



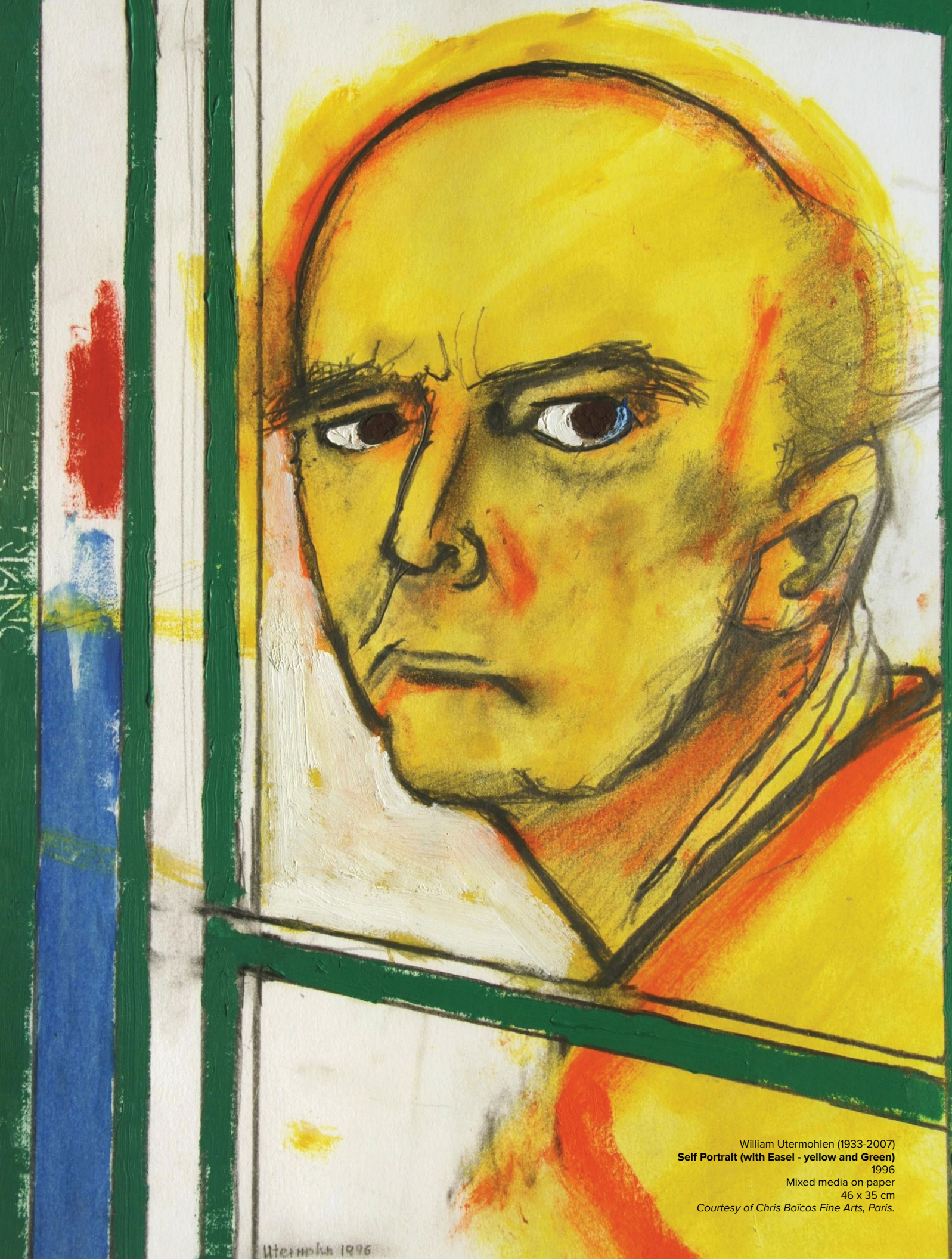
Senior Living Innovation Series: Memory Care

EXECUTIVE MEMBER REPORT

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William Utermohlen (1933-2007)
Self Portrait (with Easel - yellow and Green)
1996

Mixed media on paper
46 x 35 cm
Courtesy of Chris Boicos Fine Arts, Paris.

Утермолен 1996

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About the Artist in this Report

In 1995, at the age of 61, American artist William Utermohlen was diagnosed with Alzheimer's disease. Over the next five years, he painted a series of self-portraits. The paintings starkly reveal his descent into dementia, as his world began to tilt, perspectives flattened and details melted away.

EXECUTIVE SUMMARY

Research for the Argentum Memory Care Innovation White Paper began in January 2016 after a nationwide listening tour exposed five distinct imperatives within the senior living industry over the next ten years. Memory Care is among those five: Advancing best practices in the care of residents with dementia must be a priority for the industry.

This paper is intended to support industry efforts to promote innovative practices that enhance the quality of care for those living with dementia. It identifies innovations in the areas of nutrition and dining, programming, environmental design, staff training, and technology, each being categorized as transformational, breakthrough, or incremental. Several tried and true programs with a history of success are also described.

INTRODUCTION

Senior living communities are a primary provider of residential care for older adults living with dementia. According to the Center for Disease Control's National Center for Health Statistics, approximately 334,000 residents—or seven out of ten—live with Alzheimer's or some form of dementia: 29 percent with mild impairment; 23 percent with moderate impairment; and 19 percent with severe impairment. Data from the Alzheimer's Association reveals that about 5.4 million people in the United States have Alzheimer's disease, an estimated 5.2 million of whom are 65 or older. By 2050, the number of older adults with the disease will nearly triple from 5.2 million to a projected 13.8 million.

Just 10 percent of the more than 30,000 residential care communities are exclusively designed for those living with dementia; another 12 percent dedicate certain areas to dementia care. Yet as the population of those affected continues to grow, all assisted living communities must be prepared to serve residents experiencing cognitive impairments.

Many communities across the country have found innovative ways to help those with Alzheimer's and other forms of impairment enjoy cognitively engaging lives. While successful existing programs can continue to be improved, innovative approaches also must be disseminated in hopes of ever enhancing memory care. Tried and true techniques coupled with cutting-edge strategies can ameliorate dementia symptoms, increase comfort, improve socialization, and better the lives of seniors while improving the wellbeing of all those involved in the care of individuals living with dementia.

METHODOLOGY

To identify innovations in the United States and around the globe, members of Argentum's Memory Care Roundtable reviewed three types of sources: the scholarly and "grey" literature; an online survey of Argentum members; and the expertise of Cognitive Solutions Associates.

Defining innovation posed some challenges. Many programs described as innovative by providers were deemed "tried and true" by the Argentum Memory Care Roundtable which is made up of memory care experts. Such programs may have seemed novel within a particular community, but not within a larger context. Many programs that were considered innovative originate outside the United States; such strategies may be better known in their place of origin, but have yet to become widespread here. Geographic location, access to information, and the availability of resources influence what might be regarded as innovative and by whom.

Ultimately, 39 programs and practices, mostly innovative but some tried and true, are described below. Each innovation was evaluated and sorted by Memory Care Roundtable members according to the following categories:

- » **Incremental:** Innovations that enhance existing programs
- » **Breakthrough:** Innovations that open new markets and offer new advantages
- » **Transformational:** Innovations that change lives

While novel, many of the innovations detailed below are evidence-based, while for others, research may yet be emerging. Tried and true programs, in contrast, boast a significant record of success through widespread and longstanding adoption.

LIMITATIONS

Innovation is, by definition, ever evolving, and these results represent but a moment in time. This white paper is only the first step in a multi-phase project. The second phase will suggest how providers might replicate the success of these programs.

CONTEXTS TO CONSIDER

Caring for people with memory impairment is not a new challenge within the senior living industry. Yet the approach to care has changed over the past 30 years, establishing a historical context for understanding innovation. At one time, for example, "reality orientation" was considered a best practice, with activity directors constantly reminding people of the day, date, and year. When it was realized that no amount of repetition would improve memory, caregivers adopted a more person-centered philosophy, allowing each individual to live in his or her own "present." Person-centered care now seems like an obvious, commonsense approach, but was once a true breakthrough. Today, person-centered care serves as the foundation for the innovations featured here.

Legal and regulatory contexts also can promote or constrain innovation. Authorities may doubt the efficacy or value of an innovation, thereby dampening enthusiasm for new approaches or even blocking the possibilities of financial compensation. In addition, the corporate context may impact innovation through the privileging of an established brand identity over the creative application of new programs or the satisfying of management expectations rather than risking the uncertain returns of innovation.

Innovation may flag in the context of the current health care environment and its attachment to "evidence-based" strategies of care. Innovation requires a willingness to experiment and the patience to wait for evidence to emerge.



William Utermohlen (1933-2007)

Self Portrait (Red)

1996

Mixed media on paper

46.5 x 33

Courtesy of Chris Boicos Fine Arts, Paris.

PROGRAMMING INNOVATIONS

TRANSFORMATIONAL

Innovations that change lives

YOUNGER-ONSET MEMORY CARE RESIDENTIAL PROGRAM

Sunrise Senior Living, McLean, VA | sunriseseniorliving.com

Sunrise Senior Living's Younger-Onset Memory Care Program provides welcoming, cognitively appropriate, beneficial environments for those with early-onset dementia. The program helps residents learn more about their condition, seek vital support, and continue to live vibrant, healthy lives as independently as possible. Individualized service plans reflect each individual resident's interests and needs; programming might feature such cognitively stimulating, developmentally beneficial activities as book clubs, concerts, arts programs, or cultural events along with exercise and physical activity options. Sunrise also facilitates the participation of younger residents in events for the wider community, giving them plenty of opportunities to leave home. The program features integrated support groups and other activities for residents and their family members. The goal of the specially designed and designated neighborhoods for younger residents with memory loss is to provide a personalized, age-appropriate environment that helps residents maintain their identities.

REFLECTIONS: THE NASHER MUSEUM ALZHEIMER'S PROGRAM

Nasher Museum of Art at Duke University, Durham, NC | nasher.duke.edu

The Nasher Museum Alzheimer's Program engages guests with musical performances, hands-on art experiences, and guided discussions about art. Inaugurated in 2014, Reflections is based on Meet Me at MoMA, the New York Museum of Modern Art's monthly program featuring tours and art-related activities for dementia sufferers and their caregivers. Researchers have studied Meet Me at MoMA using self-assessments, observer assessments, and take-home evaluations; results documented improved self-esteem among participants with dementia. Caregivers also reported feeling closer to others and so expanded their essential network of support.

The program takes advantage of its university setting, uniting community members, medical researchers, practitioners, museum professionals, university faculty members, and students. Reflections includes educational programs about memory loss research and care. The Nasher Museum of Art at Duke University also partners with the Duke Family Support Program.

BREAKTHROUGH

Innovations that open new markets and offer new advantages

HOUSE OF SAINT HILARION OF SEATON

The House of St. Hilarion, Seaton, South Australia | sainthilarion.asn.au

The Wellness Team at the House of Saint Hilarion of Seaton in Seaton, Australia provides a wide range of innovative programs for memory unit clients. The team has created multi-sensory cooking classes, offered a chair-based yoga practice, designed a smart-card operated gym, built an onsite organic farm, and taught sensory craft activities. Other programs include positive psychology, cognitive stimulation therapy, and a manual-handling program.

The program generated an 81 percent reduction in challenging behaviors and an 89 percent reduction in staff injury rates. Survey results revealed a 30 percent increase in lifestyle satisfaction among residents.

LIFE'S A STAGE: THE SCRIPTED IMPROV PROJECT

Hearthstone Alzheimer Care, Woburn, MA | scriptedimprov.com

The Scripted-IMPROV™ Drama Program was developed by Hearthstone's Research Division as part of a two-year clinical trial funded by the National Institutes of Health and the National Institute on Aging. The Scripted IMPROV Project is an interactive, semi-scripted improvisational theater experience that has been specifically designed to be engaging and interesting to people living with dementia. The project incorporates research-based facilitation and communication techniques appropriate for those with memory challenges. Funded by the National Institute on Aging, the project is among the first and largest Phase 2 Clinical Trials of a major non-drug intervention for Alzheimer's and related dementias. Positive effects on improved quality of life, lowered anxiety, and increased active engagement have been documented.

MUSIC AND MEMORY

Music and Memory, Mineola, NY | musicandmemory.org

MUSIC & MEMORY™ is a non-profit organization that brings music into the lives of the elderly or infirm through digital music technology, vastly improving quality of life. Nursing home staff and other elder care professionals, as well as family caregivers, are trained to create and provide personalized playlists using iPods and related digital audio systems, enabling those living with Alzheimer's, dementia, and other cognitive and physical challenges to reconnect with the world through music-triggered memories.

In 2014, researchers at the University of Wisconsin-Milwaukee studied 1,500 people living in senior communities who were using the technique. Those residents were compared to an equal number of seniors not involved with the program. Researchers tracked the music residents chose, and how often they listened; residents were also observed at randomly selected times. Results are forthcoming.

The program has garnered national attention thanks to the 2012 documentary, *Alive Inside: A Story of Music and Memory*. The film was screened at the Sundance Festival in 2014 and won the Audience Award for U.S. Documentaries. In 2013, the Wisconsin Department of Health Services launched the Music & Memory Initiative, and other states have since followed in Wisconsin's footsteps.

JAVA MUSIC CLUB

Java Group Programs, Toronto, Ontario, Canada | javamusicclub.com

This unique peer-support program addresses the critical rates of loneliness and depression among seniors in long-term care. The Java Music Club is a research-based wellness program for people living with mild to moderate cognitive changes that has been adopted by more than 500 organizations in the United States and Canada, including long-term care facilities, assisted living and retirement homes, adult day centers, and community support centers. Weekly discussion groups meet to develop themes and assemble theme-associated music, readings, and photographs. Existing recreation staff can easily implement the program; no musical training is required.

The program has been the subject of multiple studies, including a mixed-methods qualitative process evaluation design that encompassed focus groups, the systematic observation of 65 residents in British Columbia, Canada, and interviews with staff members. Residents reported decreased loneliness, increased coping skills, stronger friendships, and a greater sense of support. Participating staff described how the unique group structure fosters active participation among residents with moderate to severe cognitive impairment. The study suggests that mutual support groups have potential to offset loneliness, helplessness, and depression within long-term care communities.

THE ALZHEIMER'S POETRY PROJECT

Alzheimer's Poetry Project, Brooklyn, NY | alzpoetry.com

The Alzheimer's Poetry Project is a nonprofit that works to improve the quality of life of people living with Alzheimer's disease and related dementia by facilitating creative expression through poetry. Some remember poems from their past (including songs) well enough to recite them. The program also provides social outings for participants, giving them the opportunity to enjoy time with people in similar situations. In addition to improving quality of life for residents, a study also showed the program improved medical students' interactions with those living with dementia. Students involved in the study progressed from seeing the dementia participants negatively to seeing them as funny, cheerful, and "still human beings."

Gary Glazner, the founder and Executive Director of the Alzheimer's Poetry Project has written the book, *Dementia Arts: Celebrating Creativity in Eldercare* (Health Professionals Press, 2014). The book can serve as a guide for healthcare professionals interested in using non-pharmaceutical interventions to improve the quality of life of people living with dementia and their relationships with caregivers.

A paper was submitted in December 2009 by Lynn Green to the School of Graduate Nursing at Wesleyan University in Marion, Indiana. This paper takes the Alzheimer's Poetry Project (APP) as its subject and is the first formal research into their performance and writing techniques. The APP is involved in research to better understand how non-pharmaceutical interventions may improve the quality of life of people living with dementia.

INCREMENTAL

Innovations that enhance existing programs

CREATIVE WRITING IN COMMUNITIES

USA and Canada

Creative writing and a robust program of arts activities can help develop individual aspirations and personal connections within dementia friendly communities. Cultural venues can and should improve inclusion, while communities of those affected by cognitive decline can benefit from the creative process—results aside. Focus should fall on participatory practice, with adaptable creative writing, music, and art activities available to people with dementia.

Evidence from the CECD Creativity Celebration in Vancouver, for example, reveals the calm and concentration that creative activities can promote in people with dementia. By making better use of professional, local writers and artists, backed up with training for emerging artists and local care staff, people with dementia can become more involved as members of a creative community.

MUSIC IN MIND PROJECTS

Manchester Camerata Orchestra, Manchester, England | manchestercamerata.co.uk

Manchester Camerata orchestra's Music in Mind (MIM) projects, which involved 7,200 people in care homes and community projects across Greater Manchester in 2015, had such dramatic effects on participants that academics at Manchester and Lancaster universities are backing a research student to create the world's first in-the-moment, multi-sensory assessment tool to quantify that effect. Camerata's projects, led by a professional music therapist and specially trained musicians from the orchestra, involve working directly with patients with degenerative brain disease. They are encouraged to sing, play instruments, create music, and even to perform in public.

COMFORT MATTERS BY BEATITUDES

Beatitudes Campus, Phoenix AZ | beatitudescampus.org

Beatitudes Campus is improving care practices for persons at early, moderate, and advanced stages of dementia. This training, education, and research program for caregivers, patients, and families aims to create a model program of best practices, improving quality of care and quality of life for persons with dementia. Successes with the person-directed and staff-empowered approaches led the researchers to work with colleagues in other organizations who were also successful.

No sedatives are given, and the average number of medications given per person is less than five. The rate of unavoidable weight loss annually is 1 percent. Hospital utilization is under 3 percent, and emergency department utilization is less than 2 percent. Staff turnover has been eliminated, and families are more satisfied. Costs have shown no appreciable increase and in some cases have decreased.

FOOT REFLEXOLOGY**Prairie Senior Cottages, Minnetonka, MN | prairieseniorcottages.com**

Reflexology is thought to be especially beneficial for older people dealing with complex and chronic conditions, such as pain, anxiety, and depression, as well as for end-of-life palliative care. This experimental, repeated-measures, crossover design study with nursing home residents examined the efficacy of reflexology in individuals with mild-to-moderate stage dementia. Specifically, the study tested whether a weekly reflexology intervention reduced physiologic distress, reduced pain, and improved affect among residents. The study was conducted at a large nursing home in suburban Philadelphia and included 21 nursing home residents with mild-to-moderate stage dementia randomly assigned to two groups. The first group received 4 weeks of weekly reflexology treatments followed by 4 weeks of a control condition of friendly visits. The second group received 4 weeks of friendly visits followed by 4 weeks of weekly reflexology. Findings demonstrate that when receiving the reflexology treatment condition, as compared to the control condition, residents demonstrated significant reduction in observed pain and salivary alpha-amylase. This study provides preliminary support for the efficacy of reflexology as a treatment of stress in nursing home residents with mild-to-moderate stage dementia.

BAYCREST'S MEMORY AND AGING**Baycrest Health Sciences, Toronto, Ontario, Canada | baycrest.org**

The Memory and Aging Program is an education and intervention program for older adults experiencing normal age-related memory changes. Through instructor-led discussions, in-class exercises, and evidence-based strategies, participants gain a better understanding of how memory works and acquire tools to better manage their memory function. This five-week program has been offered at Baycrest Health Sciences since 1997, and over 900 individuals have participated to date. The program provides education about different types of memory, memory processes, and how memory normally changes with age. Participants learn about a memory-healthy lifestyle, including factors that affect memory, and find support for making positive behavior changes. Memory training involves instruction in practical memory aids and strategies, practice using the strategies, and discussion.

JAVA MENTORSHIP PROGRAM**Java Group Programs, Toronto, Ontario, Canada | javamusicclub.org**

The Java Mentorship Program offers a way for seniors to play a more active role, as “mentors,” in helping others within their community—whether within a care home or retirement home, an assisted living residence, or out in their own neighborhoods. The mentorship program focuses on those who are lonely or isolated, reaching out especially to those who don’t normally participate or have refused invitations to come to programs. Trained staff set up a specific structure that initiates interested participants as “mentors,” then provides guidelines that support them in their outreach efforts. The structured program also allows those with cognitive impairment to participate (with assistance), even within special or secured care settings. The purpose of the Java Mentorship Program is to empower others, enabling them to use their own wisdom, experience, and skills. Research indicates reaching out to help others improves mental, emotional, and physical health, reduces loneliness and depression, and renews a sense of belonging.

NAMASTE CARE

Namaste Care, founded in Bennington, VT | namastecare.com

Namaste Care™ was originally designed for residents in nursing homes with advanced dementia who were not able to actively participate in other programs. Now it can be found in assisted living communities and hospice organizations worldwide. Namaste Care is based on the power of loving touch and provides compassionate, end-of-life care. Research reveals that although management disruption occurred across all care homes adopting Namaste Care, the program helped reduce the severity of behavioral symptoms, pain, and occupational disruptiveness. In care homes with strong leadership, adequate staffing, proficient nursing, and good medical care, Namaste Care can improve quality of life for people with advanced dementia by decreasing behavioral symptoms. *The End-of-Life Namaste Care Program for People with Dementia*, published by Health Professions Press, is in its second edition published in May 2013.

TRIED & TRUE

Well-known programs with significant data, widespread adoption, and positive results

MONTESSORI-BASED PROGRAMS

Montesson, founded in Rome, Italy

Montessori activities, based on the principles developed by Maria Montessori, involve the teaching of cognitive, social, and functional skills to participants, breaking down tasks into steps that progress from simple to complex and from concrete to abstract. Historically, these methods have been applied in the context of early childhood education, but more recently have found success within the older adult population, notably for people with dementia. Montessori methods have been developed and implemented within long-term care settings and within the adult day care environment. The evolution of the Montessori method in the adult day care setting is an example of an appropriate fit between the person and his or her environment. Adult day programs emphasize daily routine through activities and socialization; likewise, Montessori methods emphasize the fit between the activity and the person's ability level.

A study of a Montessori program in the District of Columbia involved seniors attending four adult day centers at least three days a week. The participants gathered as groups and spent approximately one hour in each session using “cognitively stimulating” items in their shoe-boxed size activity kits. A research paper on the project identified the kit items as reflecting five areas of functioning: cognitive stimulation, life skills, motor movement and fitness, sensory stimulation, and socialization. Kits included items they could arrange or use to reminisce such as dominoes, number tiles, or multi-colored poker chips. Other kits contained baby clothes or yarn, among other items. There were also dice for rolling, slinky spring toys, and opportunities to arrange flowers or find items in Cheerios. One participant who began the study easily agitated and largely passively watching the activities eventually became engaged in the program. A shy participant grew more expressive. Several women in the group began calling themselves “the ladies who laugh a lot,” demonstrating their enjoyment of the program.

TIMESLIPS CREATIVE STORYTELLING**TimeSlips, Milwaukee, WI | timeslips.org**

TimeSlips is a creative expression program that encourages residents living with middle and end-stage dementia to create stories in group sessions with their peers. TimeSlips creates failure-free experiences: Because participants are creating stories, they need not rely on their failing memories. The program leads residents in engaging socially and using verbal skills. Providers have reported positive behavioral changes among staff and residents.

Volunteers or staff members lead the weekly sessions, each time following a very structured format. Each session begins with a facilitator giving storytellers name tags and repeating the rules. Facilitators tell the story from the previous week, reminding the storytelling residents of the group's structure. Facilitators show a staged picture and ask what's happening. They follow with open-ended questions, including asking about sounds and feelings that might be involved in the picture or story. Facilitators record the answers, writing them on large sheets of paper. To keep residents engaged, the facilitator periodically rereads the story they are creating.

Interviews with faculty and staff involved in an 18-week program demonstrated positive changes, including increased communication, more sociability, and less confusion. Residents in the program also initiated conversations more frequently. Another study involved 20 randomly assigned nursing homes in two states. Half were in the control group and half were in the intervention group. Residents at the intervention communities were more engaged and alert. Staff at intervention sites were reported to be less likely to devalue residents.



William Utermohlen (1933-2007)
Self Portrait with Saw
1997
Oil on canvas
35.5 x 35.5
Courtesy of Chris Boicos Fine Arts, Paris.

ENVIRONMENTAL DESIGN INNOVATIONS

TRANSFORMATIONAL

Innovations that change lives

INTERGENERATIONAL LIVING

Humanitas retirement home in Deventer, The Netherlands. Similar models exist in Lyons, France and Cleveland, Ohio at Judson Retirement Communities. | humanitasdeventer.nl

Humanitas Retirement Home has been experimenting with resolving the issue of preventing isolation and loneliness and utilizing all of their available space. In Deventer, the Netherlands, university students pay no rent in exchange for spending 30 hours a month of quality time with their 160 older housemates. Intergenerational living promotes awareness among the younger generation about aging, deters social isolation, and makes efficient use of space and resources. Faculty and students report that partnership activities provide excellent opportunities for increasing the understanding of aging and older adults. Residents report social, recreational, and educational benefits.

IBASHO

Ibasho; Japan, Nepal, Singapore, Philippines | ibasho.org

Ibasho, meaning “a place where you can feel like yourself,” promotes the value of socially integrating elders and demonstrates the multi-generational social, economic, and environmental benefits of such a community in traditional, developing, and modern societies. Partnering with local organizations and communities, Ibasho designs and creates socially integrated and sustainable communities that value their elders.

Ibasho partners with groups that are interested in creating communities aligned with Ibasho’s values, which include viewing elders as resources rather than liabilities, empowering elders as “change agents” within their communities, enabling elders to “care for” younger generations, rather than being “cared for.” Ibasho provides flexible services to meet the needs of clients, ranging from consultations, assembling teams of experts, to project development, and training of operators and caregivers.

The Ibasho Café is both a physical and social infrastructure with elders in a leadership role. Elders who manage IBasho have organized various events to educate children about local culture, offering cooking demonstrations, making holiday decorations, and hosting traditional festivals. Ibasho Cafés facilitate true friendships in an informal, multigenerational, community setting.

BREAKTHROUGH

Innovations that open new markets and offer new advantages

ART GALLERY IN A WANDERING PATH

“Margherita” Day Center for Alzheimer’s disease in Fano, Italy | wylldementia.org

A permanent art gallery has been created as an integral part of the “Margherita” day center for Alzheimer’s disease in Fano, Italy. It is open to Margherita users and visitors as well as to all citizens. This promotes integration between the center, its users, and the city. A “Wandering Path” is quite literally that: a winding walkway that connects the entrance to the three different units that make up the center (divided according to the severity of the dementia) and to spaces for shared activities and gardens.

LED LIGHTING

Lighting Research Center, Rensselaer Polytechnic Institute | irc.rpi.edu

In an effort to help residents better tolerate lights during the night, the Lighting Research Center conducted a study using innovative lighting designs and advanced technologies, including LEDs, photo sensors, and occupancy sensors, to help seniors in long-term care environments maintain independence and be more comfortable. In a pilot demonstration study at Schuyler Ridge Residential Health Care, a 120-resident skilled nursing community in Clifton Park, New York, LRC researchers installed automated LEDs. The energy-efficient lighting solutions were intended to improve the comfort and care of seniors, assist the nursing staff in their nightly rounds, and help residents navigate community hallways.

Residents in that community reported that getting out of bed at night was difficult because lighting controls were out of reach, a fact that contributes to falls. Surveys conducted with patients and staff before the LED lighting installation showed that most patients were awakened at night by nurses turning on the overhead lighting, which was considered too bright and glaring. Beyond their individual homes, residents said it was difficult to navigate the 74,000-square-foot community and its similar common areas.

The Lighting Research Center team designed an automated lighting system meant to quell disturbances while still helping patients safely get out of bed at night. The goal was for nurses to have enough lighting to do their jobs at night and provide color-coded lighting that would help residents distinguish hallways.

The team installed LED lights in four resident rooms, bathrooms, and one hallway. Researchers mounted amber-colored lights around door frames, under beds, around bathroom doors. They also added an occupancy sensor that slowed illuminated when residents got out of bed or nurses entered the room. Residents reported no problems with sleep disturbance or discomfort with the new lights. Nurses confirmed that there was enough light in the bedrooms to perform their rounds and said the automated lighting was convenient and useful. In the hallways, nurses and residents reported that the lighted handrail enhanced the look of the hallway and served as a way-finding guide.

PERCEPTUAL AND COGNITIVE STANDARDS

Orfield Laboratories, Minneapolis, MN | orfieldlabs.com

Orfield Laboratories is the first to develop perceptual and cognitive standards designed to create optimal environments for older adults living with dementia. They have developed quantitative, measurable building performance standards for seniors' housing design, and collaborated with Western Home Communities to construct on a memory care area based on these principles.

Many places, including senior living communities, are designed to be appealing to visitors. In this new design, Orfield Labs decided to focus on the dementia resident and how design could help them better navigate cognitive declines. This cognitively sensitive plan limits objects in the room to those that are necessary. It avoids complex, patterned designs on walls and carpets along with dark furniture, which can be difficult to see at night. It considers each element in the room based on how it will look during the day when visual perception may be higher and at night when it is low. The design incorporates matte finishes, avoiding glossy finishes that can create confusing reflections. All openings, such as door frames, and pathways are outlined. The design includes high contrast colors, making it easier to separate floors from walls, fixtures and controls from backgrounds, and doors from walls. The communities are small. The design also reflects safety goals: avoiding falls and burns; bathroom safety; cleanliness for safety; way-finding clarity; a secure care setting; simple devices and elements that coach or prompt the resident.

The concept was recognized with an International Dementia Award for Design Innovation of the Year. Steven J. Orfield, a principal at Orfield Laboratories, penned two academic articles about the process and design considerations. Both were published in the Seniors Housing & Care Journal.

TRIED & TRUE

Well-known programs with significant data, widespread adoption, and positive results

COLOR, SCENT, MUSIC, AND CARE

LCB Senior Living, Norwood, MA | lcbseiorliving.com

Designs at LCB Senior Living utilizes the latest research in color to foster positive behaviors, smells to increase cognitive abilities, music to improve engagement, and care approaches to ensure successful outcomes. For example, lime green is used for uniforms because it is the last color we lose the ability to see. This helps resident identify whom to seek out when they need help or assistance, and has reduced wandering behaviors, agitation, bathroom related accidents, and even sundowning. The LCB Reading Series also uses an enlarged lime green font, which has shown a 33% increase in reading ability.

Yellow plates encourages eating without fostering overeating, and the color yellow provides more contrast with foods. Black sheets can help residents leave the bed and instead become engaged with others. Contrasting-color toilet seats help residents navigate the bathroom, and a contrasting wall prevents an all-white room from being perceived as circular.

The smell of pine releases a neurotransmitter called glutamate, which improves memory and concentration. Smells such as cinnamon can increase food intake for those who need reminders to eat, while lavender in the evening decreases sundowning. Relaxing music also helps with sundowning and eases residents to sleep.



William Utermohlen (1933-2007)
Self Portrait (Green)
1997
Oil on canvas
Size of original: 35.5 x 35.5 cm
Estate of the artist, Paris
Courtesy of Chris Boicos Fine Arts, Paris

TECHNOLOGY INNOVATIONS

TRANSFORMATIONAL

Innovations that change lives

ART BASED TABLET APPLICATION

Canterbury Christ Church University, England | canterbury.ac.uk

Arts-based interventions are believed to contribute to an improved sense of wellbeing for those diagnosed with dementia. This program takes the art beyond museum walls, allowing participants to view artworks with the convenience of a tablet device. Participants were asked to use the app together at least five times over the course of two weeks and were provided a list of discussion questions to help generate conversation about the art. The app gave the person diagnosed with dementia and caregiver a new shared activity. Those diagnosed with dementia and their caregivers reported improved moods and a boost in wellbeing following the art viewing sessions with benefits increasing over time the more the app was used.

The application was evaluated with residents that looked at the impact of viewing art on wellbeing using visual analogue scales and explored participant experiences with thematic analysis.

Overall, patients and caregivers reported a boost in wellbeing following art-viewing sessions on the app, as measured by participant appraisals of happiness, wellness, and interest before and after each session.

“The results suggest touchscreen-based art interventions could yield well-being benefits for this population. A larger-scale controlled study would help determine whether wider dementia care practice implications could be drawn.”

BREAKTHROUGH

Innovations that open new markets and offer new advantages

THE ASSAM PROJECT

Brussel, Belgium | aal-europe.eu/projects/assam

This ASSAM Project (Assistants for Safe Mobility) uses GPS technology to help navigate neighborhoods and indoor environments. It helps prevent getting lost and walking into objects. This is particularly beneficial to those with dementia who suffer physical and cognitive declines. ASSAM technology allows users to remain independent for longer and continue to exercise.

Electronic navigation beacons guide seniors and enhance the mobility of those using walkers, wheelchairs, and tricycles. The technology thus helps compensate for age-related impairments. For instance, an individual using a walker can be guided to their destination with unique sensory cues, either visual or audio signals that are based on the path created by the beacons.

Under the AAL-JP program, ASSAM is funded jointly by the European commission and the national funding organizations Turismo y Comercio (ES), Bundesministerium für Bildung und Forschung BMBF (DE), and Ministerio de Industria, and the Ministry of VWS (NL) for 3 years beginning from June 1, 2012; furthermore, ASSAM at CVI in Barcelona is co-funded by the ONCE foundation. As of 2013, plans for three pilot sites were to be implemented, demonstrating and validating the ASSAM technology and aims. As of 2013, plans for three pilot sites were to be implemented, demonstrating and validating the ASSAM technology and aims

TABLETS IN MEMORY CARE

Simple C, Georgia, United States | simplec.com

Various applications of tablet computing have proved beneficial for residents in terms of social and cognitive engagement, memory cuing, self-care, and overall wellbeing.

The SimpleC Companion™ is an intuitive touch-screen application that promotes memory, engagement, and better communication for seniors. It is classified by the U.S. Food and Drug Administration as a Daily Activity Assist Device. Twelve residents with mild cognitive impairment from an assisted living facility participated in a study. Half of the participants were cued for activities such as bingo or exercise class using the SimpleC Companion. The other half, the control group, was not cued. Results showed that participants cued with the SimpleC Companion attended activities significantly more often than the control group. Likewise, twelve memory care residents with advanced dementia were cued using the SimpleC Companion, reminding them to attend meals at lunch and dinner time but not for breakfast. Results showed that participants consumed more food when prompted with the SimpleC Companion.

Memory training using iPads has been shown to improve cognition. Furthermore, researchers found participants gained technological skills useful in everyday tasks, such as online banking and communication through social media. The iPad in particular was singled out because of its portability, thousands of applications, intuitive interface, and large visual icons that are well-suited to the cognitive, visual, and motor capabilities of older adults. Based on participant feedback, some individuals experienced great personal benefit in using the iPad, and others were moved by the use of technology to reach out to loved ones.

The study from the Center for Vital Longevity at The University of Texas at Dallas affirmed that challenging older adults with certain never-before-tried activities—such as tablet computing—might enhance cognitive vitality and ultimately help ward off or delay age-related dementia.

INCREMENTAL

Innovations that enhance existing programs

INTEL-GE CARE INNOVATIONS QUIETCARE (SMART SENSOR TECHNOLOGY)

Intel-GE Care Innovations, Roseville, CA | careinnovations.com

To ensure its staff delivers the highest levels of care to residents, Eskaton Senior Living turned to Intel-GE Care Innovations™ remote monitoring system, QuietCare. Installed in each resident's unit, QuietCare uses small wireless sensors to learn the daily living patterns of every occupant. This smart system enables Eskaton's staff to follow each resident's status around the clock. With the data provided by QuietCare, staff learned the patterns of individual residents, and how to spot out-of-the-ordinary events. By identifying unusual activity patterns, caregivers could recognize emerging health problems earlier and take action. Two years after installation of the monitoring system, Eskaton experienced increased staff efficiency, better cost control, the early detection and treatment of urinary tract infections, and an enhanced rate of medical compliance.

TECHNOLOGY LIBRARIES

Sirona Care and Health, Somerset, England | sirona-cic.org.uk

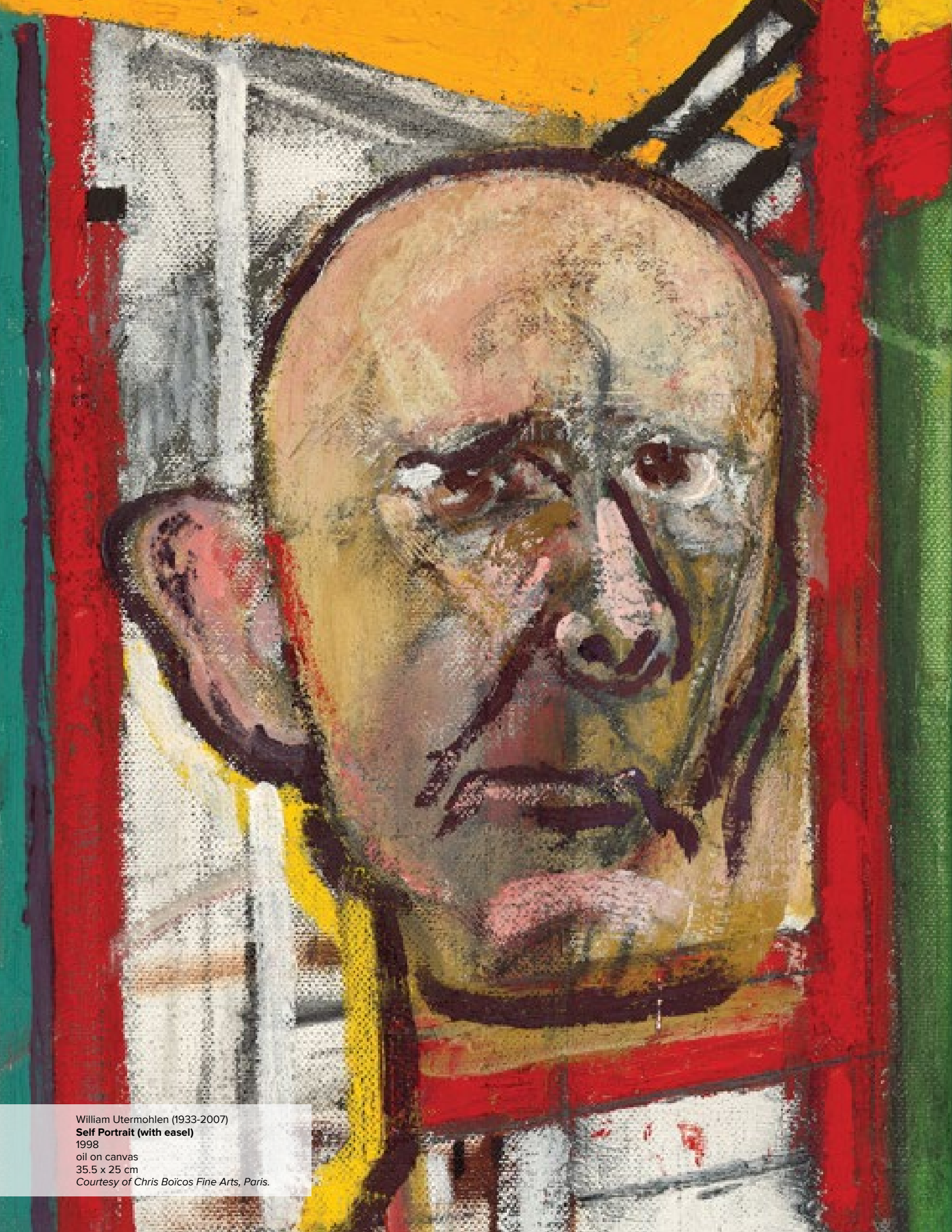
This project uses technology to support the cognitive and emotional needs of people with dementia and their caregivers. Low technology products can be used to address these problems and maintain the independence of those living with dementia. These products are based on simple, low-cost voice recorders or displays, which are widely available. The goal is to promote independence and independent living by providing tools which assist individuals to manage daily tasks.

Low-cost, simple voice recorders and displays can help maintain activity and sustain routines (e.g., attendance at day centers, managing medication), avoid emergency admissions, minimize falls and wandering, increase socialization, and improve the overall wellbeing of those living with dementia and those who care for and about them.

WEARABLE TECHNOLOGY

Wright State University, Dayton, OH | wright.edu

The widespread use of smartphones and sensors has opened physiology, environment, and health to continuous monitoring. Personalized digital health and patient empowerment can become a reality when the complex multisensory and multimodal data is processed within the patient context, converting relevant medical knowledge into actionable information for better and timely decisions. These principles can be applied in the healthcare domain of dementia. Specifically, sensors may be able to detect physiological changes in people with dementia. The actionable information provided by wearable technology can then help doctors determine physiological changes associated with dementia, and alert patients and caregivers to seek timely clinical assistance to improve their quality of life.



William Utermohlen (1933-2007)
Self Portrait (with easel)
1998
oil on canvas
35.5 x 25 cm
Courtesy of Chris Boicos Fine Arts, Paris.

STAFF TRAINING INNOVATIONS

BREAKTHROUGH

Innovations that open new markets and offer new advantages

LIVING IN MY TODAY

Schlegel Villages, along with partners from the Murray Alzheimer Research and Education Program (MAREP) | schlegelvillages.com

LIVING in My Today is a new dementia-care philosophy and education program developed over the course of more than two years by an advisory group comprising residents, family members, volunteers, community partners, and MAREP. The education program includes an overview workshop and 6 in-depth modules based on the acronym LIVING (i.e., Learning, Improving, Validating, Interpreting, Nurturing, Greeting). LIVING in My Today takes on a cross-functional approach to training that involves peer-to-peer facilitation and is open to residents, volunteers, families, and team members alike. There are three main goals of the training program: 1) Increase the understanding of and awareness about dementia among team members while building empathy for the experience of persons living with dementia; 2) Develop the strength, skills, and experiences of team members in dementia care and services; and 3) Create and support a shared philosophy of care that supports the wellbeing of residents with dementia, their caregivers, and families.

PRESENCE CARE

The Presence Care Project, California | presencecareproject.com

Presence Care is a mindfulness-based program designed specifically to meet the unique challenges in dementia care. Unlike skills-based trainings, which may be quickly forgotten, or intervention-focused trainings, which tend to be reactive, Presence Care proactively integrates mindfulness-based stress reduction (MBSR) within dementia care practices, resulting in sustained attitudinal changes that benefit care partners and, in turn, persons living with dementia. Presence Care is a 9-session program that entails a combination of mindfulness practices, lectures, dementia care practices, and group sharing. There is great emphasis on practice during and between each session with the help of a workbook. The practices introduced can be immediately integrated into daily life and care activities. Some of the practices include: daily sitting; body scanning; self-compassion breaks; repositioning; wise decision-making; sitting with; mindful walking/pacing; sensory awareness; Aikido communication; relaxing the self; and loving kindness. Some of the themes explored include: dementia and unmet needs; communication/ways of relating; attuning to the person/enabling choices; care-partnering; grieving/loss; unhelpful coping/mind-states; mindful awareness; decoding/responding to distress; working through difficult emotions; self-care strategies; and mindful end-of-life strategies.

The goal of this program is for care partners to experience a radical shift in attitude from doing and reacting to being skillfully present for themselves and the person(s) whom they support. Presence Care empowers care partners in becoming better attuned, more relaxed and confident by cultivating specific attitudes, including: non-judging; patience; beginner's mind (i.e., open mind); trust; non-striving (i.e., person before task); acceptance; effort (i.e., doing the practice); and self-compassion.

NEUROCOGNITIVE ENGAGEMENT THERAPY (NET)

Phoebe, Allentown, PA | phoebe.org

Phoebe Allentown recently became the only skilled nursing center in the country to offer a new, innovative rehabilitation model to their residents experiencing cognitive loss: NET, which stands for Neurocognitive Engagement Therapy. The goal of NET is to help individuals with cognitive impairment regain their function and return to their home environments.

Individuals who received NET had significantly greater engagement in the therapy process and greater functional gains than those who received traditional therapy. After 12 weeks of training, patients demonstrated increased knowledge, and they maintained and improved their skills at a 12-week follow-up. Therapists enjoy increased confidence thanks to a greater knowledge of how to properly care for patients. Therapy thus becomes more engaging, with less stress and frustration for both the therapist and patient.

INCREMENTAL

Innovations that enhance existing programs

THE DIALOGUE PROJECT: WORKING TOGETHER TO PROMOTE WELL-BEING

Alzheimer's Resource Center, Plantsville, CT | arc-ct.org

The Resource Center embarked on an initiative to provide opportunities for transformative education, community conversations, and collaborative action, bringing employee and family care partners together to learn with and from the elders who live at or visit the Resource Center. We call these opportunities the Dialogue Project, and through our joint participation, we aim to: 1) Expand the possibilities for living well with dementia; 2) Nurture relationships, collaboration, and teamwork within each neighborhood to strengthen connection, communication, and mutual trust; and 3) Identify, co-create, and work toward future organizational improvements.

Employee care partner surveys have revealed marked improvements in collaborative decision-making within neighborhood teams (a 68 percent improvement); elders' opportunities to access the outdoors (63 percent); decision-making with, instead of for, elders (47 percent); and a sense of elders making their own daily choices (47 percent). Communication and collaboration among employee care partners was also greatly enhanced. Results revealed a 30 percent improvement in how often employee care partners reflected on their own wellbeing and in how often employee care partners have opportunities to contribute to organizational goals and improvements. There was a 25 percent improvement in how often employee care partners do things to improve their own wellbeing, and a 23 percent improvement in asking elders for their own opinions or advice.

TRIED & TRUE

Well-known programs with significant data, widespread adoption, and positive results

DEDICATED STAFF ASSIGNMENTS

Arcare, Reservoir, Victoria, Australia | arcare.com/au

Drawing on international research, partnerships with stakeholders, and engagement with their community of residents, families, and staff, Arcare has developed a relationship-focused model of care implemented through a Dedicated Staff Assignment (DSA) model, changing the organization's staff structure, training, and approach to service provision. The new model has allowed closer relationships to develop between residents, staff, and families, with survey data showing this was highly valued by the residents and their families. There were significant improvements in a wide range of clinical outcomes.

The findings from meetings with staff residents and families showed improved outcomes for residents, staff, families, and business. There was a 90 percent reduction in pressure injuries, a 69 percent reduction in respiratory tract infections, a 52 percent reduction in the use of PRN psychotropic medication, plus significant reductions in skin tears and falls and an increased sense of the quality of staff-family relationships. Among families, there was a 45 percent increase in compliments, and a 100 percent decrease in complaints. Job satisfaction among staff increased among the nursing and care staff, with 100 percent for the new Dedicated Staff Assignment model. There was also a 100 percent reduction in agency staff usage within the dementia care unit.



William Utermohlen (1933-2007)
Erased Self Portrait
1999
Oil on canvas
45.5 x 35.5 cm
Courtesy of Chris Boicos Fine Arts, Paris

DINING INNOVATIONS

BREAKTHROUGH

Innovations that open new markets and offer new advantages

DINING BY DESIGN AND DON'T GIVE ME EGGS THAT BOUNCE

HammondCare, Victoria, Australia | hammond.com/au

Dining by Design is a one-day, practical, hands-on workshop that covers the essential ingredients and basic skills necessary to create enjoyable and engaging meals for people with dementia. Under the expert guidance of Executive Chef and Food Ambassador Peter Morgan-Jones, participants learn to make healthy, creative food choices and develop personal strategies to enhance their dining experience. Experts in dementia and nutrition are on hand during interactive presentations and active learning experiences. All participants leave with a copy of the cookbook, Don't Give Me Eggs that Bounce, along with a renewed appreciation for the joys of dining.

Don't Give Me Eggs that Bounce is an innovative cookbook featuring easy-to-read nutrition advice specifically for seniors. Strategies for designing successful mealtimes are discussed along with understanding swallowing difficulties and preparing texture-modified food and drinks. 118 recipes cover breakfast, lunch, dinner, dessert, and beverages. Snacks and small meals prove particularly important for older people and those living with dementia who often cannot eat a larger meal. The non-recipe sections of DGMETB are all evidence based and draw on our experience in caring for older people and people with dementia.

BRAIN HEALTHY COOKING PROGRAM

Senior Living Residences, Boston, MA | seniorlivingresidences.com

The Brain Healthy Cooking Program is a research-based nutrition program focused on the documented connection between diet and brain health. A healthful diet is now widely acknowledged to boost cognitive function and even potentially delay the onset of dementia. Several large-scale scientific studies of the Mediterranean Diet, as well as smaller studies on specific foods and spices, point to the important role of diet in the cause, prevention, and management of Alzheimer's disease. The Mediterranean Diet has also been proven to reduce strokes, heart attacks, and deaths due to heart disease. Because it helps to regulate blood sugar, it is also ideal for seniors managing diabetes. The Brain Healthy Cooking Program was in development for three years and launched in 2009, just as the first widely reported large scale study on the Mediterranean Diet was concluded.

INCREMENTAL

Innovations that enhance existing programs

ODE

Rodd Design, United Kingdom | rodd.uk.com/ode-dementia-innovation

Ode is a simple to use, beautifully designed disruptive innovation intended to stimulate appetite and rekindle an interest in eating. Intended for both residential and hospital settings, Ode releases three immensely appealing culinary aromas at meal times and lasts three months between refills. Ode has already been widely praised by professionals in the dementia care community, the UK Department of Health, and the National Health Service. In 2013, it was voted the most Innovative British Business Idea.

FRESH BITES

Unidine, Boston, MA | unidine.com/resources/fresh-bites-memory-care-nutrition-program

The foodservice industry could improve ways to address the special needs of memory care residents who struggle with utensils or who may be easily distracted from the table and their meal. Common interventions include staff feeding and offering only child-like finger foods, but Unidine instead provides an innovative program called Fresh Bites. Fresh Bites combines culinary artistry and science to increase nutritional intake, decrease weight loss, and improve quality of life while empowering memory care residents to dine with dignity. Unidine dietitians and chefs transform everyday menus into nutritionally dense, bite-sized portions. Innovative, edible vessels made from fresh, natural ingredients deliver an impressive and growing variety of delicious recipes that can be easily managed without utensils. A hearty but complicated menu of tossed salad, lasagna, steamed broccoli, and pie becomes an easily and eagerly consumed Fresh Bites meal. Unidine leverages the latest scientific research on diet, nutrition, and dementia to guide the development of this memory care nutrition program. Our recipes use specific “brain boosting” ingredients like turmeric, broccoli, cabbage, green tea, blueberries, and dark chocolate, which may prevent or reverse cognitive decline. Visual menus, trained dementia practitioners, and modified dining environments help families and caregivers connect with Alzheimer’s patients, while nutritionally balanced meals help maintain their weight and health.

TRAINING WORKERS TO IDENTIFY UNDER-NUTRITION

King's College London, England | kcl.ac.uk

Trained Dementia Link workers support those with memory changes or dementia, along with their caregivers and family members, in the ongoing endeavor to live well and independently. Staff are able to identify people at risk of under-nutrition and intervene in the early stages of weight loss by offering simple, practical strategies to increase food intake and preserve muscle mass.

TRIED & TRUE

Well-known programs with significant data, widespread adoption, and positive results

GRIND DINING

Arbor Company, Atlanta, GA | grinddining.com

The physical and cognitive declines of progressive dementia can make using utensils and chewing food increasingly difficult. For some, pureed food becomes the only option. Unfortunately, pureeing strips food of its natural texture, altering the taste and making eating less appealing. Working with two local chefs, the Atlanta-based Arbor Company pioneered Dining with Dignity, a program featuring a food-grinding method that allows residents to enjoy eating without utensils. The practice preserves the natural textures of foods and restores the pleasures of eating.

The Arbor Company reports that memory care residents improved their food intake by more than 30 percent; 90 percent of respondents say they approve of the choices they now have. Grind Dining has also reduced kitchen costs, because the dining staff grinds the meals other residents are eating so that separate menus are no longer necessary. Residents can again enjoy the independence of feeding themselves, meaning that fewer caregivers are needed to work at mealtime. Argentum honored Dining with Dignity in 2014, recognizing the experienced-based program with a Best of the Best Award.

CONCLUSION AND NEXT STEPS

This white paper details innovations that improve resident care and quality of life for assisted living residents with dementia. These transformative, breakthrough, and incremental innovations were selected through a review of literature, a survey, and the expertise of Cognitive Solutions Associates. Nominations were then evaluated for inclusion by the Argentum Memory Care Roundtable, which also assessed some tried-and-true practices as worthy of consideration. This completes the first of a multi-phase project. The second phase will provide guidance on replication of the innovations among senior living providers.

ACKNOWLEDGMENTS

The Argentum and MatrixCare partnership began in September 2015 as a three-year corporate partnership, the goal of which is to support the development of cutting-edge education and research programming focused on quality measures and memory care programming in senior living.

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- » Maria Nadelstumph, of Brandywine Living and Chair of the Argentum Memory Care Roundtable.

Argentum's Memory Care Roundtable helps to guide all Argentum efforts related to serving memory impaired residents of senior living. Comprising the most senior people responsible for memory care programs and services in Argentum gold member companies, the Roundtable has been instrumental in providing leadership to educate and inform Argentum members on memory care related issues. We would like to acknowledge and thank the members of the Roundtable for all of their work:

- | | |
|---|--|
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| » Juliet Holt Klinger, Brookdale | » Beverly Sanborn, Belmont Village Senior Living |
| » Joe Jasmon, Shepherd Senior Living | » Christine Stempel, HHHunt Senior Living |
| » Joel Kroft, Country Meadows | » Judy Swartzell, Bickford Senior Living |
| » Karen Leimberer, Pathway Senior Living LLC | » Sara Terry, Brookdale |



William Utermohlen (1933-2007)
Head I 2000 (August 30)
Pencil on paper
Size of original: 40.5 x 33 cm
Estate of the artist, Paris
Courtesy of Chris Boicos Fine Arts, Paris.

Aug. 30. 2000 WU c U



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