

Version 1.0

Published: April 28, 2021

Updated April 28, 2021.

Citation: Thompson, Alison, Stall NM, Born KB, et al. Benefits of paid sick leave during the COVID-19 pandemic. Science Briefs of the Ontario COVID-19 Science Advisory Table. 2021;2(25). https://doi.org/10.47326/ocsat.2021.02.25.1.0

Author Affiliations: The affiliations of the members of the Ontario COVID-19 Science Advisory Table can be found at https://covid19-sciencetable.ca/.

Declarations of Interest: The declarations of interest of the members of the Ontario COVID-19 Science Advisory Table can be found at https://covid19-sciencetable.ca/. The declarations of interest of external authors can be found under additional resources at https://doi.org/10.47326/ocsat.2021.02.25.1.0

About Us: The Ontario COVID-19 Science Advisory Table is a group of scientific experts and health system leaders who evaluate and report on emerging evidence relevant to the COVID-19 pandemic, to inform Ontario's response. Our mandate is to provide weekly summaries of relevant scientific evidence for the COVID-19 Health Coordination Table of the Province of Ontario, integrating information from existing scientific tables, Ontario's universities and agencies, and the best global evidence. The Science Table summarizes its findings for the Health Coordination Table and the public in Science Briefs.

Correspondence to: Secretariat of the Ontario COVID-19 Science Advisory Table (info@covid19-sciencetable.ca)

Copyright: 2021 Ontario COVID-19 Science Advisory Table. This is an open access document distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided that the original work is properly cited.

The views and findings expressed in this Science Brief are those of the authors and do not necessarily reflect the views of all of the members of the Ontario COVID-19 Science

SCIENCE BRIEFS

Benefits of Paid Sick Leave During the COVID-19 Pandemic

Alison Thompson, Nathan M. Stall, Karen B. Born, Jennifer L. Gibson, Upton Allen, Jessica Hopkins, Audrey Laporte, Antonina Maltsev, Roisin McElroy, Sharmistha Mishra, Laveena Munshi, Ayodele Odutayo, Menaka Pai, Andrea Proctor, Fahad Razak, Robert J. Reid, Arjumand Siddiqi, Janet Smylie, Peter Jüni, Brian Schwartz on behalf of the Ontario COVID-19 Science Advisory Table

Key Message

Multiple jurisdictions have adopted or adapted paid sick leave policies to reduce the likelihood of employees infected with SARS-CoV-2 presenting to work, which can lead to the spread of infection in workplaces.

During the COVID-19 pandemic, paid sick leave has been associated with an increased likelihood of workers staying at home when symptomatic. Paid sick leave can support essential workers in following public health measures. This includes paid time off for essential workers when they are sick, have been exposed, need to self-isolate, need time off to get tested, when it is their turn to get vaccinated, and when their workplace closes due to an outbreak, with guaranteed salary payment regardless of duration of absence (minimum 2 hours, maximum 2 workweeks).

In the United States, the introduction of a temporary paid sick leave, resulted in an estimated 50% reduction in the number of COVID-19 cases per state per day.

The existing Canada Recovery Sickness Benefit (CRSB) cannot financially protect essential workers in following all public health measures, places the administrative burden of applying for the benefit on essential workers, and neither provides sufficient, nor timely payments. Table 1 lists the characteristics of a model paid sick leave program as compared with the CRSB. Implementation of the model program should be done in a way that is easy to navigate and quick for employers.

Characteristics	Existing Federal Program	Model Program
Administrative burden placed on employer and not on employee	No	Yes
Salary payment during absence provided by employer; program reimburses employer	No	Yes
Amount of salary maintained in case of symptoms, isolation after exposure, vaccination, or testing	No	Yes
Uninterrupted salary payment in case of symptoms, isolation after exposure, vaccination, or testing	No	Yes
Guaranteed salary payment regardless of duration of absence (minimum 2 hours, maximum 2 workweeks)	No	Yes

Table 1. Comparison of Existing Canada Recovery Sickness Benefit (CRSB) with Model Paid Sick Leave Program

Table comparing the characteristics of the existing CRSB with the characteristics of the model paid sick leave program.

Advisory Table, its Working Groups, and its partners.

Summary

Background

COVID-19 in the workplace causes a substantial burden of illness among essential workers and their families, and is a significant contributor to community transmission driving the third wave in Ontario. Workplace outbreaks result in economic loss and disruption of essential services. Public health measures such as workplace screening and testing, isolation of people with SARS-CoV-2 infection and their contacts can reduce transmission, and prevent workplace outbreaks. Many essential workers lack paid sick leave that would support them in following these public health measures.

Questions

What has been the impact of COVID-19 on essential workers and Ontario workplaces?

What paid sick leave policies have been implemented nationally and internationally to support essential workers in following public health measures during the COVID-19 pandemic?

What is the evidence for the effectiveness of paid sick leave in supporting essential workers in following public health measures, preventing SARS-CoV-2 infection among essential workers, and mitigating COVID-19 outbreaks in essential workplaces?

What evidence can be extrapolated from the impact of paid sick leave in mitigating other infectious diseases such as influenza-like illness?

How can paid sick leave support COVID-19 vaccination among essential workers?

What is the economic impact of paid sick leave?

Which ethical principles and considerations should inform public policy on paid sick leave in Ontario?

Findings

Ontario workplaces are significant sites of SARS-CoV-2 transmission, and essential workers have experienced disproportionately higher rates of SARS-CoV-2 infection. National and international jurisdictions have implemented paid sick leave to support essential workers in following public health measures.

Real-world evidence from the COVID-19 pandemic and from influenza-like illnesses indicates that paid sick leave can support workers in following public health measures, reduce viral transmission and workplace outbreaks, promote higher vaccination rates among essential workers, increase work productivity, and reduce worker absenteeism. Paid sick leave also protects the larger public from harm by containing the spread of infectious diseases and optimizing economic stability. Paid sick leave is also supported by public health ethics principles.

In the United States, the introduction of a temporary paid sick leave, the Families First Coronavirus Response Act (FFCRA), resulted in an estimated 50% reduction in the number of COVID-19 cases per state per day.

Interpretation

During the COVID-19 pandemic, paid sick leave can support essential workers in following public health measures. This includes paid time off for essential workers

when they are sick, have been exposed, need to self-isolate, need time off to get tested or vaccinated, and when their workplace closes due to an outbreak, with guaranteed salary payment regardless of duration of absence (minimum 2 hours, maximum 2 workweeks). Paid sick leave will reduce overall cases, protect communities from the burden of COVID-19, and keep businesses open.

Background

Workplace spread of SARS-CoV-2, the virus responsible for COVID-19, causes a substantial burden of illness among essential workers and their families, and is a significant contributor to community transmission driving the third wave in Ontario. Workplace outbreaks result in economic loss, and disruption of essential services. Public health measures such as workplace screening and testing, isolation of people with SARS-CoV-2 infection, and quarantine of their contacts, can reduce SARS-CoV-2 transmission, and prevent workplace outbreaks. Cumulatively, these measures contribute toward reduced cases of SARS-CoV-2 infection, COVID-19 hospitalizations, and COVID-19 deaths among both workers and their household and community contacts.

While many members of the Ontario workforce are able to work from home or have access to paid sick leave while ill or self-isolating, this is far from universal. In Ontario, 60% of workers do not have paid sick leave apart from the federal CRSB program.³ Essential workers cannot work from home, and they most commonly work in trades, transport, equipment, manufacturing, utilities, sales, services, agriculture sectors, and health care.⁴⁻⁶ An estimated 42% of Ontario's workforce is employed in occupations that could be conducted remotely.⁷ Moreover, essential workers are disproportionately represented in jobs that do not include sick leave benefits.⁸

In Canada most people without paid sick leave earn less than \$50,000 in annual income, and more than 60% of seasonal, casual, or contract workers have no paid sick leave at all. ^{8,9} In Ontario, the highest proportion of SARS-CoV-2 infections are in neighbourhoods with the highest proportion of essential workers. ^{10,11} Financial support that enables Ontario workers to follow public health measures can limit SARS-CoV-2 transmission, reduce COVID-19 illness, and minimize economic loss. ^{8,9} The intersection between the absence of paid sick leave and lower or inconsistent levels of income creates a situation where essential workers face a tension between meeting basic needs (e.g., food and rent), and following public health measures (e.g., self-isolation, quarantine, testing, and vaccination).

Questions

What has been the impact of COVID-19 on essential workers and Ontario workplaces?

What paid sick leave policies have been implemented nationally and internationally to support essential workers in following public health measures during the COVID-19 pandemic?

What is the evidence for the effectiveness of paid sick leave in supporting essential workers in following public health measures, preventing SARS-CoV-2 infection among essential workers, and mitigating COVID-19 outbreaks in essential workplaces?

What evidence can be extrapolated from the impact of paid sick leave in mitigating other infectious diseases such as influenza-like illness?

How can paid sick leave support COVID-19 vaccination among essential workers?

What is the economic impact of paid sick leave?

Which ethical principles and considerations should inform public policy on paid sick leave in Ontario?

Findings

Impact of COVID-19 on Essential Workers and in Ontario Workplaces

While information about workplace transmission in Ontario remains incomplete, data from regions with high concentrations of essential workplaces, such as manufacturing facilities and warehouses, highlight workplaces as a significant sites for SARS-CoV-2 transmission. In Ontario's Peel Region, 66% of community outbreaks from September to December 2020 occurred in workplaces. Occupational exposure was the most common likely source of infection that resulted in secondary household transmission in August 2020 in the Peel Region. Between August and December 2020, 1,993 out of 7,874 surveyed workers (25%) in Peel reported attending a workplace outside of their home for one or more days following symptom onset, 80 of whom continued to work after the date that their positive SARS-CoV-2 result was reported to public health.

Many workplaces experiencing outbreaks use temporary workers who tend to have fewer worker income supports than permanent employees, and work in multiple settings.¹⁴

Overview of Paid Sick Leave Policies in Canada and Internationally

The CRSB provides \$450 after taxes per week for up to four weeks for workers who miss at least 50% of their work week because they are unwell or isolating from COVID-19.¹⁵ This allocation is \$100 lower per week than a full time (37.25 hour) weekly salary at Ontario minimum wage (\$14.25 hourly).¹⁶ Payments are not timely as it can take up to 4 weeks for workers to receive funds (see Table 1 above).¹⁷

There are additional concerns that the CRSB cannot financially support workers in following public health measures. Because the CRSB does not cover shorter absences, it excludes worker time off to get tested or vaccinated, or those workers who stay home due to symptoms or exposure, subsequently test negative for SARS-CoV-2 infection, and are then cleared for return to work within 50% of their work week.

Since CRSB is limited to a 1-week period, is not renewable, and can only be used four times per year, it may not be enough for workers in high SARS-CoV-2 exposure occupations. The CRSB application places the administrative burden of applying for the benefit on essential workers, and requires computer access, internet literacy and an understanding of English or French. Taken together, these limitations and barriers of the CRSB may hinder adequate protection of essential workers and effective mitigation of workplace outbreaks during the COVID-19 pandemic.

A number of provinces and territories introduced unpaid sick leave of varying durations in response to the COVID-19 pandemic.¹⁸ Only Yukon provides a paid sick leave benefit for workers who become sick, or who must quarantine or isolate, which guarantees 10 days of wages per employee. Employers can only access the program once per employee.¹⁹

During the COVID-19 pandemic, paid sick leave has been implemented in several jurisdictions internationally to support essential workers in following public health measures.²⁰ In response to the COVID-19 pandemic, 16 of 38 Organization for Economic Cooperation and Development (OECD) countries temporarily expanded or initiated paid sick leave policies.²⁰ For example, countries like France and Ireland

waived waiting periods for sick pay and benefits. Australia and Spain introduced additional dedicated sick benefits for workers with COVID-19 who exhausted accrued employer-provided sick-pay entitlements. The United States introduced the FFCRA, a temporary measure for employers to provide paid sick leave for reasons related to COVID-19.²¹

Evidence for the Effectiveness of Paid Sick Leave

Reduction in mobility is a proxy for measuring the time individuals stay at home, and is associated with reductions in SARS-CoV-2 transmission and COVID-19 cases.²² A study using GPS data from cellular devices found that the introduction of the FFCRA in the United States increased the average number of hours at home by 4.2%.²³

Figure 1 shows the estimated daily number of COVID-19 cases per state in states that introduced the FFCRA, as compared with control. After adjustment for a variety of factors, states that introduced the FFCRA saw approximately a 50% decrease in confirmed COVID-19 cases per state per day.²⁴ This is equivalent to about 1 prevented case per day per 1,300 workers.

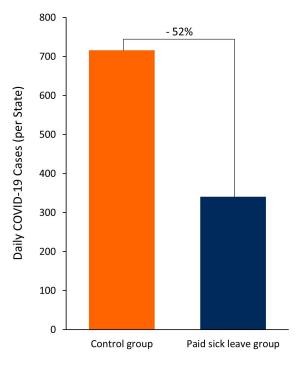


Figure 1. Impact of Two Week Paid Sick Leave Program on the Number of Daily COVID-19 Cases per State in the United States

Bar chart showing the impact of the introduction of FFCRA, a two-week paid sick leave program enacted on March 18, 2020, in the United States, on the number of daily COVID-19 cases per state, as compared with control. From March 8 to May 11, 2020, in 30 U.S. States. The analysis was adjusted for the presence of a stay-at-home order, number of tests per day, calendar week, day of the week, and state. Data sourced from Pichler et al.²⁴

Survey data from the United Kingdom found that non-adherence to public health guidelines for patients with COVID-19 was associated with factors including dependent children in the household, lower socioeconomic status, and being an essential worker.²⁵ Financial support, and wrap around services, are in particular associated with improved ability to self-isolate.^{25,26}

Figure 2 shows risk factors for influenza-like illness among a nationally representative sample of 2,042 adults from the United States during the H1N1 influenza pandemic in 2009.²⁷ Inability to work from home and absence of paid sick leave were associated with an approximately 50% increase in the risk of influenza-like illness.

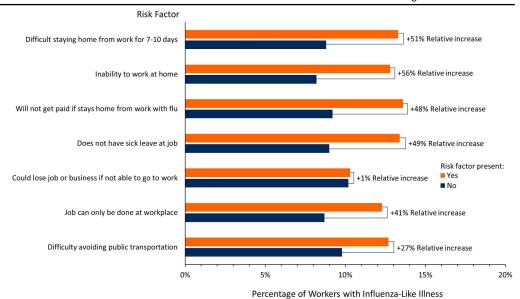


Figure 2. Percentage of Workers with Influenza-Like Illness by Risk Factor in the United StatesBar chart showing the percentage of workers in the United States with influenza-like illness in 2009 during the H1N1 influenza pandemic by the presence or absence of structural risk factors for exposure to influenza at work on in transit to work. Data sourced from Kumar et al.²⁷

There are many studies demonstrating that paid sick leave policies at the state and municipal levels are associated with reduced transmission and outbreak prevention for respiratory infections. For example, influenza surveillance data in the United States shows that access to paid sick leave led to a decline of 290 influenza-like illnesses per 100,000 individuals per week.²⁸ An OECD report notes that that paid sick leave reduced influenza-like illness rates by 10% and total work absence by 18% in some American cities.²⁹

Paid Sick Leave and COVID-19 Vaccination

Evidence from the United States indicates that paid sick leave is associated with increased influenza vaccination rates among workers, since they are guaranteed to receive paid time off to get immunized. A survey of 8,634 health care workers reported that they were much more likely to get vaccinated if direct financial support like paid sick leave were available.

As part of the Centers for Disease Control and Prevention (CDC) best practices for workplace COVID-19 vaccination, it is suggested that employers allow workers to take paid leave to get vaccinated and financially support transportation to off-site vaccination clinics. They further suggest that employers provide flexible leave policies for those who may have post-vaccination symptoms.³³ Recently, Saskatchewan and British Columbia mandated employers to provide paid time off for vaccination.^{34,35}

Economic Impact of Paid Sick Leave

Data from the COVID-19 pandemic and other epidemics demonstrate that paid sick leave is an important strategy for public health containment as well as for economic stability and recovery. Paid sick leave can increase productivity, and reduces absenteeism by preventing outbreaks and the chance of workplace closures. Job losses and working hour reductions during the COVID-19 pandemic have been larger in American states without a paid sick leave system. 8

Small businesses that provide paid sick leave for their employees require compensation to ensure economic viability. Many OECD countries have lowered the costs for

employers through government subsidization.²⁰ In the United States, California has recently extended eligibility criteria for paid sick leave to include being in quarantine, caring for a family member in quarantine, experiencing symptoms of COVID-19 and seeking a medical diagnosis, or missing work to receive the COVID-19 vaccine.³⁹

Ethical Principles Supporting Paid Sick Leave in Ontario

Paid sick leave as a critical public health measure is supported by public health ethics principles as summarized in Table 2.^{40,41} It demonstrates efficiency by reducing worker absenteeism overall, and protects the public from harm by containing the spread of infectious diseases and optimizing economic stability and recovery. Moreover, it provides mutual support by reducing the burden on those disproportionately affected by their type of work and overall compensation; it is a fair, reasonable, and proportional response to the health and economic threats of the pandemic; and minimizes damage to collateral groups by isolating infectious and potentially infectious workers from others who are susceptible. Finally paid sick leave builds a common purpose in society when viewed as supporting critical public health measures, and building public trust in decision-makers.

Ethical Principle	Brief interpretation in the context of paid sick leave in Ontario
Protection of the public from harm	A foundational principle of public health ethics is the governmental obligation to protect the public from harm. In a pandemic, this includes effective public health measures to contain the spread of infectious diseases and to reduce the burden of illness in workplaces. It also includes protecting the public from economic harms related to worker absenteeism, enhancing business continuity, and enabling economic stability and recovery. The protective effects of paid sick leave will be important as the economy
	moves into recovery.
Reciprocity	Reciprocity requires that society supports those who face a disproportionate burden when protecting the public good. During the COVID-19 pandemic, individuals who must self-isolate, and their families, may experience significant social, economic, and emotional burdens.
	Provincially mandated sick leave that is immediately accessible and eliminates or greatly reduces the financial burdens of compliance with public health measures meets the duty of reciprocity for essential workers.
	Small businesses that provide sick pay for their employees should also be appropriately supported if the costs of doing so put their business in jeopardy.
Equity	Equity requires that measures be taken to redress health and other social inequities that are unfair and exacerbated by public health measures like quarantine and isolation.
	Many essential workers are from disadvantaged groups who have fewer resources with which to protect themselves and their families and are therefore unfairly and disproportionately burdened by the impacts of COVID-19. Policymakers are urged to consider the health risks not only to workers but also to those with whom they live.
	Supporting workers to quarantine and isolate by providing paid sick leave also reduces harm for co-workers by reducing their exposure to COVID-19 and by respecting their right to a healthy workplace.
Proportionality	Proportionality requires that measures taken to mitigate the pandemic should correspond to the actual level of risk, or critical needs of the community.
	As a public health measure, paid sick leave is a proportionate response to both health and economic threats posed by COVID-19 and will play an important role in maintaining safety, productivity, and business continuity as the relaxation of public health measures begins.

Government has a moral imperative to prevent population level health harms. Anticipating public health threats and preparing for them is an ethical requirement for good public health governance. Paid sick leave will need to be considered with stepwise relaxation of public health measures, into the post-COVID-19 period. Preparing for future pandemics requires improving the adaptability of paid sick leave to the economic and health challenges posed by pandemics. Paid sick leave reflects a sense of common purpose in society when viewed as an important public health measure. It also can help build public trust, which is essential for public health compliance. To foster solidarity, we must protect the income and jobs of society's most economically and biologically vulnerable. Paid sick leave provides reassurance to workers that their wellbeing and dignity are being respected but it also

Solidarity

represents what we would all want if we were in the same position.

Stopping COVID-19 requires a collective effort. Providing paid sick leave is a critical example of a public health measure that builds a sense of common purpose between workers, between workers and employers, between

businesses and the public and between the public and government.

When public trust is increased through compensatory mechanisms, such as paid sick leave, it is beneficial for other aspects of outbreak response such as

Table 2. Relevant Ethical Principles and Considerations for Public Policy on Paid Sick Leave

vaccine uptake.

Figure adapted from the Ontario COVID-19 Bioethics Table. 42

Interpretation

Real-world evidence demonstrates that paid sick leave reduces SARS-CoV-2 transmission and COVID-19 illness among essential workers, and improves productivity. This has been demonstrated both during the COVID-19 pandemic and by studies reporting the health and economic benefits of paid sick leave for influenza-like illness, including increased influenza vaccination rates.

Most Ontario COVID-19 workplace outbreaks outside of long-term care homes have occurred in the manufacturing sector, as well as forestry, agriculture, fishing/hunting, transportation and warehousing. These services are essential to the functioning of society and to the Ontario economy. Workers in these sectors are paid relatively low wages and are often members of disadvantaged communities. Further, these workers may live with other people who work in essential services, putting more individuals and workplaces at risk. These workers may live with other people who work in essential services, putting more individuals and workplaces at risk.

Paid sick leave preserves the jobs of workers who cannot work from home and prevents harms related to loss of income while following public health measures. In Ontario it is estimated that this accounts for 3 million essential workers. ⁴⁶ Paid sick leave also increases job security and improves population health overall. ⁴⁷ The absence of paid sick leave is often characteristic of insecure work, which is correlated with poorer overall health and worse occupational health and safety outcomes, and which contributes to health inequities in Ontario and disproportionate burdens from COVID-19 being born by essential workers. ^{48,49}

The existing federal CRSB cannot financially protect essential workers in following all public health measures, places the administrative burden of applying for the benefit on essential workers, and neither provides sufficient, nor timely payments. Table 1 above lists the characteristics of a model paid sick leave program as compared with the CRSB. Figure 3 presents a proposed process for an essential worker and their employer accessing the model paid sick leave program. Implementation of the model

program should be done in a way that is easy to navigate and quick for employers.



Figure 3. Proposed Process for Accessing the Model Paid Sick Leave Program in Ontario

The proposed process presents the division of responsibilities between the essential worker and their employer in accessing the model paid sick leave program.

Ontario's essential workers require paid sick leave that offers more money, is easily accessible, is immediately paid, and supports them in following all public health measures. This includes providing essential workers with paid leave when they are sick, have been exposed, need to self-isolate, need time off to get tested or vaccinated, and when their workplace closes due to an outbreak, with guaranteed salary payment regardless of duration of absence (minimum 2 hours, maximum 2 workweeks).⁵⁰

Reducing SARS-CoV-2 transmission is a collective effort across all sectors of society. Enabling employers to provide paid sick leave to employees during the pandemic ensures workplace safety, and protection of the public. Moreover, it is a measure that fosters a sense of common purpose among workers, employers, the public and government, and builds public trust which is essential for COVID-19 vaccine uptake. ⁵¹

Paid sick leave is an essential public health measure that, if applied in Ontario, will both help control the third wave of the COVID-19 pandemic and prevent the emergence of further workplace and community outbreaks prior to the vaccination of every willing Ontarian.

Methods Used in This Science Brief

The COVID-19 Evidence Synthesis Network performed a research evidence scan for this Science Brief, published in an Evidence Synthesis Briefing Note. The COVID-19 Evidence Synthesis Network is comprised of organizations in Ontario's evidence synthesis and knowledge translation community who collectively provide high-quality, relevant, and timely synthesized research evidence about COVID-19. The Methods for the evidence scan can be found in the methods section of the Briefing Note. The evidence scan was last updated on February 17, 2021. 19

Author Contributions

AT, NMS, JG, PJ, BS conceived the Science Brief. AT, NMS, KB, AM, PJ, BS wrote the first draft of the Science Brief. AM and PJ performed the analyses. All authors revised the Science Brief critically for important intellectual content and approved the final version.

References

 Government of Ontario. Ethical framework for COVID-19 vaccine distribution. Published January 11, 2021. https://www.ontario.ca/page/ethical-framework-covid-19-vaccine-distribution

- 2. Iddins BO, Waugh MH, Buck B, et al. Benchmarking SARS CoV-2 infection in the workplace to support continuity of operations. *J Occup Environ Med*. Published online March 19, 2021. https://doi.org/10.1097/JOM.00000000000002188
- 3. Decent Work and Health Network. Health experts, teachers, frontline workers sound the alarm for paid sick days. Decent Work and Health Network. Published August 19, 2020. https://www.decentworkandhealth.org/beforetoolate
- Government of Canada. Occupational classifications. Statistics Canada. Published November 21, 2011. https://www.statcan.gc.ca/eng/concepts/occupation
- Government of Canada. Percentage of workforce teleworking or working remotely, and percentage of workforce anticipated to continue primarily teleworking or working remotely after the pandemic, by business characteristics. Statistics Canada. Published November 13, 2020. https:// www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3310027401
- Angus Reid Group. Canadian workforce of the future survey. PwC Canada. Published 2020. https://www.pwc.com/ca/en/today-s-issues/upskilling/canadian-pulse-survey.html
- Deng Z, Morisette R, Messacar D. Running the economy remotely: Potential for working from home during and after COVID-19. Statistics Canada. Published May 28, 2020. https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/ article/00026-eng.htm
- The University of British Columbia. Ability to work from home and paid sick leave benefits by precarious employment and socioeconomic status. Published June 3, 2020. http://pwhr.sites.olt.ubc.ca/files/2020/09/GSS-COVID-19-Research-Brief-2020.pdf
- Government of Canada. General social survey: canadians at work and home (GSS). Published July 12, 2016. https://www23.statcan.gc.ca/imdb/p2SV.pl? Function=getSurvey&SDDS=5221
- 10. Chagla Z, Ma H, Sander B, Baral SD, Mishra S. Characterizing the disproportionate burden of SARS-CoV-2 variants of concern among essential workers in the Greater Toronto Area, Canada. *medRxiv*. Published online March 26, 2021:2021.03.22.21254127. https://doi.org/10.1101/2021.03.22.21254127
- 11. Sundaram ME, Calzavara A, Mishra S, et al. The individual and social determinants of COVID-19 in Ontario, Canada: a population-wide study. *medRxiv*. Published online November 12, 2020:2020.11.09.20223792. https://doi.org/10.1101/2020.11.09.20223792
- Baker MG, Peckham TK, Seixas NS. Estimating the burden of United States workers exposed to infection or disease: A key factor in containing risk of COVID -19 infection. *PLOS ONE*. 2020;15(4). https://doi.org/10.1371/journal.pone.0232452
- 13. Watson T, Kwong JC, Kornas K, Mishra S, Rosella LC. *Neighbourhood Characteristics Associated with the Geographic Variation in Laboratory Confirmed COVID-19 in Ontario, Canada: A Multilevel Analysis.*; 2021:23. https://www.medrxiv.org/content/10.1101/2021.04.06.21254988v2.full.pdf
- 14. Health Services Region of Peel. Briefing note: paid sick days and supports for essential workers. Published January 22, 2021. https://peelregion.ca/advocacy/paid-sick-leave/briefing-note.pdf
- 15. Government of Canada. Canada recovery sickness benefit (CRSB). Published

- March 25, 2021. https://www.canada.ca/en/revenue-agency/services/benefits/recovery-sickness-benefit.html
- 16. Government of Ontario. Your guide to the Employment Standards Act: minimum wage. https://www.ontario.ca/document/your-guide-employment-standards-act-0/minimum-wage
- 17. Government of Ontario. Keep getting your payments: Canada Recovery Sickness Benefit (CRSB). Published October 2, 2020. https://www.canada.ca/en/revenue-agency/services/benefits/recovery-sickness-benefit/crsb-getting-payments.html
- 18. Canadian Labour Congress. Sick leave across Canada. Canadian Labour Congress. Published March 31, 2020. https://canadianlabour.ca/sick-leave-across-canada/
- Research, Analysis, and Evaluation Branch. Evidence Synthesis Briefing Note: Paid Sick Leave Benefits during the COVID-19 Pandemic. COVID-19 Evidence Synthesis Network; 2021. https://esnetwork.ca/wp-content/uploads/2021/02/ Evidence-Synthesis-BN-Paid-Sick-Leave-During-COVID-19-Pandemic_23-FEB-21.pdf
- Stricot M, MacDonald D. Paid sick leave to protect income, health and jobs through the COVID-19 crisis. OECD. Published July 2, 2020. http://oecd.org/ coronavirus/policy-responses/paid-sick-leave-to-protect-income-health-andjobs-through-the-covid-19-crisis-a9e1a154/
- 21. U.S Department of Labor. Families First Coronavirus Response Act: employee paid leave rights. Published December 31, 2020. https://www.dol.gov/agencies/whd/pandemic/ffcra-employee-paid-leave
- 22. Zipursky JS, Redelmeier DA. Mobility and mortality during the COVID-19 pandemic. *J Gen Intern Med.* 2020;35(10):3100-3101. https://doi.org/10.1007/s11606-020-05943-7
- 23. Andersen M, Maclean JC, Pesko M, Simon K. Effect of a Federal Paid Sick Leave Mandate on Working and Staying at Home during the COVID-19 Pandemic: Evidence from Cellular Device Data. National Bureau of Economic Research; 2020. https://doi.org/10.3386/w27138
- 24. Pichler S, Wen K, Ziebarth NR. COVID-19 emergency sick leave has helped flatten the curve in the United States. *Health Aff Proj Hope*. 2020;39(12):2197-2204. https://doi.org/10.1377/hlthaff.2020.00863
- 25. Smith LE, Potts HWW, Amlôt R, Fear NT, Michie S, Rubin GJ. Adherence to the test, trace, and isolate system in the UK: results from 37 nationally representative surveys. *BMJ*. 2021;372:n608. https://doi.org/10.1136/bmj.n608
- 26. Madad S, Nuzzo JB, Bourdeaux M. The missing piece In America's COVID-19 isolation and quarantine strategy: wraparound services. Published December 10, 2020. https://www.healthaffairs.org/do/10.1377/hblog20201207.458415/full/
- 27. Kumar S, Quinn SC, Kim KH, Daniel LH, Freimuth VS. The impact of workplace policies and other social factors on self-reported influenza-like illness incidence during the 2009 H1N1 pandemic. *Am J Public Health*. 2012;102(1):134-140. https://doi.org/10.2105/AJPH.2011.300307
- 28. Pichler S, Wen K, Ziebarth NR. Positive health externalities of Mandating Paid Sick Leave. *J Policy Anal Manage*. Published online February 5, 2021:pam.22284. https://doi.org/10.1002/pam.22284
- 29. Thewissen S, MacDonald D, Prinz C, Stricot M. The critical role of paid sick leave in the COVID-19 health and labour market crisis. VoxEU.org. Published July 8,

- 2020. https://voxeu.org/article/paid-sick-leave-during-covid-19-health-and-labour-market-crisis
- Zhai Y, Santibanez TA, Kahn KE, Black CL, de Perio MA. Paid sick leave benefits, influenza vaccination, and taking sick days due to influenza-like illness among U.S. workers. *Vaccine*. 2018;36(48):7316-7323. https://doi.org/10.1016/j.vaccine.2018.10.039
- 31. Wilson FA, Wang Y, Stimpson JP. Universal paid leave increases influenza vaccinations among employees in the U.S. *Vaccine*. 2014;32(21):2441-2445. https://doi.org/10.1016/j.vaccine.2014.02.084
- 32. Desveaux L, Savage RD, Tadrous M, et al. Beliefs associated with intentions of non-physician healthcare workers to receive the COVID-19 vaccine in Ontario, Canada. *medRxiv*. Published online February 26, 2021:2021.02.19.21251936. https://doi.org/10.1101/2021.02.19.21251936
- Centers for Disease Control and Prevention (CDC). Workplace vaccination program. Centers for Disease Control and Prevention. Published March 25, 2021. https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/essentialworker/workplace-vaccination-program.html
- 34. Government of Saskatchewan. Phase 2 of vaccine delivery plan launches, special vaccination leave introduced. Government of Saskatchewan. https://www.saskatchewan.ca/government/news-and-media/2021/march/18/phase-2-of-vaccine-delivery-plan-launches-special-vaccination-leave-introduced
- 35. Government of British Columbia. Paid leave for workers to get COVID-19 vaccine. BC Gov News. Published April 19, 2021. https://news.gov.bc.ca/releases/2021LBR0018-000739
- 36. Stearns J, White C. Can paid sick leave mandates reduce leave-taking? *Labour Econ*. 2018;51:227-246. https://doi.org/10.1016/j.labeco.2018.01.002
- 37. Pichler S, Ziebarth NR. The pros and cons of sick pay schemes: testing for contagious presenteeism and noncontagious absenteeism behavior. *J Public Econ*. 2019;171:86-104. https://doi.org/10.1016/j.jpubeco.2019.03.005
- 38. Chen S, Igan D, Pierri N, Presbitero A. The economic impact of Covid-19 in Europe and the US: outbreaks and individual behaviour matter a great deal, non -pharmaceutical interventions matter less. VoxEU.org. Published May 11, 2020. https://voxeu.org/article/economic-impact-covid-19-europe-and-us
- 39. The National Law Review. Statewide COVID-19 paid sick leave returns to California. The National Law Review. Published March 27, 2021. https://www.natlawreview.com/article/statewide-covid-19-paid-sick-leave-returns-to-california
- 40. Thompson AK, Faith K, Gibson JL, Upshur RE. Pandemic influenza preparedness: an ethical framework to guide decision-making. *BMC Med Ethics*. 2006;7(1):12. https://doi.org/10.1186/1472-6939-7-12
- 41. Upshur REG, Faith K, Gibson JL, et al. *Stand on Guard for Thee: Ethical Considerations in Preparedness Planning for Pandemic Influenza.*; 2005:29. https://jcb.utoronto.ca/wp-content/uploads/2021/03/stand_on_guard.pdf
- 42. Ontario COVID-19 Bioethics Table. Ethics of paid sick leave for the COVID-19 pandemic. Joint Centre for Bioethics University of Toronto. Published April 23, 2021. https://jcb.utoronto.ca/ethics-of-paid-sick-leave-for-the-covid-19-pandemic/

- 43. Smith B, Warren C. *The Inequitable Burden of COVID-19 Exposure at Work: The Occupational Exposure to COVID-19 Risk Tool.* Public Health Ontario; 2020. https://www.publichealthontario.ca/-/media/event-presentations/2021/covid-19-rounds-inequitable-risk-of-exposure-at-work.pdf?la=en
- 44. Murti M, Achonu C, Smith BT, et al. COVID-19 Workplace Outbreaks by Industry Sector and their Associated Household Transmission, Ontario, Canada, January June, 2020. *medRxiv*. Published online November 30, 2020:2020.11.25.20239038. https://doi.org/10.1101/2020.11.25.20239038
- 45. Messacar D. *Inequality in the Feasibility of Working from Home during and after COVID-19*. Statistics Canada; 2020. https://www150.statcan.gc.ca/n1/en/pub/45-28-0001/2020001/article/00029-eng.pdf?st=MAYr4LGs
- 46. Institute for Work and Health. *Incidence of COVID-19 Transmission in Ontario Workplaces.*; 2021. https://www.iwh.on.ca/sites/iwh/files/iwh/reports/iwh issue briefing covid19 workplace ontario 2021.pdf
- 47. Hill HD. Paid sick leave and job stability. *Work Occup*. 2013;40(2). https://doi.org/10.1177/0730888413480893
- 48. Rao A, Ma H, Moloney G, et al. A disproportionate epidemic: COVID-19 cases and deaths among essential workers in Toronto, Canada. *medRxiv*. Published online March 11, 2021:2021.02.15.21251572. https://doi.org/10.1101/2021.02.15.21251572
- 49. Scott-Marshall H, Tompa E. The health consequences of precarious employment experiences. *Work Read Mass*. 2011;38(4):369-382. https://doi.org/10.3233/WOR-2011-1140
- Ontario COVID-19 Science Advisory Table. Fighting COVID-19 in Ontario: the way forward. Ont COVID-19 Sci Advis Table. 2021;2(23). https://doi.org/10.47326/ ocsat.2021.02.23.1.0
- 51. Yaqub O, Castle-Clarke S, Sevdalis N, Chataway J. Attitudes to vaccination: A critical review. *Soc Sci Med.* 2014;112:1-11. https://doi.org/10.1016/j.socscimed.2014.04.018