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# RESEARCH MATTERS

RIA FEATURE

## ZEROING IN ON BETTER CARE USING MILLIONS OF PIECES OF INFORMATION

*By Liz Snyder*

We are living in a time when pieces of data are being collected about us all the time – from the activity trackers many people wear to the corporate loyalty programs we belong to. Our health information is also tracked every time we go to the doctor, get a prescription filled, visit the emergency room or see a specialist.

But all of these pieces of data aren't necessarily connected. That can be problematic if you find yourself in an emergency department, particularly if you are an older adult with multiple, chronic health issues.

Andrew Costa is the Schlegel Research Chair in Clinical Epidemiology and Aging with the RIA. He is creating ways to piece together multiple data sets to help health care professionals look after older adults in a more proactive way. This results in better



health outcomes for older adults across the country.

Costa and his research team are working with secure, anonymous data from the Ministry of Health, home care, retirement and long-term care homes to help tell a full story of someone's health.

He says this is important because our health care system is set up to support one illness at a time. That doesn't help older adults, many of whom not only take multiple prescriptions, but also see multiple specialists.

[Continued on next page...](#)

*“As you keep adding on data you see more and more of the person and the person’s movement through the healthcare system. It’s the equivalent of being near-sighted and putting on lenses that get closer and closer to your prescription. Things start to come to light in greater colour, definition and clarity,” he says.*

By mining multiple data sets, Costa and his team have been able to find clues that can help predict when someone might be at risk of a hospital visit or in need of extra support.

“What I do is I create algorithms and tools that healthcare providers use to understand a person’s care. It basically helps to get the right people involved in their care sooner rather than later,” says Costa.

This work has multiple applications, one of which is being used extensively across the country. It’s a notification system attached to existing electronic medical records.

“We’ve created an alert that lets healthcare providers know they need to allocate resources to a certain person and identifies what those resources are. We know this from looking at previous data,” he says.

Costa is motivated by experiences with his own grandparents and as an emergency room volunteer when he was younger. He compares the work he does today to looking at traffic patterns from a helicopter.

“We see the moving parts of the system and where things fall down. That’s really important for older adults because it’s not a single intervention that makes a difference, for the most part. What matters is how all of the interactions total up to something greater.” ■

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The Schlegel-UW Research Institute for Aging aims to enhance the quality of life and care of older adults through partnerships in research, education and practice. Innovations are developed and tested in the Schlegel Villages, and then shared to benefit older adults everywhere.

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