

# United States Senate Special Committee on Aging

## Benefits of Aging-In-Place Technologies

Testimony of Charles S. Strickler

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Good afternoon Chairman Collins, Ranking Member McCaskill and members of the Committee. On behalf of caregivers of aging parents thank you for the opportunity to testify before you today.

### Preface

Finding the right assistive technologies to help our parents fulfill their aspirations to “age-in-place” in a home environment, has been a long and arduous journey. It has required a significant amount of research, extensive networking, frequent trial and error, dogmatic persistence as well as a sense of humor. The process has been filled with disappointments and frustrations derived from a wide variety of issues, such as products and services that created false expectations or simultaneously dealing with multiple solutions because singular solutions were inadequate. However, our perseverance to find useful and appropriate technology aging-in-place solutions has paid huge dividends, that are fulfilling our parents hopes, providing caregivers and family “peace of mind,” while conserving resources and helping to provide an optimal quality of life for our aging parents.

Throughout this statement I may discuss “working with various companies” in order to develop/innovate solutions, address problems or issues, or explore various technology alternatives. Other than being a customer/consumer I have no current affiliation, contract, or agreement (other than a customer service agreement) with anyone in the alarm/security or Personal Emergency Response System (PERS) industry nor have I received any discount, free goods or services or any other form of compensation.

For the sake of full disclosure, I should report that I have been considering investing in a business venture in this industry, because I believe more needs to be done to meet the

growing need for Aging-in-Place Technology Solutions. However, that decision has no impact or bearing on my testimony.

## Background

My wife and I both have widowed mothers who are 85 and 76 respectively. Both have always expressed a very strong desire to live at home as long as possible. We are centrally located between both of our mother's homes, which are about 2 hours in opposite directions. For those of us trying to lookout for our aging parents it's a challenge to stay in tune with their state of mind, their safety and well being while respecting their spirit of independence and privacy. This is even more of a challenge when you are trying to do this living several hours apart.

One of the solutions for our family has been to adopt technologies that assist us in this complex endeavor. This has not been an easy or straight forward process. We discovered many things that did not work as advertised, that were a waste of money or simply inadequate for the task at hand. Fortunately, after a bit of trail and error we have been able to zero in on solutions that worked even better than we had expected and we have found companies that listen to our request and continue to innovate in order to better meet our needs.

## Our Experiences with Aging-in-place Technologies

My mother is still very independent, quite frequently on the go, yet living at home alone. She has extensive gardens around her home that she continues to enjoy tending. While she enjoys having her adult children and grandchildren visit she doesn't want us hovering or to feel like she is a burden on us. She has been very proactive on many issues, in order to stay at home longer. Over the years she modified her home to accommodate single level living, making it more accessible with a ramp, incorporating automatic lighting, and adding a security system. When we became concerned that she could fall, we tried to get her to add a panic button, however, she said she always had her cell phone on her, so she could call if she needed help. After she fell, dislocating her rotator cuff and tearing the labrum, she was unable to access her cell phone. At that point, she recognized the value of having a push button pendant. Today she uses a cellular pendant, so she can remain independent and yet have the security of an alert system that enables her to summon help at the touch of a button. In the event of a fall where she could not active the button, it can also automatically notify someone to summon assistance, no matter where she goes.

Unlike most people with pendants, she is diligent about wearing her pendant. However, we know PERS systems have been ineffective for the vast majority of users for many

reasons. The reasons include: 1. not wearing the pendant 2. responding that things are ok even when they really need help 3. fall detection not activating an emergency response 4. drained batteries 5. seniors worried that emergency responders will knock their door down if the resident cannot get to the door to open it, as well as a variety of other reasons. We had first hand experiences like these with my mother-in-law, but her biggest complaint, aside from not wanting to wear a pendant, was that she simply didn't want to "talk to an unfamiliar voice in a box."

My mother-in-law has experienced a much different aging scenario than my mother. She was always quite independent, working as a realtor well into her 70's because she enjoyed visiting with people and helping them find homes. We did not recognize it at the time, but around age 75 she started to experience some mild signs/symptoms of dementia. She was still working as a realtor and was able to hide these issues for several years from everyone including family. They did not really come to light until my wife started helping with her finances. At first, the progression of decline was fairly mild and slow and not really noticeable, until about 5 years ago. At that time she was able to live at home with her adult children looking in on her and bringing her some prepared meals to ensure she was eating healthy. After arriving at her home and finding the toaster oven had been left on for over 24 hours, it was apparent she needed more assistance and we needed to have her closer to us.

In late 2011/early 2012 we modified a guest cottage next to our home, to incorporate a walk in tub and handicap accessibility features (on grade access, wide doors, etc). It already had a security system with door sensors and motion detectors. She started brief visits to the cottage in June of 2012 and moved in full time in September of 2012. Our home security system would alert us to doors opening and detect motion in each of the 4 rooms of the cottage. We set alerts to let us know when she opened the doors and by looking at the motion detector sensor history we were able to know when she was active.

As the dementia progressed we became more and more concerned about falls, we tried several different Personal Emergency Response Systems, she refused to use the pendants. When we tested them she absolutely would not respond to the "voice in the box". In short, these solutions were a waste of money and failed to solve our concerns.

We worked with our home security company to find some alternative technologies that would be a better solution to help keep her safe and yet still remain somewhat independent. We installed bed sensors, chair sensors, a toilet sensor, a refrigerator sensor and three big easy buttons to summon help. Incorporated in with the existing

door sensors, this system enabled Lib to have some independence and privacy while we were able to monitor her normal schedule or get alerts when patterns changed, deviated from the norm, or issues arose that required immediate assistance. We were able to set parameters that allowed us to be alerted via our cell phones to potential falls or wandering alerts, so we could immediately check on her. It was comforting to know when she fell and couldn't summon help, that we were getting timely alerts. The bed sensors would enable us to know how often she got up at night and recognize changes in her sleeping patterns. With the refrigerator sensor we were able to recognize when she would forget to eat. The toilet sensor enabled us to recognize higher than normal usage rates and have her checked and treated for a urinary tract infection proactively, avoiding what could have been a costly and traumatic hospitalization. Before she had full time assistance, she would press the help button to summon one of us to help her. In those early stages of dementia, it enabled us to stay close without hovering over her, a practice that would raise her ire.

While the system provides many of the alerts based on individual sensors, it also has data summary tools that make it much easier to see trends and patterns. Additionally it provides a comprehensive "wellness" overview. All of these user friendly graphics makes it easy to see and understand what is gradually changing in Lib's lifestyle. Thus the system has enabled to us to know when to layer in additional levels of assistance and care, matching it to her state of health as her capabilities decline.

The system we are now using for my mother-in-law has also been very robust and reliable, almost flawless. Other systems we have used for home automation did not have this level of reliability, in fact they would "crash" and need to be restarted, which is unacceptable for situations that are critical for life safety.

My wife and her twin sister who are the two primary caregivers, will tell you the two biggest benefits of the system are first and foremost that, "The system provides a tremendous "piece of mind," assuring us Mom is safe, even allowing us to check on her even when we are not in her cottage." The second major benefit is that "The "peace of mind" experienced with with this technology is a priceless gift enabling us to honor Mom's request to stay at home and live as independently as she is capable." They were concerned with the setup in the nursing homes they visited and were certain that due to the volatile nature of the dementia she was experiencing, that environment would have been particularly difficult for their mom.

My wife also said, “Financially, it has been a relief to be able to preserve her resources allowing us to be able to provide the best possible one-on-one care now that she needs it.” Had we moved her into assisted living, the costs would have been astronomical. So far the cumulative cost for 2 1/2 years, moving into an average Virginia nursing home would have been \$223,000 plus an additional \$104,000 for homemaker/health aid services, (based on the Genworth 2013 Cost of Care Survey). In contrast, the cost of our system was \$2,189.24 plus a monthly fee of \$59. While we have still needed to supplement our own caregiving efforts with contracted home care support, the nominal investment in technology has clearly provided a huge cost savings. But more importantly, we think she has been able to enjoy a higher standard of care in a more comfortable environment.

Since a stroke last October, and her higher fall risk due to orthostatic hypotension, we have supplemented our care giving efforts with professional care givers. This ensures that someone can be with her around the clock. While the system is not as critical, it is still useful to monitor her health patterns, summon help, and assure that she has the attentive care she needs. The system also helps us be aware when outside caregivers may not be as attentive as we expect.

I am grateful we were able to be a beta site, (we were the first wellness consumer site with the bed, chair, toilet and easy button sensors). It was also gratifying to be invited on many occasions to provide feedback and suggestions that continue to make our system even better. I am happy the company we are working with has continued to innovate and now our system has even more capabilities that would have been very useful for our family when Lib was more mobile. Specifically, they now offer a stove sensor that will send an alert to caregivers when the stove is left on for a prolonged period. As you can imagine this is a disconcerting problem we dealt with on several occasions, at the time our only recourse was to either remove the stove and toaster oven or cut the circuit breakers off. Another challenge we had was trying to make sure she had the thermostat set at an appropriate level. In addition although we had automatic night lights, we were concerned that she would not turn on enough lights when she needed them so that she could move around safely. Our system now allows caregivers to control the thermostat and the lights remotely so that you don't have to call or make a special trip to check on it. Additionally our motion sensors can activate lights when someone is up and about at night. Another problem we have been concerned about is access, specifically unlocking the door. Our existing solution is a lock box next to the door, which needless to say, takes time to access and has been a less than ideal solution. They have also addressed this problem with locks that can be unlocked by a senior pressing a pendant or a caregiver unlocking it remotely. This solution enables

anyone responding to an emergency faster access to a residence to provide rescue services, as well as avoiding the significant cost of replacing or repairing a front door that could have otherwise needed to be forced open. Another challenge and concern we had from the outset was how Lib could have stayed connected when she was away from home. They are in the process of adding mobile PERS functionality to their app so that seniors are protected at all times, even when they leave their homes. With a simple tap on their mobile device, they can let their loved ones and emergency services know that they are in trouble and exactly where they are located. While each innovation may seem small, they are really important solutions for primary caregivers like my wife and her sister who needed help solving each of these sometimes very stressful issues.

### Summary Conclusion

In summary, with our wellness monitoring system we were able to avoid moving my mother-in-law to a nursing home, it extend her assisted “independence” by several years with a nominal cost and a significant cost savings, it also helped provide a high standard of care and living. Most importantly we are honoring her plea to “live at home rather than a nursing home.”

Had we been able to install a wellness monitoring solution like the one we have today in my mother-in-law's home a decade ago, we may have been more attuned to changes in her abilities and the onset of her dementia. We still may not have been able to find any medical intervention to slow or alter the course of the disease, but we definitely would have had an objective narration tool to help with the “difficult conversations” that are sometimes needed to assure a loved ones safety and welfare.

Aging-in-place technologies are not a silver bullet solution that will solve the problems of cost effectively caring for our aging population, but from our experience, they can be a very integral part of the solution. These technologies can be objective narration caregiving tools, that can prolong independence and help guide assistance intervention, all in a very cost effective and non-intrusive manner, affording both caregivers and their aging loved ones excellent lifestyle choices.