



**ACCESS TO
THE
DIGITAL
ECONOMY
AND
HEALTH**

**ACORN INSTITUTE
CANADA**

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Internet for All: Digital Equity and Health

Context

In 2016, the Canadian Internet Registration Authority (CIRA) reported that 30 per cent of Canadians use the internet for health or medical purposes¹. Despite the fact that a sizeable portion of the population use the internet to access health resources, many Canadians still face barriers to digital equity. Statistics Canada reported that 8% of British Columbians do not use the internet²; however, even when Canadians are connected many still struggle to afford internet services. A 2016 survey of 394 ACORN members found that 83.5% found the cost of internet to be “extremely high,” while almost 60% revealed that they had to cut back elsewhere to afford internet³. Low-income individuals and families face a digital divide where they are less likely to have internet access than those in higher income brackets⁴. This digital divide has emerged as civic, economic, educational and social environments are becoming increasingly digitized. Internet use for health reasons is expected to grow, yet even when given access, those with limited access in the past require more support to effectively access health information⁵. This report explores the experiences of low-income BC ACORN members when using the internet for health-related reasons, including the barriers that impact their access to home internet.

Summary of Research

There are a number of opportunities for individuals to manage their health issues by using tools and information available online. Some benefits of internet use include access to online education for individuals who are unable to leave home; access to text to speech facilities for persons with visual impairments; socializing and connections from home⁶, self-care and improved experience for patients⁷. Other benefits include the availability of alternative forms of information via the internet, which could increase understanding of health issues⁸. Beyond the immediate benefit of health tools and resources, there is concern that marginalized groups will be left behind as the health sector becomes increasingly digitized⁹, emphasizing the importance of immediate action to ensure low-income Canadians have the means to participate in the digital economy. As it stands, the prevalence of a digital divide

¹ CIRA, Internet Use in Canada (2016) <<https://cira.ca/factbook/domain-industry-data-and-canadian-Internet-trends/internet-use-canada>>

² Statistics Canada (2016), General Social Survey <<http://www.statcan.gc.ca/pub/11-627-m/11-627-m2017032-eng.htm>>

³ ACORN Canada, Internet for All (2016) <<http://www.acorncanada.org/resource/internet-all>>

⁴ Financial Post, Digital divide persists in Canada, both in access and Internet fluency (2013)

<<http://business.financialpost.com/technology/digital-divide-persists-in-canada-both-in-access-and-internet-fluency>>

⁵ McCloud, R. F., Cassandra O. A., Sorensen, G., Viswanath, K. (2016) Beyond access: barriers to internet health information seeking among the urban poor <<https://academic.oup.com/jamia/article/23/6/1053/2399232>>

⁶ Chadwick D., Wesson C. (2016) Digital Inclusion and Disability. In: Attrill A., Fullwood C. (eds) Applied Cyberpsychology. Palgrave Macmillan, London.

⁷ Hoffman-Goetz, L., Donelle, L., Ahmed, R. (2014) Health Literacy in Canada: A Primer for Students

⁸ Sarkar U, Karter AJ, Liu JY, et al. (2011) Social disparities in internet patient portal use in diabetes: evidence that the digital divide extends beyond access. *J Am Med Inform Assoc.* 18:318-321

⁹ Hoffman-Goetz, L., Donelle, L., Ahmed, R., Health Literacy in Canada

prevents some of the most marginalized Canadians from achieving digital equity, and potentially impacts negative health outcomes.

Reports have shown that the highest earning individuals are almost five times more likely that to access the internet than the lowest earning individuals¹⁰. This is representative of a digital divide that negatively impacts low-income households. The CRTC has reported that lower-income households spend a higher percentage of their annual incomes on communications services, when compared with higher-income households¹¹. This makes it more difficult for low-income families to stay connected and build their digital literacy skills. Underrepresented groups can be disproportionately impacted by the digital divide. For example, people with disabilities often lack the means to get online due to poverty, lack of support, inadequate equipment or other barriers¹². With reduced access to the internet due to cost and insufficient skills (often caused by a lack of access), lower-income community members may have a reduced ability to utilize health information online when compared with higher-income community members, reflecting both a digital divide and a gap in health knowledge. This has caused some researchers to call for enhanced support for marginalized groups, to build both digital skills and the capacity to access and utilize online health resources^{13 14}.

In 2016, the CRTC declared internet a basic service that all Canadians should have access to at home. Despite this, Canada falls behind other countries when it comes to accessing opportunities that arise from the digital economy. According to the International Telecommunications Union's ICT Development Index, Canada ranked 29th for broadband access, use and skills compared with other countries in 2017 (the US ranks 16th and the UK ranks 5th)¹⁵. To allow low-income households to realize the health information and tools available online, steps must be taken to close the digital divide and address issues such as cost, skills and access that is preventing this group from benefiting from the digital economy.

This study explores the use of internet for health purposes among low-income community members. It investigates the barriers faced by low-income individuals and families that impact their ability to access the internet and presents recommendations to support digital equity for marginalized groups.

¹⁰ Haight, M., Quan-Haase, A. and Corbett, B. A. (2014) Revisiting the digital divide in Canada: the impact of demographic factors on access to the internet, level of online activity, and social networking site usage
<<https://www.tandfonline.com/doi/abs/10.1080/1369118X.2014.891633>>

¹¹ CRTC (2016) Communications Monitoring Report 2016: Canada's Communication System: An Overview for Canadians
<<https://crtc.gc.ca/eng/publications/reports/policymonitoring/2016/cmr2.htm>>

¹² Chadwick D., Wesson C. (2016) Digital Inclusion and Disability. In: Attrill A., Fullwood C. (eds) Applied Cyberpsychology. Palgrave Macmillan, London

¹³ McCloud, R. F., Cassandra O. A., Sorensen, G., Viswanath, K. Beyond Access

¹⁴ Estacio, E. V., Whittle, R., Protheroe, J. (2017) The digital divide: Examining socio-demographic factors associated with health literacy, access and use of internet to seek health information
<<http://journals.sagepub.com.proxy.lib.sfu.ca/doi/full/10.1177/1359105317695429#articleCitationDownloadContainer>>

¹⁵ ITU (2017) ICT Development Index 2017 <<http://www.itu.int/net4/ITU-D/idi/2017/index.html>>

Methodology

ACORN Institute Canada worked with BC ACORN's membership base of low and moderate income British Columbians to identify focus group participants. Two separate focus groups were held in 2018, on February 15th in Surrey and February 26th in Burnaby, with thirteen and nineteen participants respectively. Participants were low and moderate income BC ACORN members from diverse backgrounds.

The focus group questions were developed through conversations with low and moderate income community members to understand the issues that they face when accessing health information online. Other organizations working on internet access issues and issues related to using the internet for health purposes were consulted to build partnerships and identify areas of common research.

ACORN Institute Canada and BC ACORN

ACORN Institute Canada is a charitable organization that uses research and training to address problems in low-income communities. AIC believes that the poverty, discrimination, and community deterioration that exists in these communities is a result of a lack of civic engagement, community leadership, and education. AIC exists to address these deficiencies by providing research and training to low income communities. We focus our work in a context that provides individuals and groups the means to act upon social and community issues through comprehensive educational sessions on areas such as digital literacy, leadership development, and civic engagement.

Our main project partner, BC ACORN, is the British Columbia chapter of ACORN Canada (Association of Community Organizations for Reform Now, Canada). Founded in 2004, BC ACORN is an independent national organization which has rapidly grown into one of the country's most effective voices for low and moderate income Canadians, with over 102,000 members in Canada. In BC, ACORN has 5 chapters across Metro Vancouver and 19,000 members across the province. ACORN's central purpose is to effectively represent and champion the interests of Canada's low and moderate income urban citizens on the critical issues of social and economic justice.

Findings

Use of Internet for Health Purposes

Participants reported a range of ways in which they use the internet to access health information and manage their health. Participants both used the internet in place of professional medical services, such as physiotherapy, and to supplement professional medical advice.

"I have an ongoing back issue. I was going to physiotherapy and they teach all these exercises to strengthen the muscles. I've got a terrible memory, but I know all the names of the exercises so I can go onto YouTube and watch them do it again. For me, that was a big part of my recovery - watching those videos and then finding others that are similar."

"I use YouTube to look for exercises because I can't afford a physiotherapist."

The British Columbia Medical Services Plan does not cover physiotherapy, which makes cost a barrier to accessing physiotherapy services. In the absence of professional support, there is potential for the internet to provide a source of health information that can help people manage their health conditions. Ideally, this would be coupled with professional advice to ensure that the information available online is accurate. However, where low-income community members have no alternative, the internet could provide some support to alleviate non-serious health concerns. Building digital literacy skills that allow individuals to determine the reliability of health resources is important, to ensure that internet users make informed decisions in relation to their health.

There is potential for the internet to supplement professional medical advice. For example, if medical professionals could direct patients to appropriate resources, aiding their recovery in a cost-effective way. One participant spoke of the importance of internet in aiding their recovery:

"I was really sick a few years ago and I didn't really know if I was going to make it, but I'm alive today. When I was sick and I was home, I kept forgetting what kind of foods I was supposed to be eating. So for me the internet was really essential because I would go online and be like, 'Oh yeah, I'm supposed to be eating this' and 'Oh yeah, I'm not supposed to be doing that'."

For patients with memory issues, using the internet could aid their recovery process, allowing them to recover at home. This has the benefit of freeing up hospital resources. Other participants indicated the internet can help them manage medical issues while they wait for assistance from a doctor:

"If you have doctor or medical questions about conditions you have, you can't just phone the doctor and ask. You can leave a message. They might call you back next week, in the meantime you have a crisis. If you have the internet you can look up this information and you can take it on yourself, instead of waiting until the specialist comes to help."

With the right resources, the internet can provide necessary information to meet the needs of patients. Participants also indicated that the internet was crucial to book certain appointments, such as blood tests:

"You have to use the internet to book an appointment on LifeLabs. Otherwise you have to go in and wait for hours. You can't phone."

"I'm a stroke survivor for thirteen years now and often I have to get a blood test to make sure my blood is not thickening up too much and I risk having another stroke... For years I would have to go to the blood lab, now it's called LifeLabs. You always had to wait for a hell of a long time to go and get your blood tested... but now you can make an appointment online, so when I have to go to get a test it's much easier."

From fourteen years of working with low and moderate income communities, we have learned that people are busy. They work multiple jobs, look after children, manage health conditions, and more. Being able to make appointments online to avoid spend hours waiting for a test is crucial to ensuring low and moderate income British Columbians are able to look after their health. The internet also has the potential to provide information that allows patients to make informed decisions and advocate for their and their family's health:

"I use it to research any kind of medication that's prescribed for me or my kids. I want to know the side effects, I want to know the precautions, and the purpose of the medication".

Other benefits of internet access that participants mentioned include supporting school children with disabilities:

"If you have a deaf child, [the internet] is their life line. They read faces and they read lips. A lot of teachers knew that she was deaf, wouldn't face her and turned their back on her. She wasn't picking up what was going on in school, so she'd have to go online."

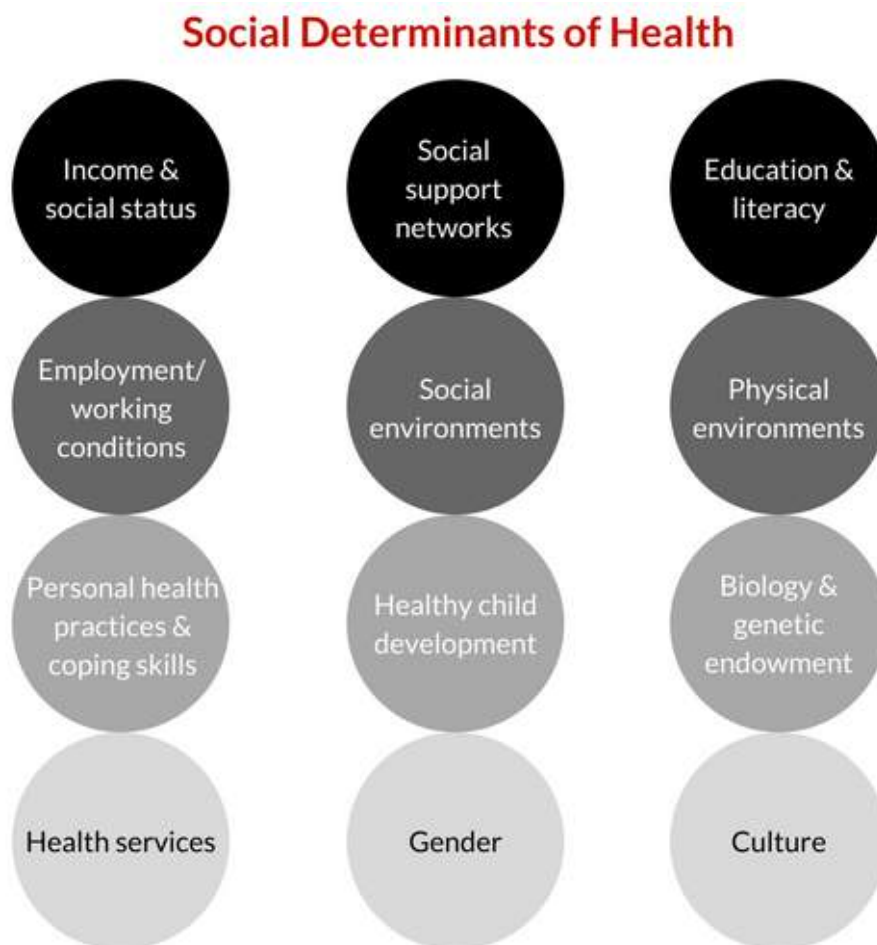
Internet access allows people to access a wide range of information. For people with disabilities, they can use the internet to identify materials that meet their needs, in a format that works for them. Other participants identified benefits to their mental health that come from internet use:

"For myself, I just go on YouTube and see funny things or whatever, because I always find that if you get really depressed and you go online and you're watching YouTube and there's this horse playing with another horse, I don't know, silly stuff... I just find that it distracts your mind from what's going on."

Utilized appropriately, participants indicated that there are many benefits of home internet access that can lead to positive health outcomes. Only one participant indicated that they don't use or need the internet.

Social Determinants of Health

According to the World Health Organization, “The social determinants of health (SDH) are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.”¹⁶



By considering the social determinants of health, it is possible to address the systemic issues that can contribute to negative health outcomes. Participants identified a number of benefits that could support the social determinants of health, such as housing (physical environment) and employment.

“I can't conceive of doing networking and job hunting without using LinkedIn, Workopolis, and multiple sites. There's multiple skills, things that I use to learn techniques and stuff. For someone who doesn't have internet access I don't know how they would search for a job.”

It is crucial that low and moderate income communities are able to compete for jobs in an increasingly technological society. This requires the access and skills to be able to use the internet effectively in a work and social context. The ability to access and

¹⁶ World Health Organization, Social Determinants of Health (2018)
<http://www.who.int/social_determinants/sdh_definition/en/>

apply for adequate jobs could potentially increase social mobility and improve financial wellbeing.

One participant raised the issue of using the internet to manage their budget for groceries, allowing them to free up some of their income:

"I actually go online a lot to look at all the flyers to see what's on sale, because I have a small budget so I look if the apples are on sale... I use my disability bus pass and go out to all the stores. I will buy one thing over here and go all the way over there to get another thing. Then I'll walk back and get another thing. Then I will look back when I get home and it says, 'You've saved \$67'. Holy smokes, I'm rich! That's another \$67 I can use in two more weeks."

This powerful experience reflects the reality faced by many low and moderate income Canadians. On a tight budget, individuals are forced to stretch funds or, potentially, face food insecurity. There is an opportunity for low-income community members to manage their budget more effectively by using the internet to make informed decisions before make purchases. This could also include comparing prices for many items and services, such as housing, transport, medical prescriptions, and other basic necessities.

Using the internet in relation to housing issues emerged as an area of concern for participants. Participants indicated that they were increasingly forced to use the internet to receive information about issues such as maintenance:

"In my building, the notice I got about the water being shut off was by email. So if I didn't have internet I'd be screwed."

"The Residential Tenancy Branch want you to do things online. It is supposed to be a system that the everyday average person can use, but it's the not the average everyday person if they require you have a computer."

The ability to access housing information and make complaints online is both useful, and a barrier, for many. The Residential Tenancy Branch directs people to their online dispute resolution process, which has the potential to be a convenient tool for tenants. However, for tenants without home internet access, this provides a barrier that could exacerbate a precarious housing situation.

Social support networks developed and strengthened through the internet were a key benefit for participants, as they spoke of connections that they maintained online. These online connections can help low income community members who are dealing with health issues, and other issues that can impact health, such as loneliness.

"I use skype to talk to my sister in London. We're the last two remaining of seven kids so we keep in contact with each other. I've had my issues over the years."

"All my friends are scattered and I have cousins and one of them has just had a baby. Everything's on the internet and I got to see everything... So it's kind of nice to interact and have internet and be able to be sociable. I think it actually improves your quality of life."

These connections that could help people deal with issues in their lives when they may otherwise have no one else to turn to, potentially helping to tackle social isolation for some of Canada's most marginalized community members.

Barriers to Digital Equity

Participants indicated that there are two main barriers to participation in the digital economy: cost and digital literacy. For many, the cost of high speed, home internet continues to be unaffordable:

"It is a large part of my income but I have to have it with [my child] being in school."

"I don't have internet; I can't afford internet."

One participant revealed that they paid \$156 for internet, phone and TV. For welfare recipients receiving \$710 per month, this is a huge expense for services that are necessary for so many daily activities.

Digital literacy also presented barriers for many participants who lack the skills to capitalize on the opportunities that arise from internet access:

"Everybody says, 'Go surf the net'. But how do you do that if you don't have a clue what you're doing?"

"When I first used the internet I had to get used to it. I'm still doing that, because they're always coming up with new stuff for the internet. It's always changing."

From the focus group discussions, it was apparent that there are many benefits to having internet access. However, it was also clear that for low and moderate income community members, financial and capacity constraints are key barriers to digital equity that must be addressed to ensure that everyone has equal access to opportunities.

Recommendations

Based on the findings that emerged from the focus groups with low-income community members, the following opportunities are apparent:

- Home internet access can support recovery by supplementing health information provided by medical professionals, particularly for individuals with memory issues;
- For low-income individuals who cannot afford some medical services (such as physiotherapy), health resources can be accessed online, ideally with guidance from medical professionals;
- As many services move online, internet access is crucial to ensure that low-income communities can book appointments, check results, and more;
- Internet access has the potential to positively impact a number of social determinants of health, such as physical environments, employment, income and social status, and social support networks;
- The connections that are possible through the internet are important, providing the social support networks that offer the potential to tackle social isolation.

The following recommendations are proposed to help tackle the barriers that prevent equitable access to the digital economy and further entrench poverty within our communities:

- All levels of government need to support digital literacy education that is delivered by the community, for the community to ensure it meets the needs of low and moderate income British Columbians (including internet use for health purposes);
- Telecommunications providers must provide affordable, high-speed home broadband for low and moderate income Canadians to end the financial constraints that contribute to the digital divide.

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