

TELUS Talks Health



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Next-gen seniors: Catalysts for a healthier Canada



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Like many octogenarians, Dr. June Fisher's mobility was an impediment to going to the market and other day-to-day activities that younger adults take for granted. As Chief Elder Executive for Aging2.0 (a San Francisco-based global network on a mission to accelerate innovation to improve the lives of older adults around the world), the retired MD provided guidance to students competing in a mobility design challenge hosted by Stanford Center on Longevity. Her advice: "Design *with* me, not *for* me!" The resulting City Cart won top prize in the international competition and serves as a combination walker and shopping basket, allowing those with mobility issues to walk, shop and return home without assistance.

"Design with me, not for me!"

Dr. June Fisher, Chief Elder Executive,
Aging2.0

This example speaks to the mounting requirement to address the needs of our aging population in a customer-centric (vs technology- or clinician-centric) fashion. And this applies across a broad range of needs, as mobility challenges are among many others that beset people as they age. Dementia, Alzheimer's and chronic disease also feature prominently, and along with them come increased demands on family and friends and additional strain on the healthcare system. These pressures will only continue to mount as the aging population increases to unprecedented numbers.

In this article, TELUS Health co-authors Helene Chartier and Rich Osborn examine the economics of our aging population and the urgency to integrate solutions to serve this critical demographic and its circle of formal and informal care providers. To advance their thinking, the authors spoke with three colleagues who bring distinct perspectives on the future of aging. Marianne Le Roux is Vice-President of Project Development, Groupe Santé, Sedna. Stephen Johnston is Co-Founder of San Francisco based Aging2.0. And Joanne Castonguay, Associate Vice-President of CIRANO is a Canadian economist who focuses on the health sector.

The economics of our greying population

Globally, the number of individuals aged 65 and over is expected to triple in the next 30 years from 524 million to 1.5 billion.ⁱ In the US and Canada alone, approximately 10,000 people turn 65 every day and it is expected that by 2020 a total of 40% of the population in the two countries will be over 50 years old.ⁱⁱ

As governments and healthcare systems around the world confront the wide-ranging ramifications of this greying population, key challenges emerge:

- Due to well publicized budgetary constraints, governments and current healthcare systems will struggle to fund the new, longer-than-average life expectancies. Advances in medical technology mean that yesterday's acute conditions, like heart failure and cancer for example, are today more manageable as chronic conditions. As a result, people are living longer and, from an economic standpoint, the risk is extended over a longer term.

In fact, projections from CIRANO's Vice President, Public Policies, Pierre-Carl Michaud indicate that by 2050 costs for long-term care facilities could, if left unchecked, reach \$87.5 billion and homecare costs could reach an additional \$59 billion, representing 100% of government spending in today's dollars.ⁱⁱⁱ

- Families and friends of ill individuals, often referred to as informal caregivers, will increasingly be called upon to provide healthcare and related support services to their loved ones as they age.

It is estimated that 50 million individuals in the United States and Canada provide an average of 20 hours or more per week of care for sick family or friends, while 20 million provide more than 40 hours. A full 85% of health related support given to seniors comes from these informal caregivers at an assessed value of \$460 billion in unpaid work in the US and Canada alone.^{iv}

- Individuals will want to age with grace and dignity, remain socially connected and supported, yet the majority will want to do so while staying in their own home for as long as possible.
- Faced with an epidemic in aging-related brain diseases such as Alzheimer's, caregivers and health systems alike will desperately require tools and technologies to provide better care to those living with the disease.



The challenges are clear and significant and, fortunately, the environment and conditions to address them are improving, specifically:

- Despite (or perhaps because of) their vulnerability, patients as health consumers, are demanding better healthcare experiences.
- New technologies and innovations are coming to market.
- The healthcare system, which since mid-century has measured its efficacy on access to acute care, has no choice but to adapt and is becoming more focused on home and community-based care vs. in-hospital settings.

Wanted: A unified 'healthy aging' marketplace

The building blocks to change our approach to health and the aging population already exist. Innovations in consumer and clinical markets have the potential to redefine healthy aging. And governments and venture funds alike are providing funding to propel innovation even further.

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Marianne Le Roux, Vice-President of Project Development, Groupe Santé, Sedna

Yet, people's needs are holistic and a unified approach is needed. As Marianne Le Roux, who serves as a Vice-President of Project Development at Groupe Santé Sedna asserts, "you can't split the life of a person into categories. Their needs are holistic and, to meet them, we need to act locally. Social services, health-related requirements, appropriate food and medication – all are equally important and interconnected."

Currently there isn't an identified market that takes a holistic approach to meeting the needs of seniors with a set of integrated end-to-end services. As it stands, innovations are emerging within discrete markets.

"The opportunity is to connect industries together and link to healthcare providers and the health system. It will result in a reduction in healthcare costs and create a healthy aging culture at the same time," says Stephen Johnston, Co-founder of Aging 2.0.

Staying connected and making technology aging-friendly

The consumer market emphasizes products that provide better support to seniors in their everyday lives and that keep them connected socially and to their informal circle of care. In particular, mobile apps and services that teach seniors how to use technology, or that make it easier to use, are coming to the forefront.

Some standouts include websites such as Techboomers.com that offers online tutorials on how to use popular websites like Facebook. Another, Breezie, is a software solution that provides a simple, uncluttered and intuitive Internet experience for seniors. And mobile apps, such as Zalio, serve as a one-stop memory organizer, digital diary and collaboration app that lets family members remotely provide assistance, receive notifications, share information and coordinate activities.

Many seniors have the time and the interest in becoming more tech savvy, yet can be hindered by device ergonomics and interfaces that are not aging-friendly. Larger icons, brighter lighting and larger buttons are a few examples that designers are paying close attention to.

Integrating solutions to allow aging in place

Integrated technologies that promote safety, security and generally support better home and community based care delivery have great promise. The demand for these individually is clear and also suggests that making this integration happen is a necessity. Some compelling evidence includes:

- 41.4 million people over the age of 65 live at home in North America.
- 85% of people over 55 years old want to remain in their present home for as long as possible, even if there are changes in their health.^v
- 67% of Boomers would be willing to pay \$25 to \$500 a month on technology if it meant they could stay at home rather than move to a care facility as they got older. An additional 13% would pay \$500 or more.^{vi}

A safe and secure home

Safety and security in the home is the most cited primary concern to be addressed to allow for seniors to age in place. Passive activity sensors, monitoring important places such as the refrigerator or the front door, provide seniors the ability to live more safely at home while tracking location and sending alerts in case of a fall or medical emergency.

Remote patient monitoring such as telehealth and digital health devices allow seniors to better self-manage their care, track medications and help reduce or address progressions of chronic disease through better in home or community health interventions.

Some examples of solutions include:

- Using wireless sensors in the home to gather information about everyday living activities to establish individual behavior patterns to evaluate data, compare current activity to past trends and update caregivers with relevant, timely information so they can proactively respond to any health or safety needs.
- Remotely monitoring the usage of home appliances and home medical equipment to gauge activity levels, prevent adverse events and generally support those living independently.
- Apps that act as virtual pillboxes to keep track of medication schedules and remind seniors to take medication and ensure the correct doses are taken at the correct time.

Connecting to care teams

While active seniors can make consumer choices among solutions that will meet their needs, those who are managing chronic disease or living with Alzheimers require deeper connectivity.

Online tools for mental health, diabetes and even lung disease equip patients with tools to self-manage, but also provide ways to connect with a coach and healthcare team for needed support and access to the right resources in the healthcare system.

Beyond apps and digital health platforms, deeper clinical connectivity can be delivered with home health monitoring technologies or virtual care. Patients are digitally connected directly to care teams who are able to monitor their health metrics remotely and intervene before an acute health event occurs.

However, in the context of a 'healthy aging' marketplace, there is additional work to be done to integrate these innovations with the healthcare system. As economist and CIRANO Associate Vice-President, Joanne Castonguay notes, "We build innovative products and services without actively integrating them properly into the healthcare system. In so doing, we weaken the value of the investments."

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Joanne Castonguay,
Associate Vice-President, CIRANO



Reducing isolation

One of the often overlooked benefits of solutions for successfully aging in place is the effect of social isolation. With isolation comes depression, anxiety, declining mobility, high blood pressure and increased mortality.^{vii} In fact, isolation is the single highest impact factor on an individual's health and it is essential that solutions support an individual in reducing social isolation.

Aging in place also means safe and efficient access to networks and resources that support other daily living activities such as meal preparation, home modifications, home maintenance, transportation and other services beyond pure health.

As Stephen Johnston states, "it's not about having people isolated and living alone in big houses. It is about building communities that allow people to connect with each other. And it's about having access to a broad set of services that haven't really been delivered in concert before. Not only technology and clinical care, but transportation services, food delivery, social connection and home maintenance – all of the necessary elements that keep people happily in their own home and connected to their community."

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Stephen Johnston,
Co-founder, Aging2.0

A new model for a healthier future

There is a great urgency to discover and support innovations to address the challenges presented by aging populations. When Canada's current health system was conceived, it did not anticipate these challenges and, like the health systems in other developed countries, was designed for episodic care of a younger population; not the ongoing and longer-term care for those managing multiple chronic conditions.

The health system – and indeed our society's very approach to aging – must fundamentally change by transitioning to a model centred on primary and community care, aging in place and one that reinforces healthy behaviors and prevention. Technology devices, apps and the connectivity enabled by the Internet of Things will play a critical role in keeping people engaged both socially and from a health perspective.

Integrating essential solutions and services for our aging population may well prove to be a catalyst for creating healthier and happier Canadians across the country – regardless of their age. "If we don't think about doing this, we won't be able to support the financial burden that comes with the long-term risk associated with the prevalence of chronic diseases within our economies," concludes Marianne Le Roux.





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