



On the Move: Labour Mobility and Community Capacity

The Opportunities and Challenges for Labour
Mobility in Rural and Remote Canada

Laura Ryser, Greg Halseth, Sean Markey, Marleen Morris

Table of Contents

	Page Number
ACKNOWLEDGEMENTS.....	3
Availability	4
Contact Information.....	4
ON THE MOVE – LABOUR MOBILITY AND COMMUNITY CAPACITY.....	5
1.0 Local Government	6
1.1 Researcher Summaries.....	6
1.2 Roundtable Discussion	8
1.2.1 Infrastructure Deficits.....	8
1.2.2 Collaboration	9
1.2.3 Financial Capacity	9
1.2.4 Information Management.....	9
1.2.5 Planning.....	10
1.2.6 Human Resources	10
1.2.7 Advocacy	10
2.0 Business and Industry.....	12
2.1 Researcher Summaries.....	12
2.2 Roundtable Discussion.....	15
2.2.1 Workplace Rotations and Protocols.....	15
2.2.2 Health and Safety.....	16
2.2.3 Skills Development	16
2.2.4 Recruitment and Retention.....	16
2.2.5 Small Business Opportunities	17
2.2.6 Small Business Infrastructure	17
2.2.7 Information Management	18
3.0 Education	19
3.1 Researcher Summaries.....	19
3.2 Roundtable Discussion.....	21
3.2.1 Workforce Readiness.....	21
3.2.2 Collaboration.....	22
3.2.3 Youth Education and Career Development.....	22
3.2.4 Education and Training as a Diversification Strategy.....	23
4.0 Health.....	24
4.1 Researcher Summaries.....	24
4.2 Roundtable Discussion.....	25

4.2.1 Health Care Issues.....	25
4.2.2 Health Care Planning.....	26
4.2.3 Worker’s Compensation.....	26
5.0 Social Services.....	27
5.1 Researcher Summaries.....	27
5.2 Roundtable Discussion.....	29
5.2.1 Renewing Programs and Mandates.....	29
5.2.2 Financial Capacity.....	30
5.2.3 Social Infrastructure.....	30
5.2.4 Training.....	30
5.2.5 Human Resources.....	30
5.2.6 Recruitment and Retention.....	30
6.0 Future Directions.....	31
6.1 Research and Information.....	31
6.2 Information Management Systems.....	32
Resources.....	33

ACKNOWLEDGEMENTS

From 2013 to 2018, our research team visited communities across Canada to conduct interviews in order to obtain a better understanding of the community impacts associated with mobile workforces used by large-scale industrial projects. As a follow-up to this research, several roundtables were conducted with local stakeholders in Fort St. John, BC to reflect on the key opportunities and challenges to mobilize knowledge emerging from the research.

These roundtables would not have been so successful without the support of Mayor Lori Ackerman who is a strong municipal voice to explore these issues with local stakeholders. Mayor Ackerman also generously hosted the OTM researchers and members of the Community Development Institute for dinner at her home.

At BC Hydro, Dave Conway generously arranged site tours at the Two Rivers Lodging camp near Site C for the OTM researchers and CDI team.

We wish to thank Barb Neis (Memorial University), Keith Storey (Memorial University), Doug Lionais (Cape Breton University), and Sara Dorow (University of Alberta) for coming together to present key issues impacting communities as a result of mobile workforces. The very detailed additional notes provided by Barb were much appreciated as we pulled this report together. We also wish to extend our appreciation to Claire Buchanan at SFU for her work to prepare background materials for the roundtables, and to Jennifer Moore and Michael Lait at the Community Development Institute for their work in organizing the knowledge mobilization roundtables in Fort St. John. Funding for this project was provided by the Social Sciences and Humanities Research Council (grant 895-2011-1019). This research is connected to a 7 year national project on employment related geographic mobility that is spearheaded by Memorial University, with over 40 researchers from 22 universities. For further information about the national project, please visit: <http://www.onthemovepartnership.ca>.

Laura Ryser, Greg Halseth, Sean Markey, and Marleen Morris - Prince George, 2018

Availability

Copies of this report have been provided to the Fort St. John Public Library, the City of Fort St. John, and the Peace River Regional District. Copies of the report have also been provided to all participants. Reports have also been posted on the website of the Canada Research Chair in Rural and Small Town Studies: <http://www.unbc.ca/greg-halseth/canada-research-chair-rural-and-small-town-studies>.

Previous reports about this project include:

- Labour Mobility in Northern BC: Final Report 2017
- A Review of Socio-Economic Characteristics in Mackenzie
- A Review of Socio-Economic Characteristics in Williams Lake
- On the Move: Community Impacts of Long Distance Labour Commuting Summary Report for Mackenzie
- On the Move: Community Impacts of Long Distance Labour Commuting Summary Report for Williams Lake
- On the Move: Mitigating Impacts – A Local Workers’ Perspective in Williams Lake
- On the Move: Mitigating Impacts – A Mobile Workers’ Perspective 2013
- On the Move: Mitigating Impacts – A Mobile Workers’ Perspective 2015

Contact Information

For further information about this topic and the project, feel free to contact Greg Halseth:

For further information, please contact:

Dr. Greg Halseth, Canada Research Chair, Rural and Small Town Studies

Co-Director, Community Development Institute

University of Northern BC

E-mail: greg.halseth@unbc.ca

Phone: 250-960-5826

Website: <http://www.unbc.ca/greg-halseth/canada-research-chair-rural-and-small-town-studies>

ON THE MOVE – LABOUR MOBILITY AND COMMUNITY CAPACITY

A key change in Canada’s resource towns has been the growth of mobile workforces. Labour mobility presents numerous opportunities and challenges for workers and communities in rural and small town settings. The On the Move Partnership is a Canadian research initiative investigating workers’ extended travel and absence from their places of permanent residence for work. In Canada, many workers are ‘on the move’. Multiple factors are fueling employment-related mobility in Canada: improvements in transportation and communications, an aging population, mismatches between work opportunities and local labour supplies, rural and remote resource development, an increase in precarious employment, economic volatility, housing costs, as well as policy changes and other developments.

The On the Move Partnership includes more than 45 researchers from 17 disciplines and 24 universities across Canada and internationally, working with more than 30 community partners to carry out research on labour mobility across many sectors in Canada (<http://www.onthemovepartnership.ca>). Research on employment-related mobility is limited, but shows that it is affecting labour recruitment, training requirements, absenteeism, turn-over, productivity and occupational health; physical and social infrastructure needs; policy and planning at municipal, provincial, and federal levels; work-life balance, family relations and community engagement; and regional economic and community development.

British Columbia’s Peace River Region experienced considerable growth and movement of mobile workers as a result of large-scale resource development projects in oil and gas, hydro, mining, and forestry. Recently, the On the Move team partnered with UNBC’s Community Development Institute and the City of Fort St. John through The Forge to connect with 46 industry, business, local government, and service sector stakeholders in a series of roundtables. A public Speaker’s Series event was also attended by 30 stakeholders from the region.



The Forge was formed to develop and implement strategies for a diversified and sustainable economy and to enhance residents’ quality of life in Fort St. John. As a part of its mandate, The Forge organized roundtables around five key areas: local government, business and industry, education, health and non-profit, and social services. Through these roundtables, stakeholders reflected on how the On the Move project’s findings fit with the realities of their work environments, how it would impact their policies and programs, and to explore new research needs related to this work. Key topics included impacts on workers, their families, and communities; challenges and strategies to connect services / supports with mobile workers and their families; gaps in training to prepare the service sector to support mobile workers and their families; housing pressures; implications for community planning and economic development strategies; implications for small business development and workplace environments; and complications of maintaining consistent health programs for mobile workers struggling with injuries, addictions, or mental health issues across different provincial jurisdictions. In this report, we highlight key issues and action items identified in each roundtable.

1.0 Local Government

Readiness is guided by policy and regulatory frameworks to provide direction and communicate expectations concerning sufficient actions and investments needed to address issues. The focus of the local government roundtable was to explore issues relevant to local governments who are experiencing an influx (host communities) or exodus (home or source communities) of mobile workers. This section begins with summaries of key findings presented by each member of the OTM team, followed by a thematic discussion of how mobile workforces are affecting local government capacity, operations, and investments.

1.1 Researcher Summaries

Sara Dorow, University of Alberta

Sara Dorow's research examined the impacts of mobile work in Fort McMurray, Alberta. Fort McMurray is located within the Regional Municipality of Wood Buffalo. Visits were made to 'open' work camps to engage with mobile workers and work camp staff.

The proximity of work camps to town shapes the scale and scope of impacts on community services and infrastructure. Industry-local government relations were shaped following local government efforts that pursued amalgamation to draw upon a wider tax base to address the region's needs in the late 1990s. This restructuring has helped to transform planning and approaches to leveraging industry relationships to make the case for additional support from senior levels of government.

In a mobile work environment, local governments must try to move away from planning that is hooked in boom and bust cycles to an approach that is more focused on a long-term horizon (albeit one that is not necessarily as long as is seemingly promised) and that plans for diversification beyond single resource dependence. Local governments are often too busy when a boom emerges, but then are trying to play "catch up" and/or adjust when a bust comes.

Local governments have struggled to get enough information from industry about current and forecasted mobile workforces to inform comprehensive planning. This information is not available through the Census. Fort McMurray initiated efforts to conduct its own annual municipal census, but these efforts are challenged by work camps across the large geographic area and by the sometimes informal living arrangements of mobile workers in the city. This has made it difficult to understand the impact of mobile workers on water usage, housing, etc. There are also extra municipal costs associated with addressing safety and the needs of vulnerable people in the community. In these mobile environments, sharing information is critical. The Regional Issues Working Group (which later became the Oil Sands Developers Group and then the Oil Sands Community Alliance) was formed to bring industry and local government together to coordinate planning and sharing of information. Despite this initiative, forecasting peak population or construction periods remains difficult.

The local government has been challenged (during boom periods) to address housing pressures as a result of the Province of Alberta's slow release of Crown land. The result is mobile workers living in illegal basement suites and garage suites throughout the city. The municipality invested in an agreement with the Province of Alberta and industry to develop Eagle Ridge, a mixed housing development that contains low-income family housing, condos, and bachelor suites for mobile workers. Industry had purchased 40% of the units for workers (Dorow 2016). The RMWB also worked with the Province to develop a large new development called Parson's Creek, but then came the downturn of late 2014, leaving a large swath of cleared land only partially developed, and many houses up for sale at a loss.

Transportation issues also remain a challenge for local government. There is only one bridge connecting Fort McMurray to the oil projects to the north, which impacts emergency / evacuation plans. Congestion and infrastructure needs are difficult for the local government to address given their limited jurisdiction over Highway 63 – a significant area that is managed by the Ministry of Transportation. Returns on local government investments in a new airport facility have been impacted by the Fort McMurray fire and the most recent economic downturn. There are also challenges managing and coordinating buses from town out to site each day (more than 600 buses per day during boom times), and providing shuttles from various camps into town. During boom times this is a matter of trying not to overwhelm local services and infrastructure for residents. But then during bust times, one frustration was the curtailing of shuttles into the city that would allow workers a reprieve from camp.

Doug Lionais, Cape Breton University

Communities in Cape Breton, Newfoundland, and PEI have functioned as source communities for mobile workers commuting to the Oil Sands. In some communities, up to 75% of the community's labour force is pursuing long distance mobile work. For source communities, the remittance economy through mobile work has helped the community to retain households and their tax base (Vodden et al. 2018).

The municipality, however, assumes responsibility for many issues that emerge in this context. First, community groups and voluntary organizations are impacted by the limited participation by mobile workers who are unable to commit to civil society. This includes challenges for fire departments in source communities that no longer have consistent volunteer supports. Second, source communities are experiencing a growth in addiction, mental health, and physical health care issues, and there are higher demands on supports in home towns where rehabilitation must take place. Family and retirement households are being transformed through mobile work. Grandparents, for example, are restructuring their retirement to look after grandchildren as parents are away for extended periods. As workers engaged in prolonged periods of mobile work, they lose their sense of community.

Sean Markey, Simon Fraser University

In British Columbia, the relationship between the distance/proximity, scale, density, and cumulative impacts of resource-based work camps on the one hand, and limited fiscal capacity of local government on the other, is complicated and ill-understood by distant policy-makers. There are important lessons, however, to be learned from the Fair Share Agreements and the Peace River Agreement. With limited fiscal capacity, there is a need to create synergies between community and industry needs in order to pursue flexible infrastructure for community development priorities. Opportunities to integrate work camp infrastructure to address these priorities remain underdeveloped. Furthermore, as local government tenders must compete against the resource sector for contractors and labour, there have been higher material and construction costs for municipal projects.

While some resource-based industries have worked with workforce housing contractors on new protocols and operating procedures to improve the quality and safety of work camp environments, local governments have underdeveloped policy tools and capacities to guide the development, operations, and decommissioning of work camps.

Place-based development is critical to the success of rural and small town places. Despite the significance of place-based development, the challenges to maintain a robust business community are complicated by labour mobility. Furthermore, issues of affordable housing, maintaining a strong civil society sector, and maintaining social infrastructure are challenged by the presence of transient and shadow populations.

Lastly, local governments have struggled with inadequate or inexperienced human resources and staff turnover among those who have left to pursue opportunities with resource development.

Keith Storey, Memorial University

Keith's research has focused on fly-in, fly-out operations in Canada and Australia. In Australia, the fly-in, fly-out phenomenon is perceived by some as the 'cancer of the bush'. While the use of FIFO workforces for construction is acceptable, most local governments do not support FIFO for operations in their area. Local governments advocate for attracting people to move to the community with no transient population. The challenge is that many workers and their families do not want to live in these places. This produces tension between the community and the company. In Queensland, coal mines have struggled to find enough qualified local workers and, as a result, have pursued a 100% FIFO strategy that was permitted by the state government. In some cases, this has meant workers moving from rural areas to staging areas commute back to these same rural areas where the employment opportunities were located. While state governments are no longer allowing new companies to adopt the 100% FIFO strategy, many local governments continue to have unrealistic expectations that workers will move to rural regions.

In Western Australia, through the Royalties for Regions and related programs, towns have invested in housing and amenities to entice people to move there. This strategy has not been as successful as hoped. The recent commodities bust prompted the out-migration of people and a rise in housing vacancies and issues for local governments managing infrastructure. Community aspirations have not dovetailed with reality. In this context, local governments have often been more interested in 'growth' than 'development'.

1.2 Roundtable Discussion

A number of findings resonated and prompted more inquiry with local government stakeholders. These topics focused on infrastructure deficits, collaboration, financial capacity, information management, planning, human resources, and advocacy.

1.2.1 Infrastructure Deficits

Exploration and construction of industry projects have increased labour mobility and exacerbated temporary housing demands when work camps are not put in place in advance of an influx of transient workforces. Roundtable stakeholders questioned whether small towns develop housing investments themselves or whether housing developments are driven by external investors. Local governments have been working to establish new partnerships to expand housing investments in host communities. In Fort McMurray, for example, the municipality entered into a partnership agreement with the Province of Alberta and industry to develop Eagle Ridge, a housing complex that provides units for low-income families and mobile workers (Dorow 2016). These partnerships, however, are not common or widespread. Local governments have also struggled to obtain land releases from Crown land to support housing investments (Province of Alberta 2006).

The critical challenge for communities is to find balance between long-term planning and being prepared for the influx of large mobile workforces. For local government stakeholders, issues such as illegal secondary suites continue to pose challenges for local governments, prompting questions about how communities can encourage people to live locally, and prompting zoning by-laws and official community plans to be updated to facilitate secondary suites.

The need for investments in transportation planning and infrastructure in advance of rapidly growing construction periods resonated with roundtable participants, with attention to intersection traffic lights, staging areas, parking, etc. For roundtable participants, airport investments are especially critical given the impact of larger planes and charters on runways. More strategic federal investments are needed to repair and meet these airport infrastructure demands (i.e. runways, check-in terminals, waiting areas, etc.) to support the mobility of workers.

1.2.2 Collaboration

Roundtable stakeholders were also interested in the collaborative structures being mobilized to better understand and address cumulative impacts from mobile workforces and large-scale industry projects. Cumulative management committees and industry leadership groups have monitored and addressed resource development impacts. In Fort McMurray, for example, the Regional Issues Working Group was formed to bring information together. From this initiative, the Oil Sands Community Alliance became a spokesperson for industry, with a focus on industry issues such as workforce development, safety within camps, and infrastructure / capital assets.

1.2.3 Financial Capacity

With many industries and work camps located outside of municipal boundaries, host municipalities do not always have the ability to obtain property tax revenues. Local government stakeholders felt important lessons could be learned from the Peace River Region where some of the municipalities who were part of the Northeast Resource Municipalities Coalition worked together to negotiate the Fair Share Agreements and the Peace River Agreement with the Province of BC in order to provide local governments with access to the industrial tax base in the surrounding areas (Northeast BC Resource Municipalities Coalition 2015).

Local governments in home or source communities have equally struggled to address financial capacity concerns. The closure of local industries has prompted significant engagement in mobile work. In some home or source communities in Atlantic Canada, up to 70% of their workforce is commuting long distances. For these local governments, the presence of the remittance economy through mobile work has been critical to retain households and the local tax base (Vodden et al. 2018).

1.2.4 Information Management

Information brings clarity to guide planning, decision-making processes, investments, and long-term working relationships across stakeholders. In preparation for large mobile workforces, communities do not have adequate and timely information about socio-economic impacts to support infrastructure investments.

The speaker's series revealed considerable interest among stakeholders in gaining access to data that could demonstrate how home and host communities are being impacted by labour mobility. However, there are considerable deficiencies with existing data. Tax filer data only provides information about the place of residence and province of work, but not the location of work within that province. Some have advocated for census data to capture secondary places of residences for mobile workers. Currently, census data does not capture the shadow population of mobile workers in communities, including those who are staying in work camps, illegal suites, shelters, private rooms, campgrounds, or other accommodations (Ryser et al. 2016). Data from the census, however, is also dated by the time it's released and cannot capture mobility between census periods. Stakeholders then suggested exploring opportunities to insert questions about mobile work in the Labour Market Survey.

Through impact assessments and project approvals, senior levels of government have the legislated authority to manage expectations and actions in resource regions (Ryser et al. 2016). Unlike environmental impact assessments, senior governments do not request or require industry to provide information about mobile workforces that can guide planning and investments in infrastructure and programs in rapidly growing communities. A centralized registry for work camps is needed at the provincial level in order to allow regions to acquire good quality information to inform broader planning and policy decisions for programs and services. For stakeholders, the importance of such a registry is magnified by recent wildfire events in British Columbia and Alberta where coordination between industry, work camps, municipalities, and provincial supports is essential. Another option may entail tracking work camps through provincial assessment agencies. The challenge is that assessment agencies may still fail to capture work camps that move around quickly in their data management processes.

1.2.5 Planning

Through the roundtables, there were discussions about the struggles confronting local governments to manage aspirations for population growth with realistic investments in amenities that could improve the local quality of life for people who are committed to living in rural regions. The announcement of large-scale industry projects can drive local governments to want ‘more development’ rather than ‘quality development’. There can be aspirations to grow to become larger communities. Bust cycles, however, have prompted the out-migration of people and a rise in housing vacancies, leaving local governments challenged to manage infrastructure investments. In this context, community aspirations have not dovetailed with the reality these places face. Local governments need to think about the nature of their community assets and strategically invest in establishing a livable community.

Another key issue roundtable participants have fought against stems from the negative perceptions about the limited availability of services and amenities. With many mobile workers confined to camps, these perceptions are often not factually based. This has prompted local governments to pursue investments in amenities, sports, arts, and services, as well as public awareness campaigns to change these perceptions. The local government in Fort McMurray, for example, has been working to change the vision from ‘we are oil’ to ‘oil is where we get our revenue from, but it’s not who we are’. Work camps have also hired recreational coordinators to ensure mobile workers are aware of all the facilities and amenities in nearby communities.

1.2.6 Human Resources

The influx of large mobile workforces can lead to several pressures on local government operations. There may be a lack of personnel for the inspection and enforcement of regulations with many mobile workforce camps established and dismantled before local and senior governments become aware of their development. Alcohol and drug addiction issues also require additional bylaw and police officer resources.

1.2.7 Advocacy

Local government and other roundtable stakeholders were interested to discuss the next steps following these roundtables. As part of its effort to mobilize knowledge, the OTM team communicated information back to the stakeholders who must deal with these issues on a daily basis in order to provide information that will be useful as stakeholders engage in negotiations with companies and senior levels of government for additional supports and policy changes. These efforts do not necessarily focus on whether or not mobile work is good or bad, but rather on how it unfolds and impacts people in

varying ways. In essence, the goal of the OTM team is to better understand the complexity of mobile work and raise the profile or visibility of issues associated with mobile work. The OTM team also prepares policy papers; however, recommendations are often better received when they are advocated by communities experiencing these pressures.

2.0 Business and Industry

Mobile work has shaped industry workplaces and small business operations in several ways. Workplace rotations, protocols and procedures, workplace culture, and work camp operations have direct implications for the health and safety of workers and their families, and impact the effectiveness of recruitment and retention strategies. For small businesses, the potential to maximize benefits from an influx of mobile workforces has not been fully realized. The impact of mobile workforces on business development in both host and home communities and labour markets has also been poorly understood. This section begins with summaries of key findings presented by each member of the OTM team, followed by a thematic discussion of how mobile workforces are affecting the capacity, operations, and investments of industry worksites and small businesses.

2.1 Researcher Summaries

Sara Dorow, University of Alberta

As a part of its community and economic development, Fort McMurray has been working to rebrand itself as a community, not just a place serving the oil industry. This includes focusing on small business and leisure activity that may or may not be related to oil.

The influx of large mobile workforces has presented many small business opportunities. Rental management companies are emerging, especially as workers are using their housing bonus to purchase second homes that can provide rental income. Towns in the region have diversified and are serving different ethnic communities. Taxi companies have been earning good incomes through trips between work camps and Fort McMurray. Self-employment agencies and Indigenous companies provide work camp services to industry (i.e. cleaning, administration). Business for hotel and tourism sectors has increased.

The local business sector, however, faces ongoing challenges. To start, the hotel sector has been challenged by labour market competition from work camps, who pay more for some of the same services and jobs. Second, upstream and downstream supply chain opportunities to diversify the local business sector remain limited. This has prompted efforts to build small business infrastructure and pursue synergies between small businesses and industry. The Province of Alberta, however, has been slow to release Crown land that may support the development of more business opportunities. Economic downturns have also prompted pressure for local government to retain a low mill rate for industry due to fears about potential impacts on small business viability. Small businesses also experience labour shortages during boom times. Stores that normally hired women, youth, etc. also pursued immigrant labour and temporary foreign workers. During the downturn, these workers were laid off – prompting additional pressures for community service agencies. Lastly, Nichols Applied Management examined spending patterns of mobile workers in Fort McMurray. Despite some of the benefits that mobile workers provide for local businesses, however, it does not compensate for the impact of mobile workers on other aspects of physical and social infrastructure.

Doug Lionais, Cape Breton University

In Cape Breton, mobile work has replaced traditional industries. Prior to downturn, mobile workers engaged in work at the Oil Sands was equivalent to employment at the coal mines in the 1980s in Cape Breton. Remittance income from mobile work is an important source for the economy through

contributions to the local tax base, investments in home renovations, and purchases of items such as ATVs, vacations, etc.

A significant challenge for small businesses, however, is that the local labour market is competing against mobile work opportunities. This has produced a shortage of local trades workers, taxi drivers, etc. as people pursue higher wages and benefit packages offered elsewhere. As a result, small local businesses have struggled to retain employees. Small businesses have also had to compete against mobile workers who pursue jobs in the informal economy in their home communities while they are off shift rotation. Some small businesses are accepting lower revenues in order to remain competitive. There is a need, however, for small businesses to understand these labour market dynamics and how small businesses may be exposed to the boom and bust cycles of mobile work.

Keith Storey, Memorial University

Environmental impact assessments for large-scale projects emerged in the 1970s. As a part of these processes, social and economic issues related to major resource projects (i.e. Voisey Bay, Muskrat Falls, Hibernia, etc.) have been examined, but those responsible often continue to be unsuccessful at predicting outcomes for projects, particularly during construction phase activities where the influx of mobile workforces is highest. This is frequently the result of underestimating labour force demands and a lack of contingency planning. For the Hibernia Project, the initial prediction forecasted an influx of 3,500 workers. In fact the project brought nearly 6,000 people on site. Fortunately in this case accommodation adjustments were able to be made without negatively affecting nearby communities.

Operations activities, however, may vary in their impacts on communities. For example, the impacts from mobile workforces will be small for hydro- or pipeline- related operations, but maybe significant for mining projects.

The impacts of mobile workforces will also be shaped by the location of work camps. Isolated work camps and work sites will produce minor impacts for local areas. The impacts will be more significant if there are many work camps in closer proximity to communities. For example, Onslow, Western Australia is the site of a terminal for LNG. With a community population of just 150, the local disruption was small. By comparison, an LNG terminal being constructed in Darwin in the Northern Territory with a construction workforce of approximately 8,000 and with the placement of the work camp in the town has generated significant impacts for the community.

Cumulative impacts are also poorly understood. Managing one project is different from anticipating the cumulative impacts from multiple projects (i.e. in Fort McMurray and Fort St. John). In the Fort McMurray region there could be up to 40 projects affecting an area at any one time without any one agency having an overall understanding of the magnitude or effects of these multiple projects. In this complex environment, stakeholders need to move away from predicting numbers of mobile workforces to developing better strategies to manage the impacts of mobile workforces. For example, better data management and sharing is needed to monitor the processes associated with projects using mobile workforces. There is also a need for the provincial government to play a larger role in strategic regional assessments.

There are important lessons for industry management to learn from the Scottish offshore experience. In this case, an isolated / insulated approach was adopted for construction workers on site. They were not allowed off site until they were travelling home. There were no living out allowances. All accommodations and other facilities were on site. These lessons were applied to accommodation arrangements for the Hibernia project.

Sean Markey, Simon Fraser University

The BC team's work focused on two dynamics: 1) key work environment issues that are impacted by mobility and 2) broader small business issues that are impacted by the influx of mobile workforces and contractors.

To start, labour mobility has shaped workplace safety and operations through ten topic areas. First, mobility is not discussed during hiring procedures. During this process, experience with mobility and work camp lifestyles is rarely assessed. Second, training is largely focused on job details and equipment. The result is that commuting and camp life is not always covered in school programs, job fairs, training, and orientation. Prolonged engagement with different shift rotation structures influenced how mobile workers felt about shift rotations and recovery time, prompting calls for shorter rotations.

Labour mobility has also influenced how mobile workers view operations in their workplace. On a positive note, it has allowed workers to obtain higher wages and has also exposed people to different beliefs, cultures, work ethics, and personality types. In terms of worker development, mobile workers have also acquired new skills and training that was not always attainable in their home community, including cultural sensitivity training, as well as the development of social and conflict management skills. Rotational work has also required mobile workers to adopt better time management skills. Unfortunately, it has also produced varied or inconsistent monitoring and evaluation practices for mobile workers. The precariousness of mobile work also impacts communication issues in work environments through fatigue and through varied sharing of information during cross-over shift meetings and orientations.

Cumulative worker fatigue from commuting and work can erode workplace health and safety through varied safety consciousness and attention towards the end of rotations as workers anticipate returning home. Commuting safety protocols are also underdeveloped and implemented in the workplace.

Experience in different work camp facilities has not only raised expectations for living environments, but is affecting the competitiveness of recruitment and retention strategies for projects not only across different projects, but also internationally. While work camp facilities have improved, dining facilities, services, and recreational spaces need to be accessible for both day shift and night shift workers.

Through mobile work, people have been able to obtain a better work-life balance through extended time off from rotations, time off for family events and emergencies, and paid bereavement leave. In these distant work environments, investments in communications infrastructure have been key to reducing isolation from families.

In terms of broader issues for small businesses, the influx of large workforces before work camps are in place has exacerbated housing pressures and recruitment and retention of staff. There is a need to ensure housing supports are in place during the early phases of construction to mitigate pressures for vulnerable / low-income employees and to retain professionals and staff across small businesses. The affordability of space for small business and their workers is not something that is being captured in assessment processes or socio-economic analyses.

Opportunities to connect mobile workforces with local businesses are underdeveloped. Mobile workers are looking for product diversity which is not always available in camp commissaries. This provides an advantage for local businesses. More outreach is also needed to connect mobile workers with small business opportunities provided through tourism, recreation, and events.

2.2 Roundtable Discussion

Following the presentations of key findings from the OTM team, the discussion amongst industry and business stakeholders focused on issues concerning workforce rotations and protocols, health and safety, skills development, recruitment and retention, small business opportunities, small business infrastructure, and information management.

2.2.1 Workplace Rotations and Protocols

Mobile workforces have transformed workplace environments, requiring more attention to the design of shift rotation schedules, training, and discrimination in the workplace.

Workforce Rotations

To start, roundtable stakeholders had questions about factors that determine the goal of shift rotations, whether they are driven by worker safety, family health, or changing economic conditions. Shift rotation lengths can vary significantly from 4 days on, 4 days off to as long as 70 days on and 14 days off. Within this range, common rotations include 2:1 ratio rosters; although, several other configurations have been used (see Ryser *et al.* 2015). Some felt that an individual's engagement in certain rotation schedules depends on family structures and the proximity and availability of family support networks. Companies, however, are reluctant to change shift rotations because of the complexity of operating projects in remote locations and the challenges associated with transportation, the delivery of products, etc.

Second, there was recognition that camp staff are often on different rotation schedules compared to other industry workers. These rotations tend to be longer, often on rotations with 21 days on and 7 days off. Camp staff often create a supportive network amongst their own rotation.

For roundtable stakeholders, these rotations can be difficult for Indigenous workers who experience feelings of isolation and do not have the luxury of getting away from camp life. In some roundtables, stakeholders talked about First Nations communities that are not ready to engage in such developments and mobile lifestyles until their members heal from decades of colonial policies and residential school impacts.

Training and Hiring

There are challenges recruiting workers who are able to adapt their family lives to an extended work camp rotational schedule. Mobile work is rarely discussed during hiring procedures, with few conversations to assess a worker's experience with mobile work and work camp lifestyles. Instead, hiring procedures, orientation, and training remain focused on job details and use of equipment. Education and training to prepare mobile workers to engage in these lifestyles, however, is needed to better equip people to advocate for supports needed in their daily lives.

Discrimination

In the roundtables, stakeholders described circumstances where women have sometimes been discouraged or excluded from mobile work in work camps and industrial sites because of their potential reproductive role (see also Dorow and Mandizadza 2018). Privacy laws prevent communities from identifying who is deploying negative hiring policies against women, making it difficult for communities to address this human rights issue.

2.2.2 Health and Safety

Prolonged periods of mobile work have led to many health and safety issues, including workplace anxieties, cumulative fatigue, and underdeveloped commuting safety protocols (Ryser et al. 2018). These challenges have been exacerbated by the reduction or elimination, in some cases, of travel supports. After the commodity prices collapsed, many companies chose to no longer pay for worker transportation costs. With flights no longer covered by some companies, discussions in the roundtable indicated that some mobile workers are pursuing overtime work throughout the rotation before flying to staging areas and then driving to home communities. Overtime work has also been pursued for many other reasons, making it a long-term feature of mobile work environments. Regardless, there are significant risks associated with long shift and work rotations that are followed by long commutes through a combination of transportation methods as people return home. The lack of regulation for commuting activities by mobile workers, however, has important implications for public safety. Regulations for commercial truck drivers could be examined for applications across other sectors engaging mobile workers.

2.2.3 Skills Development

Roundtable participants discussed the value of mobile work to enable people to learn new skills that would support advancement opportunities not available in stagnant or declining industries in home communities. These skills will not only be critical for those who continue to engage in mobile work, but will also provide workers with an edge in transferrable skills to regain employment and advancement for emerging opportunities that may once again evolve in home communities. For stakeholders, the continuance of gender and cultural sensitivity training is essential to foster a more collaborative and understanding work environment.

2.2.4 Recruitment and Retention

Workforce recruitment and retention is increasingly shaped by competition locally, regionally, nationally, and globally. Life cycle and lifestyle choices, and the presence of an aging workforce are accentuating these pressures. As industry projects move from construction into operations, industry roundtable stakeholders are strengthening recruitment and retention approaches by offering mortgage subsidies of up to \$50,000, and supporting initiatives and websites offering information for those considering relocation. This has been particularly valuable to recruit people starting their careers or for those approaching retirement. Mid-career workers have been more challenging to recruit for relocation due to their preferences to live close to aging parents or to be closer to more specialized medical services.

Through mobile work, some stakeholders felt there has been a loss of opportunities to strengthen social bonds of support outside of the workplace. Where workers are strongly rooted and work in their home communities, labour has an opportunity to develop a sense of community. These social bonds formed within rotation shift teams can be mobilized during traumatic events and disasters. As workers retire, they are more likely to retain work friendships and networks of support. Building 'shift communities' can become an important tool for recruitment and retention – a tool that can then be embedded in community to generate economic benefits.

Several human resource pressures have impacted the development and sustainability of small businesses. Small businesses in both host and home communities are experiencing labour shortages and have difficulty competing with industry wages. There are also challenges with finding and hiring good workers, and high rates of labour turnover. Furthermore, labour pressures can fluctuate across boom

and bust cycles where small businesses may replace youth, immigrants, or temporary foreign workers with people laid off from industry.

2.2.5 Small Business Opportunities

In stakeholder discussions, economic development opportunities are being shaped by four issues in the small business sector: supply chains, community engagement, expectations, and competition.

Supply Chain

For stakeholders, upstream and downstream opportunities to diversify synergies between small businesses and industry remain limited. The capacity of small businesses has been challenged by buyouts from larger urban and multi-national companies that are not necessarily engaged with community groups or fundraisers. Local governments, however, need to be proactive to reach out to contractors and ensure opportunities are also rooted locally.

Community Engagement

Roundtable stakeholders expressed concerns that companies have not always engaged to address the concerns of rural property owners (i.e. speeding, garbage, noise, etc.).

There is also a concern that mobile workers are not committed to the community. This does not always hold true. Roundtable stakeholders talked about mobile workers who come into town to play folk music. During the closure, reclamation, or decommissioning phase of some projects, mobile workers have been used to build legacy projects in communities (i.e. trail systems, etc.).

Managing Expectations

There can be a mismatch between industry and community expectations to connect workers staying in camp with the community. Work camp operations are more tightly confined with many services and amenities offered on site in an effort to keep workers in camp until they return home after their shift rotation is completed. Small businesses expected a more porous environment to integrate mobile workers into the community. Research has found that mobile worker spending is not always sufficient to make up for the impacts of mobile workers on physical and social infrastructure (Nichols Applied Management 2003, 2018). Local government can foster dialogues between industry, work camp, and business organizations to manage these expectations.

Competition

In source communities, the remittance income from mobile workers has supported home renovation businesses, recreational vehicle outlets, recreation, and other businesses. Small businesses in source communities, however, must compete with mobile workers who may take work or jobs at home when they are off rotation, and thus undercut local trades, etc.

2.2.6 Small Business Infrastructure

The ability for small businesses to maximize the opportunities associated with mobile workforces and large-scale resource development has been affected by the capacity of infrastructure in place. With the slow release of Crown land in the Fort McMurray region, small businesses have also struggled to obtain

land to develop businesses. Despite the significant revenues obtained from provincial jurisdictions from large-scale resource developments, the release of Crown land has been too late to be effective in optimally positioning the small business community to pursue opportunities.

2.2.7 Information Management

Small businesses struggle to understand the scale and cumulative impact of mobile workforces across many industrial operations. Provincial governments need to play a leadership role in regional strategic investments by supporting better data to support an ongoing monitoring process. One option is to work with provincial ministries that track data on training and the ability of graduates to obtain employment in their field of training. The key is whether location factors into these data collection methods. Opportunities should also be explored with community colleges that track employment data of former students and may function as a source of information about mobile work.

3.0 Education

Education and training shapes the extent to which mobile workers and residents are able to realize employment and economic benefits from large-scale industrial activity. It also shapes the capacity of community stakeholders to address pressures being experienced in both host and source communities. This section begins with research summaries presented by each member of the OTM team, followed by a thematic discussion of how mobile workforces are affecting the readiness, capacity, and training needs of labour and community stakeholders.

3.1 Researcher Summaries

Sara Dorow, University of Alberta

The education of mobile workers can be disrupted. The nature of shift rotations can make it difficult for mobile workers to complete their education and training while working. Cumulative fatigue can make it difficult to study following a shift. Attention is needed to ensure workers have ongoing access to safety training in these fluctuating work environments. The Fort McMurray Regional Library tried to operate a mobile library to work camps with limited success. There are also educational disruptions for temporary foreign workers, including live-in caregivers, who have college degrees but are underemployed. Due to their long hours, live-in caregivers struggle to maintain and upgrade their skill levels. This prompted one former live-in caregiver to deliver a series of professional development workshops for temporary foreign workers to learn new skills in the Canadian context and to be ready to apply for better positions.

Educational institutions must confront capacity challenges in their operations. For example, educational institutions have faced labour shortages and recruitment and retention challenges as trades teachers as well as teachers in local K-12 schools realized they could earn more money in the oil and gas sector. With limited land available, space has been too expensive to expand the K-12 system to accommodate an increasingly diverse student population.

With increasingly diverse populations, the need for ESL, and cultural and gender sensitivity training has increased. Population diversity has been further demonstrated through a new Muslim school that is operating in the public school district in Fort McMurray.

Youth imagine living in Fort McMurray for a short period of time. This prompted a project where students were asked to reflect on the location of Fort McMurray, to take photos, and ponder what the community means for them and their future.

As Fort McMurray works to rebrand itself beyond a place that serves the oil and gas sector, the college has been an important space to improve the sense of community by inviting new people into the space and connecting them with supports. More efforts have also been initiated to foster greater cooperation and liaison between schools and non-profit social service agencies. Lastly, efforts to foster lifelong learning and quality of life have been undermined by the elimination of cultural and music programs.

Doug Lionais, Cape Breton University

In Atlantic Canada, research has shown that labour mobility is impacting the education of youth and community development strategies. First, teachers are noticing the impacts of mobile work on children during transition periods as parents leave and return home. As children anticipate a parent leaving, they experience anxiety. While one parent is away, the household becomes a well-oiled machine with regular

routines that become disrupted once the parent returns home. Life for children in households engaged in mobile work can be chaotic. This has had an impact on children's behaviors in the school system.

Second, there are fewer volunteers to coach and support youth activities taking place at schools as a result of the prolonged absence of mobile workers. After noticing behavior problems unfolding in after school programs due to the absence of male role models, there are now purposeful efforts to provide those models in these programs.

As youth enter the workforce, there is a new generation of high school graduates in source communities that imagine mobile work as the only employment option.

Trades' training for mobile workers has become an industry. The only way that training for trades such as welding can be used is through mobile work.

Sean Markey, Simon Fraser University

Even though mobile work is affecting their finances, physical and mental health, family and friend relationships, and career development, mobile work is rarely part of worker education and training. Instead, training has focused on on-site performance. Training should equip people with the knowledge to understand the context of mobile work and to connect the issues associated with mobility and home life that might otherwise be hidden. As workers struggle to cope with the stresses of commuting and extended shift rotations, training is needed at all levels to understand the warning signs of fatigue, substance abuse, and mental health stress in the workplace. Technology training is also needed to help workers manage new human resource and finance processes and to manage communication with family and friends.

Cultural sensitivity training, however, is changing Aboriginal people's participation in the workforce and how workers view other cultures and related supports. Cultural sensitivity training is not widespread and is an important training gap that must continue to be addressed.

Despite these education and training gaps, four key issues are impeding the ability of educational institutions to address these needs. First, there are challenges to direct training towards mobile workers that have very busy and varied rotation schedules. Second, there are challenges to change the curriculum that is often set in other places. Collaboration on education and training is critical, but often controlled by the Province or larger, regionalized institutions. With limited jurisdiction and control over education resources to continuously support and renew industry's workforce, recruitment and retention strategies are undermined as people must leave to pursue education and training. Lastly, there is a need to invest in training for service professionals that support mobile workers and their families (i.e. mental health, teachers, childcare).

Even with an adequate investment of financial resources in education and training, there is a danger that problems will be personalized for mobile workers. There can be a perception that if people are provided with training, the further responsibility for issues is absolved. This is not necessarily the case. Education and training are not magic bullet solutions for addressing larger systemic issues.

Keith Storey, Memorial University

There is an important difference between training and education. People have left education and training programs to obtain work. Once an economic downturn emerges, mobile workers may return to school or re-enter training programs. Even though workers adopt different strategies according to different opportunities, educational institutions do not adapt to different economic cycles. This has prompted important questions about the role that the community can play in restructuring and education and training strategies. In Australia, some source communities have decided to pursue workforce training tailored specifically for mobile work as a development opportunity to diversify the

local economy. A proactive approach is taken to obtain information from companies about the type of workers and training that are needed in order to strategically design those programs. It was very important for industry that the workforce was educated, not just trained, to understand the full context of mobile work in terms of the impact on families and communities. This has shown that industry can get involved and has a responsibility for people, communities, and the workplace.

3.2 Roundtable Discussion

Following initial presentations from the OTM team, education stakeholders focused their discussion on workforce readiness, collaboration, youth education and career development, and using education as an economic diversification strategy.

3.2.1 Workforce Readiness

Workforce readiness has been a key barrier to growth and realizing opportunities presented from large-scale projects. For education sector stakeholders, the future workforce not only needs to be educated about potential jobs, but also about financial literacy, extended work rotations, and camp living lifestyles. Despite generational knowledge about boom and bust cycles that have long led to pursuits of mobile work, roundtable stakeholders have witnessed varying financial literacy across mobile workers. Their financial literacy capacity was deemed to be driven by how they were parented and behaviours learned through workplace cultures.

The second key point raised was that education pathways for mobile workers have been disrupted by the challenges associated with shift rotations, and boom and bust cycles. At the end of long shifts, workers often feel too fatigued to engage in, and sustain, studies for prolonged periods of time. Some mobile workers have taken a rotation off to complete 6 week training courses that could then be applied to mobile work. Others have continued to study during rotations in order to obtain education and training in other fields that would allow them to pursue immobile work. For roundtable stakeholders, industry has generally encouraged workers to pursue additional training during downturns, with some providing funding through scholarships to provide incentives for workers to expand their education and training.

Educational institutions at the roundtable generally experienced an increase in enrolment during economic downturns. This was not always consistent as stakeholders noted some mobile workers chose to return to their home communities to pursue other construction work in lieu of working on other industry apprenticeships. During economic downturns, mobile workers face challenges finding employers to sponsor their education. These workers cannot afford to return to school. As a result, some educational institutions did not have enrolment increases.

Cultural sensitivity training is changing how workers view other cultures and co-workers. Aboriginal people's participation with industry has been strengthened through cultural sensitivity training and culturally appropriate workplace adjustments. Cultural sensitivity training, however, needs to be more widely implemented in workplace and work camp environments.

For roundtable stakeholders, gender differences in mobility throughout the life cycle also need to be reflected in education and training programs. Women are often not equipped to pursue mobile work opportunities. They may have completed basic training, but women may not have the extended training needed to be competitive in the mobile workforce. In some cases, women with limited education and employment options have married mobile workers. In Newfoundland and Labrador, a provincial steering committee was formed to engage more women in mining and mobile work opportunities. The Women in Resource Development Corporation (<http://wrdc.ca>) has been one

initiative established to engage more women in careers for trades and technology. To successfully engage women in these opportunities, educational programs need to adopt a more family-friendly schedule.

In both host and home communities, social service agencies are not trained to deal with the unique aspects of mobile workforces. There is a need to invest in training opportunities for support services in rural and remote regions (i.e. daycare, teachers, mental health, customer service, etc.). Roundtable discussions suggested that wives and spouses are pursuing educational programs for health and community service professionals given the time they had available to do so. These were largely women who had did not have children.

Roundtable stakeholders were interested in the childcare training and supports offered to families affected by mobile work. There was interest in intergenerational or co-parenting programs. Family networks are not always available in host and home communities. In this context, there have been labour force disruptions as temporary foreign workers employed as live-in caregivers struggle to meet Canadian standards, prompting a series of professional development workshops to learn new skills in the Canadian context and to be ready to apply for stronger positions (see also Dorow 2016).

Furthermore, educational institutions have also worked to deliver business courses to improve the capacity of supervisors and entrepreneurs in order to be ready for the influx of mobile workforces. For roundtable participants, this has included attention to business etiquette, cultural sensitivity training, business management, etc. With limited enrolment, these classes are being cancelled. The limited capacity to manage small business operations has prompted the sale or closure of some businesses prior to the economic downturn.

3.2.2 Collaboration

Colleges have struggled to obtain industry partnerships for trades training or fill course spots as companies focus on internal training. This has affected the viability of safety courses at community colleges that have declining enrolments. In some cases, roundtable stakeholders noted that colleges were not able to offer what industries needed. Community efforts to reach out to industry partners, however, have been challenged by the limited availability of industry representatives to engage in these conversations. While community stakeholders must continue to work with industry to obtain a list of labour needs to complete a labour assessment, industry needs to ensure adequate staff are in place to engage in early and routine communication with education leaders in order to monitor training needs and inform strategic investments. Even though collaboration between industry, educational institutions, community stakeholders, and provincial ministries is critical, the fiscal resources and curriculum is often controlled by the Province or larger institutions.

3.2.3 Youth Education and Career Development

There are efforts to grow future workforces by working with education stakeholders on strategic high school and post-secondary programs that provide youth with the exposure and experience in resource-based industries. Stakeholders, for example, talked about Northern Opportunities, a partnership between Fort Nelson, the school districts of Peace River North and Peace River South, the Northern Lights College, First Nations, and industry (<http://northernopportunities.bc.ca>). High school students have an opportunity to obtain dual-credit credits with college trades programs and have been extended to other service sectors such as early childhood education. Unfortunately, these programs are not commonly available across different school systems. Future funding for these types of programs is also uncertain. These unique types of initiatives are increasingly feel pressure to pursue alternative sources of funding (i.e. community trusts, industry funding) to support their ongoing operations.

Educational institutions continue to address challenges reaching Indigenous students to engage in programs. These issues are exacerbated by poor high school completion rates. Educational institutions need funding for recruiters and outreach programs in order to connect vulnerable students with appropriate supports that can place them on a vocational path before they risk not completing high school.

With an increasingly ethnically diverse mobile and local workforce, colleges and public schools are seeing more diversity, prompting the expansion of ESL programs. These programs have also been important to integrate immigrant spouses into the workforce and community. Roundtable stakeholders suggested, however, that the success and effectiveness of these programs has been challenged by their part-time availability.

3.2.4 Education and Training as a Diversification Strategy

Following industry closures, trades training has become its own industry in some source communities as the skills acquired by students are only useable through mobile work. Some communities have purposefully decided to become source communities and pursue such educational opportunities as a pathway for development and diversification by connecting with industries and determining workforce and training needs. One topic for further investigation concerns efforts by source communities to mirror school schedules with industry rotations.

4.0 Health

The physical and mental health of mobile workers and their families is shaped not only by their work environments and rotation schedules, but also by their access to health care supports. And while health care pressures can become more prevalent with an influx of mobile workforces in host communities, there are also complications for planning consistent treatment across provincial jurisdictions as people commute from home to host communities. Following brief research summaries for each member of the OTM team, the discussion in this section will explore how mobile workforces are affecting the health and needs of labour, and the capacity of health care providers.

4.1 Researcher Summaries

Sara Dorow, University of Alberta

Workforce turnover and prolonged engagement in mobile work affects worker health. Fears of being laid off are generating mental health stresses that are unfolding through anxiety, depression, and thoughts of suicide. Mental health services are often not available, or seem inaccessible, for mobile workers, prompting people to absorb their issues until they are back in their home community. The rate of suicide is high, but isn't addressed adequately with preventative outreach programs with mobile workers. These mental health pressures are exacerbated by the varied amenities that exist across camps. Camp staff are working to play a larger role to develop a sense of community in camp.

Sexually transmitted diseases and addictions are also affecting mobile workers as they commute between home and host communities. As mobile workers cope with physical and mental health issues, emergency room visits and local service providers are producing challenges for local residents to obtain access to doctors.

Industries in remote resource-based regions, however, are not only relying on mobile workers, but also FIFO doctors, nurses, and counsellors as well. Larger 'closed' camps have their own service and medical staff, but 'open' camps do not have this same compliment of staff. Mobile workers from open camps are commuting to Fort McMurray for medical and emergency services, thereby affecting work camp-community relations. Fort McMurray attempted to pursue a hotel tax on open camps to help pay for services. As part of these negotiations, they argued that open camps would have to use the airport. The growth in transience is producing uncertainty over the recruitment and retention of staff.

Doug Lionais, Cape Breton University

In Atlantic Canada, health care professionals are challenged to schedule consistent and continual care for mobile workers who have injuries, addiction or mental health issues, or require family counselling because of shift rotations. This means health care issues only receive attention when they return home. There are also challenges negotiating health care treatment plans across provincial jurisdictions in attempts to provide routine and consistent treatment. For example, mobile workers receiving methadone treatment in one province may not have access to this treatment if they are working in another province. Health care workers are not always trained to negotiate treatment plans across complex, multi-jurisdictional regulatory environments.

Sean Markey, Simon Fraser University

Policy makers do not always understand the challenges of delivering health care supports in rural and remote settings which are compounded by the varied availability of services and challenges associated with servicing mobile workers. For example, the varied rotations for local and mobile workers can make it difficult to provide outreach supports and to schedule access to health care professionals. Industry attention to cultural sensitivity and gender sensitivity training are providing points of access to connect mobile workers to health care and community supports. There are questions, however, about how to maintain continuity of care with mobile work and shift rotations. There is also a lack of information about the shadow population of mobile workers to inform investments and planning of health care infrastructure and services. There are also challenges to acquire space to deliver outreach supports for mobile workers in camps. More attention needs to be invested in soft, flexible infrastructure as it supports community and economic development foundations in resource-based regions. Attention to food and nutrition has positively influenced recruitment and retention of mobile workers.

Keith Storey, Memorial University

Health care issues for mobile workers are grounded in how they cope with, and experience, prolonged periods of mobile work. In the offshore oil and gas industry, mobile workers may fear completing survival training exercises and flying in helicopters to the offshore sites. People also work in extreme environments. Soviet researchers, for example, have shown that as mobile workers adapt to working in cold environments, for example, they may return home to warmer environments with health problems. In contrast, some remote work sites are so hot, workers can only work for a few hours. The physical implications of working in extreme conditions are significant. Furthermore, people have challenges sleeping in work camps. As workers return home, they may not have enough recovery time and struggle to cope with the stresses associated with a mobile lifestyle. Alcohol and drug consumption become symptoms of these struggles.

4.2 Roundtable Discussion

In light of the key findings presented by the OTM team, the discussion amongst health sector stakeholders focused on affirming health care issues being observed with alcohol and addictions, mental health, and family health. Issues associated with health care planning with work camps and workers' compensation claims were also raised.

4.2.1 Health Care Issues

In terms of health care, stakeholders further discussed issues related to alcohol and addictions, mental health, and family health.

Alcohol and Addictions

Roundtable stakeholders affirmed the pressures confronting health care workers to respond to alcohol, addictions, and sexually transmitted diseases associated with mobile workforces. Dry camps were intended to improve work camp and workplace safety, but are prompting concerns about mobile workers commuting to town to drink; thereby leading to additional concerns about drunk driving, distracted driving, speeding, and highway accidents. These in turn invoke further pressures on limited health and emergency personnel resources. Proponents of wet camps suggest that wet camp policies not only keep workers on site, but also encourage industry to assume ownership of the higher risks and

liabilities associated with these issues. Despite zero tolerance policies adopted by industries and work camps, drug use and opioid issues are also exacerbated by a lack of health care resources and capacity to connect with mobile workers. Mobile workers who fail drug tests may end up staying in shelters for extended periods of time as they struggle with their addiction. In response to excessive alcohol consumption and drug use that may unfold, stakeholders felt that varying arrangements with camp security and local police have been used to search and screen workers before entering work camps and workplace sites. Initial screening is conducted in some host communities.

Mental Health

Roundtable stakeholders in business, industry, and health care feel that addressing mental health is now a key issue facing the workplace and work camps. Isolation, loneliness, depression, anxiety, and suicides have been reported across many jurisdictions.

In some cases, mobile workers will opt out of connecting with family in their home communities. Regular connection to family back home can increase feelings of distance, isolation, and heartache. On the other hand, mobile workers often lean heavily on their family outside of camps to deal with the emotional challenges of isolation and distance.

Family Health

There continue to be challenges for health care stakeholders to connect families with adequate health care supports to cope with the stresses of mobile work. For example, stakeholders find it difficult to connect with spouses who can experience loneliness, anxiety, and depression as a result of prolonged absences of their partners and the assumption of additional household responsibilities, with some spouses struggling with opioid and alcohol addictions during these periods. Furthermore, children's mental and emotional health, including academic achievement may be impacted when a parent is part of a mobile workforce and spends extended periods of time away from home. Investment in communications infrastructure is key to reduce isolation for workers and to connect them with on-line supports.

4.2.2 Health Care Planning

Despite zero tolerance policies on drug and alcohol abuse, roundtable stakeholders described resistance to ensuring work camps and industry sites have more comprehensive health plans and strategies in place to connect workers with health care professionals on site. Some stakeholders reported overdoses in camps. There are difficulties obtaining assurances that workers will not be impacted on the job site for reaching out to obtain support. Furthermore, there continue to be challenges managing communal diseases due to a lack of understanding and enforcement of hygiene practices (i.e. hand washing).

Health impact assessments of industry projects and their mobile workforces are needed to address the breadth of health care issues. Health ministries currently focus on providing health permits for water and sewage facilities in camp. These tasks may be assigned to small, under staffed teams that have limited capacity to keep up with the demand for approving and monitoring such permits. Greater attention is needed to focus on prevention rather than acute needs.

4.2.3 Worker's Compensation

Worker compensation claims may not be pursued or suppressed due to fears of job loss or difficulty obtaining future employment.

5.0 Social Services

Social service agencies are also experiencing growing numbers of clients from families during boom and bust periods. Long distance commuting, extended rotation schedules, and repeated moves have increased social stresses, such as depression, suicide, and strained household / family relationships. Mobile work has also increased demands and long waitlists for community services. This section begins with brief summaries of the OTM team's findings about how mobile work is shaping community social services before a more detailed description of six key topic areas that are affecting the capacity of non-profits and other community social service providers as they address pressures facing mobile workers, their families, and others in host and home communities.

5.1 Researcher Summaries

Sara Dorow, University of Alberta

In Alberta, Sara's work has examined the social impacts and experiences of living in Fort McMurray by exploring the experiences of mobile workers and those who have been in the area for generations.

Sara's work in Alberta has also examined gendered circuits of care through sustained long distance relationships while people are away. Some relationships survive by sticking to the routine of camp, while others survive by breaking that routine. This has included looking at the ways in which spouses adjust to the schedules of their spouse. For example, women may absorb household responsibilities or take part-time work that adjusts to the shift rotation schedules of their husbands. As this research moves forward, questions are being explored about how long it takes to recover and adjust during these periods with a specific on the adjustments made while re-engaging in camp life.

In town, there is a lack of 24 hour childcare to support shift rotations. In one case, a woman assigned to nightshifts won a lawsuit and the ability to demand the company adjust her schedule to align with daycare. Fort McMurray has one of the highest per capita rates of live-in caregivers through the temporary foreign worker programs. Sara's work has examined how live-in caregivers adjust to the long schedules of their employers. Live-in caregivers had to be very flexible and worked longer schedules than their employers who were commuting to the worksite.

A youth coalition led by the mayor was formed to ground what the community was doing for youth and to understand their needs in this resource-based setting. Despite their strong connections to the land and culture, Indigenous youth often felt that their only option was to work in the Oil Sands.

Homelessness has become an issue in Fort McMurray. Some of the vulnerable population who came to the region looking for work are now living in tent camps. While some health workers and non-profits have worked to develop relationships with people living in these camps to determine their needs, these vulnerable people generally have limited connections to services in the community. There can be denial that homelessness and poverty exist in these rapidly growing communities. Sometimes bylaw officers have stepped in to discourage the existence of these camps by removing people's belongings. In Fort McMurray, a drop-in centre for homeless residents was painted bright blue in order to raise its presence and profile in the community, but then met with some resistance from the community.

The response of the nonprofit sector has been impeded by a lack of space and the expense for space. For example, a prolonged period of time was needed to develop a shelter as a part of family violence programs. Non-profit stakeholders view a lack of political will as one factor in addressing these issues. Partnerships with industry have since provided opportunities to share ideas and space. There are some non-profits, however, who do not want to accept industry funding. On a positive note, the capacity of non-profits has been bolstered by the influx of workers who have brought spouses equipped

with national and international experience with non-profit organizations (see Dorow 2016). Lastly, the research in Alberta has examined the volunteer deficit in communities as a result of mobile work that has left workers and their families busy with the pace of life.

Doug Lionais, Cape Breton University

The Atlantic team examined the impacts of labour mobility on spouses, families, community, and economic development. There are communities where roughly two-thirds of households engaged in the labour force are commuting long distances for work. Industrial restructuring in Cape Breton, for example, has meant that local mining jobs were lost and replaced with mining jobs in distant locations. The remittance income that is provided through mobile work is significant to the household and the local economy.

Doug's research explored the social and health impacts that labour mobility has on intergenerational families with young children. To start, mobile workers may feel isolated from their family and community and experience a deterioration of family networks. The remaining spouse in the home community also may feel isolated after assuming additional time-consuming roles for the household (i.e. repairs, yard maintenance, snow removal). As a result, these spouses also become more withdrawn from civil society roles in the community. Roundtable stakeholders have also observed children who have struggled during the transition periods when a parent leaves for, and returns from, mobile work, resulting in periods of high stress and anxiety behaviours that are being observed by teachers in schools. Grandparents have become more engaged in the caregiving of grandchildren as parents commute long distances for work. This has prompted some family resource centres in Prince Edward Island to engage more strategically with mobile workers and their families. These efforts need to become more widely adopted in other regions that have high volumes of mobile workers.

Sean Markey, Simon Fraser University

In the BC context, mobile workers are experiencing several issues that are affecting the demands for community services. These workers are dealing with exhaustion, fatigue, and mental health challenges associated with anxiety and stress associated with both work and a prolonged absence from family. Host communities have also experienced an influx of low-skilled workers who are often amongst the first to be laid off, prompting an increased demand for employment, financial literacy, counselling, and other community services.

For roundtable stakeholders, social service agencies not only lack staff, but mobile work opportunities have also impacted volunteer pools for non-profits in both host and home communities. There is a need to capture resource revenues to address the social service impacts. This includes a need for flexible funding models to assist social service agencies due to varying boom and bust cycles across various sectors. Some roundtable stakeholders were able to negotiate budget increases; although, this has not been common.

There is a lack of information about the scale and location of work camps. The absence of this data impacts the quality of research and information needed to support evidence-based decision-making in communities.

Keith Storey, Memorial University

Mobile work arrangements were first used in the offshore oil context and later adapted for remote onshore mining operations. In the remote mining context the use of work camps and commute arrangements has replaced the traditional purpose-built minetown model. These work arrangements

have further evolved such that camp-commute arrangements are now increasingly used near and even in existing towns, which has significantly changed the dynamics of industry-work camp- community relationships. These shifts are partly attributable to the rapid growth in demand for labour with the commodities boom, the inability of communities to provide housing and other services in a timely manner and worker preferences to remain based in their home communities or move to other communities for economic, lifestyle or other reasons. In the latter case in Australia, for example, figures suggest that 22% of Australian mine workers now live in the Perth region of Western Australia and commute to remote locations elsewhere in the State or the country. Most communities, whether they act as “host” or “source” communities, are not well-prepared to meet the social service demands that mobile workers and their families present.

Assessing the potential demands on social services of mobile workforces before projects are approved is typically poorly done. In Alberta, for example, reliance on individual project assessments often means that the cumulative effects of multiple projects are inadequately identified or addressed. Cumulative effects assessment may be beyond the capabilities of individual project proponents, which may require a shift to a more strategic assessment and planning approach with responsibility assumed by government or an independent agency.

Much has been learned about the impacts of mobile work on workers and their families since some of the early research carried out with those involved with offshore work (see, for example, Morrice *et al.* 1985). Subsequent studies have demonstrated the complexity of effects on workers and their families that may be affected by a multitude of economic, social, psychological and other variables, such that any discussion of outcomes needs to be carefully nuanced. For some individuals and families mobile work may prove to be too much, such that the worker quits the work or the relationship fails. For others, the work provides benefits for both the worker and family members and is seen as generating an acceptable lifestyle. Between these experiences there are numerous others, the implications of which are that a wide variety of types of help are required if workers and their families are to satisfactorily manage the lifestyle associated with mobile work.

5.2 Roundtable Discussion

Many issues highlighted by the OTM team resonated with social service and non-profit stakeholders. These topics were supplemented with discussion that focused on six issues, including renewing programs and mandates, financial capacity, social infrastructure, training, human resources, and recruitment and retention.

5.2.1 Renewing Programs and Mandates

Community service agencies need to renew programs and mandates to reflect the changing realities associated with mobile work in both home and host communities. Family resource centres are starting to strategically invest more resources to proactively engage with mobile workers and their families through support groups, child care, and other program venues before they become too isolated. Networks within Oil Wives Clubs across Canada provide another support system to onboard and integrate spouses into host communities. Schools have also seen changes in children’s behaviours during transition periods when a parent leaves for, or returns from, mobile work, prompting efforts to ensure male role models are provided in after school programs.

Furthermore, stakeholders described an emerging new class distinction between mobile workers and vulnerable residents who are largely unemployed throughout the year. Under these

circumstances, service providers are providing support to homeless individuals who are only able to obtain sporadic mobile work. The precariousness of their situation is often not known by their family.

As many of the findings permeated with roundtable participants, however, some argued that there is a lack of training, resources, and systematic solutions to bring stakeholders together.

5.2.2 Financial Capacity

Community service agencies have been underfunded to address the influx of low-skilled workers looking for work during construction phases, exacerbating pressures for social service organizations. Despite waitlists, agencies cannot always offer sustained and consistent programs without continuity of funding. More investments in family counselling programs, youth programs, and shelters are needed to address family violence in both source and host communities.

Senior government policies also need to recognize the unique context of rapidly growing communities where infrastructure and housing costs are significantly higher than other places of similar size. Traditional per capita funding models will not work in contexts that fail to account for shadow populations, higher costs of living, labour shortages, and higher costs for materials and construction. The result is that community services and non-profits lack the resources to deliver needed supports. Non-profit social service agencies are increasingly pressured to pursue other fiscal resources through industry agreements, grants, and even Go Fund Me initiatives.

5.2.3 Social Infrastructure

Community service agencies lack space to foster collaboration and deliver services. While some local governments have been working to obtain space to bring non-profits together, infrastructure programs are specifically needed to support investments in stronger social infrastructure initiatives.

5.2.4 Training

Despite the pressures confronting community service providers, few have staff that are trained to deal with the complex issues associated with labour mobility. Opportunities for training in rural and remote communities have been limited by challenges enticing larger training institutions to visit these places to deliver the training and limited resources to send staff to other places.

Second, there are also limited training and supports for community social services, protection, fire fighters, and emergency personnel experiencing PTSD as a result of responding to opioid overdoses, fatal accidents, and mental health crises. Efforts are needed to explore how best practices from the military and RCMP through programs such as Wounded Warriors can be applied in other settings.

5.2.5 Human Resources

Mobile work and prolonged shift rotations are generating volunteer deficits in communities. As non-profit networks emerge, the local government is allocating resources from the recreation department to help build and manage non-profit capacity.

5.2.6 Recruitment and Retention

Community social service agencies have struggled to recruit and retain staff with part-time work. These agencies experience regular staff turnover and disruptions to services and programs. These challenges have expanded to other community sectors, including protection services, where soft vacancies (i.e. parental / sick leave) have been followed by hard leaves from organizations.

6.0 Future Directions

Mobile work is a common phenomenon in remote, resource-based regions, particularly during the exploration and construction phases of industry projects. Any time there are large-scale industrial projects being constructed or proposed, there are concerns about labour needs and about broader implications for worker families, communities, and work environments. Many of the policy and program approaches have long been designed to reflect labour that is rooted in place and need to be updated to reflect this mobile labour landscape. This report is intended to provide information that will be useful for community stakeholders as they engage in negotiations with companies and senior governments to address the pressures and opportunities associated with mobile work. Moving forward, these roundtables generated a series of recommendations to guide investments in research and information systems that are needed to support labour mobility.

6.1 Research and Information

Local governments and other community stakeholders struggle to understand the implications of fluctuating commodity prices across many resource sectors and projects that have different timelines. Community stakeholders are seeking more information about best practices to leverage industry with government in order to ensure appropriate investments are in place.

As communities strive to maximize the benefits from large-scale resource development projects, roundtable stakeholders felt that further research should track the value of contracts sourced locally versus broader procurement spending patterns by industry.

More research is also needed to understand how work camps and industries are formulating best practices and strategies for responding to the opioid crisis. This should include information about how industries determine the capacity of an individual to work if they have an opioid prescription. There continues to be a limited understanding of the extremes related to mental health issues in work camps.

There is a lack of data and research on the impacts of mobile work on immigrant populations. As immigrants move to Canada, they may not always understand or view mobile work and work camp lifestyles as viable options.

A better understanding is needed of the scale and scope of vulnerable people moving to these regions searching for employment and the broader impacts for safety and costs for physical and social infrastructure. Roundtable participants have observed situations where working homeless are staying in shelters due to high housing costs and the need to send money to their families in other communities. One component of this investigation could include exploring if, and how, regulations and guidelines have been implemented for mobile workers who get Living Out Allowances and want to stay in a shelter.

Mobile work can exacerbate stress in a relationship, with many issues leading to marital breakdowns in these households. There is a lack of good data, however, on whether the marital status of mobile workers is different from local workers. Some people, for example, have pursued mobile work following divorce, separation, or the loss of a loved one in order to cope with the experience. Other anecdotal accounts suggest that mobile work has strengthened relationships as it has provided opportunities for households to eliminate debt more quickly. Some roundtable stakeholders felt the ability to cope with mobile lifestyles was partially determined by whether the household made a purposeful decision to pursue mobile work or whether the household was forced into mobile work. Regardless, spouses need to have good communication and agreements about how they will work together through prolonged periods of mobile work. Moving forward, roundtable participants would like to see more research to understand the different coping strategies that are adopted by families. Information was requested to identify indicators of families that are resilient. More research and

awareness is also needed on how to effectively mobilize informal social networking and support for mobile workers' families.

There are also broader questions about who is truly benefitting from mobile work. For stakeholders, mobile work has been driven by capitalist imperatives as resource towns have become too expensive to build. Under these conditions, the costs associated with the impacts of mobile work are not borne by the company, but are externalized costs assumed by other community stakeholders. Senior governments have not provided adequate intervention.

6.2 Information Management Systems

Better information structures, protocols, and processes are needed to inform local governments about the industry activities taking place in the region. A centralized registry for work camps is a critical component of this puzzle in order to allow regions to acquire good quality information to inform broader planning and policy decisions for programs and services. Better models also need to be developed by senior governments to track how many camps exist and their impacts on physical infrastructure and resources (i.e. water).

When work camps are not put in place in advance of rapidly growing construction periods, there can be significant housing pressures. These temporary housing pressures are complicated by the varying timelines across multiple industry projects that can extend up to 40 years. There is a lack of research and institutional structures in place to track the number of temporary beds in host communities. Given the breadth and constantly changing nature of regional projects, this task is beyond the fiscal and human resource capacity of local governments. A central agency at the provincial level is needed to track information about temporary units.

Resources

On the Move database: <http://www.onthemovepartnership.ca/resources/ergm-database/>

Dorow, S. (2016) "Governing through Community in the Oil Sands Zone." In M. Brady and R.K. Lippert (eds.) *Governing Practices: Neoliberalism and the Ethnographic Imaginary*. Toronto: University of Toronto Press.

Dorow, S., & Mandizadza, S. (2018). Gendered circuits of care in the mobility regime of Alberta's oil sands. *Gender, Place & Culture*, 1-16.

Halseth, G. (Ed.). (2016). *Transformation of Resource Towns and Peripheries: Political Economy Perspectives*. London: Routledge.

Halseth, G., Markey, S. P., & Bruce, D. (Eds.). (2010). *The Next Rural Economies: Constructing Rural Place in Global Economies*. Oxford: CABI.

Halseth, G., & Ryser, L. (2018). *Towards a Political Economy of Resource-dependent Regions*. London: Routledge.

Morrice, J. K. W., Taylor, R. C., Clark, D., & McCann, K. (1985). Oil wives and intermittent husbands. *The British Journal of Psychiatry*, 147(5), 479-483.

Nichols Applied Management. (2018). FIFO in the Oil Sands: Fly-in / Fly-out Operations in the RMWB. Submitted to the Oil Sands Community Alliance. Available on-line at: <http://www.nicholsappliedmanagement.com/WP/wp-content/uploads/2018/05/FIFO-in-the-Oil-Sands-Fly-InFly-Out-Operations-in-the-RMWB1.pdf>.

Nichols Applied Management. (2003). *Survey of Residents of Construction Camps in the Wood Buffalo Region*. Submitted to Regional Issues Working Group.

Province of Alberta. (2006). *Investing in our future: Responding to the rapid growth of oil sands development*. Final Report. Available on-line at: <http://www.assembly.ab.ca/lao/library/egovdocs/2006/alec/158408.pdf>.

Ryser, L., Good, J., Morris, M., Halseth, G., & Markey, S. (2015). *Best Practices Guiding Industry-Community Relationships, Planning, and Mobile Workforces*. Prepared for the BC Natural Gas Workforce Strategy Committee. Prince George, BC: Community Development Institute, University of Northern British Columbia. Available on-line at: http://www.unbc.ca/sites/default/files/news/40513/lessons-learned-work-camp-community-relations-practices-making-positive-difference/best_practices_guiding_industry-community_relationships_and_mobile_workforces_final_-_march_2015.pdf.

Vodden, K. and Barrett, J. 2015. Mobile Work and Changing Community Dynamics on the Isthmus of the Avalon, Newfoundland and Labrador. Presentation at the Canadian Association of Geographers Conference, Vancouver, BC.

Vodden, K., Butters, L., and Hall, H. 2018. The Community Impacts of E-RGM: Communities and the Muskrat Falls Project. Presentation in Happy Valley-Goose Bay, NL.

KM EVENT ORGANIZERS



IN PARTNERSHIP WITH



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

