and filter rainwater runoff.



Noah Homes Site Plan

-  Gerard Circle (pick-up/drop-off)
-  Gating
-  Shared Courtyard
-  Memory Care Home
-  Existing Home
-  Noah Homes Admin/Office

Encouraging safe wandering in an environment that feels like home.

Adapting residential design elements, each home features its own spacious Great Room with high ceilings that open into California Rooms via NanaWall glass doors. The California Rooms flow into a shared courtyard and one of the homes has additional NanaWall glass doors that open onto a trellised patio that looks over Noah Homes' 11-acre oasis and the scenic mountain range beyond.

In creating an indoor/outdoor experience, safety of the residents was an important issue that DAHLIN addressed through the integration of other specific memory care features, including motion sensors, gating, and infinity pathways that do not terminate in 90-degree directional changes. This ensures a safe path of travel and prevents residents from getting lost or feeling confused. Additionally, the use of silent alarms and other medical features hidden from sight ensure safety and preserve the aesthetic of beautifully designed residences that feel like homes and not like a medical facility.



According to Family Caregiving Alliance, 29 percent of the U.S. adult population is providing care to someone who is ill, disabled or aged. This number is expected to grow as the population of those 65+ will more than double between 2000 and 2030.



"This is my life and I'm staying here."

Patrick Glancy, 50 years old, Noah Homes resident



RESULTS AND FUTURE PLANS

Opened to residents in January 2017, these are the first two memory care homes in California, possibly the nation, dedicated to providing memory care to individuals with special needs, and represent a best practice model for other organizations. They boast a staff to resident ratio of one to four (or less) and include state-of-the-art technology, access to national research, and opportunities for residents to participate in groundbreaking new techniques to fight Alzheimer's, dementia, and other aging struggles. Through replication by other organizations throughout California and across the nation, the hope is to alleviate the burden of the 15.5 million caregivers who provided an estimated 17.7 billion hours of unpaid care, valued at more than \$220 billion in 2013.

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