HEALTH EQUITY IMPACT ASSESSMENT (HEIA)

Digital Health Supplement

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The Ontario HEIA tool was developed by the Ontario Ministry of Health and Long-Term Care (MOHLTC) in collaboration with the Centre for Addiction and Mental Health (CAMH), to support improved health equity, reduction of avoidable health disparities between population groups, and improved targeting of health care investments (MOHLTC 2019). The HEIA tool comprises a workbook and template to help identify unintended potential impacts of a policy, program, or initiative on vulnerable, marginalized, or priority populations within general populations (MOHLTC 2012).

The HEIA was adapted for digital health, and is presented here, with the permission of the Ontario Ministry of Health and Long-Term Care.

More Information on the HEIA can be found at the Health Equity Impact Assessment community of practice https://www.porticonetwork.ca/web/heia

Purpose

The purpose of this digital health supplement to the Health Equity Impact Assessment (HEIA) tool is to encourage the use of the HEIA in planning and quality improvement in digital health, with the larger goal of increasing equitable access to digital resources and care.[1] We want to ensure that health care is accessible to all, while taking into account the unique strengths and needs of diverse populations, and the unique contexts of digital health, including virtual care.

The promise of increasing access to healthcare through technology has yet to be fully realized. While digital health and virtual care options have scaled rapidly to support the sustained delivery of healthcare over the course of the Covid-19 pandemic, the shift to digital modalities of care has also underscored inequities in healthcare.

This digital health supplement to the HEIA will allow individuals, programs, and institutions to identify health equity considerations in the design and implementation of digital health, and the delivery of virtual care.

We aspire to equity-based digital health that is strengths-based, person- and community-centered, and draws on the leadership and autonomy of the groups and communities served.

This digital health supplement to the HEIA:

- Recognizes digital health inequities and the way these are shaped by social determinants of health and broader social, cultural and political systems and structures
- Is a practical and flexible tool that helps to identify impacts of health technologies for diverse groups and communities
- Supports the application and development of evidence-based mitigation strategies that maximize strengths, and minimize potential negative impacts of digital health tools and care
- Applies the HEIA framework to multiple dimensions of digital health planning and delivery

Who should use the digital health supplement to the HEIA?

This tool is for anyone who is involved in the process of designing, developing or delivering digital health technologies and care, including virtual care.

We encourage partnership with patients, families, and community stakeholders in all aspects of developing and evaluating digital health.

We consider engagement in the HEIA-DH process to be an essential tool but not a sufficient commitment to collaborating around digital health equity. The HEIA-DH should be a precursor to action that is identified and then committed to.

Health equity lens

People, families, groups, communities and populations have unique profiles of strengths and needs. Some groups experience advantages or disadvantages as a result of social stratification and material circumstances, which can shape access to resources, power and privilege. These social and economic contexts shape the health and wellbeing of people and communities – creating social determinants of health.

Examples of social determinants of health include: income and social status; employment and working conditions; education and literacy; childhood experiences; physical environments; access to health services; experiences of racism and oppression, among others.

These social determinants of health can create health inequities, which are differences in health status between population groups that are systematic, unnecessary, unfair and avoidable.[2]

Health equity refers to the opportunity for all people to reach their full health potential and receive high-quality care that is fair and appropriate to them and their needs, no matter where they live, what they have, or who they are.[3]

Using a health equity lens means acknowledging and addressing health inequities to ensure that all receive access to care, have care that meets their values and needs, and results in equal outcomes.

Virtual Care and Digital Health

Virtual care, also known as telehealth, refers to clinical interactions (e.g., screening, assessment, treatment, intervention, etc.) between clients or patients and healthcare providers that occurs remotely through any form of communication technology, including video or audio modalities. Digital health is the larger umbrella of information and communication technologies that also includes electronic health records, wearable devices and apps, and other technologies used to manage illness and health risks, and to promote health and wellbeing.

Digital Health Equity

In order to ensure quality of care for all, digital health approaches must be developed with greater attention to the needs of diverse groups of people. While there is cause to celebrate the potential of technologies to increase access to care, and to distribute health resources to underserved, rural, and remote areas, there is growing awareness that digital health technologies and virtual care can have unintended impacts of increasing health inequities and "widening the digital divide." The rapid transition to virtual care during the Covid-19 pandemic brought digital health equity to the fore.[4,5]

The digital health equity framework (DHEF) (Crawford and Serhal 2020) integrates many health equity factors with digital determinants of health[See Figure 1].[6] This ecological approach considers the multitude of social, cultural, and economic factors that impact health and well-being, as well as the interactions between these factors, linking social determinants to health equity.

The process of social stratification within economic and sociocultural contexts assigns individuals to a social location, which is defined by intersecting factors such as race, age, income, geography, rurality, gender, dis/ability, and occupation, as well as other social factors. A person's social location governs exposure to health-related risks and vulnerabilities, including discrimination. A person's social location and material circumstances can be mutually reinforcing, and they also intersect with intermediate factors that shape health and health behaviours, including psychosocial stressors; styles of appraisal and coping; biology, including current health status and preexisting conditions; health-related beliefs and behaviors; current health needs; and their environment.

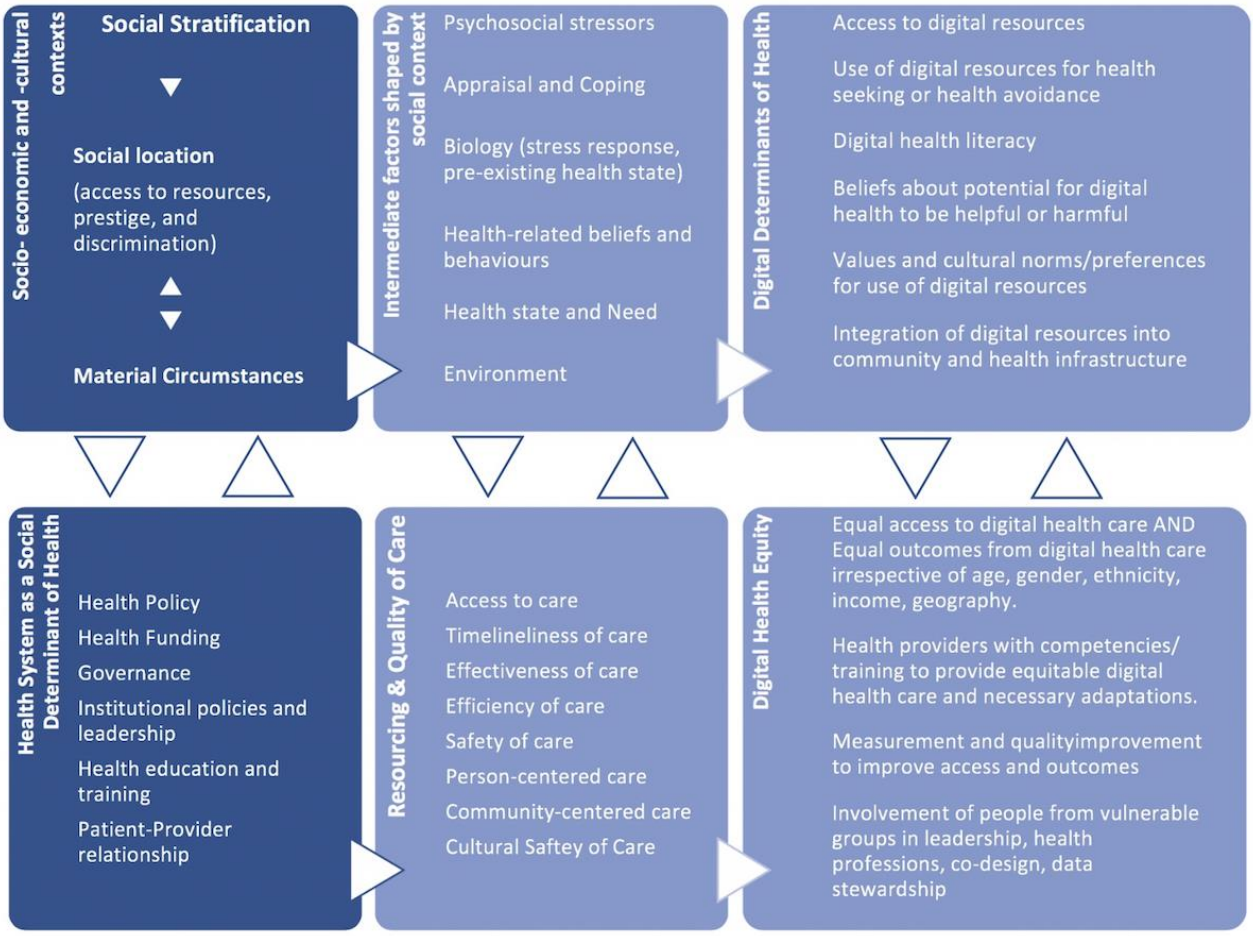
Digital determinants of health interact with these intermediate health factors. For example, access to digital health resources and digital health literacy interact with the degree and kind of psychosocial stress a person is currently experiencing; job loss or poverty, level of education, and previous exposure to digital media can all impact access to digital health. Styles of coping and appraisal of risk, along with health-related beliefs, can shape beliefs and behaviors regarding digital health; for example, some patients may have a tendency to avoid health care or to minimize risk, leading to issues such as corollary avoidance of digital health care, privacy-related concerns, or failure to appraise the quality of digital health information. Just as a person's environment shapes their health care access and quality, it also shapes their digital health access and quality.

The DHEF expands on the health system as a social determinant of health. Moving the dial on health equity, including digital health equity, requires looking beyond individual factors to the health system. We need to ensure that at every level, from health care providers to institutions, insurers, health regulators, and government, we are able to detect, understand, and work to improve the resourcing and quality of digital health

care for all social groups to reduce digital health disparities. Quality of care, which ensures that care is person-centered, safe, timely, effective, and efficient, is also care that is equitable.[7]

The DHEF highlights the importance of approaching digital health technologies from an ecological perspective, considering the ways that the use of technology by an individual shape and are shaped by their social, cultural, and economic position in the world. While this approach should make organizations, programs and providers alert to unintended equity impacts of virtual care, it should also recognize the strength and ingenuity of people and groups of people that can be harnessed to ensure the best possible outcomes of virtual care.

Figure 1. Digital Health Equity framework (Crawford and Serhal 2020)



When planning, designing, developing, delivering or evaluating health care, including digital health and virtual care, we recommend, as a minimum, considering the following questions:

- ☐ **Does the program or digital intervention consider risks, experiences and needs of all groups of people, particularly those who may be adversely impacted by social determinants of health?** Examples may include Indigenous Peoples, age-related groups, those living in rural areas, immigrants, refugees, ethnocultural and racialized groups, linguistic groups, or LGBTQ+ groups.

- ☐ **What strategies have been used to address or mitigate potential inequities in health status, health outcomes or quality of care[8] among these groups**? Have people from these groups been involved in the co-design and evaluation of these strategies?

- ☐ **How will you evaluate these equity-based improvements in program or service delivery, decision making or resource allocation?**

Health Equity Impact Assessment (HEIA) Tool

Developed by the Ontario Ministry of Health and the Centre for Addiction and Mental Health in 2011, with input from many other organizations, the Health Equity Impact Assessment (HEIA) is a tool for identifying and improving the equity of health interventions and programs.

The HEIA is practical and flexible, designed to be initiated in the planning phase of any health intervention or program, but can be used iteratively, and at any stage. The HEIA can:

- build health equity into an organization's decision making processes
- raise awareness about health equity at organization, program, and provider levels
- identify the unintended effects of a policy or program on the health of marginalized or underserved groups*
- improve the design of policies or programs to increase positive, and reduce negative health equity impacts

While the HEIA can be applied to any policy, program or initiative that has potential impact on health, this supplement gives specific direction around applying the HEIA to virtual care, and to other digital health initiatives. The remainder of this supplement will take you through the HEIA's 5 steps in relation to digital health: 1) Scoping; 2) Potential impacts; 3) Mitigation; 4) Monitoring; and 5) Dissemination.

The DigitALL Model – Equity-based Digital Health

The DigitALL Model considers the multiple dimensions of digital health and virtual care, which go beyond technology used for care delivery, and include stakeholders and relationships, as well as the interventions that are offered through technology.

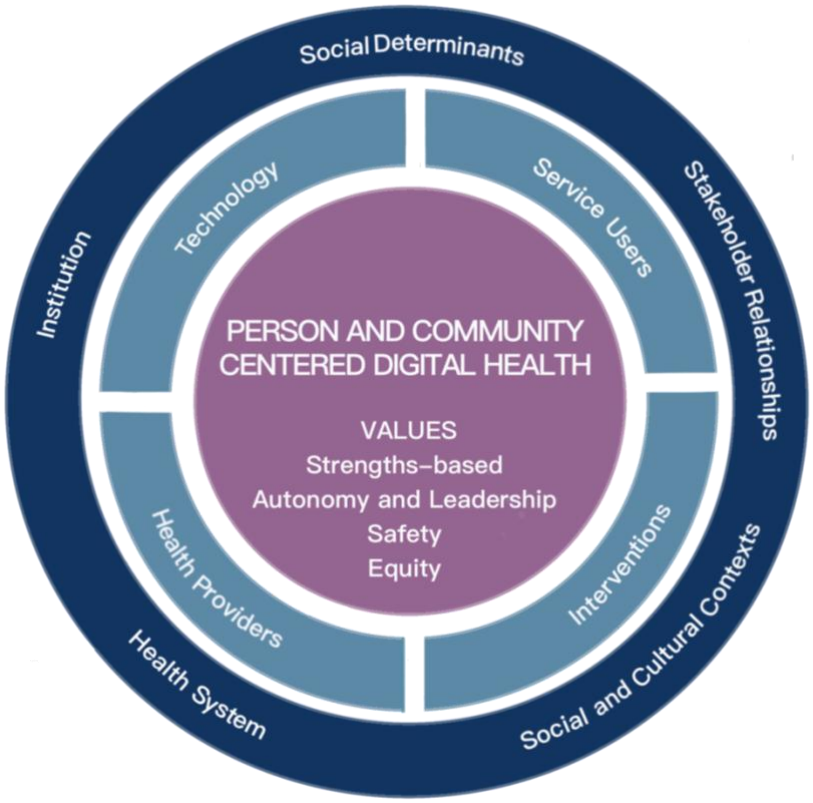
In any digital health intervention or program, clients or patients who receive care interact with healthcare providers and administrators, within the larger context of the healthcare organization and community.

This ecological approach [see Figure 2] guides us to consider the many ways that digital health and virtual care can impact health equity. This approach is derived from widening Bronfenbrenner's ecological systems theory (1979), also known as person-in-environment, to include consideration of digital health technologies as part of the environment. This model highlights the reciprocal relationship between individuals and their social, cultural and environmental contexts, including contexts created or altered by digital technologies. Changes in one part of the system can cause changes in any other dimension.

It is also critical consider temporal and historical perspectives. Bronfenbrenner added an additional chronosystem to his conceptualization of the environment in which children grow and develop, to capture the transition points that occur throughout a child's life. As we consider digital health environments, we need to remember that this environment is not static. Individuals and communities experience technology with healthcare based upon interactions with technologies across time, and with healthcare across time.

At the core of the DigitALL model are the key dimensions of quality of care, with an emphasis on **person-centered** care; **safety**, including psychological and cultural safety; and **equity**. While the process of evaluating health equity is likely to surface risks for inequities and barriers to care, we strongly center **strengths-based** approaches, recognizing the many talents and resources brought by individuals and communities. Providing care should not undermine the **autonomy** of individuals and communities; efforts should be made to promote health **leadership** from within communities, with requisite resources also going to communities.

Figure 2. The DigitALL Model: Equity-based Digital Health



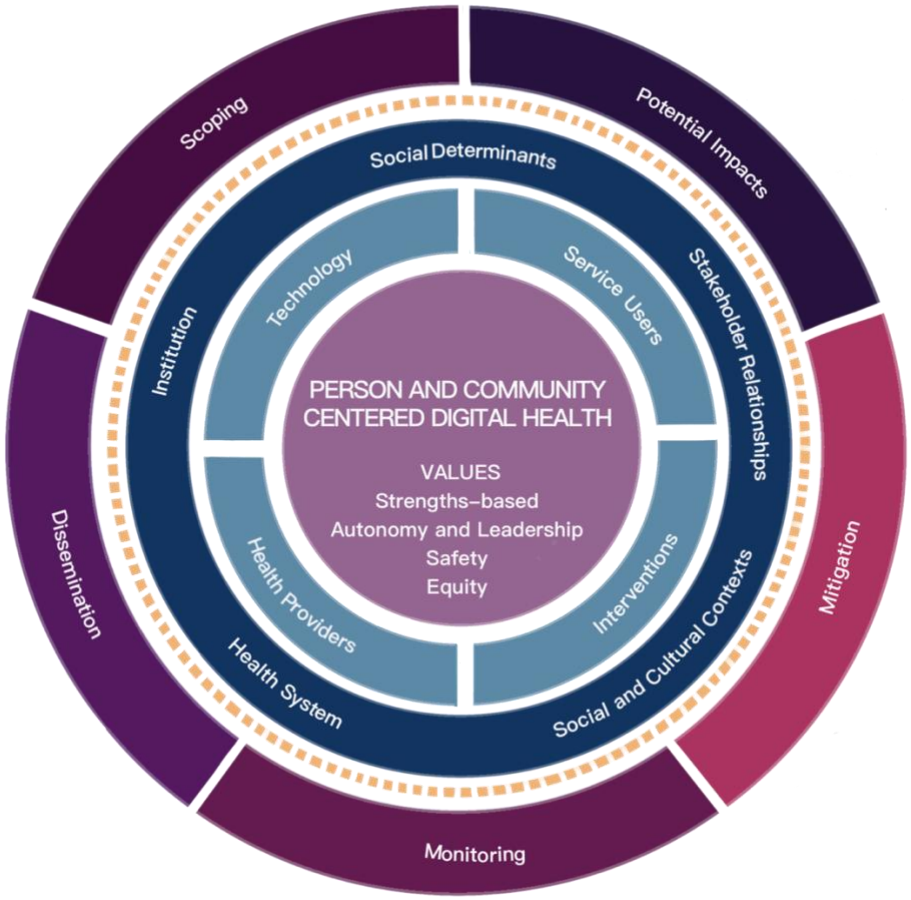
We also recognize that we all belong to more than one community, and need to be understood as having **intersecting** identities, needs, and strengths. And while care is often delivered to individuals, we recognize the ways that many social factors impact **communities** and groups. The impacts of colonization, oppression, and racism, for example, cannot be understood or redressed at an individual level. Similarly, digital health technologies and care delivery will impact not only individuals, but the organization of healthcare within communities.

Mentioned throughout this document is the importance of recognizing the autonomy and strengths of diverse people, families and communities, and of involving diverse people with lived experience of virtual care in planning, implementing and evaluating virtual care.

Applying the HEIA to plan for Equity-based Digital Health

The digital health supplement to the HEIA takes you through the impact assessment, using the same 5 steps of the HEIA, prompting equity assessment in each dimension of digital health interventions and care (See Figure 3), as applicable to the person and / or community that is interacting with that technology or care, and applicable to your providers, policy, program, or organization, with attention to other social aspects of the health system, and community (middle rings of Figure 3). The assessment of potential digital health equity impacts should be considered along with any other equity or quality of care issues.

Figure 3. Using the HEIA to achieve DigitALL: Digital Health Supplement to the HEIA



The sections below summarize the HEIA steps and provide questions to consider at each stage of developing, implementing and evaluating your digital health technology, program, or intervention. In addition, concrete examples are provided. For the purposes of illustration, we have focused examples on virtual care, but these steps and considerations can be applied to any digital health technology, and each digital health technology will result in different changes to the health care environment. See Appendix A for the HEIA - digital health supplement template.

Step 1. Scoping

In the scoping phase, identify any groups or populations that your digital health technology, service or intervention may impact. Think about groups you are trying to serve, as well as those that may experience barriers accessing or utilizing all aspects of your intervention or service.

Questions to consider	Considerations for Virtual Care
☐ Is the digital health technology, service, or program intended to serve specific populations?	☐ Consider all populations and groups that you serve, including: First Nations, Inuit and/or Métis; Age-related groups (children, youth, seniors); those with dis/abilities; ethno-racial communities, including refugees and newcomers; Francophones; people experiencing homelessness or precarious housing; linguistic communities; religious and faith communities; rural and remote, and inner urban communities; sex and gender diverse groups; sexual orientation.
☐ For each population or group that you identify as being potentially impacted (either positively or negatively) by the digital health technology, which **social determinants of health** should be considered for some/ all members of that group?	☐ All social determinants of health can be undesrtood in relation to digital health and virtual care, shaping digital determinants of health
☐ Are there unique considerations from an **intersectional** perspective?	☐ Many individuals belong to more than one group, and all groups are not homogeneous. It is important to take intersectional perspectives, and also to seek consultation and engagement with diverse members within groups.
☐ Have you involved diverse **patient- and family- partners** from these groups in planning and evaluating your digital health technology?	☐ Individuals experiencing mental health or substance use issues may warrant consideration as belonging to a population(s) with unique needs and strengths.

Step 2. Potential Impacts

Assess the unintended impacts of the digital health technology, intervention, or care for each of the populations or groups identified in Step 1. This should include consideration of strengths as well as challenges that might be experienced by individuals and families within each group.

Use available evidence and compare the impacts on the identified groups to the broader population. Mainstream research may not reflect the realities and issues faced by your identified populations. Therefore, it is important to consider a wide range of evidence, including consultation findings, grey literature and field evidence.

Questions to consider	Considerations for Virtual Care
☐ What are the **unintended positive impacts** of digital health for this group? What strengths, skills, and resources will this group bring to planning, utilizing, and evaluating virtual care?	☐ **Access to care** is the opportunity to have one's health needs fulfilled. Access to virtual care, therefore, is the opportunity to have health needs fulfilled through virtual care. Access has multiple dimensions, including approachability; acceptability; availability and accommodation; affordability; and appropriateness. In turn, each of these aspects of access to care is enhanced by corollary **abilities that patient and families bring to care**, including[9]: • Ability to perceive (approachability) • Ability to reach (acceptability) • Ability to seek (availability and accommodation) • Ability to pay (affordability) • Ability to engage (appropriateness)
☐ Are there any **unintended negative impacts** of digital health for this group? Will this impact access to care and / or the ability to achieve equal outcomes from care?	
☐ Which areas require **more information** about potential impacts? Who can you engage within the intended group to understand impacts better?	

Questions to consider	Considerations for Virtual Care
☐ What are the strengths and barriers posed by the **infrastructure** needed for digital health?	☐ Outfitting communities with high speed **internet connection** and ensuring access and **integration** across the community is an asset for access to virtual care. ☐ Lack of access to high quality internet services and connectivity can pose barriers to virtual care, or diminish the quality of care. ☐ Communities differ in their connectivity and the integration of institutions and services, as well as access to **free or subsidized internet in public spaces** (such as libraries and community centers). ☐ Virtual care that does not consider existing **community resources, services and strengths** can have an unintended negative impact on community wellbeing, and also on the quality, acceptability, appropriateness and cultural safety of care.
☐ What are the strengths and barriers posed by the **technology** to be used?	☐ Technology that is **affordable, and flexible** can increase access to virtual care. For example, devices that can be used to connect from a person's home decrease barriers to care; technology that is easy to operate can support access for those with low digital literacy and those with intellectual disabilities. ☐ The expense of technology can decrease access to care for those individuals and groups who cannot afford it. ☐ Those with **sensory dis/abilities** may require adaptations and accommodations to the technology used for virtual care.

Questions to consider	Considerations for Virtual Care
☐ What are the strengths and barriers related to **privacy and security** with this digital health technology?	☐ Some groups (for example those who are underhoused) may have difficulty securing a **private space** in which to attend virtual care. ☐ Some **platforms** may have lower security standards, and some smaller healthcare organizations may lack IT departments to ensure adequate security. ☐ Some healthcare organizations may lack **electronic health records**, or may lack integration of EHRs with other digital health tools, including virtual care. This can pose risks for patient safety and quality of care.
☐ What are the strengths and barriers posed by the digital delivery of **interventions** for this group or population? ☐ What are the strengths and barriers of different **models of digital health** for this group or population (e.g., integrated and collaborative care models)?	☐ One strength of virtual care is that it can make **evidence-based interventions** more widely available. However this requires that a full range of first-line interventions are offered through virtual care. ☐ **Culturally-based adaptations** of interventions can increase the acceptability and appropriateness of care. This requires that those offering virtual care keep this cultural and community context in mind when developing programs and delivering services. ☐ Many best-practices in healthcare benefit from an **interprofessional healthcare team**, and **integrated models of care** can be achieved virtually. However, if funding is unavailable or skewed towards physician remuneration only, or if integration with local health teams is not part of the model of care, then quality of care and continuity of care can suffer.

Questions to consider	Considerations for Virtual Care
☐ What are the strengths that patients and families in these groups, and across **intersections** of these groups, bring to digital health? And what are the barriers they may face?	☐ Ability to perceive, reach, seek and engage with virtual care are all strengths that facilitate the use of virtual care by patients, families and groups. ☐ **Digital literacy** supports the approachability, acceptability and appropriateness of virtual care. Groups and communities can enhance digital literacy by ensuring early exposure to technology in education, and providing programs and supports to foster digital literacy among those groups that require it. ☐ Lack of access to care in one's **language**, and/or access to interpreter services that are adapted for virtual care can be a barrier to accessing virtual care. ☐ **Cultural beliefs and values** may mean that virtual care is not appropriate care for some, or requires further engagement to make virtual care appropriate or meaningful. For example, some Mennonite communities may prohibit or discourage the use of technology, but this can be addressed through consultation with Elders. ☐ If you offer **group-based health virtual interventions,** consider the impact of group members on each other. For example, some communication may not be visible to group facilitators (e.g., private chat, if enabled.) Micro-aggressions, racism, and stigma can all contribute to health inequities and pose barriers to care.

Questions to consider	Considerations for Virtual Care
☐ What are the strengths that health **providers** bring to digital health for these groups? And how might health providers contribute to barriers for these groups?	☐ Health providers who have **training** and a high degree of **competency** in digital health and virtual care can support digital health equity and access to care.[10] These competencies should include skills in: • **medical expertise**, including knowledge of best-practices in virtual care and digital health; • **professionalism** (including ethics and self-care); • **digital compassion** and forming a therapeutic alliance within virtual care; • **communication**, including the integration of interpreters; • **collaboration**, including the ability to contribute to interprofessional teams in virtual care; • and **health advocacy**, which includes knowledge and skills to foster digital health equity, and community-based care. ☐ Health providers who approach care with **cultural humility** can provide culturally safe and relevant virtual care. ☐ Health providers who are from diverse communities can contribute to a workforce that reflects the diverse needs of populations.

Questions to consider	Considerations for Virtual Care
☐ What are the strengths and barriers posed by the **organization** providing digital health to this group or population?	Health organizations and programs that have **policies** for virtual care and digital health, and include considerations and strategies for achieving digital health equity, can support equity in virtual care. ☐ Health organizations and programs that include adequate **resources for infrastructure and technology** can support access to virtual care. ☐ Health organizations and programs that ensure that virtual care clinicians and administrators have **training in digital health equity** can reduce barriers to care and improve access.
☐ Are there additonal systems-level factors that build strengths or create barriers to digital health for these groups, or populations? (e.g., funding, regional and national policies)	

Step 3. Mitigation

Using the potential impacts identified in Step 2., develop an evidence-based mitigation strategy, including evidence specific for the population or group you are working with. This strategy aims to minimize or eliminate the negative impacts and maximize the positive impacts of your digital health service or intervention on all of the groups or populations you serve. When possible, this mitigation strategy should be informed by a diversity of stakeholders from these groups.

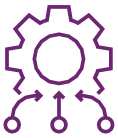
Level of mitigation	Examples of mitigation strategies in virtual care
Infrastructure	• Obtaining funding – grants, governmental, philanthropic to support the development of services • Creating physical spaces for users who lack private spaces or stable housing • Advocating for improved connectivity and broadband internet
Technology	• Assistive devices to support those with unique needs and abilities • Raising funds or obtaining grants to provide hardware to those with socioeconomic needs • Making hardware and devices available on-site
Patients, caregivers and families	• Digital literacy programs • Providing plain language materials • Creating protocols to engage caregivers and supports in virtual care • Emphasizing person-centered care, and enabling choice in modalities of care where possible, including blended- and in-person models of care • Involving people with lived experience to contribute to initiatives, especially those from priority and equity-seeking groups

Level of mitigation	Examples of mitigation strategies
Health providers	• Providing training in health equity and digital health • Recruiting members of equity-seeking communities as health providers and leaders of virtual care • Training providers in cultural safety and instilling a sense of cultural humility in the provision of virtual care
Organization and administration	• Develop and implement virtual care policies that further health equity • Promote a culture of inclusion, diversity, equity, and compassionate virtual care • Adequately resource the administrative supports required for implementation of virtual care • Measure and evaluate health equity in access to virtual care, and quality of virtual care • Take a community-engaged approach to implementation and evaluation – what does the community want from virtual care? How do they want to be involved?
Health system	• Integrate virtual care into the overall system of care – virtual solutions are not a replacement for local health services and resources • Measure digital health equity at a population level, and ensure that policy furthers equity

Mitigation

No matter where you are in the process of designing, implementing or delivering your digital health technology or intervention, you can always apply an equity and inclusion lens and make improvements. Involving patients and families, and making space for leaders and providers from diverse groups will contribute to increasing digital health equity and advancing equity-based digital health for all.

We consider engagement in the HEIA-DH process to be an essential tool but not a sufficient commitment to collaborating around digital health equity. The HEIA-DH should be a precursor to action that is identified and then committed to.



Step 4. Monitoring

Develop an evaluation plan for your digital health care service or intervention. An evaluation allows you to monitor impacts on identified groups and compare this to other populations, and also to monitor the impacts of any mitigation strategies that you implement. Consider outcomes that measure the ability of diverse groups and communities to access your service or technology; health outcomes of the individuals and populations that utilize your service; as well as the satisfaction of users and providers with your service.

Questions to consider	Considerations for evaluating virtual
☐ Does your quality improvement and evaluation plan for digital health care include equity as an outcome? How is it evaluated and monitored?	☐ Equity in virtual care must include at least equity in access to care and equity in health outcomes. Do all intended populations have equal access to your virtual care program? Do all populations do equally well in the program? Are they equally satisfied with the care they receive? • Tracking sociodemographic data can allow you to look at various subgroups of those accessing your service (by age, language, race, socioeconomic status, etc.) to see if access and outcomes across groups are similar • Sociodemographic data can also be compared to the populations at your institution that access in-person care, and to population and administrative health data • Use of measurement-based virtual care can help to assess outcomes, especially when looked at in relation to sociodemographic data. This can include symptom measures, completion of treatment, and recovery/ relapse

Questions to consider	Considerations for evaluating virtual care
☐ Are there continuous mechanisms to improve access to digital health care or technologies, and equity based upon this data? How quickly can data be available to allow for timely action?	☐ Short quality improvement cycles with targeted outcomes can provide timely access to data. ☐ Choosing a few feasible outcome measures rather than an exhaustive list can also allow for more timely access to data ☐ Having data directly entered on a secure electronic platform by patients or clients can facilitate timely access to data (beware any additional equity barriers!) ☐ Development of a data dashboard can be shared within an organization or team to ensure that all members are aware
☐ If you have implemented mitigation strategies, how are you monitoring their impact?	☐ Choose the measure that best matches your intended strategy. For example, if your mitigation strategy is to improve digital literacy, ensure that you measure changes in digital literacy (and/ or look at whether improved digital literacy leads to increased utilization of service, completion of treatment, satisfaction with service, improved health outcomes, etc.) ☐ The more quickly you are able to obtain this feedback, the more easily you can course correct (balance this with having adequate statistical power to draw conclusions)
☐ What outcomes are meaningful to the populations(s) or community(ies) you serve?	☐ What does “health” and “good care” means to the groups or communities that you serve? Also consider what “being evaluated” may mean to some individuals and communities. When possible, include patient involvement in developing evaluation strategies.
☐ Who owns the data you collect?	☐ Ensure that there are appropriate data sharing agreements in place that respect community data sovereignty

Step 5. Dissemination

Share your results and recommendations to improve digital health care for all! Sharing will raise awareness of the equity gaps in digital health, and help others learn how to reduce health digital health inequities.

Questions to consider	Example considerations
☐ How will you analyze the results of your evaluation?	☐ Does your team have access to those with expertise in implementation, quality improvement, and/or research? Have you applied for necessary institutional permissions to collect and use data (e.g., research ethics, or quality improvement review)? Are you collecting data from specific populations? Have you involved people from that community in implementation and evaluation? Do you have required agreements to report on or share these findings (e.g. memoranda of understanding, data sharing agreements)?
☐ Where will you share these findings?	Within your organization? Outside of your organization: to the community(ies) served; to government; in academic journals and conferences?

Facilitation of a HEIA - DH

There are many ways to conduct a HEIA-DH. The process can start at any point in your project, initiative, or digital tool development. Ideally, it is a continuous process that you engage in from the outset.

Who should do a HEIA-DH? We have found it very helpful to have someone on our team in the role of an Equity Coach, and who has familiarity with conducting the HEIA process.

The HEIA-DH can be done by one person, or in a small group, or it can be facilitated in a focus group. We have found the following to be helpful considerations:

- Consider who the intended users are for your digital heal intervention – are you considering diverse users? Have you considered digital health equity?
- Engage patient and family partners and those with lived and living experience as part of your HEIA-DH process
- Include more than 1 patient partner to ensure diversity, and also to help balance power across the group
- Have an intersectional understanding of who your users are – we all belong to multiple social groups
- Bring a strengths-based approach to digital health equity – invite participants to share their strengths, values, and leadership
- Consider accessibility issues for participants in your setting to engage in the HEIA
- Consider the psychological safety of all participants in any group setting – how will power be shared, privacy be protected, how will people have meaningful input
- Review parameters and create a safe space at the start of the group for all participants (not just patient partners)
- Remunerate patient partners for the time and expertise that they contribute
- Attend to the language used in the HEIA – DH discussions to ensure it does not unintentionally contribute to stigma. Words like disadvantaged, vulnerable, etc. can have unintended consequences and can be disempowering
- Commit to ACTION based upon your HEIA-DH findings and show this accountability through evaluation and iterative quality improvement.

Resources

Resource	Description
Ministry of Health and Long-Term Care. (2019). *Health Equity Impact Assessment (HEIA).*	An overview of the HEIA tool and how it works. The site contains several tools and resources related to using HEIA
Centre for Addiction and Mental Health. *Health Equity Impact Assessment (HEIA)*	A community of practice for the HEIA https://www.porticonetwork.ca/web/heia/home
European Institute on Gender Equity. (2021). *Gender-sensitive communication.*	European Institute on Gender Equity. (2021). *Gender-sensitive communication.*
Edgoose, J., Davis, S. et. al. (2018). *A Guidebook to the Health Equity Curricular Toolkit*. Parkway Leawood, KS: Health Equity Team for Family Medicine for America's Health.	A toolkit to help improve equity in communities through the development of knowledge and skills.
Government of Ontario. (April 19, 2016). *Accessibility for Ontarians with Disabilities Act.*	A statute that outlines how to improve accessibility for Ontarians with physical and mental disabilities.
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Example of Application of HEIA Digital Health Supplement to virtual care – examples are intended to demonstrate a range of impacts and mitigation strategies and are not intended to be exhaustive.

Digital Determinants of Health	Step 1. Scoping		Step 2. Potential Impacts			Step 3. Mitigation	Step 4. Monitoring	Step 5. Dissemination
	a. Population Use evidence to identify populations or groups that may experience significant unintended consequences of digital health in you setting. Consider intersectionality.	**b. Determinants of health** Identify social and digital determinants of health that should be considered	Unintended positive impacts of the digital health technology, intervention or care	Unintended negative impacts of the digital health technology, intervention or care	More information needed	Identify ways to reduce potential negative impacts and amplify positive impacts of the digital health technology, intervention or care	Identify ways to measure success for each mitigation strategy identified	Identify ways to share results and recommendations to address equity.
Access to digital health resources - e.g. high speed internet and data; hardware; private space; accessible devices for physical, cognitive and sensory needs	Neurodiverse populations including Autistic people	• Cognitive profile • Digital literacy • Social connectedness	• Comfort with using technologies • Stronger preference to receive care at home/ virtually	• Materials not plain language enough. • Missed opportunities for social interaction	• How are changes to social connectedness via tech associated with health outcomes?	• Leverage interest in technology • Provide peer support for digital literacy • Involve people with lived experience in vetting materials	Measure digital literacy Track engagement via in-person vs virtual (service utilization data)	Newsletters for community Website
Use of digital health resources for health seeking/ avoidance – trust, engagement safety, cultural safety	First Nations, Inuit and Métis People living in remote communities	• Access to internet • Colonization and history of racism within healthcare	• Increased access to healthcare close to home • Decreased travel	• Services may not be experienced as culturally safe or meaningful • May not want to access avail services	• What are holistic models of care that have worked in healthcare and/ or virtual care?	• leadership of stakeholders and community in setting priorities • Creation of Indigenous wellness teams and Elders included in virtual care	• Measure cultural safety from client's perspective • Engage community stakeholders in co-designing evaluation methods and strategy	Indigenous and community-led knowledge dissemination

Digital Health Literacy – Comfort and familiarity with technology; availability of IT and social supports **Beliefs and values about digital health** - autonomy, preferences, choice, cultural safety / values/ knowledges **Integration of digital health resources into community and health infrastructure** –integrated models of care; organization policy and leadership; provider training						• Make services available in Indigenous languages	• Ensure data sharing agreements are in place	
	Those living with severe persistent mental illness	• Supported through social services/ disability insurance • Connections to healthcare	• Increased access to mental health care • Ability to observe client in their own setting	• Ability to assess capacity to consent to virtual care • Further fragmentation of care and decreased ability to offer interprofessional team-based care	• What is the evidence for validity of assessments and treatments across mental health diagnoses?	• Involve people with lived experience in developing services • Create integrated care teams across sites • Provide training for health providers in assessing and managing mental health via virtual	• Measure service utilization and health outcomes – compare to outcomes at the institution and to population health data • Collect equity-based data to see if some intersectional groups not accessing care of have poor outcomes	• Academic journals and conferences • Target primary care providers and community health agencies as well as specialists • Involve people with lived experience in disseminating information
	Women who are homeless/ underhoused	• Housing • Low socioeconomic status • Education	• Increased access to mental health care	• Poor access to hardware and to privacy • Inability to warn of interpersonal violence/ safety		• Programs to disseminate hardware and data • Create private spaces; use of headsets • Train staff about assessment of safety and provision of trauma informed virtual care	• Track service utilization data • Measure client experience of virtual care, including psychological safety	• Webinars to community agencies
	In addition to equity, have you considered the following principles: person-centered; intersectionality; strengths-based; community-centered; autonomy and leadership; and, safety, including cultural safety.							

Health Equity Impact Assessment for Digital Health

Date	
Organization	
Name of person or team completing the HEIA, DH	
Project Name	
Considerations	• Have you involved the intended users are for your digital heal intervention – are you considering diverse users? • Engage patient and family partners and those with lived and living experience as part of your HEIA-DH process • Bring a strengths-based approach to digital health equity – invite participants to share their strengths, values, and leadership • Create a psychological safe space for all participants in any group setting – how will power be shared, privacy be protected, how will people have meaningful input
Objectives for Completing the HEIA-DH	
Based on your findings from the HEIA-DH: **What ACTIONS will you commit to in order to improve digital health equity?** **Is there any follow-up needed (more information, monitoring, dissemination)**	

Digital Determinants of Health	Step 1. Scoping		Step 2. Potential Impacts			Step 3. Mitigation	Step 4. Monitoring	Step 5. Dissemination
Access to digital health resources - e.g. high speed internet and data; hardware; private space; accessible devices for physical, cognitive and sensory needs	**a. Population** Use evidence to identify populations or groups that may experience significant unintended consequences of digital health in you setting. Consider intersectionality .	**b. Determinants of health** Identify social and digital determinants of health that should be considered	Unintended positive impacts of the digital health technology, intervention or care	Unintended negative impacts of the digital health technology, intervention or care	More information needed	Identify ways to reduce potential negative impacts and amplify positive impacts of the digital health technology, intervention or care	Identify ways to measure success for each mitigation strategy identified	Identify ways to share results and recommendations to address equity.
Digital Health Literacy – Comfort and familiarity with technology; availability of IT and social supports								
Beliefs and values about digital health - autonomy, preferences, choice, cultural safety / values/ knowledges								

Digital Determinants of Health	Step 1. Scoping		Step 2. Potential Impacts			Step 3. Mitigation	Step 4. Monitoring	Step 5. Dissemination
Use of digital health resources for health seeking/ avoidance – trust, safety, engagement cultural safety								
Integration of digital health resources into community and health infrastructure – based on population health needs; integrated models of care; organization policy and leadership; provider training								
	In addition to equity, have you considered the following principles: person-centered; intersectionality; strengths-based; community-centered; autonomy and leadership; and, safety, including cultural safety.							