# Mobility in a Pandemic: COVID-19 and the Mobile Labour Force

Working Paper

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## "Mobility is both the lifeblood of modernity and the virus that threatens to undo it." - Tim Cresswell

#### Introduction

Over the past few weeks, COVID-19 has drastically disrupted everything from the global economy to everyday life. Key features of the pandemic are its impacts on the world of work and on all kinds of mobility. An ILO estimate of the impacts of COVID-19 on the world of work, issued April 7, 2020, indicated, "[f]ull or partial lockdown measures are now affecting almost 2.7 billion workers, representing around 81 per cent of the world's workforce" (International Labour Organization, 2020). In terms of effects on mobility, Yayboke (2020) commented:

Only when people have stopped moving do we realize how much freedom of movement—the ability to visit a neighbor, to catch the train to work, to see a movie in the theater, or to fly across the world to see family—is a fundamental part of the human experience.

COVID-19 infection prevention and control measures are severely disrupting the lives of workers and their families at home, on the road, at work and in the wider community. Infection control requirements, including limits on travel, self-isolation, quarantine, and social (physical) distancing measures, have led to internal and international border as well as school, daycare and business closures. Transportation options and services are being altered; major disruptions are widespread; and the linked economic crisis has triggered widespread layoffs and work reductions. Work has been redesigned to support a dramatic increase in working from home in some sectors and social (physical) distancing in others. Workers with dependents at home

are struggling to coordinate care, travel and work responsibilities. Managing the risk of infections has increased workloads in essential services such as healthcare and cleaning, while employment volatility and inspection prevention workloads has increased in nonessential businesses.

For the past 8 years, the On the Move Partnership has been studying the patterns of work-related mobility in Canada with some affiliated work happening in Norway, Iceland, the U.S. and Southern Africa. Our focus has been extended/complex employment-related geographical mobility (E-RGM) and its intersections with life at home, on the road and at work, and how this impacts employers, workers and their families in source and host communities. We have looked at the spectrum of extended/complex E-RGM ranging from daily travel (> 1 hour each way) to and within work (as with transportation workers) to international labour migration out of and into Canada and other countries. We refer to those who engage in complex/extended mobilities as the mobile labour force and estimate that they comprise up to 16% of Canadian workers (Neis and Lippel, 2019).

While the timeframe and ultimate consequences of this pandemic are currently unclear and will vary across places and groups, media coverage of COVID-19 is already pointing to some of the particular challenges the pandemic is posing for the mobile labour force and those associated with them. This working paper links some of the relevant media coverage to On the Move research findings, highlighting these challenges and arguing for the importance of attending to E-RGM and particularly to this diverse and

substantial segment of the labour force, in COVID-19 planning, management and compensation. Our main focus is on Canada but we include coverage from some other countries to help place the Canadian situation in context. The working paper is linked to a series of blogs focused on particular types of work-related mobility and issues produced by other On the Move team members and available or forthcoming on our website, and to an evolving Zotero folder of relevant articles also publicly available on the On the Move (OTM) website:

www.onthemovepartnership.ca

As noted by Desai Shan in her blog on COVID-19 and seafarers, political leaders and chief medical officers are telling us to serve our community by going home. Working at home, which has spiked in recent weeks, was not a focus of OTM and is not our focus here: it is one end of the spectrum of E-RGM and comprised a relatively small percentage of work in Canada prior to the pandemic (Statistics Canada, 2017). It is also only feasible for a part of the Canadian labour force including primarily white collar workers. Staying and working at home is not an option for those who are providing essential services for the rest of us, many of whom are part of the mobile labour force and the focus of this paper. Life would be largely impossible without them and the success of the COVID-19 fight is closely linked to how well we manage to balance their workrelated (including mobility) requirements with the challenges of infection control and management among them over the longer term.

We start with a discussion of COVID-19 and related measures and their effects on internationally mobile workers in multiple sectors ranging from healthcare workers who commute daily between Canada and the U.S., to temporary foreign workers in agriculture and some other sectors. We then focus on the

internally (within nation states) mobile labour force, ranging from those who cross internal borders (such as between provinces or states when they go to or engage in work) to those who engage in complex/extended commuting for work within those borders. We then draw attention to the particular challenges confronting workers employed in mobile workplaces such as in trucking, seafaring, fisheries, the airline industry, taxis and ambulances, many of whom also commute before they start their work. We also touch on what COVID-19 and related measures might mean for source and host communities for mobile workers including Indigenous communities, and for communities that act as a hub for the transport of people and goods such as ports and airports.

We observe that too often the necessity and dynamics of work-related mobility have not been included in models and plans to understand and mitigate the effects of the pandemic, including our capacity to maintain 'essential services'. One consequence of this has been the enhancement of frictions and, in some cases, threats in the lives of workers, their families and communities associated with piecemeal and less than optimal, often late, interventions to address their needs.

#### **Internationally Mobile Workers**

We have heard a great deal in the media about managing international travel so as to reduce the risk of COVID-19. This has led to such measures as border closures, travel restrictions and cancellation of flights. In Canada, the main focus has been on vacationers returning from trips abroad and cross-border travel between Canada and the US plummeted in March, 2020 relative to the year before (Panetta, 2020). However, there are also Canadians who are working outside Canada who have become more visible with the pandemic. One such group is the health

care workers who live in Windsor, Ontario or Detroit, Michigan and commute daily to jobs on the other side of the border, which is closed to non-essential travel but open to the daily crossings of between 1,500 and 2,000 health care workers; some actually work parttime in Detroit and part-time in Windsor. On March 31st CBC reported that Detroit had 1,800 confirmed cases of COVID-19 while Windsor had only 65, a third of whom were health care workers working in Detroit (Fraser, 2020). Despite precautions, health care workers and some others in the area have rightly been concerned about potentially bringing the virus across the border and home, so there have been suggestions that these workers stay in hotels or in people's homes in Detroit or Windsor when they are working (Monga, 2020).

Other international migrant workers travel into and out of countries on a rotational basis staying for weeks or months before travelling home. Some are business and other travellers from countries of the North who (reversing the pattern of people from Africa being restricted from travelling to the North due to concerns about the spread of diseases like Ebola) are finding their travel into Africa restricted in the current context (Penney, 2020).

Most vulnerable are the millions of international labour migrants who Yayboke (2020) describes as "the engine of a globalized economy." Key parts of the global economy rely on them, including the agricultural, care, tourism, transportation and, in some contexts, construction sectors. Some labour migrants who happened to be in host countries in the run-up to the declaration of the pandemic, are at risk of deportation. Malta, for example, has taken measures to deport all foreign workers and announced that anyone who refuses to leave is breaking the law and will be unable to return for 3-5 years (Bonnici, 2020; Foster, 2016). India sent planes to help transport

home international migrant workers from Tehran and Milan (Leo, 2020). Of course, border closures in source countries may make it very difficult or impossible for these international migrants to return home in the short term, leaving them caught between staying and leaving. Even in the absence of active deportation efforts, COVID-19-related economic collapse combined with precarious immigration status, are putting international labour migrants at risk of layoffs. This can jeopardize their legal right to remain in the host country, to access future employment, and could force them into undocumented status.

In Canada, there are hundreds of thousands of people without Canadian citizenship or permanent resident status who come to work on a seasonal or year-round basis in agriculture, the fast food, tourism, meat and seafood-processing sectors, in construction, healthcare, home care and as live-in caregivers (Cedillo et al., 2019). In Canada and other countries of the North, there are growing populations of international students and their families who have moved there to live and study, many in the hope of immigrating. These international students form part of the national labour force during and after their studies.

On March 16, 2020, Canada announced it would be closing its borders to all non-Canadian citizens and permanent residents except U.S. citizens, diplomats and 'essential workers,' with the last apparently limited to those in the transportation sector. Anyone with symptoms of COVID-19 would also be barred from entry and all except essential workers would be asked to self-isolate for 14 days after their arrival. It was unclear in this original announcement what would happen to international workers with work permits, refugees and students with study permits (Kirkup and Carbert, 2020).

Some businesses and nonprofits protested that the exclusion of temporary foreign workers (TFWs) would prove difficult for such sectors as agriculture and seafood processing, which are considered essential to the Canadian economy and to food security (Paradker, 2020; Ryan, 2020; Yarr, 2020). Consequently, international students with study permits and TFWs were exempted from travel restrictions by air or land, subject (for those travelling by air) to passing airline health checks prior to boarding, further health assessments at their port of entry and thereafter the completion of 14 days of self-isolation (Immigration, Refugees and Citizenship Canada, 2020).

There were early concerns about whether TFWs would be isolated from others or housed in communal living arrangements with little possibility of maintaining the physical distance required to prevent the spread of contagion (CBC News, 2020b; LaFleche, 2020). On March 27, the Canadian federal government issued a "Guidance for **Employers of Temporary Foreign Workers** Regarding COVID-19" document that many sector associations of employers who bring in TFWs (such as Canadian Trucking Alliance, 2020) posted to their websites. The document indicates a worker's period of employment is intended to start upon their arrival in Canada, will include the self-isolation period, and will thus be covered by Canada's employment laws including the requirement to pay the workers during this period. There is also a requirement that workers not be authorized to work during this period and the employer is responsible for monitoring the health of workers who are self-isolating and of those who become sick after this period. In addition, employers are required to provide tools to practice good hygiene along with related information on COVID-19 to workers, ideally in the appropriate language. Employers who provide accommodations are told they "must house self-isolating workers in accommodations separate from those not subject to self-isolation" and that they can

be housed together "but the housing must enable them to be two metres apart from each other at all times" (Employment and Social Development Canada, 2020). If this is not possible, employers are told they may have to use hotels. In this respect, it is worth noting that the living conditions for agricultural workers are generally unhygienic, with people often living in bunk houses or small quarters, with several workers sleeping in one room and with limited access to clean water, proper plumbing and cooking appliances; problems with hygiene at work have also been documented.

Some employers quickly expressed concern about the delays in production and additional costs the federal requirements would cause (Thompson, 2020) and the federal government has responded to these concerns by establishing a \$50 million fund to offset quarantine costs for agricultural and seafood processing employers of TFWs (Harris, 2020).

On March 31st, 2020, CBC reported that an outbreak of COVID-19 among TFWs at a nursery in Kelowna, B.C. was under investigation by the Health Authority (CBC News, 2020c). At that time, 14 TFWs tested positive and 63 other TFWs plus 12 local workers were in isolation. These workers arrived before quarantine requirements were in place. On April 13th, Sara Mojtehedzadeh of The Star reported Jamaican agricultural workers coming to Canada were being required to sign COVID-19 waivers releasing their government from liability for "costs, damages and loss" for COVID-related exposures (Mojtehedzadeh, 2020b). A recently arrived worker understood he was supposed to quarantine for 14 days and to be paid for this time but he indicated his employer wanted him to go to work right away; another worker was told he would need to repay the quarantine wages later in the season and housing-related constraints on the capacity to self-isolate are also discussed. The federal

subsidy is supposed to be accompanied by a series of targeted inspections to help ensure compliance with the guidelines.

The extent to which employer requirements are met, the adequacy of the requirements and their effectiveness in preventing the spread of COVID-19, will need to be carefully monitored. As in the past, fears about loss of income, deportation, language and other barriers (well-documented in the sector) could mean, as reported recently by OTM co-investigator Jill Hanley, some TFWs may not be given health information in their own language and may not report violations of government requirements or provide information about their symptoms to employers or to health authorities, and will continue to work, thereby putting themselves and others at risk (Cedillo et al., 2019; Paradker, 2020; Shingler, 2020). Past research has also shown how TFWs are technically eligible for programs such as Employment Insurance, but complex rules and lack of information have resulted in many being unaware of their rights (Byl, 2010). Similarly, while they are eligible for the new federal and provincial wage replacement options that have been set up for those affected by COVID-19, whether and how the workers will access these are less clear (Department of Finance Canada, 2020). Whether federal programs like the Canada Emergency Response Benefit can be used to compensate for delays in getting to Canada and questions about the extent to which self-distancing protocols and the infrastructure and other changes needed to support them are required post-quarantine are also raised in the Mojtehedzadeh article. COVID-19 measures in home countries and limitations on international travel will likely help constrain deportation of infected workers, but this raises the question of who they will be able to turn to for support in Canada in the event of illness. Furthermore, there is a risk that non-symptomatic workers who are not tested could place their families and home communities at risk upon their

return.

Questions also need to be asked about how COVID-19 fears will affect the relationship between these racialized and vulnerable workers and the host communities in which they access key services from food and other stores. The Toronto Star reported that some international agricultural workers are having trouble accessing grocery stores and, when they are able to shop, have found that there are no supplies left (Paradker, 2020). Nonprofits have stepped in to do food drops to these farms. Prior to COVID-19, agricultural migrant workers were already sometimes experiencing hostility from people in surrounding communities (Preibisch and Binford, 2007). In general, visible minorities (including citizens, landed immigrants and migrant workers) have been experiencing increasing racism and xenophobia (Kovac and Kline, 2020; Larsson, 2020; Taschner, 2020) and there has been at least one report of 'naming and shaming' of TFWs in communities (Levitz, 2020). While people in communities where TFWs shop fear infection from them, those workers also fear being infected if they have to go to town to shop with workers on one farm asking their employer to pick up groceries for them during their time in Canada (Shingler, 2020).

Health care and live-in caregiving are also critically important sectors that rely to varying degrees on different types of international labour migrants. Shiva Nourpanah and Kerri Neil's OTM blog draws on Shiva's doctoral research on the relationship between precarious immigration status, mobility and work experiences of international migrants who entered Canada as students and ended up working in Nova Scotia's health care sector. It speaks to some of the impacts pandemic-related measures appear to be having on these workers.

Sara Dorow and Emma Jackson's research

on the experiences of largely Filipina live-in caregivers during the Fort McMurray fire and (during an earlier period) of shifting temporary foreign worker policies in Canada, points to key vulnerabilities of these workers during periods of sudden economic downturn and changing policy contexts such as we are seeing with COVID-19 measures in Canada (Dorow, 2016; Dorow et al., 2018f; Hill et al., 2019; Jackson, 2019). In the case of the Fort McMurray fire, some live-in caregivers were evacuated to hotels and other sites away from the city where they kept caring for children; some did not have a room of their own. On March 19th, The Star reported the case of a Filipina nanny, who had travelled with her employer to Mexico on vacation and was prevented from returning to Canada with them when the federal government originally closed its borders to all foreign nationals. TFWs were later allowed entry, but these kinds of vulnerabilities to rapidly shifting constraints on mobility remain a key feature of the COVID-19 pandemic for these and other mobile workers (Keung, 2020). The Star article quoted this worker, De Ramos as saying:

"I understand the need for quick and decisive action; however, please consider the people who have already left their families to begin a better life in your country and are on the path to becoming Canadians," said De Ramos, who came to Toronto early last year to look after Toronto resident Deborah Lucas' two young sons.

"My life and all my possessions are in Canada, and I know this is the case for many temporary residents like me. In these unique circumstances, please don't turn away people who pay taxes and work hard to build the multicultural Canadian community we all are proud of."

Finally, many often racialized TFWs, recent immigrants and resettled refugees work in

meat processing plants like Cargill's High River plant in Alberta. On April 21st, CBC News (2020e) reported that the plant had been linked to one death and 484 cases of COVID-19 in this community and surrounding area making the area a hotspot in Alberta with more cases than Edmonton which has ten times the population. The TFWs generally live in shared housing in order to reduce living costs; for many English is a second language. The UFCW representative for the plant workers indicated the plant designed around efficiency and social proximity rather than social distancing and it was allowed to continue operating after the outbreak started started (Keller and Dobby, 2020).

#### **Internally Mobile Labour Forces**

Travel and other restrictions taken to address COVID-19 are also affecting many internally mobile workers across the spectrum from daily to more extended mobility. These workers include those who cross provincial borders, move between regions, and also some who travel for, and as part of, work within cities and regions. Like international migrants, these workers can be exposed to COVID-19 during their journeys to and from work (particularly if they are reliant on crowded, tightly packed subways, buses, ferries, planes and trains), as well as at work and can take the virus home to their families. They can also be infected at home or in the community and take that infection into public transit and into their workplaces. They are socially and economically vulnerable to state interventions that use mobility management as a core aspect of infection control.

Desai Shan, a former postdoctoral fellow funded through OTM, has been monitoring Chinese media for the challenges facing internal migrant workers in China, including some who came to Wuhan to build new

hospitals. Despite 14 days of quarantine before trying to return home, she notes these workers were often barred, by village leaders, from returning to their villages. In Canada, as of April 7th, 2020, 8 provinces had set up border checkpoints and travel restrictions (Gollom, 2020). The Yukon recently asked entering mine workers to self-isolate for 14 days before going to work (Department of Health and Wellness, 2020). The Northwest Territories has banned travel into the territory by air, land and port for non-residents, and asked returning residents to self-isolate (Government of Northwest Territories, 2020). It has, however, provided exemptions for many types of workers including those in the transport, infrastructure-related work, mining and oil and gas sectors.

With limited exceptions, such as for truckers, people travelling interprovincially (including residents entering Newfoundland and Labrador and Nova Scotia) are required to self-isolate for 14 days (Doucette, 2020). In Nova Scotia, some of these people live close to provincial boundaries and commute daily for work between Nova Scotia and New Brunswick, raising concerns about disruptions in their work lives. Quebec has banned nonessential travel between Ontario and western Quebec, including from the Ottawa area into Gatineau, where there are thousands of interprovincial workers (Glowacki, 2020). Related to these interprovincial border controls is the question of whether, and how, interprovincial Newfoundland and Labrador workers driving home from seasonal employment or after layoffs elsewhere, or on rotations from Central and Western Canada, will be able to travel through these provinces. Will they be allowed to transit and under what conditions? There are also some questions about the constitutionality of these initiatives (Gollom, 2020) and indeed about the constitutionality of airline staff screening Canadians and preventing those with symptoms from returning to Canada (Le Bouthillier and Nakache, 2020).

Fly-in/fly-out (FIFO) interprovincial workers will be monitored for symptoms before starting work when they return, opening up the possibility that they could be stuck in their work province unable to work if they are symptomatic or minimally have to self-isolate before going to work. If symptomatic, they could also have to self-isolate on the way home and thus experience travel delays, or end up self-isolating longer than 14 days in their home province if symptoms develop delaying their return to work. Certain types of rotations such as 2 weeks on/ 2 weeks off are just not feasible in this context.

Like other mobile workers, FIFO and Drivein/Drive-out (DIDO) workers are vulnerable to infection not only at home and on the road but also at work (on the work site) and when living at work (as when staying in work camps or hotels). On March 20th, it was reported that a worker at camp was sent to hospital with suspected COVID-19 (Canadian Press, 2020). The Brucejack mine in northern BC moved to a three-weeks on/ three-weeks off rotation to minimize crew changeovers – a key source of risk (Penner, 2020). A possible infection allowed work camp and transportation companies near Fort McMurray to test their pandemic preparedness (Krugel, 2020). In Canada, British Columbia and Alberta now have COVID-19 guidelines for industrial work camps that are available on the web. These may also exist for other provinces and may be supported by visits from public health agents although involvement of public health appears to be driven mainly by employer/ camp operator reports of symptomatic staff or clients, or by outbreaks at a camp (BC Centre for Disease Control, 2020; Government of Alberta, 2020). It is not clear how actively workplace health and safety personnel are involved in these and other COVID-19 initiatives across Canada. While not all camps would have single rooms, sending home nonessential personnel would open up more space for isolation and for workers to remain

there if going home between rotations is not always feasible.

The relationship between FIFO/DIDO and risk of work-related spread of infection has been the focus of considerable attention in Australia. The latter has a very large FIFO/ DIDO labour force employed mainly in the resource extraction sector. On March 30th, Queensland mining workers were reported to be boycotting work in protest against thousands of FIFO workers coming in from regions with high COVID-19 rates (Bromby, 2020). On April 4th inter-state travel restrictions in Queensland required FIFO workers entering Queensland from other states to undergo a 14-day quarantine. While the application of this restriction to DIDO workers was less clear, some companies were enforcing it based on the interpretation that DIDO exemptions only applied to workers from communities close to the Queensland border and to those employed in a narrow range of critical resource sector types of occupations (McMaster and Walthall, 2020). Australian mining companies are changing FIFO/DIDO rosters or rotations to reduce the risk of infection, with some going up to 2 weeks on/2 weeks off from shorter rosters and one going from 2 weeks on/1 week off to 4 weeks on/2 weeks off (Christmass, 2020).

Interprovincial border controls and travel restrictions raise the question of whether or not, and under what conditions, interprovincial workers will be paid by employers for time spent in self-isolation and related costs (as is required for TFWs entering Canada) or for time and costs associated with self-isolation on the way home if they develop symptoms and are not permitted to board planes. There is also the question of where they will stay. Returning workers may be able to self-isolate at home once they arrive but will need to travel from the airport to their homes and risk exposing taxi or bus drivers or family members who pick them up en route.

If they are concerned about making their families sick, they may need to take temporary accommodation outside their homes. On the Move co-investigator Deatra Walsh's husband was a migrant worker employed in Nunavut in Canada's far north. A former migrant worker herself, in her blog, "Walking the Empty City: Feminist Reflections on Life Suspended under **COVID** -19," she describes going for a walk in St. John's, NL during the COVID-19 period of social-distancing and business closures. She describes how her husband came home from working in the Arctic and managed to self-isolate from his family by travelling to a second house in Lewisporte that had belonged to Deatra's now deceased mother. Also in Newfoundland, a Port Blandford worker returning from working at Suncor in Fort McMurray, Alberta, opted to stay in a prospector's tent pitched outside his residence during the self-isolation period (Wheeler, 2020).

Inter-regional travel and other constraints on internal mobility are also being imposed in countries other than Canada. OTM Norwegian co-investigator Marit Aure has been studying mobile oil and gas workers in Norway. She notes in her blog, "How COVID-19 Has Impacted Offshore Workers in Norway," how those who travel from the South to the North of Norway must go into quarantine before they can go to work and self-isolate when they return home if they fly to work. This has led to some opting to drive long distances to reduce the time they need to spend in self-isolation on their return.

A lot of attention has been paid to the risk of infection on airplanes (including for airline personnel – discussed below). However, COVID-19 also poses a risk to the lives and livelihoods of those who rely on various other modes of ground/marine transit to get to and from work, and whose mobility might cover relatively short distances but still take a lot of time. Kathy Fitzpatrick of

OTM has done research with Newfoundland homecare workers who commute to work in Nova Scotia. The ferry takes several hours and they are then often transported by van to their work sites where they stay for a couple of weeks before returning home. Achieving social distance by staying in vehicles is not feasible for longer ferry rides, like the six-hour journey from Port aux Basques, NL to Sydney, NS, as vehicle decks are not heated and passengers cannot turn on their vehicles for risk of carbon monoxide poisoning (Marine Atlantic, n.d.). Marine Atlantic has taken steps to reduce the risk of infection on the ferry by ending or limiting food service and reducing the number of passengers it carries. Mobile workers with adequate incomes can selfisolate in cabins but home care workers may spend the night in chairs in lounges. OTM's Sharon Roseman and Diane Royale's work on the Bell Island ferry in Newfoundland shows that residents "need the boat to survive" (Kennedy, 2015), including to get to and from work. Passengers were, until recently, required to leave their vehicles and go upstairs during the ferry crossing, but concerns about risk of infection led to the decision to allow passengers to stay in their vehicles (Transportation and Works, 2020), effectively physically distancing them from each other during the ferry ride.

On April 4, 2020, Transport Canada issued a list of new measures for ferries and commercial passenger vessels that fall within essential work exemptions and are capable of carrying more than 12 passengers, and has deferred the start of its cruise ship season until July (Transport Canada, 2020b). Ferry rides, like airline travel, are often prolonged by weather conditions increasing periods of potential exposure to the virus. On March 24, it was reported the Kamutik W was stuck in the ice with 120 passengers, several of whom had recently travelled internationally (Careen, 2020b), highlighting the risks of ferry services bringing people from different locations together in cramped quarters for long periods

of time. It is also important to consider the challenges COVID-19 poses for ferry workers. Quebec is the only province that has implemented some internal mobility controls between provincial regions (although some people in Labrador have asked for this) in an effort to reduce the spread of COVID-19 and to protect people who live in remote communities with limited health care services (Health and Social Services, 2020). In light of the history of devastation by disease of Indigenous peoples and their particular vulnerability to serious effects, as we note below, not surprisingly some Indigenous communities are trying to ban access to their communities in an effort to control the spread of the virus and thus support these efforts (Bell, 2020).

Another group of workers who engage in complex/extended mobility within Canada includes some of the estimated 27-45% of all Canadian workers who are precariously employed and at risk of falling through cracks in the country's social safety net (Lippel, 2020). They are still going to work in retail, health, transportation and other sectors and may be employed in several workplaces including at transient (as in construction), or multiple (as in cleaning/homecare) worksites. They are often low-waged, recent immigrants and members of racialized groups, and their work and travel put them at daily risk of infection (Block and Dhunna, 2020; Dhunna and Block, 2020). As shown by Stephanie Premji's OTM Toronto research, these worers may not travel long distances, but they do frequently engage in long, complex commutes via public transit to get from their homes in lower cost housing areas to places of employment (Premji, 2018; Premji et al., 2014). They may also be more likely to travel in vans to, from and between worksites. These commute patterns make it difficult or impossible to self-distance and avoid viruscontaminated surfaces. Most, such as cleaners, those working in grocery stores, homecare

workers and some other health care workers, don't have an office to go to at work where they can manage their exposures. Instead, they may be cashiers, or personal support workers, dealing with the public and often required to move in and out of spaces that are open to changes of personnel and clients (Gollom and Mauro, 2020). The Toronto Star recently talked about some cleaners' fear and lack of control and personal protective equipment (PPE) support during their jobs (Mojtehedzadeh, 2020a).

Personal support workers and those in long term care and assisted living homes have complained about lack of training and access to PPE on their jobs. The common practice of these workers having to work in multiple jobs and thus to move in and out of different worksites in order to make a living has been identified as a risk factor for outbreaks in long-term care homes. The Canadian government released federal guidelines on infection prevention and control in long-term care homes, included the recommendation that staff work only in one location (Public Health Agency of Canada, 2020). On April 13th, the Federal Minister of Seniors, Deb Schulte said, "Residents of long-term care homes are vulnerable to infections due to their communal living spaces, shared healthcare providers, exposure to external visitors, and transfers from other healthcare facilities" (Aiello, 2020). These are only guidelines because health falls under provincial jurisdiction, but in British Columbia, and in a growing number of other provinces, longterm care workers are already required to work in only one facility and governments are providing wage subsidies to help offset the income-related impacts of this requirement (Evra, 2020; Welsh, 2020). Unfortunately, as was revealed on April 19th, 2020, the Ontario health directives limiting mobility between homes exempted temporary agency workers, who "earn their living floating from home to home." The rationale for this exemption is the need to ensure a steady supply of labour in

the event of an emergency (Mojtehedzadeh, 2020c). Home care workers and those they care for have recently expressed concerns about home care agencies sending workers into multiple sites with enhanced risks of infection both for the home care workers and for their clients (Contenta, 2020). This is in the absence of access to adequate PPE and related training (Choi, 2020).

There are also other groups of essential workers whose mobility to and within work comes with the risk of infection and of spreading infection. These include waste collection workers who appear to be at very high risk in countries of the South like Nepal (Ojha, 2020) and medium to high risk in contexts like New York where privately employed, Black waste collection workers responsible for removing contaminated hospital and other waste were the focus of a recent CBC story documenting higher death rates among Black and Latino populations in parts of the US (Ormiston, 2020). Canadian communities have adjusted garbage removal rules and practices in response to the pandemic to reduce risk in some cases pushed by workers demanding improved protection from COVID-19 (Mann, 2020; Scott, 2020b). Other mobile workers potentially at risk include delivery and frontline postal workers responsible for door to door delivery.

In terms of the risks associated with public transit, operators are taking steps to achieve social distancing, but these initiatives have often taken time to be implemented. In the U.K., for example, Londoners were still travelling on packed subway trains the day after the government shut down non-essential businesses (The Guardian, 2020). Globally, use of public transit has dropped more than 80% in some major cities and service has also been cut back (Griswold, 2020). Such changes have the potential to reduce the risk of infection, and sometimes involve reduced loads and requests that essential workers travel outside

of heavy traffic times, but reduced service may also extend already prolonged commutes and the time spent away from families. Furthermore, many workers and particularly the precariously employed don't generally set their own shifts so their capacity to travel outside of peak times would be limited by the shifts they are assigned.

#### Internationally and Internally Mobile Transportation, Cruise Ship and Fisheries Workers

Internationally and internally mobile transportation, cruise ship and fisheries workers are particularly vulnerable to outbreaks when they encounter COVID-19 infections and their mobility can put others at risk. The transportation and shipping of goods has been protected against shutdowns by the Canadian and many other governments as an essential service, because employment in shipping and trucking and in delivery services supports supply chain workers in areas such as food and health care supply distribution. Thus, shipping vessels and trucks continue to operate, and companies and governments are taking steps to respond to COVID-19 (Maritime and Coastguard Agency, 2020).

Seafaring work often brings people from different parts of the world to live together in tight quarters on board ships, often for prolonged periods, making it a high-risk work place for contracting and spreading COVID-19 should an infection occur (Tobin, 2020). International seafarers already experience weak occupational health and safety standards on board although seafaring work is one of the most dangerous occupations globally (Shan and Lippel, 2019). Commuting to ports can require a combination of flights and ground transportation; security-related constraints on access to shore leave and mobility-related

fatigue were already significant challenges for Canadian and other seafarers before COVID-19 (Shan and Lippel, 2019; Shan and Neis, 2020). Desai Shan's blog in this series, "People who Carry Food and Fuel for the World are Trapped at Sea: A Crewing Crisis in the Context of COVID-19," talks about how COVID-19 measures have exacerbated these challenges by denying shore-leave, constraints on crew changes and increasing the complexity of travel between vessels and home residences during the pandemic.

Trucking is another essential service and is still operational but this is not without some challenges. Natasha Hanson and Kerri Neil's blog, "The Impact of the COVID-19 Pandemic on Canadian Truck Drivers," draws on recent media coverage to talk about how the shutdown of businesses, particularly restaurants and rest stops, has restricted truckers' access to food and bathroom facilities while on the road and what some groups and companies are doing to address this challenge. Some local couriers including those delivering food for Uber Eats, Skip the Dishes and Foodora, another key group of workers in the context of the current pandemic, are facing similar problems as restaurants require them to do curbside pickup and they are having to drop off food and other deliveries on the doorsteps of customers leaving them with nowhere obvious to go for bathroom and other breaks (Watters, 2020). Some couriers doing this kind of delivery appear to be left to their own devices when it comes to sourcing masks and other PPE (Davie, 2020).

In Canada, as international and national-level travel has been curtailed, decimation of the airline industry and massive layoffs have resulted (Tasker, 2020). For instance, by March 30th, Air Canada had temporarily laid off 16,500 employees although it announced on April 8th that it was rehiring them with help from the federal wage subsidy (Evans,

2020; Reynolds, 2020). Some airline workers, importantly, put themselves at risk by helping international travellers return to their home countries. On March 18th, the World Health Organization issued interim guidance in "Operational considerations for managing COVID-19 cases or outbreak in aviation," which encompassed all aviation workers both in the air and on the ground in airports (World Health Organization, 2020). On April 7, 2020, IATA issued a press release indicating that globally 65.5 million people depend on the aviation industry for their livelihoods, and that COVID-19 related initiatives had placed 25 million jobs at risk (International Air Transport Association, 2020). Canada's airlines are required to provide gloves, masks, wipes and sanitizer to employees, so Air Canada is providing gowns and protective glasses that must be worn during food preparation but are optional for other tasks (CBC News, 2020a). Flight attendants are exempt from the 14-day self-isolation rules and are concerned about contracting the disease while working. In the US, unions representing airline workers are requesting accurate data on the number of positive tests and improved prevention interventions, such as plane cleaning between flights rather than at the end of each day (Wiley et al., 2020).

Public transit workers are part of the mobile labour force still going to work, supporting the work-related mobility of others including essential workers. In New York City, an April 7 report indicated 41 transit workers associated with the M.T. A. had died and more than 6,000 had been infected or selfquarantined due to COVID-19. Delays and trip cancellations had substantially increased prolonging commute times including for essential workers and the M.T.A. was criticized for delays implementing its plan for dealing with the pandemic (Goldbaum, 2020). In London, 14 transit employees were reported to have died (McGuinness, 2020). In Toronto, some TTC workers have tested positive for COVID-19 (Dhanraj, 2020).

Some transit companies have taken steps to reduce exposures including by making transit free and only allowing the public to enter and exit using the rear doors on buses and streetcars, with only those who need the accessibility supports able to use the front door (Leedham, 2020; Rodrigues, 2020). In Canada, the Amalgamated Transit Union is petitioning the federal government to provide maximum support for public transit to allow this essential service to continue while also achieving the changes needed to ensure social distancing (D'Agnillo, 2020).

The incomes of taxi drivers have been significantly hit by the shutdown but they are also at risk as they continue to work. As people travel less and have concerns about sharing vehicles, fewer people are taking taxis. On March 23rd, the taxi business was reported to be down 70-90% in St. John's, NL (Cooke, 2020). Similar effects on taxi work and driver incomes have been reported from Regina, SK, along with fears about infection (Ponticelli, 2020). On March 27th, over 50 taxi drivers in Penticton, BC walked off the job because of fears related to COVID-19 (Day, 2020). The next day, in Vancouver, two taxi companies announced they were suspending business indefinitely due to the combined effects of lower revenue and risk associated with the pandemic (Scott, 2020a). In Quebec, on March 23rd, some taxi companies were reported to be offering \$25 bonuses for drivers willing to take COVID-19 patients in their cars in order to compensate for the cost of cleaning a taxi after a trip and for other health risks associated with these trips (Caillou, 2020).

The Canadian federal government moved recently to limit the landing of international flights to only 4 airports but flights from the U.S., Mexico and the Caribbean could continue to land elsewhere. Thus, many international travellers need to travel on to other airports to make it home, resulting in

even domestic flights carrying international travellers (Transport Canada, 2020a). When such flights arrive, taxi and bus are among the options passengers may use to get themselves home where they are then expected to self-isolate for 14 days. Taxi drivers have therefore been concerned about picking up passengers from international flights, particularly in light of the limited options they have for social distancing and for cleaning their cars (Cooke, 2020; Day, 2020).

Paramedics transport and care for those who are ill en route to hospitals and other destinations. Their COVID-19-related risks include not only potential exposure in transit but also in the homes of people who make ambulance calls and at points of delivery into hospitals/homes. On March 26, the head of the Paramedic Association of Newfoundland and Labrador said eight medics were in quarantine because "people who called for an ambulance had misinformed operators about their COVID-19 symptoms" (Tutton, 2020).

The cruise ship industry bridges transportation and tourism and cruise ship COVID-19 outbreaks have been the focus of a lot of media coverage. These vessels have a high ratio of crew to passengers, and crew do everything from running the vessel to providing a diverse array of services to those on board, ranging from food, cleaning and laundry service through entertainment. They live and work in high human density situations and have little control over their work environment. Furthermore, because most cruise ships operate internationally and may carry flags from states other than those where they operate, cruise ship workers run the risk of being quarantined on the ship if someone on board develops symptoms, as well as facing delays in treatment and disembarkation as cruise ships look for a port willing to allow them to dock.

In the case of the Diamond Princess,

when the first passenger tested positive for coronavirus, the cruise ship went on lockdown, quarantining passengers in their rooms until the ship found a port that would allow them to dock (Falconer, 2020). When that was achieved, crew members and passengers were quarantined on the vessel while those who were ill were moved to hospital (Moriarty et al., 2020). Living in communal rooms with shared bathrooms, crew members had to continue working in close quarters, delivering food to guests prior to and during the quarantine and despite widespread illness (Bethea, 2020). On April 5th BBC (2020) reported that the Ruby Princess cruise ship in Australia is now under criminal investigation after docking in Sydney and releasing its passengers without notifying the port about illness on board. After they had disembarked, the ship was reported to be anchored off Sydney with 200 crew members on board, mainly international workers, showing symptoms of the virus and left to be cared for by medical staff on board. A recent report indicated an estimated 93,000 crew members, most of international origin, are stuck on cruise ships off the US coast (Schuler, 2020). Such vessels have been described as 'floating petri dishes' and are not considered an appropriate location for quarantining passengers and crew (Tan, 2020).

The fisheries and aquaculture sector employed almost 60 million people globally in 2018 (Food and Agriculture Organization, 2018). It encompasses work on board mobile and often crowded work platforms that journey between international, national and regional ports, making fishery workers potential conduits for the spread of infection and particularly vulnerable to outbreaks should infection happen. Seafood processing workers are also vulnerable, as the sector has come to rely on internal and internationally migrant labour in many parts of the world. There are regular reports in the international media of the impact of the pandemic on the sector, including prices, incomes, hunger and food

security, safety and vulnerability to infection (SAMUDRA News Alerts, n.d.).

As noted in a blog by OTM's Gale Burford, "COVID-19 and Coastal Fishing Communities," the start-up of seasonal fisheries in Cordova, Alaska and in some other Alaska communities this year is creating both anticipation and some anxiety among local people. Fisheries are crucial to the local economy of these communities, but season preparations and operations bring with them an influx of processing workers, vessels and harvesters from elsewhere including other parts of Alaska, other US states and other parts of the world.

In Atlantic Canada, fish harvesters from New Brunswick (some of them Indigenous) migrate to Cheticamp in April for the snow crab fishery. They have recently been told that, under new provincial rules, they and others entering Nova Scotia, must self-isolate for 14 days (The Telegram, 2020). In Newfoundland and Labrador, the start-up of the seasonal, small-scale snow crab fishery has been delayed until May 1st as government, industry and labour debate whether a safe fishery is even feasible, and as the NL Fish Harvesting Safety Association seeks to develop protocols and provide information for operators in an effort to ensure harvesting can operate more safely (Barry, 2020). The Gulf of Nova Scotia Fishermen's Association is reporting fish harvesters' and their families' deep concern about the opening of lobster season. A Cape Breton fish harvester and his wife and son who fish for lobster "said the government is giving mixed messages about physical distancing and staying home while expecting fish harvesters and processors to carry on with business as usual" (Gunn, 2020).

Atlantic Canada's large, offshore factory freezer trawlers, like other offshore national and international or distant water fisheries, have been in operation throughout the COVID-19 period. Crew on these trawlers can be at sea for long periods, and infection control issues are similar to those on other types of vessels with space constraints reported to be particularly significant on the factory deck. Draft COVID-19 prevention protocols are said to be under discussion/negotiation between companies and union representatives in Atlantic Canada for the unionized part of the fleet; it is unclear what is happening in other parts. Transport Canada has not, to our knowledge, released guidelines for fisheries similar to those for seafaring and other marine sectors.

#### COVID-19 and Source, Hub, and Host Communities for the Mobile Labour Force

Source communities are communities or subcommunities that are home to populations of mobile workers. Source communities for daily commuters can be poorly serviced, often racialized, sub-communities in larger centres, as well as suburban or more rural communities adjacent to cities. For the internally mobile interprovincial and interregional labour forces, they can be rural, including Indigenous communities, and urban communities from which migrant workers travel to work. They are often in provinces/regions with relatively high rates of unemployment. or lower wages for particular occupations. The mobility can be rural to rural, rural to urban or urban to rural. Likewise, internationally, migrant labour generally flows from poorer, less industrialized countries including from rural areas, to the industrialized north or to wealthy centres like Dubai in the Middle East.

During the 2009 H1N1 crisis, Indigenous people in Canada were disproportionately at risk of hospital admission, of ending up in intensive care and of dying from infections (Palmater, 2020). In both Canada

and Australia, First Nations/Aboriginal communities are among the host and source communities considered to be most at risk in the event of COVID-19 infection. In both countries, Indigenous communities are often characterized by high rates of poverty, poor quality crowded housing, limited access to running water and health services (including particularly hospital care), and to appropriate places to quarantine the sick. The result has been high rates of chronic illness (including among young people) and high rates of social interaction (Rodway, 2020). Significant efforts have been made to increase the employment of First Nations people in resource development in Canada's North and in Australia, but this generally requires mobility between those communities and remote worksites or in some cases cities, returning workers perhaps bringing COVID-19 infections with them. Indigenous territories are also host to much mining and oil and gas resource development activities including infrastructure development and to migrant healthcare and educational workers who live elsewhere and travel to the communities and surrounding areas to work.

In Australia, some state governments have restricted travel to Indigenous communities. Western Australia has 'essentially quarantined' a third of its territory where there are remote Indigenous communities (Rodway, 2020). More health consultations with these communities and with work sites are being done via telemedicine (Barker et al., 2020). In British Columbia, by April 8th and in response to some First Nations people being diagnosed with COVID-19, 82 out of 204 First Nations were on lockdown, cutting themselves off from outside visitors, with some barricading roads into their community. Terry Teegee, Regional Chief of the B.C. Assembly of First Nations, linked this response to the history of devastation among Indigenous people from infections including Spanish Influenza in 1918 (Little, 2020). States of emergency and lockdowns are also

in place on First Nations reserves in other provinces including Saskatchewan, Manitoba and Northern Ontario (Pasiuk, 2020; Rosen, 2020). Clusters of First Nations people in areas like Vancouver's downtown East Side have no control over the flow of people, and thus the virus, into and out of these areas. Canadian Inuit communities confront similar risks to those in Indigenous communities with 6 confirmed cases of COVID-19 by April 9th. In addition, Inuit communities are already dealing with significant tuberculosis problems, at rates 300 times that of other parts of Canada (Stefanovich, 2020). In Labrador, Vale suspended charter flights to its mining operation near an Inuit and Innu community as it developed a COVID-19 plan (CBC News, 2020d). The company then reduced its onsite labour force as it shifted into a 'care and maintenance' mode for the next few months and stopped bringing charter flights in through nearby Indigenous communities. Rural and remote non-Indigenous source communities with populations of migrant workers (such as communities like Burgeo on Newfoundland's south-west coast) are also at risk from returning workers and workers who continue to rotate in and out of work in oil and gas, seafaring and other sectors.

Hub communities are communities with critical anchor institutions. These can be ports, airports, train stations, national and international ferry terminals, garages and other transit-related facilities essential to mobility (Butters, 2018). Workers in these places have to process and monitor members of the mobile labour force as well as vacationers and other types of travellers/ commuters, providing meals, transporting goods and people, and engaging in enhanced cleaning and infection prevention protocols in the context of the pandemic. Hence they are at risk of both health and economic impacts as travel is curtailed: they still need to interact with travellers and transfer goods critical to ongoing consumption and trade. Those infected at work can take the infection

home or out into the wider community. Hub communities also often become home to communities of mobile workers who move closer to these hubs to reduce the strain of extended/complex commuting for work. We have heard about some of the challenges confronting airport (versus airline) workers but generally have heard less about those who work in these places or their vulnerabilities and those of hub communities in the context of COVID-19.

A recent story about port workers in Vancouver talked about how such workers were continuing to handle huge volumes of cargo essential to the Canadian supply chain (including medical supplies), and to export sectors, using social distancing and other protocols (McKeen, 2020). Around the time this story was published on March 27th, port workers in Montreal exercised their right to refuse dangerous work, after a worker was diagnosed with COVID-19 and it was felt not enough steps had been taken to protect them from the spread of infection (Orfali, 2020). Ports in large centres are associated with the risk of disease transmission from vessels to shore personnel, and vice versa: into the port, out to vessels and other transport personnel, and between workers at the port.

Some hub communities are also host communities as with Fort McMurray, in Alberta and Fort St. John in northern British Columbia. Fort McMurray has a major airport and provides a range of services, including health care services, to the oil sands operations and to mobile populations in the area. As research on Fort McMurray done by OTM's Sara Dorow and others shows, inter-provincially migrant workers are employed and interact with intra-provincially migrant workers from other parts of Alberta, regionally-based First Nations people, daily commuters from Fort McMurray and surrounding communities, and Temporary Foreign Workers often employed in the camps (Dorow et al., 2018a, 2018b, 2018c, 2018d, 2018e, 2018f).

The Alberta government has deemed oil and gas an essential industry and in Fort McMurray the oil sands continue to operate, despite early concerns from the Mayor (McDermott, 2020). Mayor Scott explained that, "We have tons of flights coming in and out of this region and people from all over the place. I want our industry to be strong, but I need the people of our region to be protected and safe." Many workers are described as physically healthy and younger than 55. They may be at a lower personal risk of COVID-19 complications than older workers, but they are still vulnerable and could spread the illness, especially when they return home to their families. One plane headed to the oil sands was turned around as it was confirmed that one of the crew had been in contact with someone who had tested positive for coronavirus (Tait, 2020). A large proportion of migrant workers in that labour force travel from rural parts of Atlantic Canada where remittances have helped keep these regions going. With rotational work, these workers run the risk of possibly infecting their communities which, in rural areas, have very limited health care capacity and aging populations (Barrett, 2017; Butters et al., 2019).

OTM researchers had done extensive research in Fort St. John prior to the pandemic (Ryser et al., 2018). Fort St. John, like Fort McMurray, is located in a region surrounded by a variety of resource extraction projects and many work camps. It is adjacent to the large Site C Dam development project that had more than 4,000 workers on site in February. During project start-up, Fort St. John required the Site C Dam project to house workers on site to minimize potential negative effects on the community. This and other features of the camp/site may have made it easier than with some other projects to manage and control

potential infection threats from the site within the community. The labour force at Site C has been cut back in recent weeks and is now around 900. Workers with symptoms are required to go into self-isolation in the camp, and the shuttle service between the camp and the community was recently cancelled. These changes have reduced community vulnerability to infection from this source, but not necessarily from others, including local people travelling to live and work in other regional operations of whose condition the town has limited knowledge (Alaska Highway News, 2020; Ryser et al., 2012).

Happy Valley-Goose Bay in Labrador is the host/hub community for the massive Muskrat Falls Hydro project. As with Site C, this site has been reduced to essential workers in response to COVID-19, and there are numerous protocols in place designed to reduce the threat of infection en route to the site, and on site and in its accommodations. These protocols include compulsory temperature testing prior to arriving, daily on site and prior to departure, along with social distancing on charter flights and buses to and from the site and during meals and in accommodations. There are also protocols for quarantining workers with elevated temperatures (Nalcor Energy, 2020). Despite these protocols, Labrador politicians expressed concern about potential community impacts, since the rule that workers have to go directly from the airport to the site was breached in early April when some workers stopped off in homes in the community (Careen, 2020a).

#### **Conclusion**

The pandemic has exposed key vulnerabilities that come with embracing the hypermobility of goods, services and people as the fundamental premise of the world as we know it (Cresswell, 2020). As argued in this working

paper, globally, the most common response by governments has been to try to curb that mobility, particularly of people, as much as possible. The mechanisms used to do that and their effects on both people and the spread of the virus have varied a lot from place to place. India's lockdown was one of the most sudden and most strict. On March 24th, the Prime Minister gave only four hours' notice of a ban preventing everyone leaving their homes for 21 days, leaving it unclear how people would get food or get to work in essential services (Gettleman and Schultz, 2020). India's cities are temporary homes to an estimated 45 million migrant workers who live in slums and, in some cases, on the sites where they work (Choudhury, 2020). When the lockdown was implemented, it turned hundreds of thousands of migrant workers who were working in the large cities, into refugees. The disappearance of their employment and the simultaneous shutdown of transportation triggered mass migrations by foot back to rural villages (Biswas, 2020). The politics, process and consequences of COVID-19 state response in India, including for migrant workers, are eloquently described in Arundhati Roy's (2020) essay "The Pandemic is a Portal". In her words,

The lockdown worked like a chemical experiment that suddenly illuminated hidden things. As shops, restaurants, factories and the construction industry shut down, as the wealthy and the middle classes enclosed themselves in gated colonies, our towns and megacities began to extrude their workingclass citizens — their migrant workers — like so much unwanted accrual. Many driven out by their employers and landlords, millions of impoverished, hungry, thirsty people, young and old, men, women, children, sick people, blind people, disabled people, with nowhere else to go, with no public transport in sight, began a long march home to their villages. ... Some died on the way. ... They knew they were going home potentially to slow starvation. Perhaps they even knew they could be carrying the virus with them, and would infect their families, their parents and grandparents back home, but they desperately needed a shred of familiarity, shelter and dignity, as well as food, if not love.

Three weeks later, India's lockdown has been extended although work in some sectors is now permitted. Despite the brutality of the lockdown and its impact on the poor and on migrant workers, COVID-19 cases are now spread throughout the country and there is little evidence the pandemic has been controlled except for in Kerala, one of the few states with a strong public health system (Choudhury, 2020).

Canada's pandemic response has been more cautious and the emphasis has been more on voluntary physical distancing and selfisolation than on state-enforced lockdowns and quarantines. However, here as elsewhere, a core element in our response has been efforts to eliminate and, where this is not possible, to constrain/control mobility into and out of the country, across provinces and regions, and within communities in order to reduce the risk of infection and 'flatten the curve'. Many businesses have been closed with widespread layoffs. Many types of work-related travel including daily commuting have been severely curtailed as those who can have adjusted to work from home, and virtual communication and online purchasing have replaced travel to meetings, for business and for some shopping. A variety of federal and some provincial programs have been introduced to replace wages lost to lay-offs and to quarantine, and Canada has a fairly robust public health care system with, perhaps, the exception of provisions for long-term care. But many goods still need to be produced, transported and delivered even during a pandemic; critical infrastructure needs to be operated, maintained and even developed; people (the elderly, youth, the sick and the injured) need to be cared for, including those with COVID-19.

As argued in this paper, Canada's mobile labour force includes many of those workers deemed essential whose ongoing work-related mobility is vital to immobilizing most of the population in the midst of the pandemic. We have heard quite a lot about how better pandemic planning around the production and distribution of personal protective and other equipment essential for treatment could have reduced our vulnerabilities. What this review of relevant media coverage on the pandemic, seen through the lens of what we have learned about the mobile labour force through OTM, shows is that pandemic management would have worked better, with fewer disruptions and ongoing risks to the health of workers and the wider public if it had been informed by better knowledge about the mobile labour force including who is on the move, why, where to, using what means of transportation, under what conditions, and with what consequences for the workers and their families, employers and communities. This knowledge would have better prepared us for managing the work-related mobility that is still happening including its impact on the spread of the virus, and would have helped reduce the health, economic and social risks to these workers, their families and to communities. It would have made it easier and safer for them to continue doing the work needed to provide the goods and services essential to effective pandemic response including making it feasible for those of us who can, to go home and stay home.

Temporary international labour migrants have come to play a critical role in Canadian agriculture and some other sectors of the Canadian economy. This dependency is even more extreme in other parts of the world including, for instance, in South-East Asia. In Singapore, originally seen as one of the most successful states in containing the spread of the virus, there is now a second wave of infections linked to a significant degree to its neglect of labour migrants. Lowwage international labour migrants work in

construction, shipping and maintenance jobs in Singapore and are housed in dormitories on the edge of the city state (Ng, 2020). By April 17, an estimated 300,000 international workers were confined to those crowded dormitories and other accommodations where they are at high risk of infection, with only essential workers able to leave (Ratcliffe, 2020). Singapore's actions might help contain the spread of the virus from these workers to those in the wider city state but this will likely come at huge risk to their health as have similar kinds of lockdowns on cruise ships and in long-term care facilities in other parts of the world.

The multiple layers of vulnerability that confront Canada's and other international labour migrants and even some recent immigrants affect their ability and willingness to voice their concerns, and are likely now amplified by the threat the pandemic and associated measures pose to their livelihoods and their health (Cedillo et al., 2019; Hill et al., 2019; Howse, 2019; Tucker, 2017). If problems with living conditions and gaps in health and safety (well-documented in past research and activist publications) had been addressed prior to the pandemic, the physical infrastructure for accommodations and work environments in Canada would be closer to what is needed to protect TFWs and local workers from the spread of infection. If these workers had been given access to Canadian citizenship instead of being treated as disposable workers, they would not be facing such challenges and Canadian food security would be less in jeopardy (Stasiulis, 2020). Of course, if they and their families were able to live in Canada, they would need to be paid more to keep them working on farms because their expenses would be based on Canadian prices year-round. One indication of this is the wage subsidy of \$100 the Quebec government recently committed to encourage mainly young people in Quebec to take up jobs in agriculture to help offset the reduced numbers of TFWs available to farmers (Presse Canadienne, 2020).

This working paper notes some of the challenges live-in caregivers, another group of international labour migrants, experienced when the Canadian border was initially closed. These workers might be less at risk of infection than those living and working in crowded conditions in sectors like agriculture but more at risk of being immobilized in the homes of their employers and of the kinds of labour standards and other violations that happened during previous emergencies such as the fire in Fort McMurray. A detailed Guide to Employers related to COVID-19 published online by Gilmore et al. (2020) in March 2020 clearly assumes that workers concerned about infection, or who may have been exposed or have symptoms, have a home to go to that is physically separate from the worksite. This is not an option for live-in caregivers – as it is not for the migrant workers in India who live on their worksites.

It is also not simple or even feasible for all of the thousands of internally migrant FIFO/ DIDO workers employed in mining and oil and gas in Canada and Australia who are still working to get home to their families, even when they are working in the same country where they live. They often live thousands of miles away and, in places like Canada and Australia, across multiple borders. Screening for COVID-19 symptoms before allowing access to a plane, worksite and camp can reduce risk for FIFO/DIDO workers, camp workers, and others, but not all those infected have symptoms and they may have already travelled long distances to go to work before symptoms are detected. Who will pay for travel and loss of wages in these circumstances and does provision of PPE by employers include PPE such as masks, now required for boarding flights in Canada, for use during travel? We have questions but no answers.

In Canada and in Australia, a common

response to pandemic-related mobility challenges has been to extend rotations so workers come and go less frequently and to accommodate requirements for self-isolation and to constrain the movements of mobile workers when away to keep them out of communities. In the case of seafarers, these combined strategies have resulted in limits on access to shore leave and to limits on crew changes. All of these changes have potentially serious consequences for their physical and mental health. In Australia, construction unions in the oil and gas sector have been critical of new rosters implemented by one company requiring workers to self-isolate for 2 weeks on site before working for 4 weeks with 2 weeks at home (essentially a 6/2 roster). Calling the new roster a 'divorce roster', they have argued that workers should be able to self-isolate at home instead of at work. Other oil and gas companies are applying this requirement to self-isolate en route to work only to workers coming from the eastern states with higher rates of COVID-19 (Hastie, 2020). Western Australia has a 2019 FIFO mental health code of practice developed in the wake of research showing high rates of suicide among FIFO workers - there is a real risk that suicides and fatigue-related accidents could increase in the context of these extended rosters.

Source communities in Canada and elsewhere experience what Storey and Hall (2018) have called "dependence at a distance", particularly when they have a high proportion of interprovincial workers. This term originally referenced their economic dependence but in the context of the pandemic, it has taken on new meaning as the COVID-19 fate of these often rural and remote communities with limited access to health services is determined by what happens in workplaces, camps, communities and in transportation systems elsewhere. Similarly, host communities like Fort McMurray and Fort St. John have long expressed concern about their lack of knowledge and

control over what is happening in the many operations and work camps that lie outside of their municipal boundaries but that rely on community health and other resources to operate. Lack of data and acknowledgement of these 'shadow populations' in funding allocations and services is a key issue for these communities including in the pandemic context. Indigenous communities are similarly vulnerable as both source and host communities. Transportation hub communities host the infrastructure and people who make the movement of goods and people possible but are similarly at risk of poor work organization and other practices that might lead to infections in hub labour forces and communities.

What has become abundantly clear in this review of COVID-19 media coverage is that the pandemic-related hazards of mobility are not taken into consideration in risk assessments. This is consistent with our research in On the Move which has shown that to a large extent work organization that relies on a mobile workforce transfers the hazards of mobility to the workers (Lippel et al., 2017). In the time of a pandemic the consequences of that transfer of responsibility for the workers and their families, and for public health become crystal clear. Having health care workers employed in multiple facilities in order to earn a living and relying on temp agencies to make up for staff shortfalls might save money in the short term for those facilities, but clearly the hazards associated with moving from facility to facility were not factored in to the risk assessment for the health and safety of the patients and the workers; only now has this become obvious (Mojtehedzadeh, 2020c). Some jurisdictions like British Columbia are prohibiting recourse to workers who work part-time in multiple facilities, but a true risk assessment that included the design of work organization could have anticipated and helped to prevent the unfolding tragedy in many long-term care facilities (Quinlan, 2007). Similarly, the

spread of precarious employment across many sectors that are key to pandemic-related services such as cleaning, taxi-driving and courier activities, where employer-employee relationships are muddy is making it difficult to hold employers to account for the health and safety of large pools of workers. In these arrangements the workers have no entitlement to paid sick leave, no obvious, single workplace to go to, no meaningful control over their work schedules and their ability to know what their exposure risks are and to participate in designing ways to minimize those risks to themselves and others is highly constrained.

The pandemic is ongoing as we write. Extensive and focused coverage by journalists, and published information from unions and other organizations have provided much of the data for this working paper. Despite all this coverage, the gradual emergence of knowledge about the virus and how it behaves, the roll out of pandemic-related policies at multiple scales from municipal through provincial and federal levels, and the frequent reversals and refinements in policy are confusing and hard to track. Assessments are further hampered by the lack of systematic attention to mobility patterns across diverse segments of the workforce to and between workplaces. More systematic research on COVID-19 and the mobile labour force is needed. It will not only help us better respond to this pandemic but will also help ensure that we plan more appropriately for the next one.

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