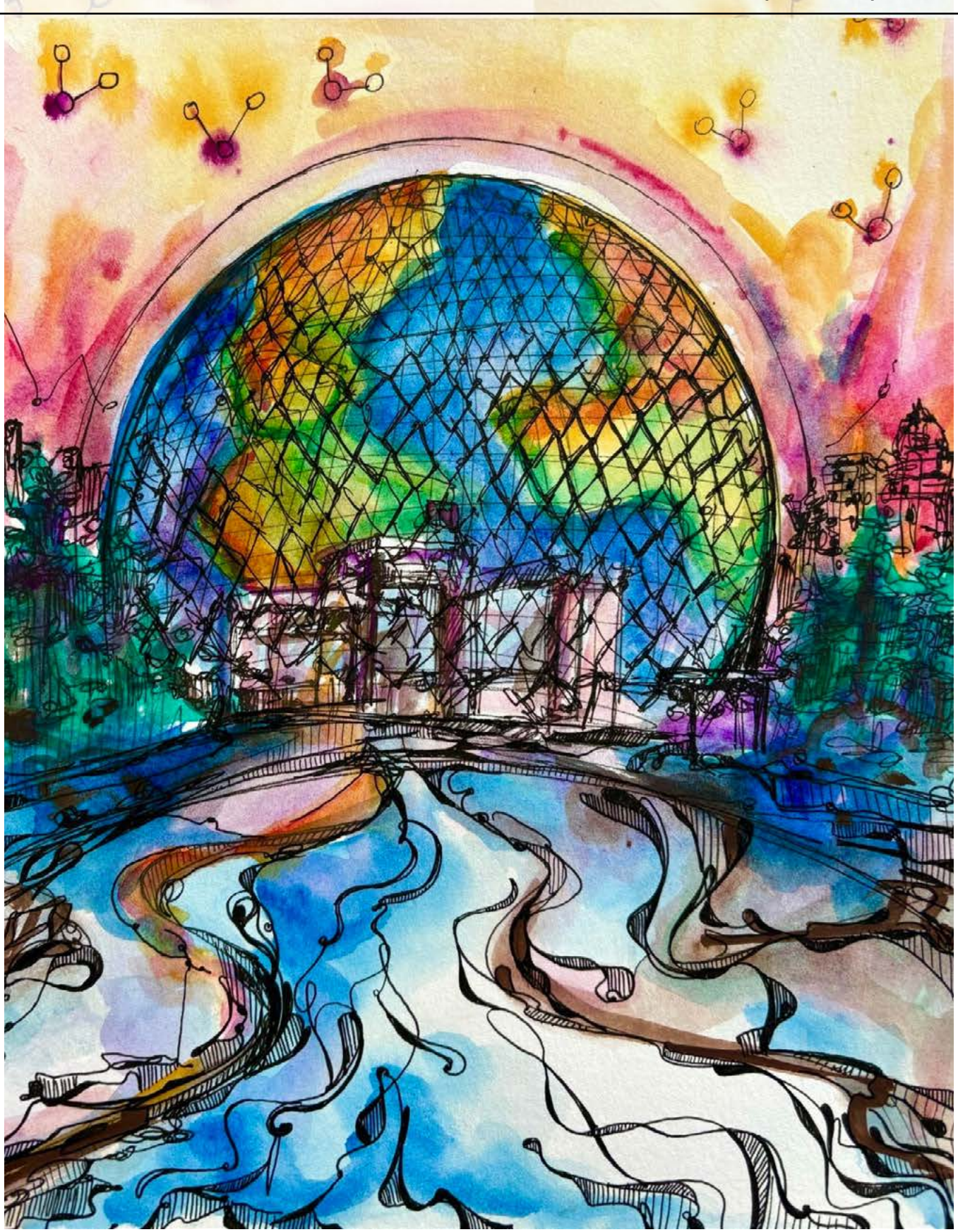
McGILL JOURNAL OF GLOBAL HEALTH

Volume XIV | Issue 1 | 2025



How the Digital Healthcare Shift Affects Older Adults: A Commentary

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Received: April 1, 2025 | **Published Online:** August 28, 2025

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Introduction

Recently, healthcare in North America has transitioned towards the use of digital technologies and data analytics [1]. Some components of this digital transformation include increased use of telemedicine, electronic health records, data analytics, wearable technologies, and artificial intelligence [1]. Despite these new developments continuing to reshape the healthcare landscape and allowing for better accessibility, efficiency, and patient participation, they also present challenges for older adults which limit their ability to fully benefit from digital health innovation. This commentary explores the benefits and challenges older adults may face in adapting to the new digital healthcare field and the necessary efforts to ensure equitable and inclusive access.

Benefits of Digital Health for Older Adults

For older adults, telemedicine can help overcome barriers to in-person care by reducing the physical and logistical burdens of travel through remote access to appointments. This increased access also enables the delivery of remote support for mental health, chronic disease management, and health behaviour counseling, areas especially important in rural and underserved communities [2]. Furthermore, telemedicine is a cost-effective alternative to in-person healthcare, reducing the burden of transportation, parking expenses, and extended wait time for medical services [3]. Therefore, telemedicine plays a key role in reducing missed appointments, increasing continuity of care, and reaching older adults who might otherwise delay or forgo treatment due to travel limitations.

Another benefit of digital health is its ability to improve health monitoring for older adults. Fall detection systems, continuous heart rate monitoring devices, at-home devices that track blood pressure and oxygen levels, sleep tracking technology, and digital reminders can support both the prevention and treatment of chronic diseases in older adults, as these systems allow clinicians to keep track of patients' health remotely [4]. Other benefits also included promoting independence and empowering older adults to self-manage their health conditions [5]. Therefore, these tools provide continuous, real-time monitoring of vital health metrics, allowing for early detection of potential health risks and leading to timely treatment. These, in turn, help improve the quality of life for older adults and ease the minds of families and caregivers.

Challenges and Barriers

Although digital healthcare offers promising opportunities for older adults to better manage their health, barriers related to the "digital divide" often limit their ability to fully benefit from these innovations. The "digital divide" is defined as the gap between those with and without access to modern information and communication technologies [6]. More so, the digital divide consists of two tiers: access to technology as the first tier and digital literacy as the second tier [7]. Although digital health technology can aid in improving health outcomes and access to care for older adults, it may still exclude individuals who face barriers to technology adoption [8]. Moving towards digital care most often assumes universal technology proficiency, which can ultimately sideline older adults who struggle with navigating digital platforms, understanding data privacy, and affording devices.

The first tier of digital literacy is defined by the World Health Organization as "the ability to search, find, understand and evaluate health information from electronic resources and to use the knowledge gained to solve health-related problems" [9]. In Canada, digital literacy varies among older adults. According to Statistics Canada, in 2022, approximately 8 in 10 older adults over the age of 65 use the internet [10]. However, some still fall behind on the 'catch-up curve,' where the fast pace of technological change limits opportunities to build foundational digital skills [11]. Consequently, having limited digital literacy can affect older adults' confidence and ability to navigate digital health tools such as electronic health records, mobile health applications, video consultations, and health management platforms.

In relation to the second tier, digital accessibility still remains a challenge, especially for adults living in rural and remote areas. Infrastructure limitations, such as the lack of high-speed broadband or unreliable internet connectivity can severely restrict access to digital health services [12]. Moreover, limited availability of service providers or outdated technologies further widens the digital divide [12]. Furthermore, affordability is another barrier, especially the cost of purchasing devices, coupled with ongoing internet service fees which can be prohibitive for older adults on fixed incomes [13]. These factors collectively act as barriers to equitable access to digital health platforms, leaving some older adults unable to benefit from innovations designed to improve care delivery and health outcomes [13].

Call to Action and Future Considerations

To ensure equitable access to digital health services, efforts must be made to close the digital divide, such as addressing issues related to digital literacy and digital accessibility [14]. This includes policymakers and healthcare providers funding

and expanding new and existing community-based education programs tailored to older adults to develop digital literacy. Currently, there are government and community initiatives in Canada that are aiming to make digital healthcare more accessible to older adults. For example, the Digital First for health strategy launched by the Ontario government and the Innovating Digital Health Solutions initiative aim to emphasize the importance of digital health, make healthcare more patient-centred, and fund startups that develop low-cost, older adult-friendly applications that contain features such as voice commands and large text for easier readability [15]. In addition to these, the tech sector should focus on developing technology that is adaptable to the needs of older adults. This can be achieved by designing intuitive interfaces with features like voice activation, high-contrast visuals, and minimal text input. Moreover, to create an age-inclusive digital healthcare, companies should adopt universal design frameworks like digital health accessibility guidelines, ensuring simplicity, assistive device compatibility, and multilingual support. Furthermore, involving older adults in design without assuming reluctance to learn, addressing privacy concerns, and promoting digital equity policies are also important. Altogether, digital healthcare should enhance and not replace traditional in-person care. This, therefore, requires efforts to mandate healthcare systems maintain this balance and avoid rigid "digital-first" mandates that risk alienating certain populations.

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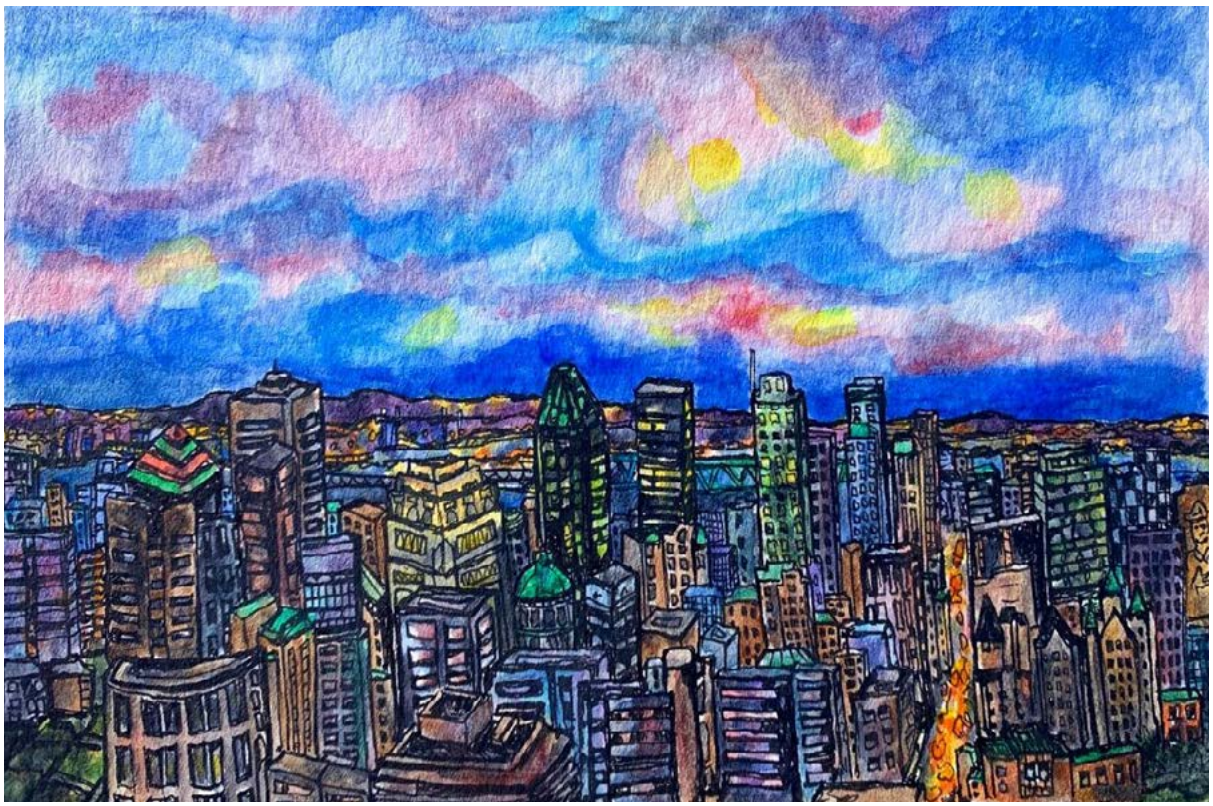

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