

Chapter One

Nexus at Silverado

Life is like riding a bicycle. To keep your balance, you must keep moving.

– Albert Einstein

Today we know more about what's possible in memory care than ever before. While a cure for Alzheimer's and other dementias remains elusive, there are now steps we can take to slow the progression of dementia and even delay its onset.

Back in 1996 when Silverado was founded, Steve Winner, Jim Smith and I (Loren Shook) knew through years of industry experience that it was possible to significantly improve the quality of life for people suffering from dementia. At that time, we did not know if we could slow the progression of dementia, our focus was on helping the resident and family have a better life – even with devastating diseases like Alzheimer's and Parkinson's. We were committed to the notion that with the right support, enjoyment of life did not need to end with a diagnosis. Steve, with our Silverado team, successfully combined a series of cutting-edge concepts that included a whole new model of care for the memory impaired. Our approach included giving people a purpose to live again, a chance to be needed, and the freedom to enjoy life. The new model included access to the outdoors and an environment where they could interact with pets and children daily. In

short, we gave people a reason to get up in the morning!

We also made a commitment to the highest staffing ratio in the industry, providing professionally trained caregivers instructed not to restrain any resident. Our groundbreaking approach pushed many professionals and family members outside their comfort zone. Steve was on the front line to address these concerns and give people the confidence that this was going to work.

Shortly after we opened our first Silverado community in Escondido, California, we began to see success as our new approach to dementia care was implemented. It was a very exciting time. One of the tools we used was medication reduction. By reducing medications (which in many individual cases surpassed a dozen) and increasing participation in adult-appropriate activities, we began to see an increase in our residents' quality of life. Using all the principles noted above, there was a significant and measurable difference. We witnessed first-hand everything from positive mood and behavior changes to residents' ability to walk again on their own. The key to this approach was to treat residents with the same dignity and respect any adult would expect – a practice we call “normalization.” It often lived up to its name; families saw it as a miracle, saying, “Wow, he looks as though he could fit into ‘normal’ society again.”

The factors we always knew contributed to quality of life, we now know can actually slow the disease progression and may also result in physical changes within the brain. Since Silverado had been tracking quality of life indicators and clinical outcomes for 20 years, we were in a unique position to align our core values with a formal program to slow the onset and progression of dementia.

To be the first memory care provider to implement such a program, we needed to recruit someone whose experience was in line with our clinical/social hybrid approach to memory care, someone up-to-date with the world's top research on memory-impairing conditions. We needed to find the best.

The first time I ever heard of Kim Butrum was before Silverado was founded. Coincidentally, Kim was a speaker at the same event where I first met Steve Winner. She had been leading the Alzheimer's Disease Research Clinical Team at the University of California San Diego (UCSD) Medical Center. This was a very prestigious position – the research team at UCSD was known globally for discovering the Beta Amyloid plaque in the brain that causes Alzheimer's disease. Kim had worked in a variety of settings including as a Gerontological Nurse Practitioner in home health and hospice, director of a skilled nursing facility, founding director of a sub-acute rehabilitation unit, and the primary Nurse Practitioner at The Memory Center at the Seton Brain and Spine Neurology practice in Austin, Texas.

Her knowledge and passion has made her one of our country's leading experts on dementia care, and so we were honored when she joined Silverado in 2014. Her very first initiative was to take the collective knowledge of our Silverado team and top researchers, and create a program specifically to help residents in the early stages of dementia build and maintain cognitive ability.

She says, "Society's mindset has continually shifted over the past several decades. It used to be that a grandparent might develop a chronic disease, like heart disease, and we would say, 'well, there's nothing we can do about it.' Today, we know there are a lot of things we can do to prevent heart disease. Not only do we feel empowered, but we are empowered. That same mindset is how our children will view dementia – as something they have control over. At Silverado, we're at the forefront of this paradigm shift."

Inevitably, we were frustrated that there was an acceptance of what was thought to be the "normal progression" of a dementia such as Alzheimer's disease, and we disagreed with that progression; it was based on past practices in which individuals with dementia were treated as "needy" rather than as normal adults. This was no one's fault. It was simply accepted that there was no other way to provide care, and that there was no hope. We had frequently discussed this problem among our leaders, and when Kim came

to Silverado she joined the conversation.

By 2014, we had statistical results showing that since 1997 our teams had succeeded in the re-ambulation of thousands of people. Further, we could point to thousands in the late stages of the disease who had regained their ability to feed themselves. We had evidenced-based clinical outcomes showing the lowest use of hospitalization and emergency room visits. And we could demonstrate significant reductions in the use of psychotropic medications for controlling behavior.

Of course, this expertise led our communities to attract residents in mid to late stages of dementia. But we were dismayed that families would seek a less expensive setting for a loved one with early-stage dementia, thinking it would be adequate until the disease progressed further. They thought they could always move to Silverado later. In a sense, we were victims of our own success! We needed to communicate to families and to some professionals that a purposeful, engagement-rich environment – supported by our well-trained team – could actually slow the progression of the disease and in the meanwhile enhance people’s cognitive level. But before we could communicate this message effectively, we first wanted to be sure we were using the best techniques available.

Shortly after Kim joined us, we assigned her to study the best of the best in the country regarding their ability to improve the cognitive level of patients with dementia. She also did a careful evaluation of our services to determine what we were doing well and how we could improve. We specifically did not consider costs in this analysis, which is exactly how Steve, Jim, and I developed the first model for Silverado in 1996.

Kim started with a literature search and traveled to the best diagnostic centers, such as the Mayo Clinic and Cleveland Clinic. She scoured the country for the brilliant clinicians to see who was getting something right that we could use to better serve our residents. During the process, we all practiced Silverado’s *Love is greater than fear* core operating philosophy. Out of love, we were committed to having the courage to listen with an open mind, and

to change even if it proved more costly as we pursued our aspiration to be the best in the world.

Eight months later, Kim was excited to share that much of our programming was supported by top research. She suggested adding two components: The first was group therapy support for our residents. (Yes, although unheard of at the time, we would be providing a type of group therapy for people with dementia!) Kim's second suggestion was digital programming, which we had tried when it first came out, but did not find useful at the time – it was too boring for our residents. However, in subsequent years, there had been many advances in the field as well as studies to support potential benefits.

Taking Kim's findings, we resolved to overhaul our program focus and to rollout our new initiative in all Silverado memory care communities. This was a major undertaking.

In January 2015, after much anticipation, Silverado launched “Nexus”. This 20-hour-a-week program is built around six brain-building “pillars” that not only make a difference in the lives of those we serve, but also help reshape the way people with dementia are perceived. We named the program Nexus (the Latin word for “connection,”) because it's designed to create connections in the brain by combining science and social engagement. Silverado's six pillars of Nexus include:

- (1) **Physical Exercise:** Multiple studies show a correlation between physical activity and improved brain function, which may help to slow the effects of dementia. Nexus incorporates physical exercises such as Ping-Pong, strength training, aerobics, golf and other activities.
- (2) **Stress Reduction:** Studies reveal that meditation and other stress-relieving activities benefit people with Mild Cognitive Impairment (MCI). Nexus includes mindfulness-based activity such as meditation, Tai Chi and yoga.
- (3) **Cognitive Exercise:** Cognitive compensation strategies reinforce

cognitive strengths for those with early-stage dementia. Journaling, word strategy games, and creative arts are some of the ways these individuals may be able to slow their disease progression.

(4) Specialized Digital Programs: Nexus uses digital tablets equipped with a specially designed brain fitness program called Brain HQ by Posit Science. Based on the science and research of neuroplasticity, targeted brain exercises have been shown to reinvigorate certain brain functions. Outcomes include improved visual and auditory processing speed, sharper attention, and better memory.

(5) Purposeful Social Activities: Purposeful social activities and a strong social network may protect against cognitive decline and modify the effect of Alzheimer's disease. As part of Nexus, purposeful social activities include teaching skills to others, and participation in service clubs that benefit the greater community.

(6) Resident Support Groups: While traditional support groups have been for caregivers, studies now show that support groups can benefit people with dementia by reducing depression and improving self-esteem. One of our social workers, Melissa Cruz, LMSW, presented her research on this powerful component of the Nexus program at the Alzheimer's Association International Conference in 2015.

"If Nexus were a drug,
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billion dollar drug."
-Loren Shook

In the first year we implemented Nexus, early results surpassed our greatest expectations. Hundreds of Silverado residents began benefiting immediately. We track the effect of Nexus using a variety of tools, but we primarily use the Mini Mental State Examination (MMSE). This 11-question exam is recognized industry-wide as a method of monitoring progression in Alzheimer's disease. Neurologists, social workers, and gerontologists often use this test. It has a scoring scale of zero (severe dementia) to 30 (no dementia), to monitor disease progression over time. To get a baseline score, every Silverado resident takes the MMSE within two weeks of arrival. Every six months

afterward, we retest residents as part of their personalized care plan. After just six months, we began to see the MMSE scores of some of our Nexus residents improve significantly. And although only time will give us more scientific results, we are seeing this improvement throughout our communities – a testament to the skill and knowledge of our team.

“In addition to the core research and new findings, a number of individuals inspired us as we developed Nexus,” expresses Kim. “One was a friend from the University of California Irvine who had led studies and presented findings regarding the impact that exercise has on the brain. I had heard him speak a decade earlier, and he was never one to overstate his results. So when he said, ‘We now have enough evidence to say with certainty that exercise is a lifestyle factor that helps to maintain a healthy brain,’ I was ecstatic. This was one of the studies that truly changed our thinking as we focused on implementing a brain health component to our program.”

“We like to say that the side effect of Nexus is quality of life.”
-Loren Shook

If Nexus were a drug, it would be a multi-billion dollar drug. Medications currently available to treat Alzheimer’s have shown only moderate improvements of 1-2 points on the MMSE, benefits which last about half a year in most people. Neurologists expect an average decline on the MMSE of 2-4 points a year in Alzheimer’s. With Nexus implemented in the Silverado environment, we quickly began to see some MMSE scores improve by three, four, and even five points. To see stabilization or improvement in cognitive scores is exciting. While research is still ongoing, it is clear Silverado’s six pillars of brain health can alter the trajectory of dementia for many people.

This. Is. Groundbreaking. Nexus programming, within Silverado’s clinical/social care environment, helps hundreds of people with dementia each year to delay the issues of mobility, health, and behavioral issues. Not many years ago, researchers could only dream of results like this. What we’re doing today significantly changes the quality of life for residents now, and it sets the stage for years to come.

Life is about living. A dementia diagnosis does not mean the end of a purposeful life. Nexus is enabling people with memory loss to live a better quality of life every single day.

“The Nexus program guides people in a step-by-step program to brain health. Human memory and thinking are complex and the Nexus program addresses this complexity through brain and body programs that provide the building blocks of brain health and brain function.”

- Jeffrey L. Cummings, M.D., Sc.D.

“Another inspiration for Nexus was the ‘nun study,’ chronicled in a book called *Aging with Grace*,” shares Kim. “In 1986, 678 Catholic Sisters began participating in a brain study that concluded in 2001. Using information dating back to when each participant first became a nun and combining it with 15 years of tests and observations, Dr. David Snowdon, a leading expert on Alzheimer’s disease, discovered a striking positive impact

that living a purposeful life can have on the brain: While some of the participant’s brain pathology indicated they had dementia, they displayed no noticeable signs of cognitive impairment during life. It was a remarkable study, and inspired the Purposeful Social Activity pillar of Nexus.”

The vision we established at our founding back in 1996 continues to guide us today. We aim to change the way the world cares for and perceives people with cognitive decline. True to Silverado’s culture, we regularly share details of our Nexus program with others, here in the United States and abroad. In April 2016, Kim Butrum, along with Nexus co-creator, Kathy Greene, presented the Nexus program and its early results to attendees of the Alzheimer’s Disease International conference in Budapest, Hungary. The topic of the 31st annual event was Dementia: Global Perspective – Local Solutions. Alongside others who influence global progress in treating and preventing Alzheimer’s, the duo presented evidence that current research can be successfully implemented daily within a memory care setting. To the global leaders in attendance, their presentation was of scientific interest, but for people with memory loss the result was life-giving.

Six months after implementing Nexus, we also broadened the definition of a Nexus resident. The maximum MMSE score is 30 points – no dementia. A score of 20 to 24 suggests mild dementia, 13 to 20 suggests moderate dementia, and less than 12 indicates severe dementia. When we first set out, we enrolled anyone with a 20 or higher on the MMSE (mild dementia). After witnessing dramatic results, we altered the parameter to 15 or higher. It quickly became apparent that people in the mid-stage of the disease process could also benefit greatly. (Of course, even individuals in the later stages continued to take part in Silverado’s sensory programs).

When it was clear that Nexus was a powerful force for change, we expanded the program to maximize quality of life for individuals with mild cognitive impairment who live outside the Silverado community. The robust brain fitness program first became available in Los Angeles, California in 2015. Participants, who live at home or at an independent living community, regularly visit the Silverado community where they are given access to a variety of support groups, social outings, brain fitness workshops, and other resources.

“Recently, I transferred a few residents from another dementia directed care facility to Silverado. I had them enrolled into the Nexus program and the results were amazing. They went from an apathetic/depressed mood to being happy and heavily engaged in activities. What a great program for improving the quality of life for patients with dementia.”

- Walter J. Nieri, M.D., AGSF, FACP, CMD

Because Nexus quickly became a way of life, we realized that it could be taught and implemented in a variety of settings. In 2015, it was estimated that more than 800,000 people were living alone at home with dementia, and that number sadly continues to grow. Knowing this, we began in 2016 to look at ways to bring Nexus into people’s homes. The truth is, dementia has a large and growing effect on the healthcare system as a whole. The rules of healthcare are changing. New, progressive hospital systems are constantly challenging various healthcare providers to work together and think outside the box to give patients the right level of care. Hospital leaders

have identified both the challenge of caring for dementia patients and the burden it places on their nursing staff. Healthcare systems are more and more trusting Silverado with direct hospital discharges to our memory care communities. Families want to know that their loved one with dementia is transitioning to the place best equipped to handle unique needs – whether at home, a skilled nursing facility, an assisted living facility, or a memory care community. Anyone would want access to a program like Nexus for a loved one. Unfortunately, dementia patients spend too many days either in the hospital or discharged to a setting not appropriate for their condition. Too often this results in additional medications to manage behaviors, which in turn, leads to reduced mobilization, increased risk of developing pressure ulcers, and weight loss – all while increasing costs to the healthcare system. When we look at the state of healthcare today, we want to be a solution. Hospitals and other healthcare systems are quickly realizing that sending their patients to a Silverado community, or home with the “Nexus At Home” program, reduces the likelihood that they will return to the hospital. Nexus changes individual lives, and it also has the power to better serve society as a whole as the delivery of healthcare continues to transform.

At its core, Nexus at Silverado is about the former piano teacher who begins making music again, the cartoonist who once again makes his friends laugh, the poet who writes new poetry despite his dementia, and the artist who hosts an art exhibit—things no one ever dreamed could be a reality for someone with dementia. We’ve encountered these types of successes over the past 20 years, but today Nexus gives us an opportunity to facilitate an increase in the number of these stories. After all, this is what continues to inspire us to be the best in the world.

In Budapest, Kathy Greene, who serves as our Senior Vice President of Programs and Services Integration, expressed to the audience, “The bottom line is that the outcomes are spectacular. No one in assisted living gets outcomes like these, and we are excited to share this knowledge to make a positive impact on more people around the globe. At Silverado, we regular-

ly refine our programs based on two things: observations made within our communities and the latest research studies. Nexus is just the beginning. We will continue to gain new knowledge and implement new programs with one purpose: to improve the lives of those affected by Alzheimer's disease and other memory impairing conditions.”

Kathy's right. We're not resting on our laurels. I'm often asked why others in the industry don't have the same program. The short answer: It's not easy to bring a program like Nexus to life. It takes individualized focus and an industry-leading team with proven outcomes to make it a reality. At Silverado, we are humbled to be in a position to create innovative programs like Nexus. To better understand how we got here, it's important to learn about our past and what drives us. That said, here's our story.