Lived experience helping shape the next generation of assistive technology

By Liz Snyder

The next generation of design engineers and health science graduate students recently got the chance to learn how real-world users interact, and would like to interact, with an assistive technology – a wheelchair - in a special course lecture at the RIA.

Mary Buhr Nightingale and her husband Don Nightingale, a resident at The Village of University Gates, spoke to students in Prof. Jen Boger’s graduate class on assistive technology and rehabilitation engineering. They shared Don’s experiences using a wheelchair and Mary’s experience as Don’s care partner.

Boger, Schlegel Research Chair in Technology for Independent Living, says this interaction reflects her research philosophy, which is to look at all aspects of how technology could and should work – including talking to the people who use them.

“I want to break down barriers with my students so they see how someone feels about being in a wheelchair, how that

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technology impacts their quality of life,” she says. “We can improve things by knowing more about their needs, goals, and frustrations - what is working and what isn’t.”

Mary talked about the terrifying night Don fell to the floor after suffering a stroke, and the confusing, emotional and exhausting weeks and months afterward as they navigated a new world where Don’s mobility was greatly limited and Mary was suddenly not just his wife, but also his care partner.

One thing they needed to work out was finding the right wheelchair for Don – and learning how to use it.

“We banged into a lot of doorways. It took time to learn how to manoeuvre,” Mary said.

The Nightingales highlighted aspects of wheelchair design that impact Don’s quality of life as someone who sits in the wheelchair, and Mary’s as someone who helps Don navigate many aspects of his daily life. They talked about comfort, accessibility and weight, demonstrating adjustments they have had to make like switching out the heavy seat cushion his wheelchair came with for the air cushion pillow they upgraded to.

The Nightingales are actively involved with the RIA, taking part in research projects and programs and this is the second year they have spoken to Boger’s class. Mary sees it as an opportunity to connect with younger people and build understanding between generations.

“We find this part of our ‘new life’ very gratifying,” she says. “Many young people have no idea what older people are like and they have no idea what it’s like for Don to live in a wheelchair. I want them to know older people are okay and to see that through it all we’re optimistic -- that we have acceptance and move on, that we still laugh and have fun.”

She also hopes to get something out of the class - “I would really like them to design a better manual wheelchair.”