

# Digital Equity in Timiskaming



## Our Ask:

**Candidates commit to addressing gaps in digital equity across Ontario.**



## Return on Investment:

**Equitable access** to digital devices and services for Ontarians are vital for improving:

- **Economic wellbeing**
- **Social wellbeing**
- **Overall health**

**“Every day that goes by without a more robust Canadian broadband strategy means a Canadian who is socially and economically vulnerable continues to be profoundly disadvantaged...”<sup>13</sup>**

- CRTC chairman Jean-Pierre Blais

### Employment and Economic Gains:

- Prior to the COVID-19 pandemic, research noted the economic benefits of increased availability and adoption of Internet services in rural areas.<sup>1, 4, 5</sup>
  - Findings from a number of Canadian areas have noted that broadband Internet service in rural regions can “decrease regional disparities in employment opportunities and enhance the economic viability of rural regions.”<sup>4</sup>
  - The economic benefits of quality telecommunications infrastructure in northern and remote communities can include increased productivity, making new services and products available, supporting new practices, and increased access to new business markets in Canada and across the world.<sup>5</sup>
- Research has indicated that medical care delivered over Internet connected devices (often called ‘Telehealth’ or ‘telemedicine’) can be a cost-effective healthcare option in rural areas, however further research is needed to assess the broad cost-efficacy of this type of option in rural Ontario.<sup>2, 3, 6</sup>

### Social Cohesion:

- Social exclusion has negative impacts on health by preventing people from accessing resources and opportunities to develop skills, encouraging stigma or discrimination, and contributing to chronic stress and anxiety.<sup>51, 52</sup>
- Many people are left out of using Internet connected devices and the socialization opportunities they offer – when people are excluded from socialization opportunities, this can have a bad influence on quality of life and well-being.<sup>53</sup>
- Internet connected technology can be a powerful tool for people to improve their social participation, and it can empower people to work towards overcoming social problems that affect their communities.<sup>14</sup>
  - These devices can be used to build closer ties to community support networks and groups
  - Meeting people from other cultures and communities online can expand people’s worldview and may lead to less extreme political polarization.

### Health Benefits:

- Telehealth can benefit the health of community members. It can:<sup>15, 32</sup>
  - Increase access to specialized doctors in rural and remote areas
  - Reduce travel time to medical appointments
  - Reduce wait times for getting care
- Social and mental health services can also benefit from Internet connected devices – community members can use these devices to connect with specialist mental health workers, and to access helpful resources, services and supports regardless of location.<sup>16</sup> However, there is also the chance that lack of access to Internet connected devices and services may create greater health differences between people who have access to these devices / services and people who do not.<sup>54</sup>

## Background:

There is a digital divide in Timiskaming – a gap in equity that prevents community members from using Internet connected devices and services to improve their health, to access social and economic opportunities, and so much more.<sup>7, 8, 9, 10, 11, 12</sup> Digital equity is affected by many factors, including:

- **Access:** Things that prevent people from getting, keeping, or using digital devices.
- **Affordability:** Things that affect the costs of buying and/or using digital devices, data, or high speed Internet
- **Digital Literacy:** Things that help people look for, judge and understand digital information.

When dealing with these issues, it is vital that any actions are developed through a culturally appropriate lens to avoid increasing health inequities.<sup>12</sup> Digital equity can be addressed by provincial governments through a number of actions. For examples of what governments can do to address these issues, please see **Appendix A**.

## What is stopping people from using digital devices and services in Timiskaming?

### Access:

- There are a number of areas in Timiskaming that do not have Internet services available at the minimum target speed set by the Canadian Radio-television and Telecommunications Commission (CRTC).<sup>17, 18</sup>
- Timiskaming has a limited number of Internet service providers for community members to choose from compared to other areas in Ontario. For instance, people in Virginiatown have 2 Internet service providers to choose from (one of which only provides satellite services), but people in Barrie have 7 service providers to choose from.<sup>17</sup>
  - Rural Canadians do not benefit from competition among service providers as much as urban Canadians, and as such they have less choices in providers and pay more for their Internet services<sup>13</sup>
- The extent of this issue is hard to gauge, as much of the Internet speed data has gaps in information
  - For example, there is a lack of Internet speed and availability data for First Nations communities, which can make it hard to address Internet quality and availability issues in these areas.<sup>32</sup>

### Affordability:

- In the 2016 Canadian census, the median total income among Timiskaming residents was \$32,142, compared to Ontario residents as a whole, who had a median total income of \$33,539.<sup>19</sup>
- In Timiskaming, an estimated 5,080 households have an annual income below \$40,000 (approx. 34% of households).
  - People in rural Ontario **spend more on expensive Internet services** that are **lower quality** compared to other areas in Ontario.<sup>20, 21</sup>

### Digital Literacy:

- The northern location and sparse population of Timiskaming poses challenges when it comes to developing digital literacy among community members:
  - The lack of opportunities in the area may lead to a 'brain drain' of people who are talented with technology, which can reduce chances for community members to learn from others and develop their own digital literacy skills.<sup>22</sup>
    - The loss of people skilled in technology can lead to challenges with building and maintaining infrastructure needed to access Internet services.<sup>23</sup>
  - It is also important to encourage equitable digital skill development among the social service workforce, as the development of these skills is highly important for improving the outcomes of the care received.<sup>55</sup>

# The Digital Divide and the Social Determinants of Health

The Canadian Public Health Association defines the social determinants of health as the “...social and economic factors that influence people’s health.”<sup>33</sup> There are currently fourteen recognized social determinants of health, including:

- |                                      |                          |
|--------------------------------------|--------------------------|
| 1) Income and Income Distribution    | 8) Social Exclusion      |
| 2) Education                         | 9) Social Safety Network |
| 3) Unemployment and Job Security     | 10) Health Services      |
| 4) Employment and Working Conditions | 11) Aboriginal Status    |
| 5) Early Childhood Development       | 12) Gender               |
| 6) Food Insecurity                   | 13) Race                 |
| 7) Housing                           | 14) Disability           |

## The Digital Divide and the Social Determinants of Health:

From the above list, it is not hard to imagine how a lack of access to Internet connected devices and services could lead to differences in the social determinants of health among Ontarians. As such, access to and digitally literate use of the Internet have been coined as “super social determinants of health”, as they allow for all of the other social determinants of health to be addressed.<sup>54</sup>

- 1) Income and Income Distribution: Limited income has been identified as a barrier to Internet use.<sup>34</sup> Lack of device and Internet access can prevent participation in education, which can hamper future economic prosperity.<sup>35</sup>
- 2) Education: Access to Internet and Internet connected devices is a necessity for remote learning. Lack of equitable access to online education will continue to be a concern, especially for rural and remote communities who rely on these educational models.<sup>35</sup>
- 3) Unemployment and Job security: Given the key role that Internet connected devices play in the job searching process and the importance of computer skills for a wide range of jobs, limited access to devices and Internet services may have negative impacts on employment prospects.<sup>36</sup>
- 4) Employment and Working Conditions: Access to Internet connected devices allows for people to work remotely. Remote work includes benefits such as improved work autonomy and greater work-life balance.<sup>37</sup>
- 5) Early Childhood Development: Use of Internet connected devices can allow for innovative ways for children to develop basic motor, social-emotional, and cognitive skills; as such, lack of access to these technologies may disadvantage some children.<sup>38</sup>
- 6) Food Insecurity: Many people took advantage of online grocery shopping and food delivery services during COVID, and these services may continue to be important for marginalized groups in the future.<sup>39</sup> Lower income households face barriers to accessing these services, including lack of Internet connected devices and services.<sup>40</sup>
- 7) Housing: Access to Internet connected devices and services is highly important for finding adequate housing, including subsidized housing services offered by the provincial government.<sup>41,42</sup>
- 8) Social Exclusion: Internet connected devices and technologies can be used for a personal socialization, such as e-mailing friends and family, as well as for participating in civic duties, including contacting elected officials and ensuring your voice is heard.<sup>43</sup>
- 9) Social Safety Network: Many social services moved online in response to the COVID-19 pandemic, and as a result, some community members experienced gaps in the social safety networks due to inability to access online services.<sup>44</sup>
- 10) Health Services: Access to telehealth services is important for rural and remote areas, as it can increase access to specialist medical providers and reduce commuting time.<sup>15,32</sup> People who cannot access adequate Internet connected devices and services to use telehealth and left out of these benefits.
- 11) Aboriginal Status: Indigenous people in Canada have been disproportionately affected by the digital divide, with substantially lower access to quality, high-speed Internet services.<sup>45</sup>
- 12) Gender: Historically, low enrollment of women in computer science programs has resulted in public education efforts to increase technology use by them.<sup>46</sup> It is worth noting that the gender demographics relating to the digital divide are constantly developing, and it is important to continue efforts to ensure equitable access to people of all genders.<sup>47</sup>
- 13) Race: Minority groups have been identified as having reduced access to Internet connected devices and services in many jurisdictions; in Canada, it has been suggested that structural inequities may be contributing to a digital divide specific to racialized peoples.<sup>47,48</sup>
- 14) Disability: Many people with disabilities report less access to the Internet.<sup>49</sup> In Ontario, this may be related to the limited amount of funding supplied to disabled Ontarians through the Ontario Disability Support Program.<sup>50</sup> Additionally, people with disabilities face additionally accessibility challenges when using Internet connected devices.<sup>50</sup>

## Key Actions:

**Decisions made by the provincial government can impact individual and community health. Provincial policies influence digital equity and digital determinants of health. The upcoming election is an opportunity to think about public health issues that affect our lives and future generations.**

**Learn more about the issues and the actions provincial leaders can take to protect and promote the health of communities locally and across the province.**

**Get informed. Get involved. Go vote.**

**Key actions the provincial government can take to address digital equity:**

- Support policies that increase competition and lower barriers for Internet providers, such as cataloging provincial Internet infrastructure assets, increasing access to rural Internet infrastructure subsidy programs for small to medium sized Internet Service Providers, and encouraging connectivity planning in new building projects (Dig Once policies). <sup>7, 13, 31</sup>
- Support data collection efforts that look into the issue of rural Internet availability and quality and use this data to guide goals and indicators of success to improve the Internet services received by Ontarians who live in rural and remote areas <sup>11, 26</sup>
- Improve and enforce accessibility standards that remove barriers to digital inclusion for people who live with disabilities. <sup>10</sup>
- Advocate for all levels of government to increase accessibility, availability, and quality of subsidized Internet programs. <sup>7, 30</sup>
- Support continued collaboration between government, non-profit organizations, and the private sector to distribute no-cost or low-cost devices to people who are the most impacted by the digital divide. <sup>11</sup>
- Support local schoolboards to consider digital literacy as a priority for students to develop.
  - o Support teachers in accessing the devices and educational material they need to teach and promote these skills.
- Support collaboration between government, non-profit organizations, and the private sector to provide tailored, low-cost, culturally relevant digital literacy training opportunities to those most impacted by the digital divide. <sup>9, 10, 11</sup>
- Support the digital literacy skills of healthcare workers in Ontario. <sup>9</sup>

## Appendix A: Opportunities for Addressing Digital Equity in Canada

- 1) Digital Equity Ottawa – [Boosting the Signal: Pathways to Improving Digital Equity in Eastern Ontario](#)
- 2) National Collaborating Centre for Determinants of Health: [Digital equity for mental health and addictions in Nova Scotia – A Situational Assessment](#)
- 3) Alliance for Healthier Communities: [Digital Equity Call to Action | Bridging the Digital Divide](#)
- 4) Ryerson Leadership Lab: [Overcoming Digital Divides | What We Heard and Recommendations](#)
- 5) Toward Common Ground: [Vital Focus | The Impact of COVID-19 on access to the Internet and digital devices](#)
- 6) Rural Ontario Municipal Association: [Broadband Connectivity | A Municipal Primer](#)

## References:

- 1) Prieger, J. E. (2013). The broadband digital divide and the economic benefits of mobile broadband for rural areas. *Telecommunications Policy*, 37(6-7), pages 483-502. Doi <https://doi.org/10.1016>
- 2) Fu R, Sutradhar R, Li Q, and Eskander A. (2022). Virtual and in-person visits by Ontario physicians in the COVID-19 era. *Journal of Telemedicine and Telecare*. Doi: [10.1177/1357633X221086447](https://doi.org/10.1177/1357633X221086447)
- 3) Pham, Q., Hearn, J., Gao, B., Brown, I., Hamilton, R. J., Berlin, A., Cafazzo, J. A., & Feifer, A. (2020). Virtual care models for cancer survivorship. *Npj Digital Medicine*, 3(113), <https://doi.org/10.1038/s41746-020-00321-3>
- 4) Ivus, O. & Boland, M. (2016). The employment and wage impact of broadband deployment in Canada. *Canadian Journal of Economics*, 48(5), pages 1803-1830. Doi <https://doi.org/10.1111/caje.12180>
- 5) Federation of Canadian Municipalities. (2014). *Broadband Access in Rural Canada: The role of connectivity in building vibrant communities*. Accessed April 8, 2022. Available from <https://fcm.ca/sites/default/files/documents/resources/report/broadband-access-rural-canada.pdf>
- 6) Kruse, C. S., Williams, K., Bohls, J., & Shamsi, W. (2021). Telemedicine and health policy: A systematic review. *Health Policy and Technology*, 10(1), pages 209-229. Doi <https://doi.org/10.1016/j.hlpt.2020.10.006>
- 7) Digital Equity Ottawa (2021). *Boosting the Signal: Pathways to Improving Digital Equity in Eastern Ontario*. Accessed April 8, 2022. Available from: <https://neighbourhoodequity.ca/digital-equity-ottawa/>
- 8) National Collaborating Centre for Determinants of Health. (2021). *Digital equity for mental health and addictions in Nova Scotia | A Situational Assessment*. Accessed April 8, 2022. Available from: [https://mha.nshealth.ca/sites/default/files/2021-07/Digital%20equity%20mental%20health%20sit%20ax\\_Final\\_May%2011%202021.pdf](https://mha.nshealth.ca/sites/default/files/2021-07/Digital%20equity%20mental%20health%20sit%20ax_Final_May%2011%202021.pdf)
- 9) Alliance for Healthier Communities. (2020). *Digital Equity Call to Action | Bridging the Digital Divide*. Accessed April 11, 2022. Available from <https://www.allianceon.org/sites/default/files/14.6%20Digital%20Equity%20Strategy%20Call%20to%20Action%20Bridging%20the%20Digital%20Divide.pdf>
- 10) Abdelaal, N. & Andrey, S. (2022) *Overcoming Digital Divides | What We Heard and Recommendations*. Accessed April 11, 2022. Available from: <https://www.ryersonleadlab.com/overcoming-digital-divides-what-we-heard>
- 11) Toward Common Ground. (2021). *Vital Focus | The impact of COVID-19 on access to the Internet and digital devices*. Accessed April 11, 2022. Available from: [http://www.towardcommonground.ca/en/resourcesGeneral/VitalFocus\\_DigitalDivide\\_03\\_AODA-May-12-2021.pdf](http://www.towardcommonground.ca/en/resourcesGeneral/VitalFocus_DigitalDivide_03_AODA-May-12-2021.pdf)
- 12) National Collaborating Centre for Determinants of Health and Nova Scotia Health Authority. (2022). *Digital equity in health services*. Accessed April 11, 2022. Available from: <https://nccdh.ca/resources/entry/digital-equity-in-health-services>
- 13) McNally, M. B., Rath, D., Joseph, K., Evaniew, J., and Adkisson, A. (2018). Ongoing Policy, Regulatory, and Competitive Challenges Facing Canada's Small Internet Service Providers. *Journal of Information Policy*, 8(1), 167-198. Doi <https://doi.org/10.5325/jinfopoli.8.1.0167>
- 14) Warburton, J., Cowan, S., and Bathgate, T. (2012). Building social capital among rural, older Australians through information and communication technologies: A review article. *Australasian Journal on Ageing*, 32(1), 8-14. Doi <https://doi.org/10.1111/j.1741-6612.2012.00634.x>
- 15) Jong, M., Mendez, I., and Jong, R. (2019). Enhancing access to care in northern rural communities via telehealth. *International Journal of Circumpolar Health*, 78(2). Doi [10.1080/22423982.2018.1554174](https://doi.org/10.1080/22423982.2018.1554174)
- 16) Bryant, L., Garnham, B., Tedmanson, D., and Diamandi, S. (2015). Tele-social work and mental health in rural and remote communities in Australia. *International Social Work*, 61(1), 143-155. Doi <https://doi.org/10.1177/0020872815606794>
- 17) Government of Canada. (2021). *National Broadband Internet Service Availability Map*. Accessed April 20, 2022. Available from: <https://www.ic.gc.ca/app/sitt/bbmap/hm.html?lang=eng>
- 18) Canadian Radio-television and Telecommunications Commission. (2022). *What you should know about Internet speeds*. Accessed April 20, 2022. Available from <https://crtc.gc.ca/eng/Internet/performance.htm>
- 19) Statistics Canada. 2017. *Temiskaming Shores, CY [Census subdivision], Ontario and Ontario [Province] (table)*. *Census Profile*. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E> (accessed April 20, 2022).
- 20) Canadian Internet Registration Authority. (2020). *New Internet performance data shows urban speeds improving while rural speeds plateau*. Accessed April 4, 2022. Available from: <https://www.cira.ca/newsroom/state-Internet/new-Internet-performance-data-shows-urban-speeds-improving-while-rural>
- 21) Weeden, S. A. and Kelly, W. (2020). *Addressing the Digital Divide: COVID-19 and the Importance of Connecting Rural Canada*. Accessed April 20, 2022. Available from [https://www.researchgate.net/publication/342318420\\_Addresssing\\_the\\_Digital\\_Divide\\_COVID-19\\_and\\_the\\_Importance\\_of\\_Connecting\\_Rural\\_Canada](https://www.researchgate.net/publication/342318420_Addresssing_the_Digital_Divide_COVID-19_and_the_Importance_of_Connecting_Rural_Canada)
- 22) Lai, J. and Widmar, N. O. (2020). Revisiting the Digital Divide in the COVID-19 Era. *Applied Economic Perspectives and Policy*, 43(1), 458-464. Doi <https://doi.org/10.1002/aapp.13104>
- 23) Hadziristic, T. (2017). *The State of Digital Literacy in Canada: A Literature Review*. Accessed April 20, 2022. Available from [https://brookfieldinstitute.ca/wp-content/uploads/BrookfieldInstitute\\_State-of-Digital-Literacy-in-Canada\\_Literature\\_WorkingPaper.pdf](https://brookfieldinstitute.ca/wp-content/uploads/BrookfieldInstitute_State-of-Digital-Literacy-in-Canada_Literature_WorkingPaper.pdf)

- 24) Innovation, Science and Economic Development Canada. (2022). *High-speed Internet for all of Canada*. Accessed April 20, 2022. Available from <https://ised-isde.canada.ca/site/high-speed-Internet-canada/en>
- 25) Government of Ontario. (2020). *Ontario connects: making high-speed Internet accessible in every community*. Accessed April 20, 2022. Available from <https://www.ontario.ca/page/ontario-connects-making-high-speed-Internet-accessible-in-every-community>
- 26) Rajabiun, R., Hambly, H., & Worden, D. (2020). *Broadband Infrastructure Quality Gaps in Ontario: Needs-Based Broadband Funding as Economic Stimulus*. Accessed April 14, 2022. Available from <https://www.r2b2project.ca/wp-content/uploads/2020/11/Policy-Brief-03-Nov-2020-1.pdf>
- 27) Hunt, R. (2021). *Mobile WiFi Hotspots for Loan at TSPL by Rebecca Hunt*. Accessed April 20, 2022. Available from <https://www.temiskamingshores.ca/en/news/mobile-wifi-hotspots-for-loan-at-tspl-by-rebecca-hunt.aspx>
- 28) reBOOT Canada. (n.d.). *reBOOT Canada Programs*. Accessed April 20, 2022. Available from <https://www.rebootcanada.ca/>
- 29) Electronic Recycling Association. (n.d.). *Donate to Charities: Make a Difference*. Accessed April 20, 2022. Available from <https://www.electronicrecyclingassociation.ca/donate-to-charities/>
- 30) Connecting Families. (n.d.). *Welcome to Connecting Families*. Accessed April 20, 2022. Available from <https://www.connecting-families.ca/welcome>
- 31) Rural Ontario Municipal Association. (2020). *Broadband Connectivity | A Municipal Primer*. Accessed April 20, 2022. Available from <https://www.roma.on.ca/sites/default/files/assets/DOCUMENTS/Broadband/BroadbandConnectivityAMunicipalPrimer20201117.pdf>
- 32) Hudson, H. E. (2020). *The Impact of Internet Access in Indigenous Communities in Canada and the United States | An Overview of Findings and Guidelines for Research*. Accessed April 20, 2022. Available from <https://www.Internetsociety.org/wp-content/uploads/2020/07/Impact-Indigenous-Communities-EN.pdf>
- 33) Canadian Public Health Association. (n.d.). *What are the Social Determinants of Health*. Accessed May 2, 2022. Available from <https://www.cpha.ca/what-are-social-determinants-health>
- 34) Fang, M. L., Canham, S. L., Battersby, L., Sixsmith, J., Wada, M., and Sixsmith, A. (2019). Exploring Privilege in the Digital Divide: Implications for Theory, Policy, and Practice. *The Gerontologist*, 59(1), e1-e15. Doi <https://doi.org/10.1093/geront/gny037>
- 35) Mulcahy, D., Barbour, K. M., & Lahiri, M. (2016). The straight truth about online learning in the Straits: An investigation into the nature of education in a rural and remote region of Newfoundland and Labrador. *Australian and International Journal of Rural Education*, 26(1), pages 27-41.
- 36) Lindsay, C. (2005). Employability, Services for Unemployed Job Seekers and the Digital Divide. *Urban Studies*, 42(2), pages 325-339. Doi [10.1080/0042098042000316173](https://doi.org/10.1080/0042098042000316173)
- 37) Sostero, M., Milasi, S., Hurley, J., Fernández-Macias, E., & Bisello, M. (2020). Teleworkability and the COVID-19 crisis: a new digital divide? JRC Working Papers Series on Labour, Education and Technology, No. 2020/05, European Commission, Joint Research Centre (JRC), Seville.
- 38) Berson, I. R., Luo, W., & Yang, W. (2021). Special Issue: Narrowing the Digital Divide in Early Childhood: Technological Advances and Curriculum Reforms. *Early Education and Development*, 33(1), pages 183-185. Doi <https://doi.org/10.1080/10409289.2022.1989740>
- 39) Sanchez-Diaz, I., Vural, C. A., & Halldórsson, A. (2021). Assessing the inequalities in access to online delivery services and the way COVID-19 pandemic affects marginalization. *Transport Policy*, 109. Doi <https://doi.org/10.1016/j.tranpol.2021.05.007>
- 40) Cummins, S., Berger, N., Cornelsen, L., Eling, J., Er, V., Greener, R., Kalbus, A., Karapici, A., Law, C., Ndlovu, D., & Yau, A. (2020). COVID-19: impact on the urban food retail system and dietary inequalities in the UK. *Cities & Health*. Doi <https://doi.org/10.1080/23748834.2020.1785167>
- 41) Government of Ontario. (n.d.). *Find your local service manager*. Accessed May 2, 2022. Available from <https://www.ontario.ca/page/find-your-local-service-manager>
- 42) McConnaughey, J. W., Lader, W., Chin, R., & Everette, D. (1998). *Falling Through the Net II: New Data on the Digital Divide*. Accessed May 2, 2022. Available from <https://www.ntia.doc.gov/ntiahome/net2>
- 43) Hill, R. A., Owens, I., Beynon-Davies, P., & Williams, M. D. (2004). Beyond Access: Bridging the Digital Divide. *ECIS Proceedings*. Available from <https://aisel.aisnet.org/ecis2004/61/>
- 44) Hansmann, K. J., Cotton, Q. D., & Kind, A. J. H. (2020). Mind the Gaps: Supporting Key Social Safety Nets Across the Digital Divide in Rural Wisconsin. *WMJ: official publication of the State Medical Society of Wisconsin*, 119(4), 227-228.
- 45) Greenfield, E. (2020). *Digital Equity for Indigenous Communities*. Accessed May 2, 2022. Available from <https://www.socialconnectedness.org/digital-equity-for-indigenous-communities/>
- 46) Howard, P. N., Busch, L., & Sheets, P. (2010). Comparing Digital Divides: Internet Access and Social Inequality in Canada and the United States. *Canadian Journal of Communication*, 35(1), 109-128.
- 47) Ercikan, K., Asil, M., & Grover, R. (2018). Digital Divide: A Critical Context for Digitally Based Assessments. *Education Policy Analysis Archives*, 26(51). Doi <http://dx.doi.org/10.14507/epaa.26.3817>
- 48) Hassan, S. & Daniel, B. (2020). During a Pandemic, the Digital Divide, Racism and Social Class Collide: The Implications of COVID-19 for Black Students in High Schools. *Child & Youth Services*, 41(3), pages 253—255. Doi <https://doi.org/10.1080/0145935X.2020.1834956>
- 49) Johansson, S., Gulliksen, J., & Gustavsson, C. (2021). Disability digital divide: the use of the Internet, smartphones, computers and tablets among people with disabilities in Sweden. *Universal Access in the Information Society*, 20, pages 105-120. Doi <https://doi.org/10.1007/s10209-020-00714-x>

- 50) Pasieka, C. (2022) *This woman with disabilities gets on \$1,169 a month. She hopes the Ontario election changes that.* Accessed May 5, 2022. Available from <https://www.cbc.ca/news/canada/toronto/odsp-rates-election-issue-1.6433163>
- 51) Australian Institute of Health and Welfare. (2018). *Social determinants of health.* Accessed May 9<sup>th</sup>, 2022. Available from <https://www.aihw.gov.au/getmedia/746ded57-183a-40e9-8bdb-828e21203175/aihw-aus-221-chapter-4-2.pdf.aspx>
- 52) Raphael, Dennis. (2016). *Social Determinants of Health, Canadian Perspectives*, 3<sup>rd</sup> Edition.
- 53) Seifert, A. (2020). The Digital Exclusion of Older Adults during the COVID-19 Pandemic. *Journal of Gerontological Social Work*, 63(6-7), pages 674-676. Doi [10.1080/01634372.2020.1764687](https://doi.org/10.1080/01634372.2020.1764687)
- 54) Sieck, C. J., Sheon, A., Ancker, J. S., Castek, J., Callahan, B., & Siefer, A. (2021). Digital inclusion as a social determinant of health. *npj Digital Medicine*, 4(52). Doi <https://doi.org/10.1038/s41746-021-00413-8>
- 55) Synnott, J., Harkin, M., Horgan, B., McKeown, A., Hamilton, D., McAllister, D., Trainor, C., & Nugent, C. (2020). The Digital Skills, Experiences and Attitudes of the Northern Ireland Social Care Workforce Toward Technology for Learning and Development: Survey Study. *JMIR Med Educ*, 6(2), e15936. Doi [10.2196/15936](https://doi.org/10.2196/15936)