Technology as a Fix for the Age-Old Challenge of Aging in Place?

INTRODUCTION

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Introduction

Health system leaders, researchers and the public alike recognize the multiple and often tragic ways in which our health systems continue to fail older adults. We have long been aware of the demographic shifts in our population that are seeing an increasing percentage of the population over the age of 65 years; in fact, up to 30% of the Canadian population is projected to be over 65 years of age by the year 2068 (Statistics Canada 2022). However, we have not yet seen the system-wide adaptations and reforms to health systems to support people to maintain their health as they age.

The persistent challenges facing older people and their families and caregivers are well documented: it is increasingly difficult to access primary care; unpaid caregivers receive limited support and policy attention; and home care for health and personal supports is limited in terms of who can access it and how many hours of care are provided, with clients paying out of pocket to access the care they

need. Also, emergency departments are facing extremely long waits, and many people are staying longer than clinically needed (and designated "alternate level of care" [ALC]) in hospitals due to limitations with home care, alongside limited capacity and long waits for long-term care (LTC) homes. (Of note, in Ontario, the ALC patients waiting for LTC spaces face the dual burden of hospitalization plus the difficult choice of paying a hefty fine or forgoing their freedom to choose a preferred LTC home).

The impacts of the COVID-19 pandemic on LTC home residents and workers provide a stark example of the magnitude of this failure to support older people, a culmination of decades of underinvestment in aged care and policies that reflect institutionalized sexism, racism and agism that perpetuate inequities in our society and health systems (Estabrooks et al. 2020, 2024). At the same time, the pandemic catalyzed a rapid escalation of technology into healthcare; for example, with virtual care as a routine part of primary care. Overall, while many experts expected and hoped that the COVID-19 pandemic would open a window of opportunity for major change to improve aged care, this window seems to have closed.

System leaders must then turn to incremental, yet possibly transformative, changes to the way system stakeholders engage, reimagine and redesign care for older adults and care partners in Canada to maintain their health, dignity and independence. Therefore, at a time when advanced technologies have become ubiquitous and digital literacy is increasing, this issue grapples with this provocative question: How can we leverage 'AgeTech' – the collection of digital tools, software and devices – to transform the way we support the health and social needs of an aging population?

Summary of the Current Issue: Technology to Support Aging in the Right Place

A team of authors from the National Institute on Ageing, with the Toronto Metropolitan University, and from the Universities of Toronto and Oxford set the stage for this discussion (Kokorelias et al. 2024). They expertly explore the many opportunities presented by new technologies to support what they refer to as "[a]geing in the *right* place" (p. 12), while also cautiously recognizing the many challenges in doing so. They provide evidence of, and insights into, the digital divide and how it impacts older people specifically, as well as the salient ethical considerations that will require ongoing attention, risk assessments and meaningful engagement with older people and their caregivers.

Inevitably, technological tools raise many questions, especially as they interact with the unique needs, considerations and preferences of older people. These include: Who has access to these technologies and whom do they benefit? How are personal data collected and how are they used and shared with patients, families, the government and developers? Who is engaged in the development process? Who decides which technologies should be implemented within publicly funded health systems, and how? How do we evaluate their intended, and unintended, impacts, such as the potentially negative effects of technologies on social connectedness and caregiver well-being? These are some of the questions that this issue addresses, thereby providing essential insights for health system managers and decision makers.

Centring their commentary on personal support workers (PSWs), the main formal care provider for older people at home, Shaw et al. (2024) caution against the use of technologies as a panacea for the challenges currently faced in supporting older adults to

safely age in place – what they refer to as "techno-solutionism" (p. 26). Instead, they argue that our goal should primarily be to strengthen and support the PSW workforce and secondarily be to consider the possible role for technologies to address the challenges PSWs and homecare agencies face.

Chiu and Saragosa (2024) underscore the importance of including adults and caregivers from the earliest stages of design, development and testing of new technologies and ensuring that they are compensated for their expertise and time. In addition to meaningfully engaging end users, they also argue for collaborative partnerships across sectors, including innovators, researchers and investors, to increase the potential for new technologies to have their intended positive impacts.

In addition to engaging with older adults and their caregivers, Harris et al. (2024) highlight the need to ensure that new technologies are introduced that align with the priorities of older adults, which they argue are reducing cybersecurity threats and supporting caregivers. Also, they remind us of the importance of integrating new technologies into the existing home and community supports available, ensuring that these are complementary, and improving experiences throughout the care continuum.

AgeTech is a global phenomenon and Forrest and Randriambelonoro (2024) provide an international perspective on the potential for technologies to enable remote healthcare monitoring, increase social connectivity and improve access to care. They review the global

Joining the Team as the New Co-Editor-in-Chief

As we enter the second quarter of the 21st century, Canada's health systems seem to be at a breaking point in the aftermath of a global pandemic. The long-standing cracks in its foundation – such as the institutionalized inequities, workforce challenges, lagging digitization and data linkages and care fragmentation – threaten to undermine public support that has been an enduring feature of medicare since its inception. This threat means that this is precisely the time when evidence- and experience-informed policy debates are needed more than ever.

I am delighted to serve as the incoming co-editor-in-chief, joining my colleague and mentor, Audrey Laporte, and the Longwoods team, to address the hard questions of our time. How can we rebuild the public's trust and support for publicly funded health systems? How can we leverage partnerships with researchers, decision makers, planners, communities and health sector stakeholders to support meaningful and positive change for patients, caregivers and health workers and for Canadians?

As a comparative health policy and systems researcher, I enjoy collaborations across Canada and globally, and I am keen to situate the health systems issues that we face in a comparative perspective. Health system challenges across the world are arguably more similar than they are different. Ongoing work by international organizations such as the Organisation for Economic Co-operation and Development, the European Observatory on Health Systems and Policies (not to mention our very own North American Observatory on Health Systems and Policies), the World Health Organization and the Commonwealth Fund have catalyzed cross-country comparisons through standardized data, in-depth country studies and conceptual frameworks. By leveraging these resources, and by sharing our learnings from successes and failures with varied system reforms, we can help expand the realm of possibilities for improvement here in Canada.

In this and forthcoming issues in this journal, we will be sure to bring local and international experiences to bear on some of the most pressing health system challenges we face, such as artificial intelligence in health systems, the role of federal government and the iconic *Canada Health Act*, 1985, and the often-divisive yet critically important debates on the public-private mix, among others. I believe we are well positioned at Longwoods' *Healthcare Papers* and in Canada to address these issues in a thoughtful, inclusive and evidence-informed manner.

We are reviving our editorial advisory board (stay tuned for a formal announcement), and I look forward to working with them to shape the direction of this journal. Thanks to the Longwoods team and to all the readers and contributors for your ideas and support and for joining me in this journey to grapple with the questions that will help us strengthen and rebuild support for Canada's health systems.

— *Sara Allin*

evidence and provide recommendations for overcoming some of the key barriers to widespread adoption of these technologies, such as by expanding the United Nations' Sustainable Development Goals (https://sdgs.un.org/goals) to include digital literature and by promoting intergenerational dialogue.

Boot and Czaja (2024) present additional evidence for technology – for example, novel social virtual reality – to enhance social connectivity and reduce loneliness among older adults while also emphasizing the need to balance technology with in-person/face-to-face interactions. They describe the gap between the evidence, which is growing rapidly, and the adoption of technologies, which they describe as a problem of "technology transfer" (Boot and Czaja 2024: 55), and outline steps to overcome this challenge, such as working closely with innovators to ensure that the technologies account for the unique needs and priorities of older adults and work in the real world.

While most AgeTech research and development has focused on supporting people living independently in the community, Grigorovich and McMurray (2024) consider the current and future potential applications of technology to improve the lives of residents and workers in LTC homes. They provide a critical lens into current uses of technology, such as technological monitoring and surveillance of residents, and suggest seven key recommendations to ensure that technology is better designed and implemented to meet the needs and preferences of older adults living in LTC homes.

Finally, Rogers and Mahajan (2024) explain how to take a human factors and ergonomics approach to the design, development and deployment of technologies to ensure that they are widely adopted and contribute to meaningful improvements in quality of life. Specifically, they outline the different steps that are needed, from identifying user groups and undertaking needs assessment to simulations and formal evaluation.

Conclusion

To conclude, the lead essay articulates an optimistic yet thoughtful call to action "for collaboration and collective efforts … to drive rights-based, equitable and ethical technological innovation for older adults," (Kokorelias et al. 2024: 20) and this collection of commentaries provides concrete suggestions for optimizing the potential for technologies to support older adults to age in the right place. The readers of this issue can be the judge of whether these efforts will ultimately lead to the transformative change that has proven so elusive.

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