

GPS technology provides peace of mind for families coping with dementia

March 13 2015, by Bryan Alary



Allison Warman wears a GPS device that tracks her movements to help her from getting lost during her regular walks through her Calgary neighbourhood. Warman is a participant in the Locator Device Project, a partnership between the U of A and AHS, that uses GPS technology to help families affected by dementia. Credit: Lyle Aspinall

It was a phone call that changed everything. Two years ago, while Allison Warman was driving from Edmonton to her house in Calgary, she became confused and disoriented to the point that she couldn't

remember the way home.

She pulled over at the halfway point, in Red Deer, and called her husband Tim, who dropped everything to pick her up. It was the first warning sign something was wrong cognitively, a diagnosis that was later confirmed as dementia.

At just 53 years old, Allison—an active, vibrant mother of three and accomplished costume designer whose creations have been worn by figure skating champions Kurt Browning and Kristi Yamaguchi, and the Alberta Ballet—is increasingly housebound, unable to work, drive or even read anything longer than a headline.

"It's been devastating to watch this happen to such an energetic and talented and creative person—she's always been an active person, doing things for people she loves—to have all that taken away from you is brutal," Tim says.

Not everything has been taken. Walking remains one of Allison's true passions, keeping her body and mind refreshed. But the risk of wandering or getting lost is a real concern for people with dementia.

Locator device project

Fortunately for Allison, Tim and the couple's teenaged children, she can continue going on her daily outings without fear, thanks to SafeTracks GPS technology in a phone-like device she wears around her neck. The device, and others like it worn in a shoe or as a watch, provide real-time location information viewable on Google Maps and can send text messages or emails to family if Allison veers outside a designated safe zone.

The device was given to Allison when she joined the Locator Device

Project, a 12-month trial to evaluate GPS technology in preventing people with cognitive impairments from getting lost or wandering. The project is a partnership between the University of Alberta's Faculty of Rehabilitation Medicine and Alberta Health Services, with 40 participants from Calgary and Grande Prairie.



Allison Warman with a sample of her figure skating costume designs. Credit: Lyle Aspinall

"The technology provides peace of mind for families," says Lili Liu, lead researcher, professor and chair of the Department of Occupational Therapy. "Even if there is an accident or an incident, knowing that their loved one has a GPS device helps family members feel more at peace."

More than 40,000 Albertans have dementia of some form, and about three out of every five seniors with dementia living in the community

experience wandering. The number of Alberta seniors with dementia is expected to exceed 100,000 by 2038.

"We have a responsibility to provide Albertans who are at risk with supports that will enable them to enjoy their independence without coming to harm," says Don Juzwishin, director of health technology assessment and innovation for AHS. "And we believe the locator project, which uses sophisticated GPS technology, will also support family caregivers and emergency responders to assist dementia clients who have wandered or become lost."

Liu's team, which includes several graduate students based in the Department of Occupational Therapy's satellite site in Calgary, has visited the homes of families participating in the project, answering questions and offering support. The data they're collecting are still being analyzed, but could be used to inform technology options for home-care clients and families.

To her knowledge, this is the first study of its kind in Canada, says Liu, and one she wants to eventually expand to a national level.

For the Warman family, participating in the study and using the technology has afforded Allison a precious sense of dignity.

"The best thing that has happened to her is being able to go out on her own and still be safe," says Tim, who believes the technology could benefit other individuals and families coping with [dementia](#). "It contributes to her emotional well-being, just knowing that she is safe. It's empowering. It's just a wonderful thing."

Provided by University of Alberta

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