Enterprise Healthcare Physician Services in Canada: An Environmental Scan

Les services médicaux d'entreprise au Canada : analyse de la conjoncture

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Abstract

Employers in Canada are increasingly offering physician services to their employees through third-party "enterprise" virtual care platforms. In our environmental scan, we identified nine enterprise healthcare companies offering physician services to millions of Canadian employees via enterprise platforms. All platforms offered rapid access to virtual physician services. Some offered in-person visits, access to specialists, health system navigation and sharing of information with an employee's regular care provider. Almost half shared aggregate or de-identified health data with employers. These platforms provide rapid and convenient access to physician services but also disrupt the continuity of care, pose risks to employee privacy and expand two-tiered healthcare.

Résumé

Au Canada, les employeurs offrent de plus en plus de services médicaux à leurs employés au moyen de plateformes de soins virtuels « d'entreprise ». Dans notre analyse, nous avons identifié neuf entreprises de soins de santé qui offrent des services médicaux à des millions d'employés canadiens au moyen de ces plateformes. Toutes les plateformes offrent un accès rapide aux services médicaux virtuels. Certaines proposent des consultations en personne, l'accès à des spécialistes, la navigation dans le système de santé et le partage d'information avec le fournisseur de soins régulier de l'employé. Près de la moitié de ces plateformes

partagent avec les employeurs des données agrégées ou dépersonnalisées. Ces plateformes offrent un accès rapide et pratique aux services médicaux, mais elles perturbent également la continuité des soins, posent des risques en matière de vie privée des employés et favorisent les soins de santé à deux vitesses.

Introduction

Employers in Canada are increasingly offering physician services to their employees through a third-party company in a business-to-business model (Baystreet 2021; GlobeNewswire 2021; Shoppers Drug Mart 2019; Teledact Inc. 2021). These third-party companies use a workplace – or "enterprise" – healthcare platform to provide the services. Physician services are generally virtual but some platforms also appear to facilitate in-person physician care (TELUS Health 2023a). The third-party companies claim that the platforms improve access to care leading to lower rates of employee absenteeism and provide a good return on investment for employers (Maple 2023; Normandeau 2021; TELUS Health 2023b). Employee health services for ill and injured workers are not new in Canada. Historically, however, only very large companies have offered physician services, generally by directly hiring or contracting individual physicians (Guidotti and Cowell 1997; Kraut et al. 2018; Lees 1980). Third-party platforms with virtual care services appear to have enabled the rapid expansion of enterprise healthcare to companies of all sizes (Gisby et al. 2022).

Enterprise healthcare also differs from the traditional model of healthcare in Canada. Most people receive care from self-employed physicians working independently or in small groups in community clinics (CFPC 2017; Martin et al. 2018; Peckham et al. 2018). These physicians either bill the provincial/territorial single-payer public health system – known as medicare – or, much less commonly, bill patients directly (Contandriopoulos and Law 2021; Flood 2021; Flood and Archibald 2001). In addition, until recently, physicians working in the traditional model of care rarely provided virtual care; only three percent of Canadians reported a virtual care physician visit in 2018 (Canada Health Infoway 2018). With the onset of the COVID-19 pandemic, and the introduction of public funding for virtual care, more physicians started offering these services (Bhatia et al. 2021; Burton et al. 2022; CMA 2020; Lapointe-Shaw et al. 2023). In the province of Ontario, virtual care visits increased 56-fold to comprise over 70% of all visits between March 2020 and July 2020 (Glazier et al. 2021).

Despite the apparent widespread access to enterprise healthcare in Canada, little work has been done to understand this approach to organizing and delivering physician services. Our research objective, therefore, was to gain an understanding of the nature and extent of enterprise healthcare in Canada and the implications for employees and the public health system, through a national environmental scan.

Methods

We conducted structured internet searches, using the Google search engine, between December 3, 2021, and April 1, 2022, to identify enterprise platforms that provide physician services to company employees in Canada. Search terms covered the topic areas of virtual care, enterprise and Canada. These included "virtual care," "virtual health care," "telemedicine," "enterprise," "employer," "employee," "business" and "Canada." For each search, we examined the first 50 results looking for relevant findings. We compared our findings to a list we compiled during a previous research study examining direct-to-patient virtual care in Canada (Spithoff et al. 2023).

Inclusion/exclusion criteria

We included third-party platforms that could be contracted by an employer to provide physician healthcare services through a proprietary software platform to employees living in Canada. We only included companies that provided physician services as, historically, these are part of Canadian medicare, whereas many other clinical services (e.g., counselling) are not. We included companies with platforms that provided physician visits through both synchronous (e.g., phone calls, video chat, in person) and asynchronous communication (e.g., text communication). We excluded companies if they provided services solely to employees living outside Canada or if they offered only non-physician services. We only included companies with platforms using the English language.

Identification of documents for extraction

For each enterprise healthcare platform that we included, we identified the platform's public website and any linked websites or documents. We also searched Mergent Intellect for information on the platform and the company owning the platform. Mergent Intellect is a publicly accessible, web-based application offering business data for US and Canadian private and public corporations (Toronto Public Library n.d.). This database contains company information, including corporate structures, a list of key executives and a complete company family tree.

Data extraction and analysis

Using these sources, we extracted information on the company's corporate structure; company headquarters; countries of operation; ownership (publicly traded or privately held); communication mode(s) for virtual services (e.g., in person, text, phone or video); access to services (e.g., same day); types of physician services (e.g., primary care, specialist services); in-person services; system navigator services; family coverage for services; payment for physician services (private or public); sharing of data with employers; and communication with an employee's regular primary care provider. Where available, we also collected information on company claims about the number of Canadian enterprise clients (employers) and the number of enterprise members (employees and their family members) in Canada.

Ethics

As we only used publicly available documents, we received a Research Ethics Board exemption from the Women's College Hospital.

Results

We identified nine companies offering enterprise physician services to employees in Canada via 11 enterprise software platforms. These enterprise care companies claimed to provide services to more than 44,000 companies and 4.5 million employees and their family members (Table 1). Seven of the 11 companies were publicly traded. Ten companies were based in Canada, and one was based in the US (Table 2). All companies offered virtual care physician services, and five companies also arranged in-person visits through their platform. Ten companies offered primary care, and one offered only addiction physician services. Seven companies provided coordinated access to specialist appointments, and six provided a system navigator to help employees navigate the health system. Four platforms offered to provide information to an employee's regular primary care provider and five stated that they provide employers with aggregated or de-identified employee health information.

Discussion

Our environmental scan provides insight into enterprise healthcare in Canada, which is available to millions of Canadian employees and their families. Enterprise healthcare provides employees with rapid access to physician services, but may also disrupt continuity of care (i.e., care by the same provider or team of providers over time) and pose risks to employee privacy. Furthermore, as many people living in Canada do not have access to these services, the model is also introducing a two-tiered healthcare system broadly across Canada.

TABLE 1. Companies providing enterprise physician services

Platform name	Parent company	Claims about services provided
ALAViDA	LifeSpeak Inc.	–
Appletree	Appletree Medical Group	–
CloudMD	CloudMD Software & Services Inc.	7,200 companies (employers)
Dialogue	Dialogue Health Technologies Inc.	25,000+ companies (employers), 1.8 million members (employees and family members)
JungoHR	JungoHR	–
Kii	CloudMD Software & Services Inc.	–
LifeWorks	TELUS	–
Maple	Maple Corporation	–
Meira Care	Meira Care	–
Teladoc	Teladoc Health	12,000+ companies (employers)
TELUS Health Virtual Care	TELUS	2.8 million members (employees and family members)

TABLE 2. Description of companies, enterprise physician services and data-sharing practices

Description		Number (%)
Ownership	Privately held	4 (36%)
	Publicly traded	7 (64%)
Headquarters	Canada	10 (91%)
	US	1 (9%)
Funding of physician services	Public	–
	Private	–
	Not stated	11 (100%)
Medical services	Primary care services	10 (91%)
	Addiction physician services only	1 (10%)
	Access to specialist care	7 (64%)
	System navigators	6 (55%)
	Family coverage	5 (45%)
Modality	Virtual care	11 (100%)
	In-person care	5 (45%)
Access	24/7	8 (73%)
	Same day	2 (22%)
Data sharing	With employee's regular primary care provider	4 (36%)
	With employers (aggregate or de-identified health data only)	5 (45%)

The widespread availability of these services indicates that they benefit employers, perhaps by increasing employee satisfaction and reducing workplace absenteeism (Maple 2023; Normandeau 2021; TELUS Health 2023b). Primary care is often difficult to access in Canada: about 15% of people do not have a primary care provider and, of those who do, many struggle to get timely access (CIHI 2020). Furthermore, the Canadian healthcare system is fragmented and difficult to navigate (Carter et al. 2017; Martin et al. 2018; Tang et al. 2021). Accordingly, surveys – commissioned by companies with enterprise healthcare platforms – report that employees value the rapid and convenient access to care and believe that the services reduce absenteeism (Dialogue 2021; TELUS Health 2019). There is a lack, however, of independent studies that evaluate the impact of enterprise healthcare on employee satisfaction, productivity, quality of care and health outcomes.

Our analysis also points to risks for employees. Less than half of the platforms enable in-person physician visits, implying that patients are expected to seek care from their regular care provider or the emergency department for complicated issues. This disrupts the continuity of care and poses a challenge for the effective management of chronic and complex health conditions (Davis et al. 2019; Li et al. 2021, 2022; Ray et al. 2019; Resneck et al. 2016; Schoenfeld et al. 2016; Shi et al. 2018; Uscher-Pines et al. 2016). As some of the enterprise care companies share de-identified or aggregate patient data with employers, enterprise care may create privacy-related ethical issues. Although the risk of re-identification

is likely to be low if the data are de-identified or aggregated (Artemis Health Inc. 2020; CloudMD Software & Services Inc. 2021), sharing data with employers can enable surveillance and discrimination. For example, the data can be used to identify the characteristics of employees who are likely to have complex health conditions or who may have a high-risk pregnancy (Edwards 2016; Landi 2021; The New York Times Editorial Board 2016; Witte 2019). Companies may use this information to improve services for these employees. They may, however, also use this information in job recruitment algorithms to ensure that these individuals are not offered employment in the first place (Ebeling 2016; O'Neil 2016; Regan and Jesse 2019).

Enterprise healthcare affects the health system more broadly by introducing a two-tiered system, where millions of employees and family members have access to physician services and health system navigation not available to other Canadians. This may worsen health disparities (Zawacki et al. 2022). Employees of larger companies are often from a higher socio-economic stratum than other people living in Canada and are part of a group that already has better access to care (Martin et al. 2018) and better health outcomes (Bhatia et al. 2021; CMA 2020; Glazier et al. 2021; Lapointe-Shaw et al. 2023). Furthermore, studies show that a two-tiered system is likely to increase wait times for those in the public system by luring healthcare providers to the enterprise system (Cheng et al. 2018; Davidson 2006, 2008; Duckett 2005; Lee et al. 2021). The services may also lead to "cream skimming" of less complicated patients (Cheng et al. 2015: 1; Duckett 2020: 22). As many enterprise platforms do not offer in-person assessments, patients with complicated health issues are shunted to the emergency department or to their regular primary care provider, leading to a replication of services and potentially increasing health system costs (CMA 2020).

Limitations

Our study is limited by the fact that we relied on company documents to answer our research questions. In addition, we were not able to determine whether physicians billed the public system or if the services were paid privately.

Next steps

Researchers should seek to evaluate the quality, efficacy and usage of enterprise care and explore issues related to health system impacts and data privacy. They should determine whether physicians working for enterprise platforms bill privately or publicly. Private funding negatively affects equity, accessibility and quality of care without reducing healthcare costs (Bambra et al. 2014; Dahlgren et al. 2014; Gelormino et al. 2011; Hopkins and Cumming 2001; Lee et al. 2021; Tuohy et al. 2004). Furthermore, as private billing data are not collected by public systems, evaluating care is difficult. To address gaps in the public system, policy makers should improve access to primary care (Kiran 2022). They should take steps to address threats to the stability of the public health system from two-tiered care and create mechanisms to capture billing information on all physician health services – whether billed

privately or publicly – in a public data trust (Expert Advisory Group 2021). Furthermore, policy makers should create legislation to protect employee privacy and prevent surveillance and discrimination.

Conclusion

Enterprise healthcare in Canada provides employees with rapid and convenient access to physician services and, perhaps, reduces workplace absenteeism. This approach to organizing and delivering care, however, may also expose employees to harms, as well as pose threats to the sustainability of the public healthcare systems. More research is needed to further explore how the system functions economically, who the system benefits and the implications for individuals and publicly funded health systems.

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References

Artemis Health Inc. 2020, January 21. Big Data in Healthcare: How Employers, Providers, and Brokers Are Using Healthcare Analytics. Retrieved March 30, 2021. <https://www.artemishealth.com/blog/big-data-in-healthcare-how-employers-providers-and-brokers-are-using-healthcare-analytics>.

Bambra, C., K. Garthwaite and D. Hunter. 2014. All Things Being Equal: Does It Matter for Equity How You Organize and Pay for Health Care? A Review of the International Evidence. *International Journal of Health Services* 44(3): 457–77. doi:10.2190/HS.44.3.c.

Baystreet. 2021, March 18. Digital Health Care Creating a Potential $634.9 billion Opportunity. Retrieved March 30, 2021. <https://www.baystreet.ca/stockstowatch/10023/Digital-Health-Care-Creating-a-Potential-6349-Billion-Opportunity>.

Bhatia, R.S., C. Chu, A. Pang, M. Tadrous, V. Stamenova and P. Cram. 2021. Virtual Care Use Before and During the COVID-19 Pandemic: A Repeated Cross-Sectional Study. *CMAJ Open* 9(1): E107–14. doi:10.9778/cmajo.20200311.

Burton, L., K.L. Rush, M.A. Smith, M. Görges, L.M. Currie, S. Davis et al. 2022. Has Virtual Care Arrived? A Survey of Rural Canadian Providers during the Early Stages of the COVID-19 Pandemic. *Health Services Insights* 15. doi:10.1177/11786329221096033.

Canada Health Infoway. 2018. Connecting Patients for Better Health: 2018. Retrieved April 7, 2022. <https://www.infoway-inforoute.ca/en/component/edocman/3564-connecting-patients-for-better-health-2018/view-document?Itemid=0>.

Canadian Institute for Health Information (CIHI). 2020. *How Canada Compares: Results from the Commonwealth Fund's 2019 International Health Policy Survey of Primary Care Physicians – Methodology Notes*. Retrieved July 20, 2023. <https://www.cihi.ca/sites/default/files/document/cmwf-2019-meth-notes-en-web.pdf>.

Canadian Medical Association (CMA). 2020, May. What Canadians Think About Virtual Health Care. Nationwide Survey Results. Retrieved December 8, 2022. <https://www.cma.ca/sites/default/files/pdf/virtual-care/cma-virtual-care-public-poll-june-2020-e.pdf>.

Carter, N., R. Valaitis, J. Feather, L. Cleghorn and A. Lam. 2017. An Environmental Scan of Health and Social System Navigation Services in an Urban Canadian Community. *SAGE Open Nursing* 3. doi:10.1177/2377960816689566.

Cheng, T.C., J.P. Haisken-DeNew and J. Yong. 2015. Cream Skimming and Hospital Transfers in a Mixed Public–Private System. *Social Science and Medicine* 132: 156–64. doi:10.1016/j.socscimed.2015.03.035.

Cheng, T.C., G. Kalb and A. Scott. 2018. Public, Private or Both? Analyzing Factors Influencing the Labour Supply of Medical Specialists. *Canadian Journal of Economics/Revue canadienne d'économique* 51(2): 660–92. doi:10.1111/caje.12334.

CloudMD Software & Services Inc. 2021, March 18. CloudMD Announces Rapid Growth of Enterprise Health Solutions Division. Retrieved August 30, 2021. <https://www.globenewswire.com/news-release/2021/03/18/2195340/0/en/CloudMD-Announces-Rapid-Growth-of-Enterprise-Health-Solutions-Division.html>.

The College of Family Physicians of Canada (CFPC). 2017, July. *Best Advice: Team-Based Care in the Patient's Medical Home*. Retrieved December 8, 2022. <https://patientsmedicalhome.ca/files/uploads/BAG_TeamBasedCare_ENG-1.pdf>.

Contandriopoulos, D. and M.R. Law. 2021. Policy Changes and Physicians Opting Out from Medicare in Quebec: An Interrupted Time-Series Analysis. *CMAJ* 193(7): E237–41. doi:10.1503/cmaj.201216.

Dahlgren, G. 2014. Why Public Health Services? Experiences from Profit-Driven Health Care Reforms in Sweden. *International Journal of Health Services* 44(3): 507–24. doi:10.2190/HS.44.3.e.

Davidson, A. 2006. Under the Radar: Stealth Development of Two-Tier Healthcare in Canada. *Healthcare Policy* 2(1): 25–33.

Davidson, A. 2008. Parallel Payers, Privatization and Two-Tier Healthcare in Canada. *HealthcarePapers* 8(3): 16–20. doi:10.12927/hcpap.2008.19793.

Davis, C.B., L.N. Marzec, Z. Blea, D. Godfrey, D. Bickley, S.S. Michael et al. 2019. Antibiotic Prescribing Patterns for Sinusitis Within a Direct-to-Consumer Virtual Urgent Care. *Telemedicine and e-Health* 25(6): 519–22. doi:10.1089/tmj.2018.0100.

Dialogue. 2021. *Canadian Attitudes on Healthcare and Telemedicine: Annual Report*. Retrieved December 7, 2022. <https://pages.dialogue.co/en/report-canadian-attitudes-healthcare-telemedicine-download/>.

Duckett, S.J. 2005. Private Care and Public Waiting. *Australian Health Review* 29(1): 87–93. doi:10.1071/ah050087.

Duckett, S. 2020. Commentary: The Consequences of Private Involvement in Healthcare —The Australian Experience. *Healthcare Policy* 15(4): 21–25. doi:10.12927/hcpol.2020.26228.

Ebeling, M.F.E. 2016. *Healthcare and Big Data: Digital Specters and Phantom Objects*. Palgrave Macmillan.

Edwards, A. 2016, February 20. Companies are Using Big Data to Track Employee Health and Pregnancies. *Popular Science*. Retrieved April 10, 2022. <https://www.popsci.com/companies-use-big-data-to-track-employee-health-and-pregnancies/>.

Expert Advisory Group. 2021. Building Canada's Health Data Foundation: Pan-Canadian Health Data Strategy Expert Advisory Group. Expert Advisory Group – Report 2. Government of Canada. Retrieved December 8, 2022. <https://www.canada.ca/en/public-health/corporate/mandate/about-agency/external-advisory-bodies/list/pan-canadian-health-data-strategy-reports-summaries/expert-advisory-group-report-02-building-canada-health-data-foundation.html>.

Flood, C.M. 2021. Two-Tier Healthcare After Cambie. *Healthcare Management Forum* 34(4): 221–24. doi:10.1177/0840470421994304.

Flood, C.M. and T. Archibald. 2001. The Illegality of Private Health Care in Canada. *CMAJ* 164(6): 825–30.

Gelormino, E., C. Bambra, T. Spadea, S. Bellini and G. Costa. 2011. The Effects of Health Care Reforms on Health Inequalities: A Review and Analysis of the European Evidence Base. *International Journal of Health Services* 41(2): 209–30. doi:10.2190/HS.41.2.b.

Gisby, S., P. Micca, B. Kheyn-Kheyfets, C. Chang and M. Wagh. 2022. *New Business Models in Health Care: Building Platform-Enabled Ecosystems*. Deloitte Centre for Health Solutions. Retrieved December 8, 2022. <https://www2.deloitte.com/content/dam/insights/articles/us165009_chs-health-care-ecosystem/DI_CHS-Health-care-ecosystem.pdf>.

Glazier, R.H., M.E. Green, F.C. Wu, E. Frymire, A. Kopp and T. Kiran. 2021. Shifts in Office and Virtual Primary Care during the Early COVID-19 Pandemic in Ontario, Canada. *CMAJ* 193(6): E200–10. doi:10.1503/cmaj.202303.

GlobeNewswire. 2021, March 18. CloudMD Announces Rapid Growth of Enterprise Health Solutions Division. Retrieved December 8, 2021. <https://www.globenewswire.com/en/news-release/2021/03/18/2195340/0/en/CloudMD-Announces-Rapid-Growth-of-Enterprise-Health-Solutions-Division.html>.

Guidotti, T.L. and J.W. Cowell. 1997. The Changing Role of the Occupational Physician in the Private Sector: The Canadian Experience. *Occupational Medicine* 47(7): 423–31. doi:10.1093/occmed/47.7.423.

Hopkins, S. and J. Cumming. 2001. The Impact of Changes in Private Health Expenditure on New Zealand Households. *Health Policy* 58(3): 215–29. doi:10.1016/s0168-8510(01)00161-0.

Kiran, T. 2022. Keeping the Front Door Open: Ensuring Access to Primary Care for All in Canada. *CMAJ* 194(48): E1655–56. doi:10.1503/cmaj.221563.

Kraut, A., A. Thompson, S. Martin and S. Siu. 2018. Practice Patterns of Occupational Medicine Physicians in Canada. *Archives of Environmental and Occupational Health* 73(2): 102–06. doi:10.1080/19338244.2017.1299086.

Landi, H. 2021, September 9. Modern Health Rolls Out Data Tool for Employers to Better Pinpoint Workers' Mental Health Needs. *Fierce Healthcare*. Retrieved April 10, 2022. <https://www.fiercehealthcare.com/tech/modern-health-rolls-out-data-tool-for-employers-as-companies-ramp-up-efforts-to-address>.

Lapointe-Shaw, L., C. Salahub, C. Bird, R.S. Bhatia, L. Desveaux, R.H. Glazier et al. 2023. Characteristics and Healthcare Use of Patients Attending Virtual Walk-In Clinics in Ontario, Canada: Cross-Sectional Analysis. *Journal of Medical Internet Research* 25: e40267. doi:10.2196/40267.

Lee, S.K., B.H. Rowe and S.K. Mahl. 2021. Increased Private Healthcare for Canada: Is That the Right Solution? *Healthcare Policy* 16(3): 30–42. doi:10.12927/hcpol.2021.26435.

Lees, R.E. 1980. The Family Physician in Occupational Health. *Canadian Family Physician* 26: 239–42.

Li, K.Y., Z. Zhu, S. Ng and C. Ellimoottil. 2021. Direct-to-Consumer Telemedicine Visits for Acute Respiratory Infections Linked to More Downstream Visits. *Health Affairs* 40(4): 596–602. doi:10.1377/hlthaff.2020.01741.

Li, L.X., J.E. Szymczak and S.C. Keller. 2022. Antibiotic Stewardship in Direct-to-Consumer Telemedicine: Translating Interventions into the Virtual Realm. *Journal of Antimicrobial Chemotherapy* 77(1): 13–15. doi:10.1093/jac/dkab371.

Maple. 2023. The Maple Experience: Whole-Person Care for an Integrated Health Journey. Retrieved April 13, 2022. <https://www.getmaple.ca/business/experience/>.

Martin, D., A.P. Miller, A. Quesnel-Vallée, N.R. Caron, B. Vissandjée and G.P. Marchildon. 2018. Canada's Universal Health-Care System: Achieving Its Potential. *Lancet* 391(10131): 1718–35. doi:10.1016/S0140-6736(18)30181-8.

The New York Times Editorial Board. 2016, March 26. Opinion: Protecting Employees' Health Data. *The New York Times*. Retrieved April 10, 2022. <https://www.nytimes.com/2016/03/27/opinion/sunday/protecting-employees-health-data.html>.

Normandeau, M. 2021, May 25. What Makes Dialogue a Valued Investment in Organizational Wellness? *Dialogue*. Retrieved April 13, 2022. <https://www.dialogue.co/en/blog/dialogue-valued-investment-organizational-wellness>.

O'Neil, C. 2016. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Crown.

Peckham, A., J. Ho and G.P. Marchildon. 2018, March 1. *Policy Innovations in Primary Care across Canada A Rapid Review Prepared for the Canadian Foundation for Healthcare Improvement*. North American Observatory on Health Systems and Policies. Retrieved December 8, 2022. <https://naohealthobservatory.ca/wp-content/uploads/2019/08/NAO_RR1.pdf>.

Ray, K.N., Z. Shi, C.A. Gidengil, S.J. Poon, L. Uscher-Pines and A. Mehrotra. 2019. Antibiotic Prescribing during Pediatric Direct-to-Consumer Telemedicine Visits. *Pediatrics* 143(5): e20182491. doi:10.1542/peds.2018-2491.

Regan, P.M. and J. Jesse. 2019. Ethical Challenges of EdTech, Big Data and Personalized Learning: Twenty-First Century Student Sorting and Tracking. *Ethics and Information Technology* 21(3): 167–79. doi:10.1007/s10676-018-9492-2.

Resneck, J.S.Jr., M. Abrouk, M. Steuer, A. Tam, A. Yen, I. Lee et al. 2016. Choice, Transparency, Coordination, and Quality among Direct-to-Consumer Telemedicine Websites and Apps Treating Skin Disease. *JAMA Dermatology* 152(7): 768–75. doi:10.1001/jamadermatol.2016.1774.

Schoenfeld, A.J., J.M. Davies, B.J. Marafino, M. Dean, C. DeJong, N.S. Bardach et al. 2016. Variation in Quality of Urgent Health Care Provided during Commercial Virtual Visits. *JAMA Internal Medicine* 176(5): 635–42. doi:10.1001/jamainternmed.2015.8248.

Shi, Z., A. Mehrotra, C.A. Gidengil, S.J. Poon, L. Uscher-Pines and K.N. Ray. 2018. Quality of Care for Acute Respiratory Infections during Direct-to-Consumer Telemedicine Visits for Adults. *Health Affairs* 37(12): 2014–23. doi:10.1377/hlthaff.2018.05091.

Shoppers Drug Mart. 2019, November 28. Shoppers Drug Mart and SilverCloud Health Bring Leading Digital Mental Health Solution to Canadian Employers. *Cision*. Retrieved March 30, 2021. <https://www.newswire.ca/news-releases/shoppers-drug-mart-and-silvercloud-health-bring-leading-digital-mental-health-solution-to-canadian-employers-840010994.html>.

Spithoff, S., B. McPhail, Q. Grundy, L. Vesely, R.K. Rowe, M. Herder et al. 2023, March. *Commercial Virtual Healthcare Services in Canada: Digital Trails, De-Identified Data and Privacy Implications*. Health Tech and Society Lab. Retrieved August 11, 2023. <https://static1.squarespace.com/static/61803ca0424ab062d9625e2d/t/640799d52430852f868b06a1/1678219738649/>.

Tang, K.L., J. Kelly, N. Sharma and W.A. Ghali. 2021. Patient Navigation Programs in Alberta, Canada: An Environmental Scan. *CMAJ Open* 9(3): E841–47. doi:10.9778/cmajo.20210004.

Teledact Inc. 2021, July 14. Gotodoctor.ca to Provide On-Demand Virtual Care Services to Frontline Staff of Union Social Group Restaurants. *Cision*. Retrieved August 11, 2021. <https://www.newswire.ca/news-releases/gotodoctor-ca-to-provide-on-demand-virtual-care-services-to-frontline-staff-of-union-social-group-restaurants-806856625.html>.

TELUS Health. 2019. *Virtual Healthcare in Canada: The Solution at Our Fingertips*. Retrieved December 8, 2022. <https://f.hubspotusercontent40.net/hubfs/2346897/Virtual%20Care%20Industry%20Report_2020_EN.pdf>.

TELUS Health. 2023a. Employee Health Services: Comprehensive Healthcare for Your Business. Retrieved July 20, 2023. <https://www.telus.com/en/health/care-centres/corporate-care/employee>.

TELUS Health. 2023b. TELUS Health Virtual Care: Compassionate Care, Every Step of the Way. Retrieved April 13, 2022. <https://www.telus.com/en/health/organizations/group-health-benefits/employers/virtual-care>.

Toronto Public Library. n.d. Mergent Intellect. Retrieved January 17, 2022. <https://www.torontopubliclibrary.ca/detail.jsp?Entt=RDMEDB0188&R=EDB0188>.

Tuohy, C.H., C.M. Flood and M. Stabile. 2004. How Does Private Finance Affect Public Health Care Systems? Marshaling the Evidence from OECD Nations. *Journal of Health Politics, Policy and Law* 29(3): 359–96. doi:10.1215/03616878-29-3-359.

Uscher-Pines, L., A. Mulcahy, D. Cowling, G. Hunter, R. Burns and A. Mehrotra. 2016. Access and Quality of Care in Direct-to-Consumer Telemedicine. *Telemedicine and e-Health* 22(4): 282–87. doi:10.1089/tmj.2015.0079.

Witte, M. 2019, June 12. How to Make Employee Health Data Work for Your Business and Employees. HRreview. Retrieved from April 10, 2022. <https://www.hrreview.co.uk/analysis/mark-witte-how-to-make-employee-health-data-work-for-your-business-and-employees/116608>.

Zawacki, A., T. Hegland and G.E. Miller. 2022, September. *The Underserved Have Less Access to Employer-Sponsored Telemedicine Coverage*. Center for Economic Studies. Retrieved November 22, 2022. <https://www2.census.gov/ces/wp/2022/CES-WP-22-40.pdf>.