

Priority Health Equity
Indicators for British Columbia:

Household Food Insecurity

Update Report | October 2023



BC Centre for Disease Control
Provincial Health Services Authority

The British Columbia Centre for Disease Control provides services to communities across British Columbia, on the territories of many distinct First Nations. We are grateful to all the First Nations who have cared for and nurtured the lands and waters around us for all time, including the x^wməθk^wəy'əmə (Musqueam), Skwx_wú7mesh Úxwumixw (Squamish Nation), and səl'ílwətaʔ (Tsleil-Waututh Nation) on whose unceded and ancestral territory our head office is located.

Prepared for the BC Centre for Disease Control (BCCDC)

Geoff McKee, Medical Director, Population & Public Health, BCCDC, Provincial Health Services Authority

Authors

Rebecca Hasdell, MPH, PhD, Postdoctoral Research Fellow, Food Policy Lab, Dalhousie University and Population & Public Health, BCCDC, Provincial Health Services Authority

Seri Niimi-Burch, MSc, Coordinator, Food Security, Population & Public Health, BCCDC, Provincial Health Services Authority

Melanie Kurrein, MA, RD, Director of Operations, Population & Public Health and Environmental Health Services, BCCDC, Provincial Health Services Authority

BCCDC contact

For further information contact:

Population & Public Health Program

BC Centre for Disease Control

Provincial Health Services Authority

655 West 12th Avenue

Vancouver, BC V5Z 4R4

pph@phsa.ca

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Executive Summary

Introduction

Household food insecurity (HFI) is when a household worries about or lacks the financial means to buy nutritious, safe, personally acceptable foods. Monitoring household food insecurity is a priority for the BC regional health authorities and the Population and Public Health (PPH) program at the BC Centre for Disease Control (BCCDC). Household food insecurity prevalence is one of the 52 provincial health equity indicators developed by PHSA and one of 13 preliminary indicators identified by the BC health authorities in the first phase of a process to prioritize indicators to monitor food security in BC.

This report is an update to the August 2016 *Priority health equity indicators for British Columbia: Household food insecurity indicator report*, published by the Provincial Health Services Authority (PHSA) in collaboration with the PROOF research centre at the University of Toronto.

This report:

- Shares literature on household food insecurity, health and evidence-based responses
- Monitors trends in the prevalence of people who live in households experiencing household food insecurity in BC
- Reports on two indicator areas prioritized in a preliminary phase of a project to refine evidence-based indicators for food security monitoring in BC: **household food insecurity and income** and **household food insecurity and mental health**
- Summarizes data on concern for food security during the COVID-19 pandemic

The data in this report helps monitor household food insecurity in the province and can inform planning and policy development to address household food insecurity. This report focuses on household food insecurity, which is distinct from the broader issue of food insecurity, and it should be interpreted alongside monitoring and surveillance of other food insecurity indicators.

Household food insecurity refers to the inadequate or insecure access to food due to financial constraints.

Food insecurity exists when factors outside an individual's control negatively impact their access to enough foods that promote wellbeing. Economic, social, environmental, and geographical factors influence this access. Food insecurity is most acutely felt by those who experience the negative impacts of structural inequities, such as discrimination and on-going colonial practices.

Review of Evidence on Household Food Insecurity

The negative impacts of food insecurity on people's physical and social wellbeing have been well documented. Systematic reviews and meta-analyses further demonstrate the associations between food insecurity and adverse health and wellbeing outcomes in child, youth, adult and senior populations. Children who live in food insecure households have increased likelihood of various adverse physical health, development, social and academic outcomes. Among adults and seniors, household food insecurity is linked with poorer dietary intake, diabetes management, cognitive health and mental health outcomes.

Household food insecurity is primarily an income-based issue that requires income-based solutions. Household income is a robust predictor of food insecurity in Canada and is tightly linked to other forms of material deprivation, as illustrated by data from several socioeconomic indicators, such as income source, housing/homeownership and employment. Sociodemographic factors, such as place of residence, education, employment status, Indigenous identity, race/cultural group, immigration status and household composition, are also tightly linked to household food insecurity prevalence and severity, as well as poverty. People with these social identities disproportionately experience food insecurity and poverty due to structural factors such as racist and colonial policies, practices and norms that have restricted access to opportunity and upward mobility; thus addressing food insecurity requires addressing the structural drivers of health and its determinants. Evidence for the relationship between household food insecurity and health provides a compelling case for interventions that improve household incomes and economic security.

Indigenous Context and Data

Understanding key challenges around food insecurity among Indigenous Peoples requires centering Indigenous contexts and lived experiences. While the analyses in this report do not include data on household food insecurity among Indigenous Peoples, the report provides historical and current context and complexities of food security and food insecurity among Indigenous Peoples, shares available data, acknowledges the importance of broader, more holistic approaches in Indigenous contexts, and identifies the need for further work to find respectful ways to include Indigenous data and ensure interventions and policies address the needs of those experiencing the highest rates of food insecurity.

Methods

The prevalence of household food insecurity in BC was assessed using data from the 2017-2018 Canadian Community Health Survey (CCHS), a cross-sectional survey administered by Statistics Canada. The relationships between household food insecurity and various economic and sociodemographic factors were examined using bivariate analyses.

3 categories of Household Food Insecurity

Marginal food insecurity:

Worry about running out of food and/or limited food selection due to a lack of money for food

Moderate food insecurity:

Compromise in quality and/or quantity of food due to a lack of money for food

Severe food insecurity:

Miss meals, reduce food intake, and at the most extreme go day(s) without food

Key Findings

- In 2017-2018, 1 in 8 (12.5%) people 12 years of age and over in British Columbia lived in households that experienced some level of household food insecurity during the previous 12 months.
 - ◆ 2.8% of people lived in households classified as severely food insecure.
- The rate of household food insecurity varied within the province, from 10.4% in the Vancouver Coastal Health region to 16.6% in the Northern Health region.
- Household food insecurity rates in BC differ depending on different economic and sociodemographic characteristics.
 - ◆ Household food insecurity was most prevalent among people in households who were in the lowest quintile of income distribution at 26.9%, including 8.1% reporting severe food insecurity, compared to 3.5% in the highest quintile for income.
 - ◆ Among people living in food insecure households, more than three quarters (75.7%) reported their main sources of income were wages, salaries or self-employment.
 - ◆ People whose main source of household income is from social assistance had the highest rate of household food insecurity (57.9%), including 32.3% experiencing severe food insecurity.
 - ◆ Renters in BC experienced disproportionately high rates of household food insecurity (23.7%) compared to those who reported owning their home (7.9%).
- Household food insecurity is associated with adverse mental health outcomes in BC.
 - ◆ Compared to people living in food secure households, those living in food insecure households reported lower rates of positive perceived mental health (93.0% vs 79.1%).

Supplement: COVID-19 and concern for food security in BC

The COVID-19 pandemic has caused unprecedented changes to social and economic life, including job losses and reduced work hours, which have resulted in financial hardship. The BC COVID-19 Survey on Population Experiences, Action and Knowledge (SPEAK) collected information about BC residents' experiences and measure impacts on social, economic, physical and mental wellness during the COVID-19 pandemic, including concern for food security, or worry that food would run out before having money to buy more. Data from this survey show that concern for food security in BC in April/May 2021 was most prevalent among populations that faced inequities stemming from structural drivers of health and wellbeing prior to the pandemic.

- People living in remote communities reported the highest rate of concern for food security (16.9%).
- People who identified as Black had one of the highest rates of concern for food security (19.9%), compared to those who identified as white, who had the lowest rate (10.0%).
- Almost half (47.4%) of people with no legal immigration status or who are refugee claimants were worried that food would run out before they had money to buy more, followed by almost one third of those who are on work or study permits (32.3%).
- Single parents living with children aged under 18 (22.5%) and unattached people living with others (27.4%) reported higher rates of concern for food security compared to parents living with a spouse/partner and children (11.3%), people living with a spouse/partner (8.5%), and unattached people living alone (15%).
- Concern for food security was most prevalent among those aged 18-34 and 35-49 (18.4% and 14.0%), and rates decreased with increasing age, with those in the age groups 65-79 and 80 and over having the lowest rates of food insecurity (5.7% and 4.1%).
- 19.6% of people who did not complete high school and 14.8% of people for whom high school was the highest level of formal education completed reported concern for food security.
- Prevalence of concern for food security was highest among people reporting the lowest annual household incomes; 40.7% of those reporting annual household incomes less than \$20,000/year and 22.9% of those reporting household incomes between \$20,000-59,000/year worried that food would run out before they had money to buy more.
- People who experienced an employment change during the pandemic had higher rates of concern for food security compared to the overall rate in BC. Nearly a third (30.4%) of those who were reported being out of work for 7 months or longer reported concern for food security.

Discussion

When considered alongside other evidence on household food insecurity in Canada, our findings support conclusions made elsewhere that dominant responses to food insecurity, such as charitable food responses, do not address the structural drivers nor the symptoms and outcomes of the issue. It is broadly recognized that reducing household food insecurity at a population level requires policies that improve household incomes. Research is needed to examine the impact of income supports on household food insecurity, and ultimately, health, including relief measures that were implemented during the COVID-19 pandemic. The data reported here also highlight the need for accessible, consistent data on household food insecurity to monitor the extent of the issue and to evaluate health and social policy responses. There is also a need to better understand challenges around food security among Indigenous Peoples to inform policies and programs that centre Indigenous contexts and lived experiences.

Conclusion

This report is an update to the August 2016 *Priority health equity indicators for BC: Household food insecurity indicator report*. It includes household food insecurity data specific to the COVID-19 pandemic and is part of BCCDC's commitment to ongoing monitoring and surveillance of household food insecurity. The data demonstrates that household food insecurity continues to disproportionately affect people and households that are marginalized due to social, economic, geographic and structural inequities.

This report is intended to increase understanding of the drivers of household food insecurity and inform policy solutions that address the intersecting inequities at the root of household food insecurity.

Introduction

Context for this report

Using the work of Davis and Tarasuk, Health Canada defines household food insecurity (HFI) as “the inability to acquire or consume an adequate diet quality or a sufficient quantity of food in socially acceptable ways or the uncertainty that one will be able to do so”, which is most often the result of inadequate income (1). PROOF defines household food insecurity as “the inadequate or insecure access to food due to financial constraints” (2). Simply put, household food insecurity is when a household worries about or lacks the financial means to buy nutritious, safe, personally acceptable foods, and it is driven by multiple exacerbating factors (3).

Food insecurity is a significant public health issue in British Columbia (BC). The BC Ministry of Health identified food security as one of its core public health programs in 2006, and monitoring food insecurity is a priority for the BC regional health authorities and the Population and Public Health (PPH) program at the BC Centre for Disease Control (BCCDC), a part of the Provincial Health Services Authority (PHSA). The PPH program at BCCDC has developed a conceptual framework - the *Conceptual Framework for Food Security Indicators* - which articulates evidence-based indicators to monitor intersectoral action on food security and its determinants. Household food insecurity is one of 13 possible new indicator areas identified by the BC health authorities in the first phase of a process to prioritize indicators to monitor food security in BC. Household food insecurity is also one of the 52 indicators included in the suite of indicators developed by the PHSA to monitor health equity (4).

This report focuses on household food insecurity, which considers the economic and financial dimensions of food insecurity and is distinct from the broader issue of food insecurity as it does not look at other factors which impact food insecurity as articulated in the BC Food Security Definitions (see Box 1) (5). As such, this report on household food insecurity should be interpreted alongside the monitoring and surveillance of other food insecurity indicators.

Box 1

Household food insecurity refers to the inadequate or insecure access to food due to financial constraints.

Food insecurity exists when factors outside an individual's control negatively impact their access to enough foods that promote wellbeing. Economic, social, environmental and geographical factors influence this access. Food insecurity is most acutely felt by those who experience the negative impacts of structural inequities¹, such as discrimination and on-going colonial practices.

Food security means that everyone has equitable access to food that is affordable, culturally preferable, nutritious and safe; everyone has the agency to participate in, and influence food systems; and that food systems are resilient, ecologically sustainable, socially just, and honour Indigenous food sovereignty.

This report is an update to the August 2016 *Priority health equity indicators for British Columbia: Household food insecurity* indicator report published by the Provincial Health Services Authority (PHSA) in collaboration with the PROOF research centre at the University of Toronto. This report:

- Shares literature on household food insecurity, health and evidence-based responses
- Monitors trends in the prevalence of people who live in households experiencing household food insecurity in BC
- Reports on two indicator areas prioritized in a preliminary phase of a project to refine evidence-based indicators for food security monitoring in BC: **household food insecurity and income** and **household food insecurity and mental health**
- Summarizes data on concern for food security during the COVID-19 pandemic

The data in this report helps monitor household food insecurity in the province and can inform planning and policy development to address household food insecurity.

¹ Structural inequities: Unfair and unjust systemic biases present in institutional policies and day-to-day practices that disadvantage certain social identities over others based on race, gender, class, sexual orientation and other domains

Review of Evidence on Household Food Insecurity

Household food insecurity is a serious public health issue in Canada. This section provides evidence on the impacts of food insecurity on health, then describes the circumstances that create household food insecurity and evidence-based interventions.

The impact of household food insecurity on diet and health

The negative impacts of food insecurity on people's physical and social wellbeing are well documented in previous reports (3). This section highlights findings from systematic reviews and meta-analyses² on the known impacts of household food insecurity on health and wellbeing.

Household food insecurity in children and youth

- There is evidence for increased likelihood of having some birth defects, anemia, lower nutrient intake, asthma, and poorer general health and hospitalization among children who are food insecure versus those who are food secure (6). Children under five years old living in food insecure households are also more likely to experience developmental delays, poorer cognitive outcomes in vocabulary and math, and challenging behavior (7).

Household food insecurity in adults and seniors

- Food insecurity is inversely associated with adult dietary quality, particularly for intakes of vegetables, fruits and dairy products. There is more evidence for the impact of food insecurity on the dietary intake of women than for men (8,9).
- While there is some evidence indicating an association between household food insecurity and diabetes control and management, the significant heterogeneity among studies limits the strength of the association (10,11).
- There is some evidence that household food insecurity in early and later life is associated with poorer global cognitive function in middle age and in older adults (12).
- There is strong evidence for an association between household food insecurity and an increased likelihood of depression, anxiety, stress and sleep disorders (13,14).

² Systematic reviews use replicable methods to identify and synthesize all possible studies on a given topic, and in some cases, critically appraise the strength of the studies included in the review. A meta-analysis is a type of systematic review where the quantitative results from several studies are combined and summarized to create a pooled estimate of an effect. Systematic reviews and meta-analyses are considered 'gold standards' among research methods because they draw conclusions from the overall body of evidence on a topic or question.

Circumstances that create household food insecurity

Household food insecurity and economic factors

Income

Research consistently demonstrates that household food insecurity is primarily an income-based issue. Household income is a robust predictor of food insecurity in Canada and is tightly linked to other forms of material deprivation (15–18), as demonstrated by data from several socioeconomic indicators summarized below.

Income source

A household's source of income is a strong predictor for household food insecurity. Households whose main source of income is from social assistance are three times more likely to be food insecure than households who have income from wages or salaries (17). By design, social assistance programs do very little to build assets that could buffer an economic shock, making households vulnerable beyond their income alone (19). Household food insecurity, however, is sensitive to changes in income supplementation programs. In BC, overall rates of household food insecurity and rates of severe food insecurity decreased following a modest enhancement to social assistance benefits between 2005-2012 (18).

Housing and homeownership

Evidence indicates disparities in household food insecurity based on homeownership status and levels of housing assets. Most food insecure households are market renters, and among homeowners, those with a mortgage on a home valued in the lowest decile of home values are most likely to be food insecure (19). Lack of affordable housing in BC is a compounding stressor for food insecurity. Housing affordability is poor or worsening across several indicators of affordability, and this is especially true among the province's four largest urban regions: Okanagan Valley, Fraser Valley, Victoria and Greater Vancouver (20). These affordability challenges are particularly concerning given research that suggests protective effects of home ownership in relation to household food insecurity (21).

Employment

While income source plays a role in susceptibility to household food insecurity, working in paid employment does not prevent household food insecurity (22). While the prevalence of household food insecurity among households that receive wages from salaries or self-employment as their main source of income is low, 51.9% of food insecure households report wages or salaries as their primary source of income (15). This indicates that earning income through paid employment is not always sufficient to prevent household food insecurity. Changes to the labour market over the last 40 years have concentrated jobs at the top and bottom of the wage distribution and contributed to a growth in low-wage and precarious work, which is a concern for economic security and a potential driver of food

insecurity. In Canada, job losses and reduced hours during the COVID-19 pandemic were largely concentrated among people in low-paid and precarious work (23).

Household food insecurity and sociodemographic factors

In Canada, the probability and severity of the experience of household food insecurity depends not only on economic factors such as income, source of income, homeownership and employment, but also on sociodemographic factors (which are closely linked to poverty) such as place of residence, education, Indigenous identity, race/cultural group, immigration status and household composition (2,15). For example, Canadian data shows that food insecurity is more prevalent among households with children. 20.9% of male lone parent households and 38.1% of female lone parent households reported household food insecurity in 2021, compared with 15.6% of couples with children in the home and 9.1% of couples without children (15).

Systemic racism: a structural driver of household food insecurity

At the root of poverty are economic factors that fail to deliver or secure an adequate income to meet basic needs. In Canada, where structural factors such as racist and colonial policies, practices and norms restrict access to opportunity and upward mobility for racialized people, household food insecurity is most prevalent among households where the respondent identifies as Indigenous (30.7%), Arab/West Asian (27.6%) or Black (22.4%) (15). In 2020, the proportion of people living in poverty among racialized groups was 13.2% compared to 8.0% for non-racialized groups in BC (24). In Vancouver, over 66% of persons living in poverty were from racialized groups in 2020 (24). While there has been a downward trend in the poverty rate in Canada, disparities between racialized and non-racialized groups continue to persist. Addressing food insecurity requires attention to the structural drivers – or ‘causes of the causes’ – that drive health and its determinants.

Evidence-based interventions to address household food insecurity

Evidence for the relationship between household food insecurity and health provides a compelling case for interventions that improve households’ economic security. Research has shown that household food insecurity is primarily an income-based issue that requires income-based solutions, and there is evidence from Canada and the United States indicating that social protection policies and interventions that provide income to households improve both household food insecurity and health (2,25).

In Canada, cash transfers in the form of children’s and seniors’ benefits have been associated with reductions in household food insecurity, particularly effective at reducing severe food insecurity among low-income families (18,25–27). Similarly, in the United States, income supplementation programs, such as the Earned Income Tax Credit, have been shown to be associated with decreased household

food insecurity and improved health outcomes (18,26–27). In-kind financial benefits, which are non-cash monetary benefits or supplemental benefits typically restricted to spending on particular goods (e.g., food, medical or housing benefits/subsidies), are designed to augment households' material resources. In the United States, the Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamps Program), which provides targeted food purchasing assistance to eligible low-income people and families, has been shown to reduce poverty and household food insecurity (6). A systematic review of in-kind subsidies and child food insecurity found some evidence for reductions in food insecurity and poor health among recipients of programs like SNAP and WIC, the Special Supplemental Nutrition Program for Women, Infants, and Children; however, evidence was mixed and limited in scope and quality (28). There is no evidence demonstrating that in-kind financial benefits are more effective at reducing food insecurity than cash transfers, and research has identified administrative costs, stigma and barriers to access as hindering the effectiveness of in-kind financial benefits (29). There is consensus that in order for cash transfers and in-kind benefits to effectively reduce household food insecurity, sufficient benefit amounts and program coverage are necessary (28).

Day to day feeding programs are another broad type of intervention that often target specific populations, such as people who are homeless (e.g., soup kitchens), elderly people or people with disabilities (e.g., Meals on Wheels in the United States), or low-income children (e.g., school breakfast or lunch programs). Such targeted feeding programs have been shown to have limited and mixed impacts on household food security (30,31). They have also been associated with stigma and barriers to access (such as means testing) (32), and have been recognized as insufficient for addressing the root causes of food insecurity. A systematic review found that school food assistance and breakfast programs can increase food access and improve dietary intake, while delivering social, behavioural and educational benefits (28). Currently, there is no national school food program in Canada, and the patchwork of school food programs across the country provides inconsistent access to nutritious foods at school for children (33). A recent review of Canadian school food programs identified the need for sufficient resources to deliver high-quality programming, consideration of food systems and environmental impact, and integration of the social determinants of health as key considerations for a national school food policy and program (34), though experts caution that such a program should not be seen as a solution to the broader issues of poverty and food insecurity (35,36).

There is strong evidence for the association between community food programs, such as community gardens or kitchens and box programs, and positive social outcomes such as social connectedness and sense of belonging, as well as some positive impacts on community food security. However, there is limited evidence related to the impact of community food programs on household food insecurity (25).

Overall, there are significant gaps in BC and Canada’s policy response to household food insecurity, and the evaluation of programs that target the economic drivers of food insecurity is limited (37). Charitable food assistance remains the dominant and most prominent public response to food insecurity in Canada.

Food banks emerged in Canada in response to the economic downturn of the 1980s, and have since become institutionalized as a form of social assistance alongside economic and policy trends that have stagnated incomes for those at the bottom of the income distribution (38). While food banks are designed to serve those facing immediate food needs, the vast majority of food insecure families do not access charitable emergency food assistance. Food insecure households report food banks as a last resort after other resource augmentation strategies, and only a small percentage of food insecure households report using food banks (39). Despite the BC and federal governments directing emergency funds to food banks and food security programs to support immediate needs of people facing food insecurity during the pandemic (40,41), the gap between food bank usage and household food insecurity has been even more pronounced during the COVID-19 pandemic. A nationally representative survey to track the economic and health impacts of the pandemic found that only 7.4% of food insecure households reported receiving charitable food assistance in the previous months (42).

Effective and sustained responses to household food insecurity must be evidence-based, address the root causes of the issue and be evaluated for their impact on household food insecurity. Evidence shows that dominant approaches to addressing food insecurity focused on charitable, emergency food responses, such as food banks, do not effectively address the root causes of household food insecurity. Rather, the evidence demonstrates a need to address the conditions that give rise to household food insecurity – inadequate incomes, broader material deprivation and financial insecurity, and the intersecting structural inequities that underlie them – through upstream social policies.

Indigenous Context and Data

Indigenous Peoples' relationships with their traditional territories and food systems provided food security and food sovereignty for millennia. Prior to European contact, Indigenous Peoples' relationships to food were "land-based, holistic and self-determined" (43), and vibrant food trade and sharing relationships existed. While climate disruptions and fluctuating populations of plant and animal food sources caused food availability to vary, prolonged hunger was not a common experience for most Indigenous communities (44).

While the inherent rights of Indigenous Peoples, rooted in connection to lands and waters, have never been ceded or surrendered, colonization has disrupted traditional food systems and Indigenous Peoples' relationships to food (44). Forced dislocation from their traditional territories, ecological destruction and decimation of traditional food systems, impacts of residential schools, intergenerational trauma, and more have led to experiences of prolonged hunger and food insecurity among Indigenous Peoples. While Indigenous Peoples have always been resilient in maintaining traditional food systems and practices, these colonial disruptions and ensuing food insecurity have had detrimental impacts on the mental, emotional, spiritual and physical health of Indigenous Peoples.

While the analyses in this report do not include data on household food insecurity among Indigenous Peoples, it is well documented that Indigenous people and communities today are disproportionately impacted by high rates of household food insecurity and experience unique barriers to food access and food security.

- 30.7% of First Nations people living off-reserve in the 10 provinces reported experiencing household food insecurity in 2021, the highest percentage among all racial groups (15). This included 8.8% reporting severe food insecurity.³
- Even after accounting for sociodemographic and economic factors, households whose main income earner is Indigenous remain almost twice as likely to be food insecure compared to those with white main income earners (15).³
- On-reserve, 43.5% of First Nations households in BC reported not being able to afford to eat balanced meals in the past 12 months in 2015-2017 (45).

³ These data do not include people living in the territories or on reserve, who experience very high rates of household food insecurity.

- Close to half (48%) of households living on-reserve in Canada experienced household food insecurity in 2008-2018. Regional rates were 3-5 times higher compared to the general Canadian population (12%) (46).
- 47% of families living on-reserve reported running out of traditional food before they could replenish their supplies, and 77% desired to serve traditional food more often (46).
- There is little data available specific to food security and food insecurity among Métis and Inuit people in BC.

Understanding key challenges around food insecurity among Indigenous Peoples requires upholding inherent rights and centering Indigenous contexts and lived experiences. Tensions can exist for many Indigenous households who rely on income and must find a balance between time and energy spent in mainstream economic activities (i.e., participating in the wage economy or paid work), with time and energy for harvesting, preparing and preserving traditional foods from the land and passing food-related knowledge to current and future generations (43). At the same time, many Indigenous Peoples rely on traditional foods and food sources, especially in times where lack of income and rising food costs inhibit their access to market foods. When food from the lands and waters are not harvested, eaten and shared, and knowledge is not transferred, relationships between Indigenous Peoples, food, land and culture are disrupted, and in turn, the health of both current and future generations is impacted deeply (47). Thus, measures to support harvesting, access, exercising land rights, and intergenerational knowledge transfer, in addition to adequate incomes, are critical.

Indigenous scholars and Knowledge Keepers have articulated the need for broader, more holistic approaches in Indigenous contexts: “The criticisms of food security measures clearly point to the need for Indigenous voices, values and beliefs in food and nutrition studies” (48). The Working Group on Indigenous Food Sovereignty has identified that Indigenous Peoples’ ability to respond to their own needs for adequate amounts of Indigenous foods in the forests, fields and waterways requires framing within ecological, cultural and temporal scope and scale of Indigenous food systems (49).

Food security for Indigenous Peoples is intrinsically tied to food sovereignty, self-determination (UNDRIP Article 23) and access to land (UNDRIP Article 26), and requires Nation-to-Nation leadership and decision making. Both the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) (50) and BC Declaration on the Rights of Indigenous Peoples Act (DRIPA) (51) recognize

and affirm Indigenous rights to self-determination, and the Truth and Reconciliation Commission's (TRC) Calls to Action (52) call for governments to acknowledge the impact of government policies on Indigenous health (18) and take action to identify and close gaps in health outcomes (19). The Province has reaffirmed its commitments to Indigenous Peoples through the Declaration on the Rights of Indigenous Peoples Act Action Plan (Action Plan) (53), which prioritizes the maintenance of traditional foods and systems over the next five years. The Action Plan highlights the following food security related outcomes the Province is striving towards:

- Indigenous food systems are recognized and supported in their foundational and interconnected role in providing cultural, social, environmental and economic well-being; and,
- Indigenous Peoples have meaningful and sufficient access to abundant and healthy traditional foods and have peaceful enjoyment of their harvesting rights.

Further work to find respectful ways to include Indigenous data is essential to ensure interventions and policies meet the needs of those experiencing the highest rates of food insecurity. The First Nations Population Health and Wellness Agenda (54) (a partnership between FNHA and the Office of the Provincial Health Officer (OPHO)) and Métis Public Health Surveillance Program (55) (a partnership between Métis Nation BC, OPHO and the Ministry of Health) demonstrate commitments to monitor and report on First Nations and Métis indicators including those related to food insecurity, traditional foods and Indigenous food sovereignty.

Methods

Measuring household food insecurity in Canada: The Canadian Community Health Survey

Data used in the main section of this report comes from the 2017/2018 Canadian Community Health Survey (CCHS), a cross-sectional survey administered by Statistics Canada that collects health-related information from approximately 130,000 Canadians. The sample is representative of the Canadian population 12 years of age and over living in the provinces and territories, but it excludes individuals living on First Nations reserves, Crown Lands, or in some Quebec health regions, full-time members of the Canadian military, and persons in prisons or care facilities.

Household food insecurity has been measured in Canada since 2004 using the Household Food Security Survey Module (HFSSM), a standardized and validated scale of household food insecurity that measures inadequate or insecure access to food due to financial constraints. The module monitors households'

experiences of food insecurity of the previous 12 months and consists of 18 questions on a range of conditions, from worrying that food will run out to modifying the amount of food consumed. The questions distinguish between the experiences of adults and children. Households with zero affirmative responses are classified as food secure, while households with one or more affirmative responses are classified as food insecure. Households are further classified as experiencing either *marginal*, *moderate*, or *severe food insecurity*, representing a spectrum of experiences with food insecurity (see Box 2) (2). Marginal food insecurity is defined by no more than one affirmative response, moderate food insecurity by two to five affirmative responses and severe food insecurity by six or more affirmative responses. While Statistics Canada reports on only moderate and severe food insecurity, this report adopts the use of marginal, moderate and severe food insecurity recommended by the PROOF research centre at the University of Toronto and used by BCCDC in the 2016 *Priority health equity indicators for British Columbia: Household food insecurity indicator report* (3).

Box 2

3 categories of Household Food Insecurity

Marginal food insecurity:

Worry about running out of food and/or limited food selection due to a lack of money for food

Moderate food insecurity:

Compromise in quality and/or quantity of food due to a lack of money for food

Severe food insecurity:

Miss meals, reduce food intake, and at the most extreme go day(s) without food

The prevalence of household food insecurity in this report is measured at the level of individuals 12 years of age and older who live in households that experience household food insecurity. Measurement of household food insecurity at the individual level, rather than at the household level, differs from previous reporting of household food insecurity in British Columbia (3) and in Canada (2). This discrepancy is because this report uses data from the CCHS Public Use Microfile (PUMF) rather than the CCHS Masterfile. Due to the risk of disclosure, household weights are not included on the PUMF. By applying individual weights supplied by Statistics Canada on the PUMF, the prevalences reported here reflect the proportion of individuals who reported living in households with food insecurity, and not the proportion of households experiencing food insecurity. Thus, data included in this report should not be directly compared to other reports of household food insecurity measured at the level of households.

Analytical approach

The data were analyzed to 1) determine the overall prevalence of household food security in BC at the provincial, Health Authority, and Health Service Delivery Area (HSDA) levels, and 2) to examine, using bivariate analyses, the relationship between household food insecurity and various economic and sociodemographic factors identified in the evidence review as influencing household food insecurity such as geography, income, income source and homeownership. These variables were selected through discussion and engagement with the Health Authority Food Security Committee. The relationship between household food insecurity and mental health, one of the indicator areas prioritized in the initial prioritization phase of the *Developing Provincial Food Security Indicators for BC* project, was also examined using bivariate analysis.

Findings

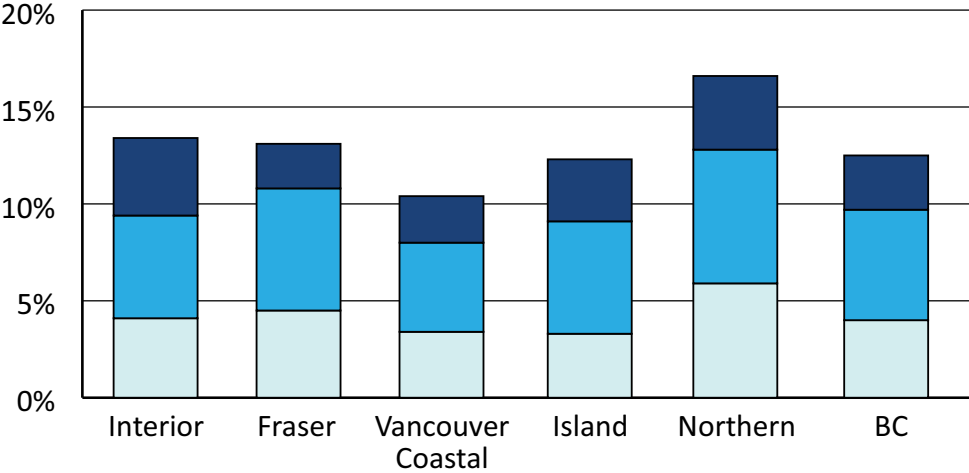
Prevalence of Household Food Insecurity across British Columbia

In 2017-2018, 12.5% of people 12 years of age and over in British Columbia lived in households that experienced some level of food insecurity during the previous 12 months, with 2.8% of people living in households that are classified as severely food insecure. This means that 1 in 8 people lived in households that experienced household food insecurity.

Reporting the total number of people living in food insecure households in BC is not possible with the data used in this report; however, it has been reported elsewhere that there are approximately 732,000 food insecure households in BC (15).

Across BC health authorities, the prevalence ranged from 10.4% in Vancouver Coastal Health to 16.6% in Northern Health (Figure 1). Marginal and moderate food insecurity contributed to Northern Health having the highest overall household food insecurity rate; however, the highest rate of severe food insecurity was in Interior Health, with a prevalence of 4.0%.

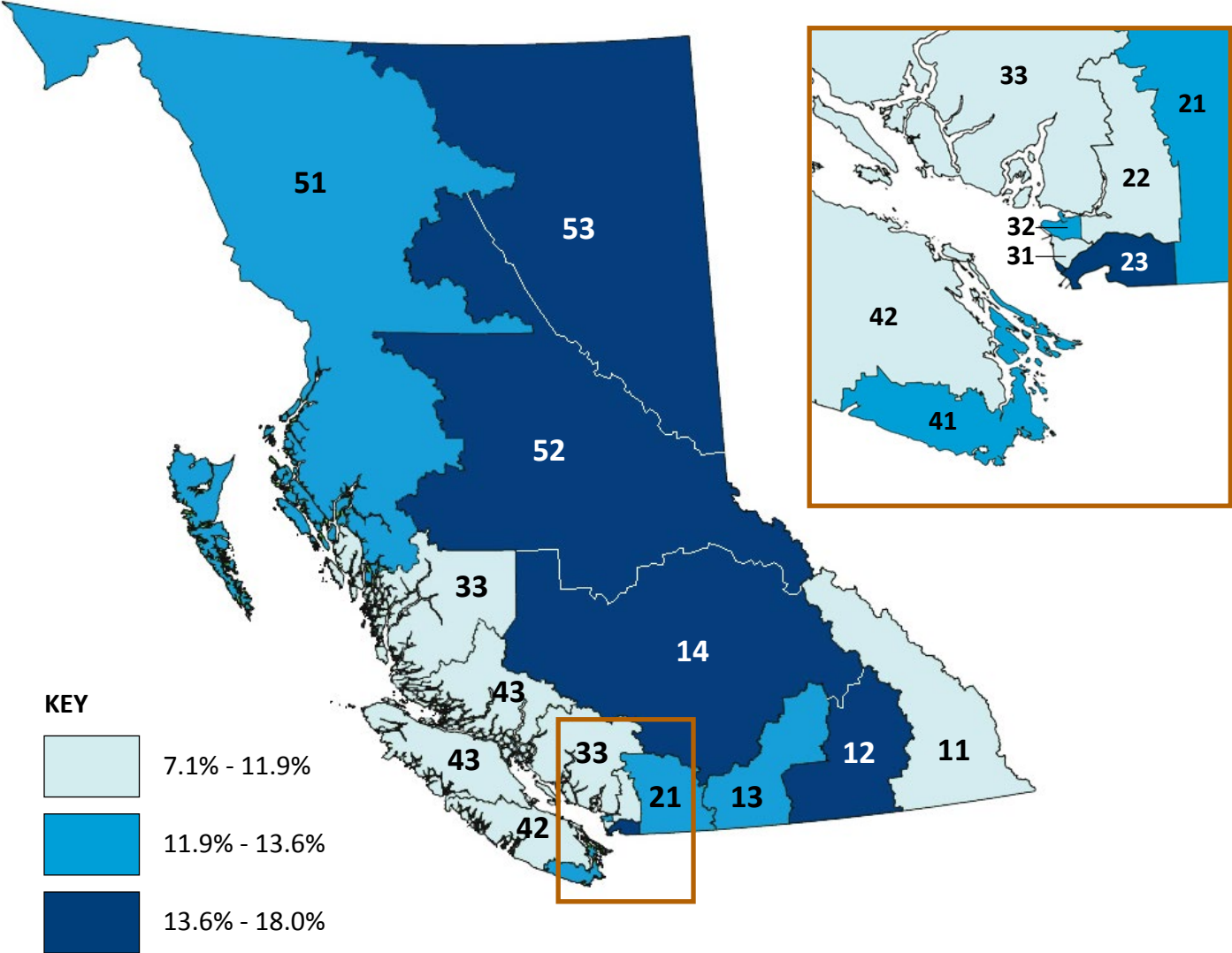
Figure 1. Prevalence of people living in households with food insecurity status in British Columbia by Health Authority



	Interior	Fraser	Vancouver Coastal	Island	Northern	BC
Total	13.4%	13.1%	10.4%	12.3%	16.6%	12.5%
Severe food insecurity	4.0%	2.3%	2.4%	3.2%	3.8%	2.8%
Moderate food insecurity	5.3%	6.3%	4.6%	5.8%	6.9%	5.7%
Marginal food insecurity	4.1%	4.5%	3.4%	3.3%	5.9%	4.0%

The rate of household food insecurity varied across the 16 Health Service Delivery Areas (HSDAs) in BC, with a more than twofold difference between the highest (Northeast, 18%) and lowest (North Shore/Garibaldi, 7.1%) (Figure 2).

Figure 2. Prevalence of people living in households with food insecurity status in British Columbia across Health Service Delivery Areas (HSDAs)



- | | | |
|-----------------------------|--------------------------------|---------------------------|
| 11 East Kootenay | 23 Fraser South | 43 North Vancouver Island |
| 12 Kootenay Boundary | 31 Richmond | 51 Northwest |
| 13 Okanagan | 32 Vancouver | 52 Northern Interior |
| 14 Thompson Cariboo Shuswap | 33 North Shore/Coast Garibaldi | 53 Northeast |
| 21 Fraser East | 41 South Vancouver Island | |
| 22 Fraser North | 42 Central Vancouver Island | |

Which households are most susceptible to household food insecurity?

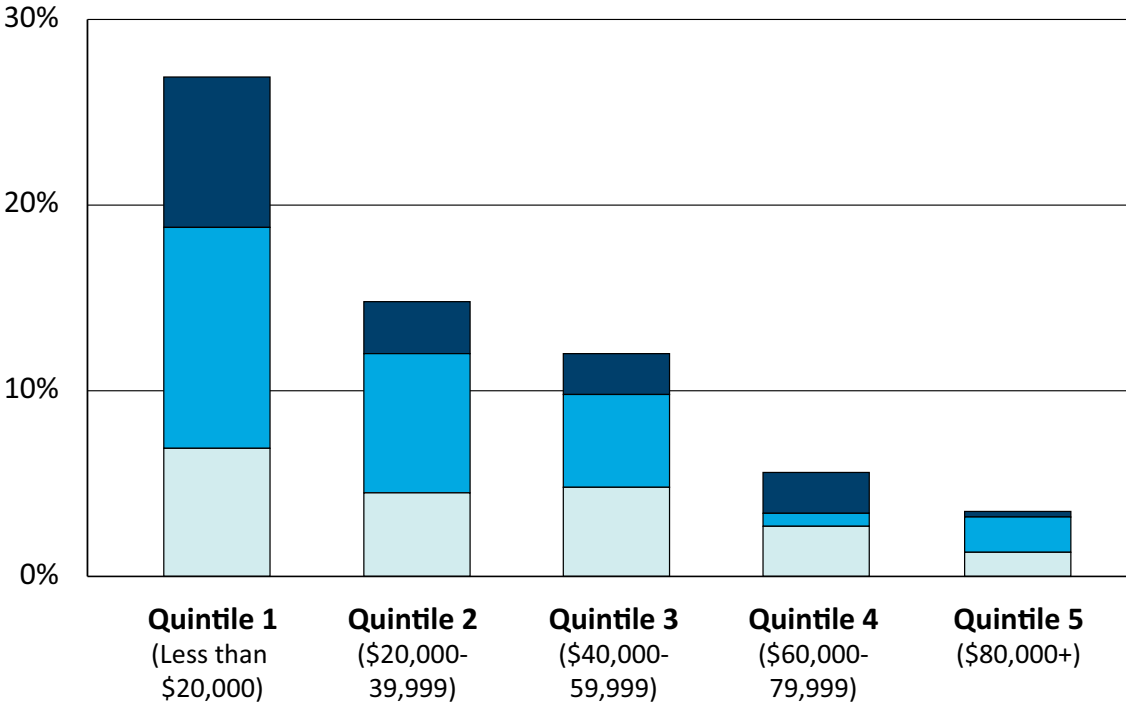
Household food insecurity and economic factors

Household food insecurity is fundamentally a measure of a lack of economic access to food that is tightly linked to other indicators of social and economic disadvantage. Not surprisingly, household food insecurity is related to a household's income, source of income and other indicators of economic security (such as housing).

Household food insecurity was more prevalent among people in households who were in the lowest quintiles⁴ of income distribution, a relative measure of their household income compared to the household incomes of other respondents adjusted for household and community size (Figure 3). Of those in the lowest quintile, 26.9% were food insecure with 8.1% reporting severe food insecurity, compared to 3.5% in the highest quintile.

⁴ Quintile refers to any of five equal groups into which a population is divided according to the distribution of values of a particular variable.

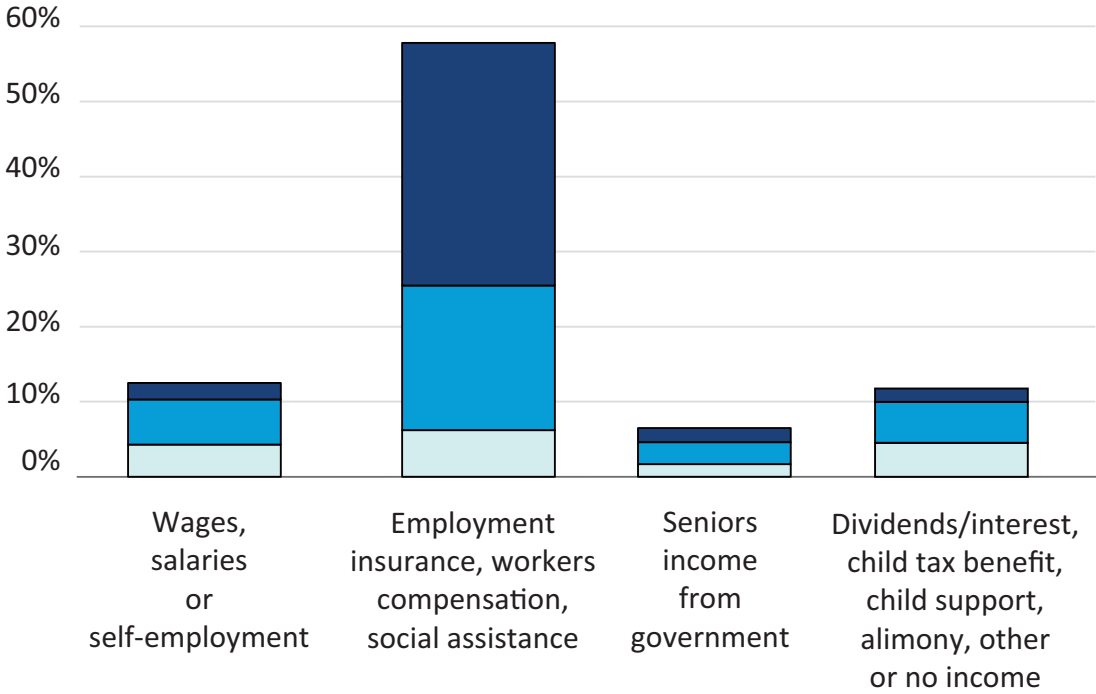
Figure 3. Prevalence of people living in households with food insecurity status in British Columbia and household income quintile



	Quintile 1 (Less than \$20,000)	Quintile 2 (\$20,000-39,999)	Quintile 3 (\$40,000-59,999)	Quintile 4 (\$60,000-79,999)	Quintile 5 (\$80,00+)
Total	26.9%	14.8%	12%	5.6%	3.5%
Severe food insecurity	8.1%	2.8%	2.2%	2.2%	0.3%
Moderate food insecurity	11.9%	7.5%	5%	0.7%	1.9%
Marginal food insecurity	6.9%	4.5%	4.8%	2.7%	1.3%

There are marked differences in the prevalence of people experiencing household food insecurity when the main source of household income is from social assistance, with 57.9% reporting any food insecurity, and 32.3% experiencing severe food insecurity (Figure 4). The lowest rates are among people living in households where the main source of income is from government pensions (6.5%). The grouping of different income support programs in the CCHS limit the extent to which firm conclusions can be drawn about the extent to which recent reforms to income support programs (such as the Canada Child Benefit or Canada Workers Benefit) have impacted the prevalence of household food insecurity. This data from 2017-2018 also precedes the introduction of BC Poverty Reduction Strategy actions to increase rates and implement the Child Opportunity Benefit; as such, conclusions cannot be made about the impact of these strategies on household food insecurity.

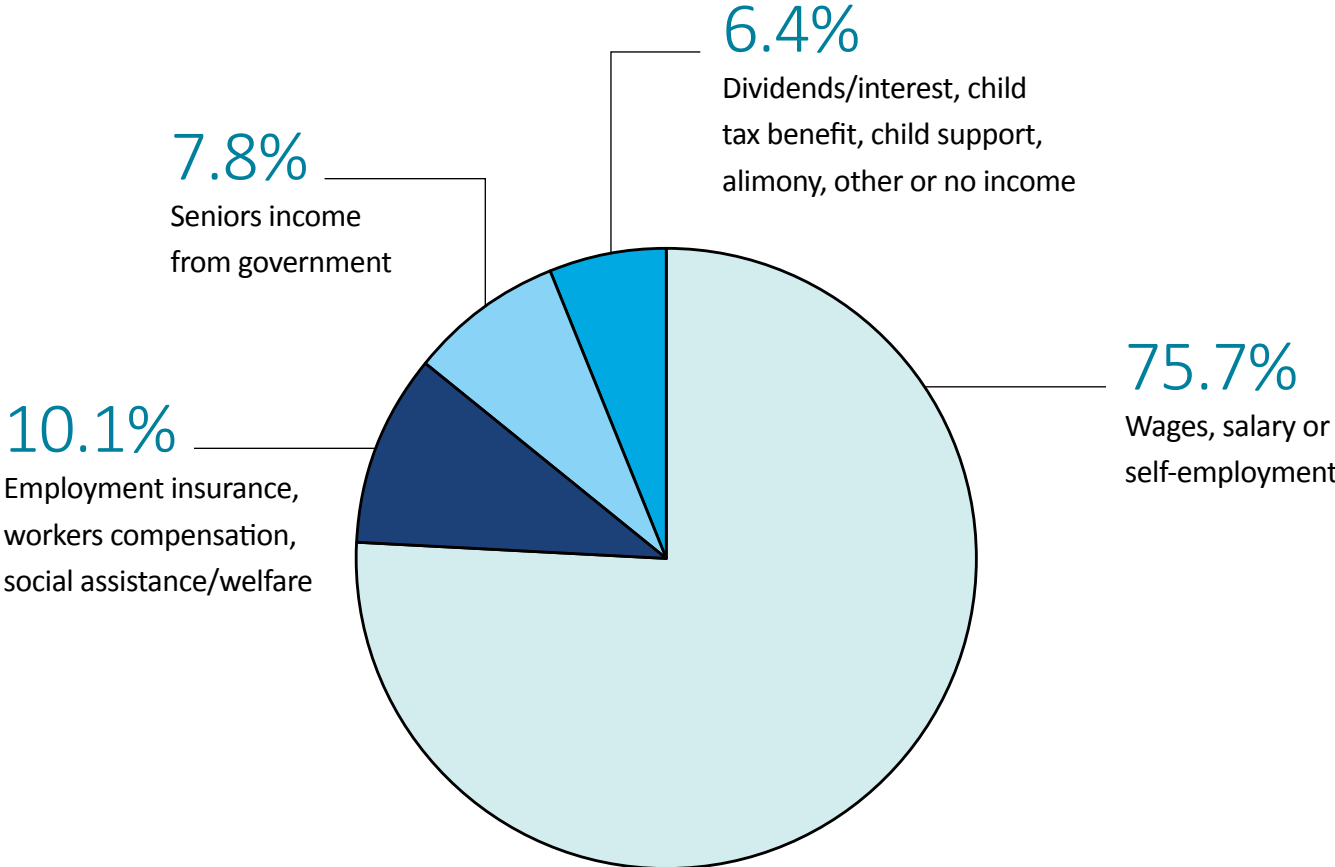
Figure 4. Prevalence of people living in households with food insecurity status in British Columbia and households' main source of income



	Wages, salaries or self-employment	Employment insurance, workers compensation, social assistance	Seniors income from government	Dividends/interest, child tax benefit, child support, alimony, other or no income
Total	12.4%	57.9%	6.5%	11.6%
Severe food insecurity	2.2%	32.3%	1.9%	2.1%
Moderate food insecurity	6.0%	19.3%	2.9%	4.8%
Marginal food insecurity	4.3%	6.2%	1.7%	4.6%

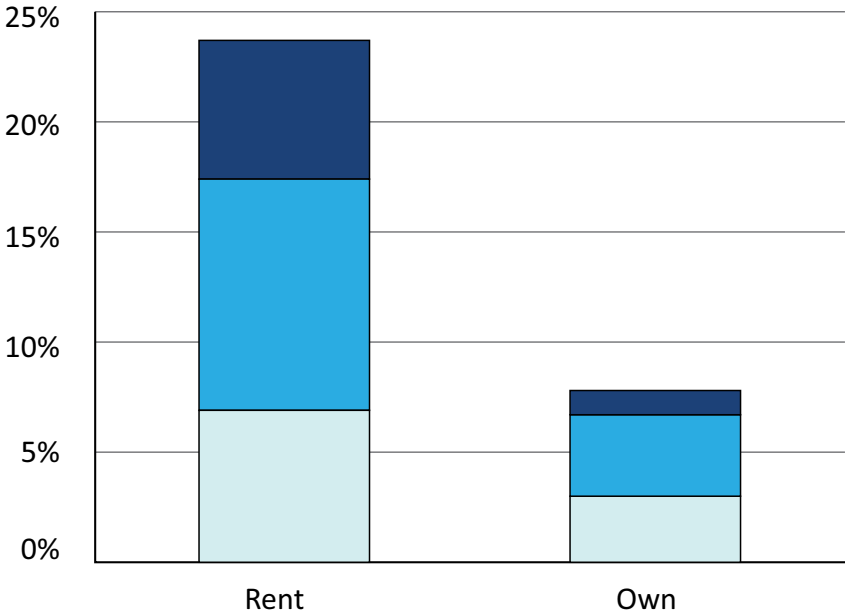
While the prevalence for people living in food insecure households where the main source of household income was from wages and salaries is relatively low, among all people living in food insecure households, 75.7% reported their main source of income were wages, salaries or self employment (Figure 5).

Figure 5. Income sources among people living in households with food insecurity status in British Columbia



Household food insecurity is much more prevalent among those who rent rather than own their home, with 23.7% of renters and 7.9% of owners affected by some degree of household food insecurity (Figure 6). Among those experiencing household food insecurity, 55.3% rented their home, compared to 44.7% who owned their home.

Figure 6. Prevalence of people living in households with food insecurity status in British Columbia by renter/homeownership



	Rent	Own
Total	23.7%	7.9%
Severe food insecurity	6.9%	1.1%
Moderate food insecurity	10.5%	3.7%
Marginal food insecurity	6.3%	3.0%

Household food insecurity and sociodemographic factors

Analysis of sociodemographic factors, such as race, immigration status and household composition (e.g., households with children), in the BC context is not possible with the CCHS Public Use Microdata File (PUMF) that has been used in this report, and which is the most widely available source of national health survey data for public health decision-making. However, it has been well documented elsewhere that food insecurity is strongly related to other forms of social and economic disadvantage. For example, 2021 CIS data analyzed by PROOF shows that racialized groups, and especially Indigenous peoples, experience disproportionately high rates of household food insecurity (15).

Food insecurity is most acutely felt by those who experience the negative impacts of structural inequities, such as discrimination and on-going colonial practices.

Household food insecurity and mental health

People experiencing household food insecurity reported lower rates of positive (excellent, very good or good) perceived mental health compared to those who are food secure, at 79.1% versus 93.0%. This is consistent with the robust evidence for the increased likelihood of depression, anxiety and sleep disorders among those who are food insecure compared to those who are food secure (13). Proposed mechanisms for this relationship include a stress response that may contribute to poorer mental health, or an increased psycho-emotional burden from poorer social relationships given the importance of food to social connection and inclusion in community (14). It should also be noted here that the relationship between mental health and household food insecurity can be bi-directional, as mental health issues can pose challenges to workforce participation and employment, which can, in turn, exacerbate financial stress, poverty and household food insecurity (56).

Supplement: COVID-19 and Concern for Food Security in BC

The COVID-19 pandemic has caused unprecedented changes to social and economic life. Measures necessary to contain the virus have led to job losses and reduced work hours, especially among people in low-wage and precarious work in the food and retail sectors in Canada (23), reflecting long-standing inequalities that the current crisis has exacerbated. Loss of income raises concerns about growing household food insecurity. Data from several sources show that the financial hardships brought on by the pandemic may have impacted household food insecurity. For example, early monitoring by Statistics Canada, using the 6-item short form HFSSM⁵, found that between March and May 2020, one in seven Canadians (14.6%) indicated living in households experiencing food insecurity in the previous 30 days (57). Those who were absent from work due to COVID-19 were more likely to be food insecure (28.4%) than those who were working (10.4%). Taking into account differences in how food security was assessed by Statistics Canada early in the pandemic and in pre-pandemic monitoring suggests a 39% increase in the prevalence of household food insecurity during the pandemic (42).

The BC COVID-19 Survey on Population Experiences, Action and Knowledge (SPEAK) (58) was developed by health system partners in the Province of BC to collect information about BC residents' experiences and measure impacts on social, economic, physical and mental wellness during the COVID-19 pandemic. Two province-wide, cross-sectional, web-based population health surveys were conducted one year apart (May 2020 and April/May 2021). Here, BC residents' experience of concern for food security from round two of the BC COVID-19 SPEAK (58) is reported.

Methods

The BC COVID-19 SPEAK Round 2 (58) was an observational cross-sectional, voluntary, online survey administered in April/May 2021. The target population was residents of British Columbia aged 18 years of age or older. From a final number of 206,241 respondents, a sample of 188,561 was used in the final analytical dataset⁶. Data was weighted using 2016 Canadian Census data by geography (HSDA, Local Health Area (LHA), and Community Health Service Area (CHSA)) at the level of the individual for age,

⁵ The 6-item short form questionnaire includes 6 questions from the 18-item HFSSM and asks about past 30-day food insecurity experiences, while the full HFSSM on the CCHS asks about experiences based on the past 12 months.

⁶ The final analytical dataset for the BC COVID-19 SPEAK Round 2 (58) only included surveys where a Health Service Delivery Area (HSDA) geography, age and sex were assigned and the respondent must have progressed to at least 33% of the survey. Identified duplicate responses and those who withdrew consent after the survey was submitted were removed from the final analytical sample.

sex at birth, education level and ethnicity to ensure a representative sample. Therefore, the data presented in this supplement section represents individual, and not household, experiences of concern for food security.

There are important differences between the measurement of food security concern in the BC COVID-19 SPEAK survey compared to routine monitoring of household food insecurity in Canada. In the BC COVID-19 SPEAK (58), the experience of food insecurity was measured using a single question from the routine HFSSM measure, compared to the Canadian Community Health Survey (CCHS) that uses the full 18-question HFSSM to measure household food insecurity. For this reason, the experiences of concern for food security reported in this supplement should not be directly compared to household food insecurity data from the CCHS reported in this report.

The BC COVID-19 SPEAK (58) asked respondents to answer the question “Please indicate whether the following statement is often true, sometimes, or never true since the COVID-19 pandemic. You worry that food will run out before you get money to buy more.” Those who selected “often true” or “sometimes true” were classified as having concern for food security, while those who selected “never true” were classified as having no concern for food security. Those who selected “I don’t know” or “Prefer not to answer” or with no selection were excluded from the analysis. Responses to this single question related to worry about food running out should be interpreted as an individual’s experience with food worry or concern for food security, rather than experiences with household food insecurity, which is a complex construct that includes worry as well as compromising food quality and quantity (2).

Analytical approach

The BC COVID-19 SPEAK (58) data were analyzed to 1) determine the proportion of respondents who reported concern for food security at the provincial, Health Authority, and Health Service Delivery Area (HSDA) levels, and 2) to examine, using bivariate analyses, the relationship between concern for food security and various economic and sociodemographic factors identified in the literature and by the Health Authority Food Security Committee as important factors related to food security. Variables of interest included geographic location, self-reported race/ethnicity, immigration status, family composition, age, education, household income and reported changes in employment during the COVID-19 pandemic.

Equity-based analysis of concern for food security

The BC COVID-19 SPEAK (58) data shows that, in April/May 2021, concern for food security in BC was most prevalent among populations that were facing inequities stemming from structural drivers of health and wellbeing prior to COVID-19:

People who reside in remote communities:

Rates of concern for food security were highest in Northern Health. People in remote regions had the highest rate of concern for food security at 16.9%. Half of remote regions in the province are in the Northeast Health Service Delivery Area (HSDA).

Racialized people:

People who identify as Black had one of the highest rates of concern for food security at 19.9%, compared to 10.0% among those who identified as white, who had the lowest rate. Data specific to Indigenous people are not included in this report based on the need for data sovereignty.⁷

Immigration status:

Almost half (47.4%) of people with no legal immigration status⁸ or who are refugee claimants reported worry that food would run out before they had money to buy more, followed by those who are on work or study permits at 32.3%.

⁷ OCAP® asserts that First Nations alone have control over data collection processes in their communities, and that they own and control how this information can be stored, interpreted, used, or shared. In accordance with Indigenous Data Governance practices in B.C., COVID-19 SPEAK (58) data from Indigenous respondents is provided to the First Nations Health Authority and Métis Nation B.C. to determine how best to use the data in planning and engaging Indigenous communities across the province.

⁸ Are not a Canadian citizen, do not have permanent residency in Canada or do not have a work/study visa

Findings

The overall prevalence of people reporting worry about food running out before having money to buy more in BC was 12.3%. Prevalence was highest in Northern Health, at 15.5%. The prevalence of concern for food security reported here was overall lower than reported in the first round of the BC COVID-19 SPEAK (58), at 15.6% overall prevalence in BC and 18.4% in Northern Health, in May 2020. The higher prevalence in May 2020 is likely attributed to the emergency context of the early days of the pandemic, while the findings from round 2 (April/May 2021) reported here are likely more reflective of the longer-term, sustained impacts of COVID-19 on food insecurity in BC. Please see the Appendix for statistical results from the BC COVID-19 SPEAK survey.

Rates of concern for food security were relatively consistent across health authorities, ranging from 11.1% in Vancouver Coastal Health to 15.5% in Northern Health. However, they varied more widely across Health Service Delivery Areas (HSDAs), with North Shore/Coast Garibaldi having the lowest prevalence (8.3%) and the Northeast region the highest (19.9%).

Figure 7. Prevalence of people who reported concern for food security in British Columbia by Health Authority

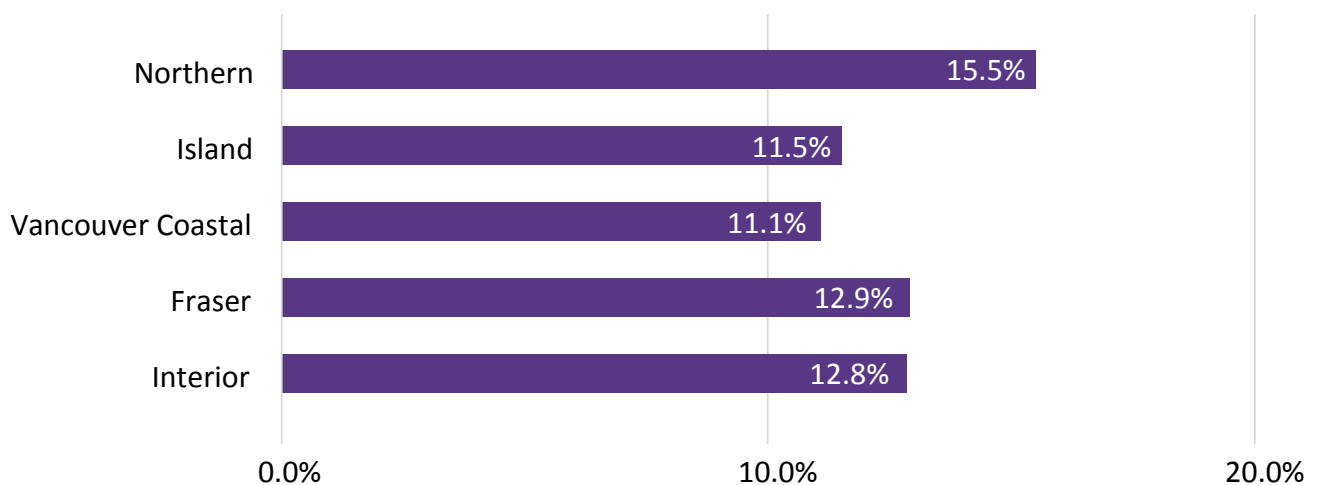
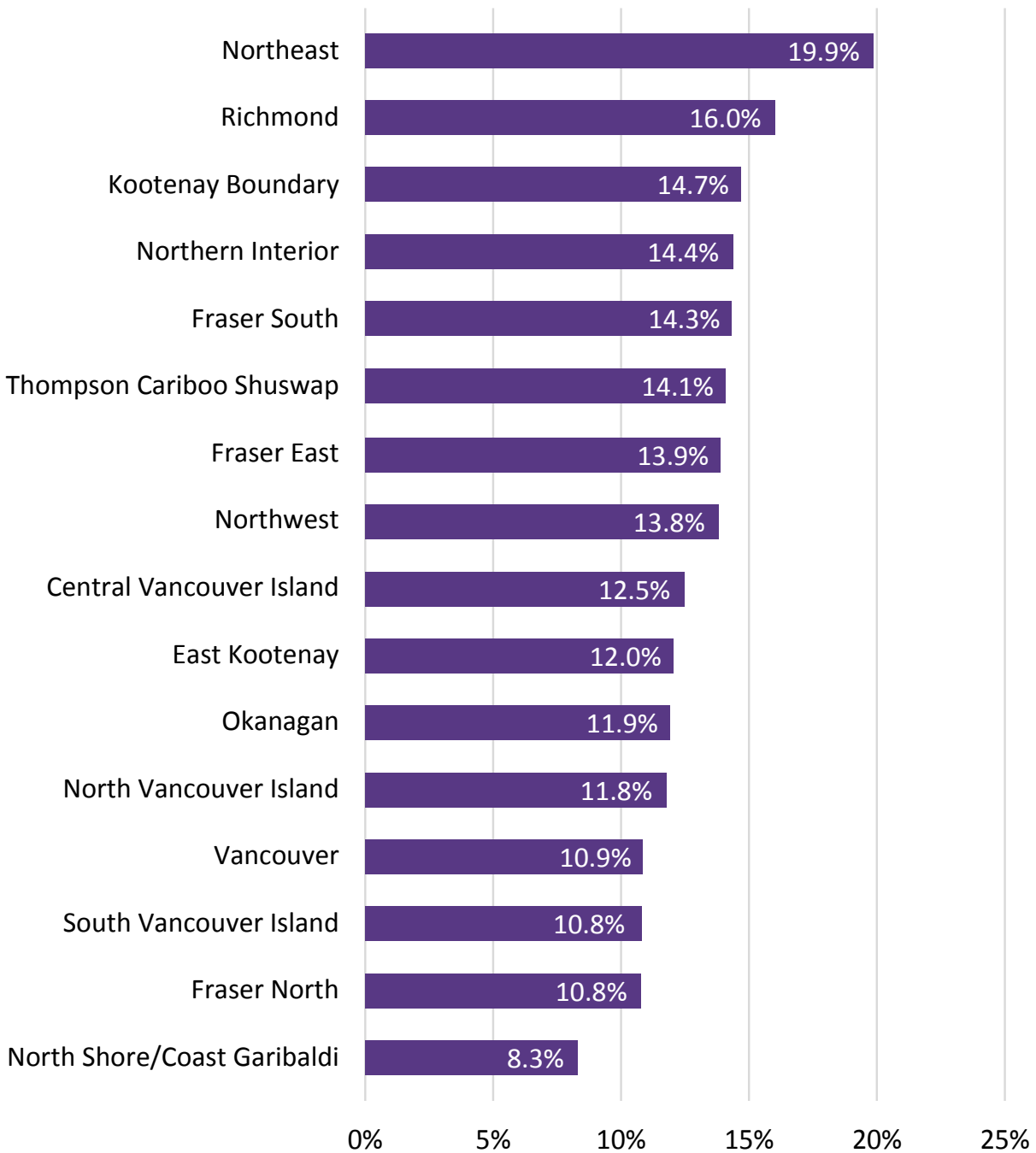
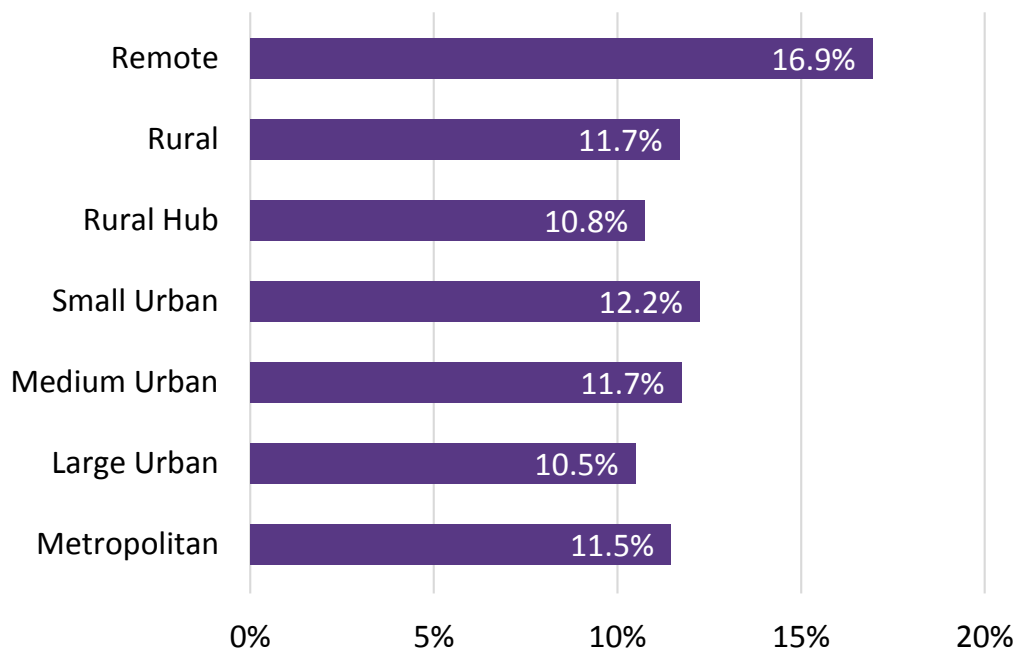


Figure 8. Prevalence of people who reported concern for food security by Health Service Delivery Area (HSDA)



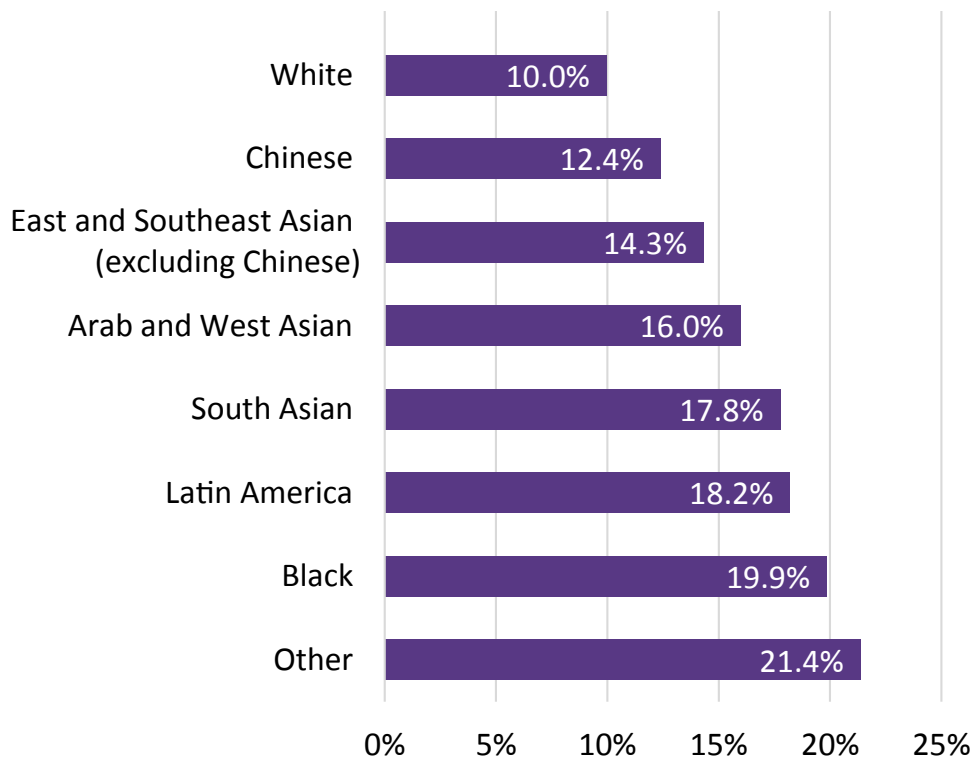
The level of urbanization of respondents' geographic location was classified by Community Health Service Area (CHSA) urban-rural classifications (metropolitan, large-urban, medium-urban, small-urban, rural-hub or rural or remote). Remote CHSAs had the highest rate of concern for food security (16.9%), consistent with existing evidence on the intersecting economic and geographic factors that contribute to food access issues in remote communities (59). Half of the remote CHSAs are in the Northwest HSDA. There were minimal differences in concern for food security between rural and urban CHSAs. This finding is consistent with previous results that report minimal differences between rural/urban residence (17), and may reflect lower cost of housing in rural areas that mitigates the impact of other economic hardships.

Figure 9. Prevalence of people who reported concern for food security by Community Health Service Area (CHSA) urban-rural classifications



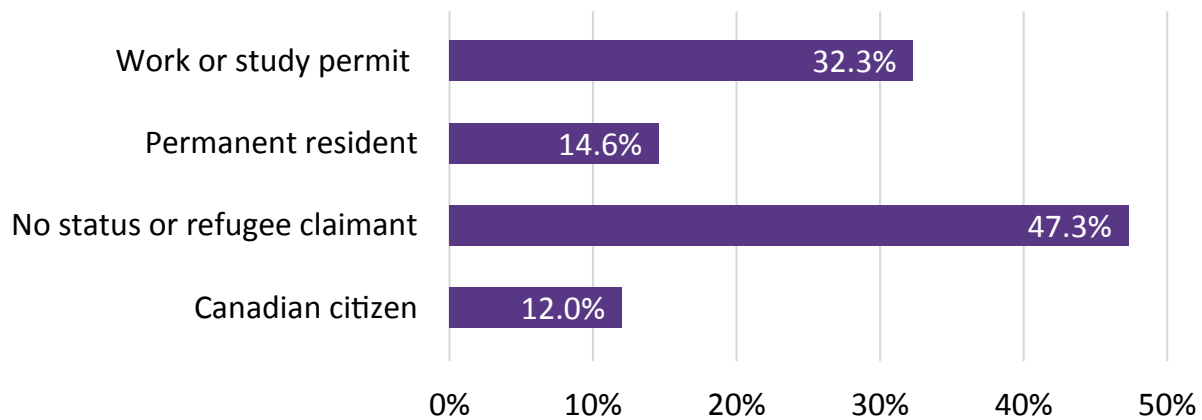
There are marked differences in the prevalence of concern for food security based on self-reported race/ethnicity. Previous research has shown that racialized populations experience higher rates of food insecurity than those who identify as white due to structural racism and social and economic determinants of food insecurity (such as poverty, unemployment and disability) act as significant drivers of racial disparities in food insecurity. In the BC COVID-19 SPEAK (58), the highest rates of concern for food security were found among people who did not identify with the racial/ethnic categories included in the survey (21.4%) and among people who identified as Black (19.9%). Data specific to First Nations, Inuit and Métis are not reported here, due to need for data sovereignty and community-led decision-making as the foundation of respectful relationships in health reporting (60).

Figure 10. Prevalence of people who reported concern for food security by race/ethnicity



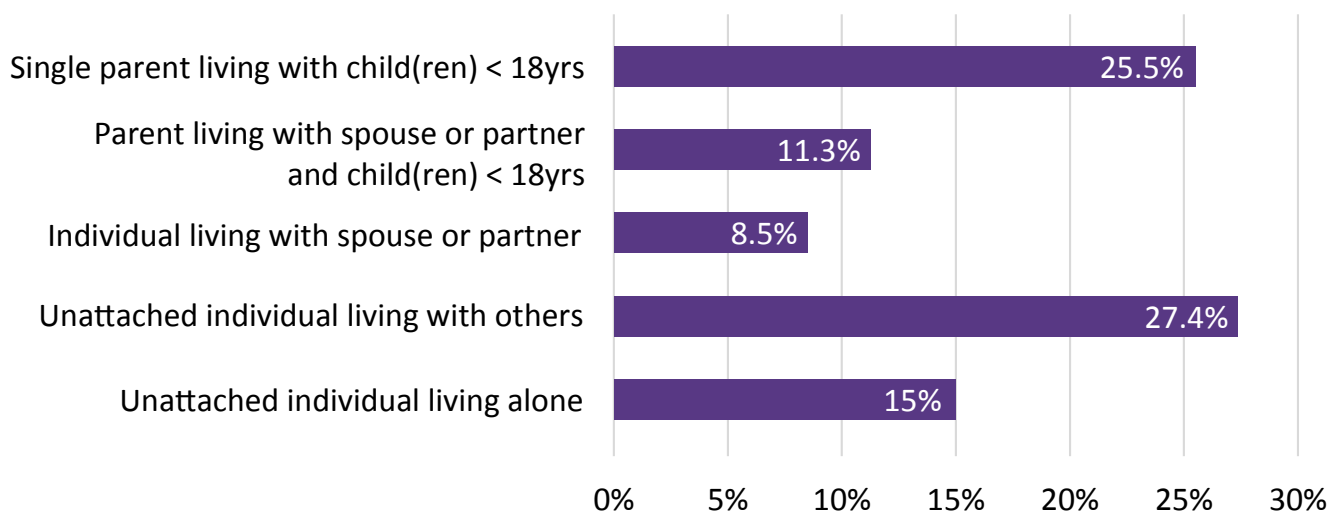
The prevalence of concern for food security differed based on people’s immigration status. People with no status or refugee claimants and those on work or study permits had the highest rates, at 47.3% and 32.3% respectively. This finding is consistent with Canadian studies which have shown that international students experience higher rates of food insecurity compared to their peers (61-63).

Figure 11. Prevalence of people who reported concern for food security by immigration status



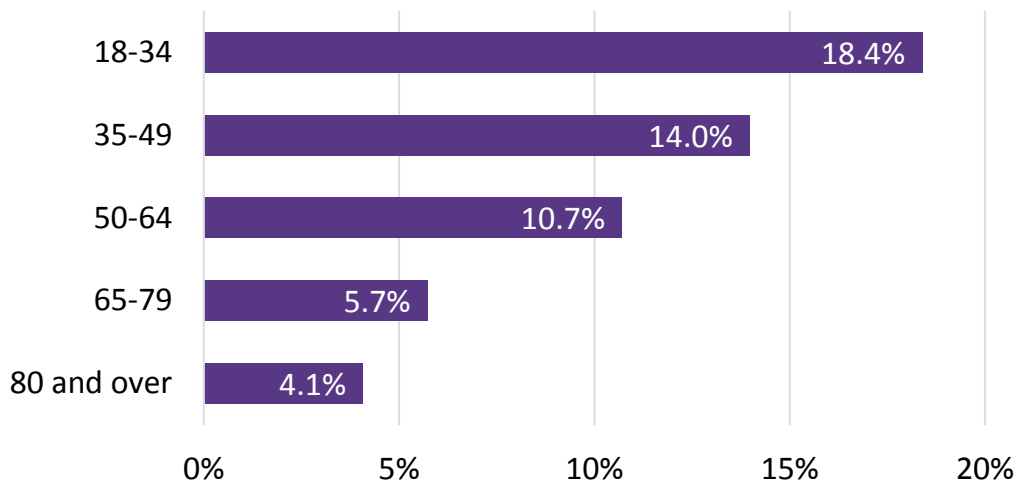
Rates of concern for food security differed by family composition. Prevalence was highest among unattached individuals living with others (27.4%) and single parents living with children under the age of 18 (25.5%). People living with a spouse or partner and no children had the lowest rate (8.5%).

Figure 12. Prevalence of people who reported concern for food security by family composition



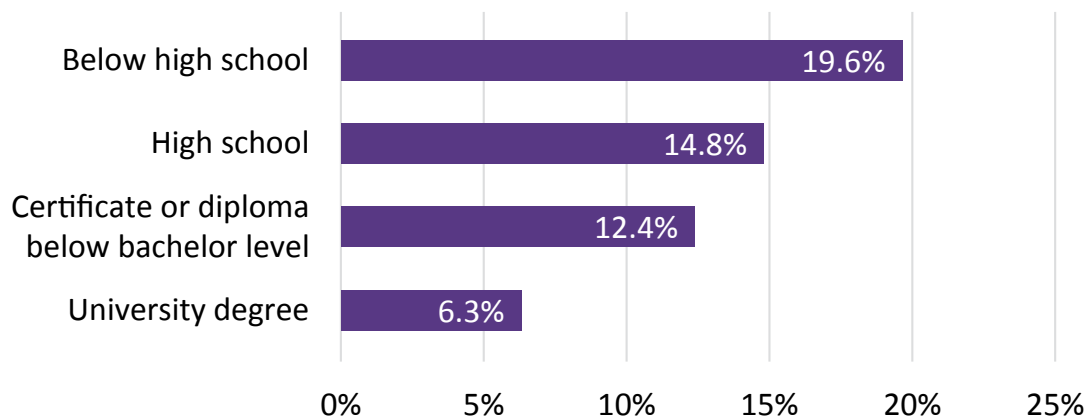
The prevalence of concern for food security was highest among those aged 18-34 and 35-49, at 18.4% and 14.0% respectively. Prevalence decreased with increasing age, with those in the age groups 65-79 and 80 and over having the lowest rates at 5.7% and 4.1% respectively.

Figure 13. Prevalence of people who reported concern for food security by age



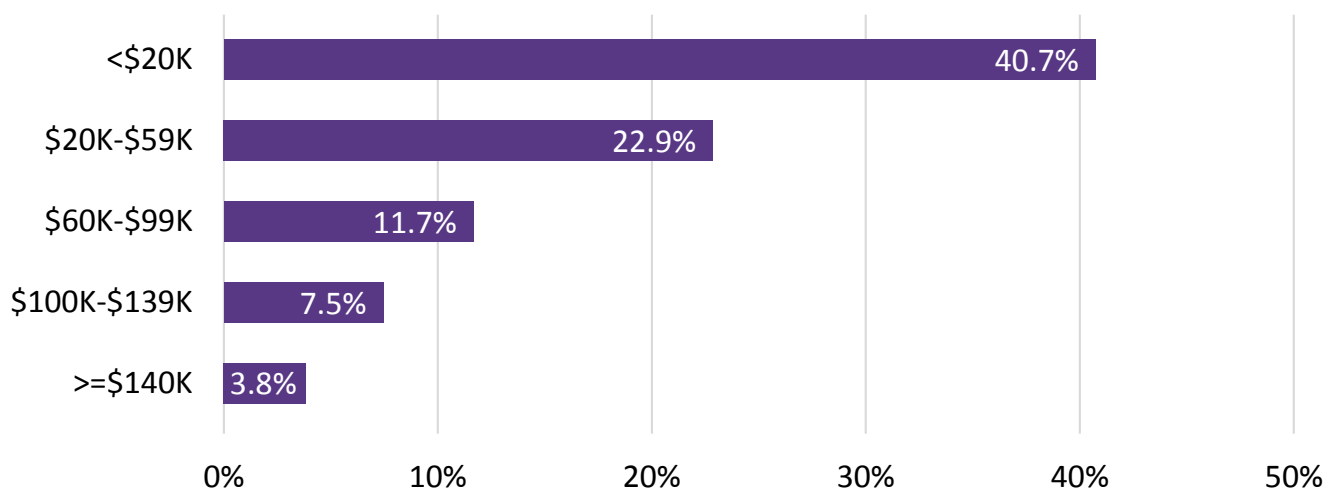
Prevalence of concern for food security also differed based on levels of formal education. While people with a university degree had the lowest prevalence (6.3%), 19.6% of people who did not complete high school and 14.8% of people for whom high school was the highest level of formal education completed reported concern for food security.

Figure 14. Prevalence of people who reported concern for food security by education



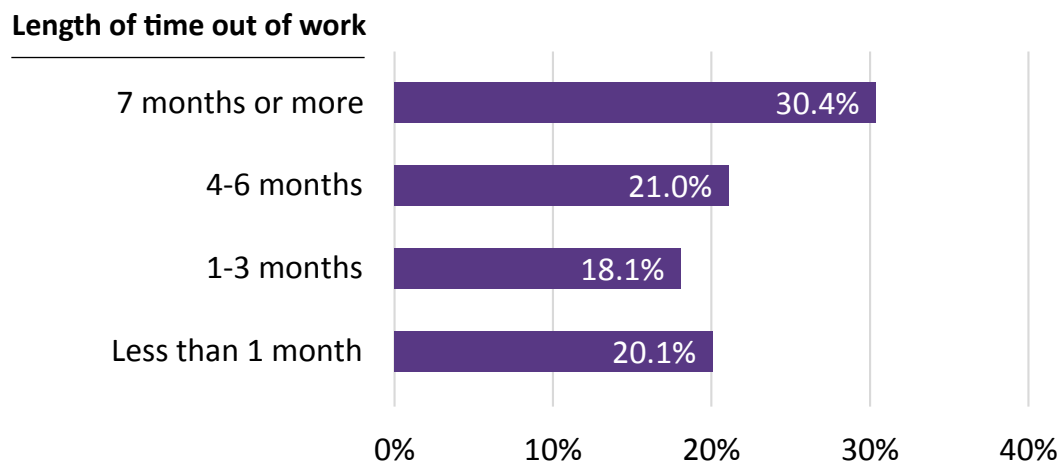
Similar to the CCHS data in this report, which showed that household food insecurity was more prevalent among people in households who were in the lowest quintiles of income distribution, concern for food security was most prevalent among respondents to the BC COVID-19 SPEAK (58) with the lowest annual household incomes. The highest prevalence of concern for food security was among people with household incomes less than \$20,000/year (40.7%) and between \$20,000-59,000/year (22.9%). The prevalence of concern for food security decreased as income increased, and the rate for those with incomes greater than \$60,000/year was lower than the overall provincial rate of 12.3%.

Figure 15. Prevalence of people who reported concern for food security by annual household income



People who experienced an employment change during the pandemic had higher rates of concern for food security compared to the overall rate in BC. The rate was highest among those who were out of work for 7 months or longer, at 30.4%. This finding is consistent with the data that has been reported elsewhere on food insecurity among those who were absent from work due to business closure, layoff or personal circumstances (57).

Figure 16. Prevalence of concern for food security among people experiencing an employment change during the COVID-19 pandemic



Summary of findings

- Analyses of 2017/2018 CCHS data show that 12.5% of people 12 years of age and over in BC lived in households experiencing food insecurity. These results are largely unchanged from the previous August 2016 report on household food insecurity in BC; however, changes in the sampling methods of the CCHS between 2015 and 2017/2018 limit the extent to which comparisons can be made over time.
- The sociodemographic profile of people living in food insecure households has remained largely unchanged since household food insecurity has been consistently monitored in Canada, and tracks with other social and economic markers of health and wellbeing. Those most likely to be food insecure include people in households with economic disadvantage and most impacted by the negative impacts of structural inequities. In the April/May 2021 BC COVID-19 SPEAK (58), racialized people, refugees, people without legal immigration status and those currently unemployed reported concern that food will run out before they have money to buy more at disproportionately high rates.
- The prevalence of food insecurity varied across the province in 2017/2018, with Northern and Interior Health regions experiencing the highest rates. The BC COVID-19 SPEAK (58) provides additional insights into the role of geographical region of residence. Remote regions had the highest rate of people reporting concerns about food security, while there were fewer differences between urban and rural areas.
- Results from this report suggest lower rates of positive perceived mental health for those who experience household food insecurity, and the negative impacts of household food insecurity on overall health are well documented elsewhere.

Discussion

Food insecurity in BC is a significant public health concern and a key indicator of health equity. When considered alongside other evidence on household food insecurity in Canada, our review of the literature and analysis of the CCHS 2017/2018 and the BC COVID-19 SPEAK (58), a survey of the experience of BC residents during the pandemic, support conclusions made elsewhere that dominant responses to food insecurity, such as charitable food responses, do not address the structural drivers nor the symptoms and outcomes of the issue. Only a small proportion of food insecure households utilize food banks, which were the focus of several policy initiatives to respond to the unintended and immediate consequence of the COVID-19 pandemic.

It is broadly recognized that reducing household food insecurity at a population level requires policies that improve household incomes. Recent Canadian evidence shows that household food insecurity is sensitive to policies that increase economic security, such as the Canada Child Benefit. More research is needed to examine the impact of income supports on household food insecurity, and ultimately, health, including relief measures that were implemented during the COVID-19 pandemic.

There is a need for accessible, consistent data on household food insecurity to monitor the extent of the issue and to evaluate health and social policy responses. Since 2004, Statistics Canada has systematically monitored household food insecurity at the household level using the Household Food Security Survey Module (HFSSM) in the Canadian Community Health Survey (CCHS). Between 2015/2016 and 2021/2022, the HFSSM is included as 2-year themes in alternating biennial CCHS survey cycles. On the off cycles, it is optional content where the provinces and territories decide whether or not to collect the information for their jurisdiction. In BC, the health authorities and the Ministry of Health determine the optional content. In 2017/2018 and 2021/2022, HFSSM was 2-year theme content. In 2015/2016 and 2019/2020 when it was optional content, BC selected HFSSM for 2015/2016 but opted out for 2019/2020 in order to balance other data needs. Since 2019, food insecurity information has been collected in the Canadian Income Survey, an annual cross-sectional survey examining income and income sources of Canadians. More precise measurement of income will improve the monitoring and surveillance of one of the key drivers of household food insecurity and allow for evaluation of the impact of policies that improve economic security.

This report does not include analyses specific to Indigenous Peoples and recognizes limitations and gaps in data related to household food insecurity among Indigenous Peoples. It also acknowledges some of the limitations of income-based approaches to addressing the complex issue of food insecurity, particularly

within Indigenous contexts in which food security is inherently tied to food sovereignty and self-determination. Further work is required to better understand and centre Indigenous contexts and lived experiences in order to inform policies and programs to support food security for Indigenous Peoples in BC while respecting and upholding inherent rights.

Conclusion

This report is an update to the August 2016 *Priority health indicators for BC: Household food insecurity indicator report*. It includes household food insecurity data specific to BC from the 2017/2018 Canadian Community Health Survey, as well as data specific to concerns about food security during the COVID-19 pandemic. This report is part of BCCDC's commitment to ongoing monitoring and surveillance of household food insecurity in the province.

The data in this report demonstrate that household food insecurity continues to disproportionately affect people and households that are marginalized due to structural, social, economic and geographic inequities. The provincial rate of people living in households experiencing food insecurity is concerning given the known impacts of household food insecurity on health and wellbeing. The data and literature in this report are intended to increase understanding of the drivers of household food insecurity and inform evidence-based policy solutions that address the intersecting inequities at the root of household food insecurity.

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Appendix

95% Confidence Intervals (CI) for BC COVID-19 SPEAK Round 2 – 2021 data

Table 1

Food Security	%	95% CI
Food Secure	87.7	(87.1, 88.2)
Concern for food security	12.3	(11.8, 12.9)

Table 2 data for Figure 7

Health Authority	% with concern for food security	95% CI
Northern	15.5	(13.3, 17.7)
Vancouver Island	11.5	(10.8, 12.3)
Vancouver Coastal	11.1	(10.3, 11.9)
Fraser	12.9	(11.7, 14.1)
Interior	12.8	(11.9, 13.8)

Table 3 data for Figure 8

Health Service Delivery Area	% with concern for food security	95% CI
Central Vancouver Island	12.5	(11.0, 13.9)
East Kootenay	12.0	(9.6, 14.5)
Fraser East	13.9	(11.4, 16.4)
Fraser North	10.8	(9.6, 11.7)
Fraser South	14.3	(12.0, 16.6)
Kootenay Boundary	14.7	(11.9, 17.4)
North Shore/Coast Garibaldi	8.3	(7.4, 9.2)
North Vancouver Island	11.8	(9.8, 13.7)
Northeast	19.9	(15.2, 24.5)
Northern Interior	14.4	(11.3, 17.5)
Northwest	13.8	(9.5, 18.2)
Okanagan	11.9	(10.7, 13.1)
Richmond	16.0	(12.7, 19.3)
South Vancouver Island	10.8	(9.9, 11.7)
Thompson Cariboo Shuswap	14.1	(12.0, 16.1)
Vancouver	10.9	(9.9, 11.8)

Table 4 data for Figure 9

Community Health Service Area urban-rural classification	% with concern for food security	95% CI
Remote	16.9	(11.2, 22.6)
Rural	11.7	(10.7, 12.7)
Rural Hub	10.8	(9.6, 11.9)
Small Urban	12.2	(11.1, 13.4)
Medium Urban	11.7	(10.8, 12.6)
Large Urban	10.5	(9.7, 11.3)
Metropolitan	11.5	(10.9, 12.1)

Table 5 data for Figure 10

Race/Ethnicity	% with concern for food security	95% CI
White	10.0	(9.6, 10.3)
Chinese	12.4	(10.5, 14.3)
East and Southeast Asian (excluding Chinese)	14.3	(12.4, 16.3)
Arab and West Asian	16.0	(12.0, 20.0)
South Asian	17.8	(12.3, 23.2)
Latin American	18.2	(14.9, 21.5)
Black	19.9	(11.5, 28.2)
Other	21.4	(15.7, 27.1)

Table 6 data for Figure 11

Immigration Status	% with concern for food security	95% CI
Work or study permit	32.3	(22.2, 42.5)
Permanent resident	14.6	(12.0, 17.2)
No status or Refugee claimant	47.3	(19.4, 75.2)
Canadian citizen	12.0	(11.5, 12.5)

Table 7 data for Figure 12

Household Composition	% with concern for food security	95% CI
Unattached individual living alone	15.0	(13.8, 16.2)
Unattached individual living with others	27.4	(21.1, 33.6)
Individual living with spouse or partner	8.5	(8.0, 8.9)
Parent living with spouse or partner and child(ren) < 18yrs	11.3	(10.4, 12.2)
Single parent living with child(ren) < 18yrs	25.5	(20.1, 30.9)

Table 8 data for Figure 13

Age	% with concern for food security	95% CI
18-34	18.4	(17.3,19.5)
35-49	14.0	(12.9, 15.1)
50-64	10.7	(9.5, 11.9)
65-79	5.7	(5.0,6.4)
80 and over	4.1	(2.4, 5.8)

Table 9 data for Figure 14

Education	% with concern for food security	95% CI
Below high school	19.6	(13.9, 16.8)
High school	14.8	(13.8, 15.8)
Certificate or diploma below bachelor level	12.4	(11.9, 12.8)
University degree	6.3	(6.1, 6.6)

Table 10 data for Figure 15

Household Income	% with concern for food security	95% CI
<\$20K	40.7	(34.8, 45.7)
\$20K-\$59K	22.9	(21.2, 24.5)
\$60K-\$99K	11.7	(10.7, 12.6)
\$100K-\$139K	7.5	(6.8, 8.2)
>=\$140K	3.8	(3.3, 4.4)

Table 11 data for Figure 16

Employment Change (Length of time out of work)	% with concern for food security	95% CI
7 months or more	30.4	(28.4, 32.3)
4-6 months	21.0	(18.4, 23.5)
1-3 months	18.1	(16.4, 19.7)
Under 1 month	20.1	(17.5, 22.6)