Unemployment and Underemployment

EXAMINING THE SOCIETAL CONSEQUENCES

OF THE COVID-19 PANDEMIC



- BC's unemployment rate increased from 5.2% in February 2020 to 13.1% in May 2020, largely because of COVID-19 response measures. Unemployment declined between June and November 2020 with the partial lifting of these measures; but was still higher compared to the same months in 2019.
- Unemployment and underemployment can harm physical and mental health. As well, parental
 unemployment and underemployment are linked to lower levels of children's educational
 attainment and well-being.
- Women, temporary workers, informal economy, and non-white racialized workers have been disproportionately affected by COVID-19-related unemployment.

Situation

Response measures to the COVID-19 pandemic¹ included the temporary closure of non-essential services and restrictions on certain industries (e.g. dine-in services at pubs, bars and restaurants; travel/tourism restrictions)² that could not meet physical distancing and other safety requirements.¹ Essential services, such as grocery stores, were encouraged to stay open, and required to modify physical spaces to ensure that customers and staff interact safely.³.⁴ Many businesses were challenged by the changes required, and/or struggled to make enough revenue,⁵ and as a result, some businesses closed temporarily and some closed permanently.^{6,7}

Background

Unemployment rate is used to understand the health of economies. ¹³ It measures the share of workers in the labour force who do not currently have a job and are actively looking for work. ¹⁴ It does not include individuals who are retired, on a scheduled leave, or not looking for work. Underemployment rate is used to understand labour markets. ¹⁵ It measures the share of parttime workers who would prefer to be working full-time. ¹⁶

Prior to 2020, the highest unemployment rate recorded in Canada^{a,9,10} was 12% in 1983.¹⁰ Between March and September 2020, the number of Canadians who experienced long-term unemployment (unemployment for 6 months or more) increased by 107 per cent.⁸ In 2020, the Canadian unemployment rate reached a high of 13.7%¹¹ in May, and declined to 8.8% in December 2020.¹²

a Canada began to regularly collect unemployment data through the labour force survey in 1945.





Employment can improve people's physical and mental well-being, while being unemployed can have negative impacts on mental and physical health.¹⁷ Unemployed people have an elevated risk of: cancer, circulatory diseases, respiratory diseases, alcohol related diseases, accidents, and violence, compared to people who are employed.¹⁸ Unemployed people are also more likely than employed people to experience mental illness (e.g. depression, psychological distress),19 stress, boredom, high level of uncertainty, and less satisfaction with life.20 Similarly, unemployment has consequences for peoples' physical and mental health. 21,22,23,24 Parental unemployment 25,26,27,28 and underemployment²⁹ have effects on their children and youth as well. When compared to children of employed parents, children and youth with unemployed parents have lower self-esteem, higher school dropout rates, lower academic expectations, poorer health, and higher household food insecurity.

Many factors affect unemployment and underemployment rates, including: availability of jobs;³⁰ automation;³¹ quality of jobs (e.g. temporary, contract and term employment);^{32,33} level of education and training;³⁴ health;³⁵ and systemic discrimination and racism.^{36,37,38} COVID-19 response measures have impacted many of these factors. The temporary closure of nonessential services has reduced the number of jobs available,³⁹ as well as reduced hours and/ or wages.⁴⁰ The replacement of workers with technology (automation) has accelerated during COVID-19 measures, with increased reliance on technology to perform services,⁴¹ especially in low-wage occupations.^{42,43,44} The impacts of response measures on reduced access to postsecondary education^{45,46} and skills training programs⁴⁷ meant delayed or cancelled training for entering or moving within the workforce.

Forecasts for global economic recovery vary. 48,49,50 Within Canada, the Conference Board forecasted that BC will have the best economic performance in the 2020/21 fiscal year compared with other provinces, due to the continuation of major energy projects and fiscal stimulus programs. 1 However, travel restrictions will continue to impact the tourism and hospitality industry in BC. Systemic discrimination and racism, 2 and women's disproportionate responsibility for childcare, will affect the economic recovery of certain groups of people more than others (see Equity Considerations below, for further discussion of disproportionately impacted populations).

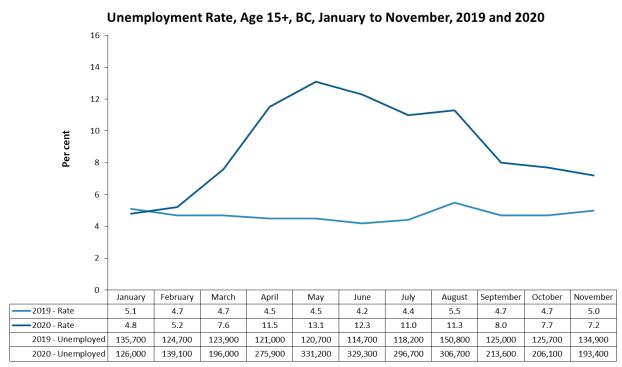
The First Nations Health Authority's Statement on the Societal Consequences of BC's COVID-19 Response

COVID-19 and the public health measures taken to respond to it have reinforced existing inequities and discrimination present in BC's health and wellness system. First Nations people in BC have been disproportionately affected by COVID-19. Data show that First Nations people in BC have tested positive for COVID-19 at a higher rate than other residents, have had lower median ages of hospitalization and have higher rates of admission to intensive care units and death from the virus. The impact of COVID-19 on social determinants such as housing, food security, education, and geography has had ripple effects on the health and wellness of First Nations in BC. This is evident in the significant increase in toxic drug deaths during the pandemic and the elevated rates of anxiety, depression, and grief

experienced by many First Nations people, which is further layered with intergenerational trauma and loss from past pandemics. Despite these challenges, First Nations people in BC have responded to the pandemic with strength and resilience that is grounded in culture and community. Families have found new ways to connect, support their communities and keep each other well. The First Nations Health Authority (FNHA) has worked quickly to expand virtual services, and proudly served as a partner to First Nations communities in BC to advance community priorities and ensure support and services have been available throughout the pandemic. The FNHA's full statement on the societal consequences of BC's COVID-19 response can be found at: www.fnha.ca/ Documents/FNHA-COVID-19-Statement.pdf.

Findings

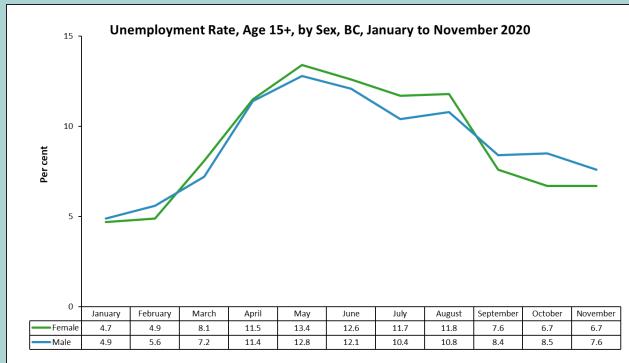
This section provides an overview of the unemployment and underemployment rates for BC before and after the declaration of a public health emergency in March 2020. Analyses of Statistics Canada's Labour Force Survey (LFS) shows differences in rates according to sex, age, and educational attainment. Analyses of BC's 2020 COVID-19 SPEAK Survey data indicate that the pandemic has affected racialized groups' unemployment experiences differently. SPEAK Survey analyses by sex and gender are forthcoming and will be included in future reports.



Notes: Estimates are percentages, rounded to the nearest tenth. Unemployment is based on the number of persons who, during the reference week, were without work, had looked for work in the past four weeks, and were available for work. Those persons on layoff or who had a new job to start in four weeks or less are considered unemployed. These rates are seasonally unadjusted.

Source: Statistics Canada, Labour Force Survey (LFS), Table 14-10-0287-02 Labour force characteristics. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, January 2021.

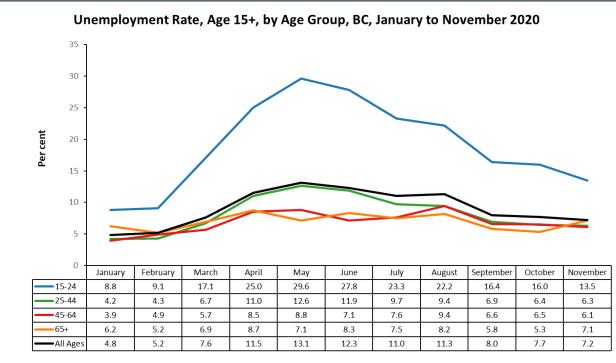
Figure 1 shows that the unemployment rate in BC for people 15 years and older increased from 5.2% in February to 13.1% in May 2020. It decreased to 7.2% in November as a result of the partial lifting of public health measures. Overall, the unemployment rate was higher between February and November 2020, compared to the same months for 2019.



Note: Estimates are percentages, rounded to the nearest tenth. Unemployment is based on the number of persons who, during the reference week, were without work, had looked for work in the past four weeks, and were available for work. Those persons on layoff or who had a new job to start in four weeks or less are considered unemployed. These rates are seasonally unadjusted.

Source: Statistics Canada, Labour Force Survey (LFS), Table 14-10-0017-01 Labour force characteristics. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, January 2021.

Figure 2 shows the unemployment rates in BC by sex from January to November 2020. Although the unemployment rates between males and females remained close during this time-period, the rate for females exceeded that of males' between March and August 2020. By September 2020 however, the unemployment rate for women returned to being lower than the unemployment rate for men.

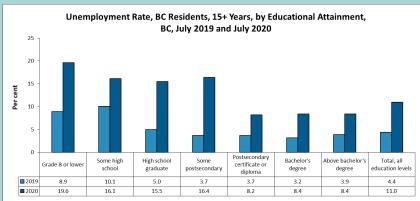


Note: Estimates are percentages, rounded to the nearest tenth. Unemployment is based on the number of persons who, during the reference week, were without work, had looked for work in the past four weeks, and were available for work. Those persons on layoff or who had a new job to start in four weeks or less are considered unemployed. These rates are seasonally unadjusted.

Source: Statistics Canada, Labour Force Survey (LFS), Table 14-10-0017-01 Labour force characteristics. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, January 2021.

Figure 3 shows the unemployment rates in BC from January to November 2020, by age group. Between February and May 2020, the unemployment rate of young adults (age 15-24) more than tripled (from 9.1% to 29.6%). During the same time-period, it almost tripled for individuals aged 25-44 (from 4.3% to 12.6%). Although unemployment rates decreased for all age groups between May 2020 and November 2020, they were still higher in November 2020 than they were in the two months leading up to the pandemic.

FIGURE 4

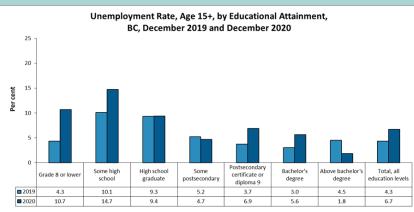


Educational Attainment

Note: The category of Postsecondary Certificate or Diploma identifies those who completed any certificate or diploma from an educational institution beyond the secondary level but below a Bachelor's degree obtained at a university. The category of "Some Postsecondary" includes those who worked towards a "Postsecondary certificate or Diploma". Unemployment is based on the number of persons who were without work, had looked for work in the past four weeks, and were available for work. Those persons on layoff or who had a new job to start in four weeks or less are considered unemployed. These rates are seasonally unadjusted. The rates are not additive since they represent unemployment rates calculated independently for those who are unemployed with the reported level of educational attainment.

Source: Statistics Canada, Labour Force Survey (LFS), Table 14-10-0019-01 Labour force characteristics by educational attainment. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, August 2020.

FIGURE 5

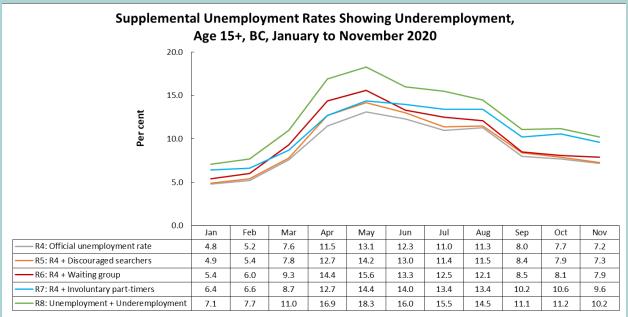


Educational Attainment

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Source: Statistics Canada, Labour Force Survey (LFS), Table 14-10-0019-01 Labour force characteristics by educational attainment. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, January 2021.

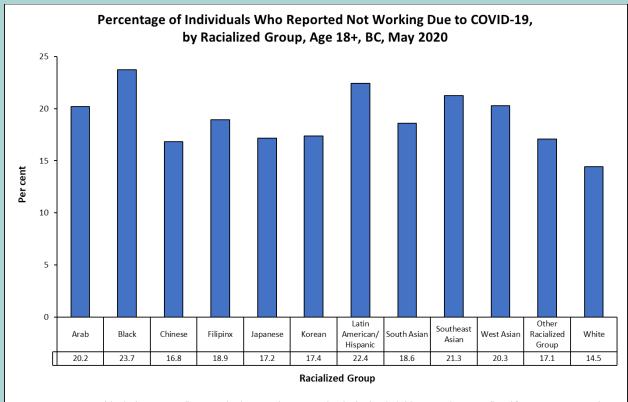
Figures 4 and 5 show the unemployment rates in BC, by educational attainment, in July 2019 and 2020, and December 2019 and 2020, respectively. Overall, these figures showed similar patterns in July and December, in which unemployment rates were higher in 2020 than in 2019. In July (Figure 4), the increase in the unemployment rate from July 2019 to 2020 was largest among individuals whose highest educational attainment was high school and some postsecondary education.



Notes: R5 to R8 are supplemental unemployment rates, meant to be compared to the official employment rate (R4). Discouraged searchers are people who wanted and were available to take work but who did not look for a job because they believed none was available. Waiting group includes those who are not searching for work but are waiting for employment (e.g. waiting to be recalled from a previous employer, have applied for a job and are waiting for replies, or have lined up a job to start in five weeks or more). Involuntary part-time workers do not include those who work full-time hours between two jobs nor part-timers who are only partially utilized in the labour market. Rate R8 provides a single measure of labour underutilization, including all of the groups in the preceding three rates (R5-R7).

Source: Statistics Canada. Table 14-10-0077-01 Supplementary unemployment rates, monthly, unadjusted for seasonality. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, January 2021.

Figure 6 shows the unemployment, as well as combined unemployment and underemployment rates in BC, from January to November 2020. Between February and May 2020, the combined underemployment and unemployment rate increased from 11.0% in March 2020 to a high of 18.3% in May 2020. Although the underemployment and unemployment rates declined between June and November 2020, they remained higher in November 2020 than they were in the two months leading up to the pandemic.



Notes: Responses were weighted using 2016 Canadian Census data by geography, age, sex, education level, and ethnicity. Survey data were collected from May 12-31, 2020. The Project team reports on race-based disaggregated demographic data to reveal inequitable outcomes between racialized groups that result from many factors, including historic and current systemic discrimination and racism. Respondents who selected more than one group were counted in each selected group, so percentages do not add up to 100%.

Source: BC COVID-19 SPEAK, 2020. Prepared by: BC COVID-19 SPEAK Analysis Group; Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, September 2021.

Figure 7 shows the percentage of respondents to the 2020 BC COVID-19 SPEAK Survey who reported that they are not currently working due to COVID-19, by racialized group. At the time of survey completion in May 2020, higher proportions of non-white racialized respondents reported that they are not currently working due to COVID-19, than white (European descent) respondents. The difference between non-white racialized groups and the white group was largest among British Columbians who reported being Black (23.7%), Latin American/Hispanic (22.4%), Southeast Asian (21.3%), West Asian (20.3%), and Arab (20.2%).

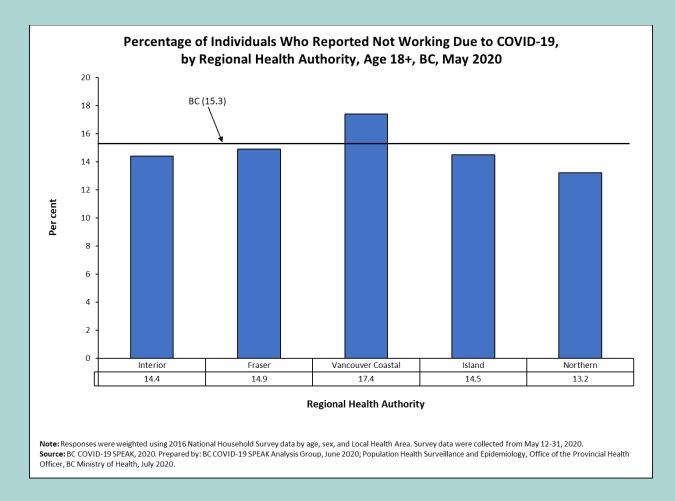


Figure 8 shows the percentage of respondents to the 2020 BC COVID-19 SPEAK Survey who reported that they are not currently working due to COVID-19, by health region. At the time of survey completion (May 2020), 15.3% of respondents reported that they are not currently working due to COVID-19. While 17.4% of respondents from the Vancouver Coastal health region reported not working due to COVID-19, 13.2% of respondents from the Northern health region reported not working due to COVID-19.

Equity Considerations

Unemployment disproportionately affects health and wellness based on gender, age, education level, type of employment, and race.

During COVID-19, some groups of people have been disproportionately impacted by job loss.

Systemic discrimination has been defined as "practices or attitudes that have, whether by design or impact, the effect of limiting an individual's or a group's right to the opportunities generally available because of attributed rather than actual characteristics."⁷⁹

Indications that systemic discrimination may be happening in employment, include inequitable employment outcomes and/or different experiences between groups of people; non-inclusive policies, practices, and decision-making processes; and non-inclusive organizational cultures.⁸⁰

Women: COVID-19 response measures have disproportionately impacted women's employment, 39,40,55,56,57 and economists have described this phenomenon as a "shecession."58,59 A national survey in Canada found that more women (11%) reported losing their job as a result of COVID-19 response measures than men (6%).56 It also found that one-third of women respondents considered guitting their jobs to take care of home responsibilities, including child care, compared to 20% of men.56 Some women with children also stopped looking for work or withdrew from the workforce, because they were not the higher household income earner. 60 Similarly, some women reduced their hours to look after their children, 55,57 because their partner earns more.⁶¹ This widening of the gender gap among parents^{55,57} has raised concerns about the longterm impacts on gender equality in employment, and drawn attention to the importance of an equitable recovery. 53,54,61

Young adults: COVID-19 response measures have also disproportionately impacted youth employment. Et al. 2020, The unemployment rate in Canada for non-student youth reached 25.1% in May 2020, compared to 9.8% in May 2019. Similarly, the unemployment rate in Canada for student youth (looking for summer employment) was 40.3% in May 2020, compared to 13.8% in May 2019.

Workers in less secure jobs: Unemployment due to COVID-19 response measures has had a greater impact on workers in less secure jobs and lower quality jobs in Canada. The number of employees in temporary jobs decreased by 14.5% (274,900 jobs) in March 2020. This decrease was observed across all types of temporary work, with the greatest decrease in casual employment (decrease of 23.5% or 136,000 jobs). Individuals employed in accommodation and food services; information, culture and recreation; and some education services, were more likely to lose their jobs than individuals employed in other industries.⁶³

Informal economy workers: Globally, the COVID-19 pandemic is presenting significant impacts in terms of unemployment and underemployment for informal workers. b,64,65,66 In Canada, informal economy workers are not captured in the Labour Force Survey, but they are likely to have experienced significant declines in the availability of work and income as a result of COVID-19 response measures. 53,67 In 2007, a study found that only 32% of unemployed women are eligible for Employment Insurance compared to 40% of men because women are more likely than men to be employed in part-time or non-standard work due to child care demands. 54,68

b Informal employment includes paid work that is "not registered, regulated, or protected by existing legal or regulatory frameworks" as well as unpaid work. Informal workers do not have secure employment contracts, workers' benefits, social protection or workers' representation. Examples include domestic workers, sex workers, undocumented workers, panhandlers, waste-pickers ("binners"), and casual (day) labourers.

Visible Minorities^c: In July 2020, the national unemployment rates for South Asian, Arab, and Black respondents were 17.8%, 17.3%, and 16.8% respectively, compared to 9.3% for whites/ Caucasian respondents.⁶⁹ Visible minority women: In July 2020, the national unemployment rate for south Asian women (20.4%) was significantly higher than the unemployment rate for South Asian men (15.4%).⁶⁹ Black women were also more likely to be unemployed than Black men (18.6% vs 15.1%).⁶⁹ As shown in Figure 7, in May 2020, in BC, higher proportions of non-white racialized respondents reported that they are not currently working due to COVID-19, than white (European descent) respondents.

Indigenous Peoples and Reconciliation

For many Indigenous (First Nations, Métis, and Inuit) individuals and communities, the challenges of public health restrictions added a layer to the cumulative barriers and stresses faced everyday as a result of colonialism, inter-generational trauma, manufactured poverty, and pervasive discrimination. Governments and employment sectors must work in meaningful partnership with Indigenous Peoples to arrest structural racism and white supremacy to ensure equitable economic recovery after the pandemic.

Actions Initiated or Planned to Address Unintended Consequences

This list provides examples of actions taken or initiated and is not a comprehensive list. Readers are encouraged to visit the websites of ministries involved in this work to find the latest information.

To mitigate the consequences of unemployment the Province of BC continued and/or implemented business supports and financial aid packages. These included (but are not limited to):

- The Emergency Benefit for Workers (a \$1,000 taxfree, one time benefit available to BC residents).
- The BC Temporary Rental Supplement (BC-TRS) Program (provides up to \$500 a month to help renters and landlords during COVID-19 for lowand moderate-income renters).
- The BC Rental Assistance Program (RAP)
 (assistance with monthly rent payments for eligible low-income working families).⁷²
- A ban on evictions for non-payment of rent between March 18 and August 17, 2020 and the related Rent Repayment Plan to give tenants a reasonable timeframe to pay landlords any back payments due for rent for March 18 to August 17, 2020.⁷³

Additional supports implemented by the Canadian Government for individuals, businesses, sectors and organizations included:

- The Canada Emergency Response Benefit [CERB] (\$500 a week for workers who stopped working because of COVID-19),⁷⁴ and the subsequent enhanced Employment Insurance (EI) program⁷⁵ and new Canada Recovery Benefit for workers who are not eligible for EI (e.g., self-employed individuals and people working in the gig economy).⁷⁵
- The Canada Recovery Sickness Benefit and Canada Recovery Caregiving Benefit which provide monetary support for workers who are sick or must self-isolate; or are caring for a child, a family member with a disability, or a dependent for reasons related to COVID-19, will also be available from September 27, 2020 for one year.⁷⁵

c This report recognizes that The United Nations Committee on the Elimination of Racial Discrimination called on Canada to "reflect further" on the use of the term "visible minorities." The term "visible minorities" is used in this section of the report for consistency with the data source referenced: Statistics Canada's Labour Force Survey.

Considerations for Further Action

This section provides considerations for action based on the findings of this report. These are not formal recommendations, but rather ideas to consider when shaping recommendations and actions related to this topic.

Individuals who are unemployed for a longer time are less likely to successfully transition back into employment, but economists are optimistic that the uniqueness of this period of high unemployment due to COVID-19 may ease the barriers that longer-term unemployed individuals typically face when transitioning back to employment.⁸ The following considerations for action are offered both to assist with the severity and impact of underemployment and unemployment as the pandemic continues, as well as to help the province adapt once response measures are no longer in effect.

 Incorporate an equity lens into all recovery and employment/stimulus activities, to recognize that extra measures and/or policies or programs may be needed to support some of the most vulnerable groups (e.g., informal workers) and the groups who have been disproportionately impacted (e.g., women, racialized groups)

- 2. Adapt post-secondary training programs to provide students with the education and skills required to work in occupations that are indemand in a post-COVID-19 economy. ⁷⁶ Such programs can be helpful for new workers, as well as workers who are looking for new jobs because they lost their old jobs to automation or the permanent closure of businesses.
- Plan for economic recovery that focuses on fixing the causes of inequitable employment outcomes (e.g., systemic discrimination and racism, and differential gender roles^{53,54,77}).
- 4. Ensure that schools, daycares and other childcare programs are open and affordable, in a consistent, reliable manner, and are able to facilitate parents' return to full employment, particularly for women.⁷⁸
- Evaluate the short- and long-term impact of CERB and the revised El program to monitor the implications for health and wellness, and potential broader societal benefits.

Appendix A: Data methodology notes

1. Charts provided by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer.

For questions contact: <u>HLTH.PHSE@gov.bc.ca</u>.

2. Definitions for the terms used in the Statistics Canada Labour Force Survey:

- a. Labour Force: Number of civilian, non-institutionalized persons 15 years of age and over who, during the reference week, were employed or unemployed. Estimates in thousands, rounded to the nearest hundred.
- b. Part-time employment: Persons who usually work less than 30 hours per week at their main or only job. Estimates in thousands, rounded to the nearest hundred.
- c. Population: Number of persons of working age, 15 years and over. Estimates in thousands, rounded to the nearest hundred.
- d. Seasonally adjusted: Fluctuations in economic time series are caused by seasonal, cyclical, and irregular movements. A seasonally adjusted series is one from which seasonal movements have been eliminated. Seasonal movements are defined as those which are caused by regular annual events such as climate, holidays, vacation periods and cycles related to crops, production and retail sales associated with Christmas and Easter. The data in this report have not been seasonally adjusted.
- e. Unemployment: Number of persons who, during the reference week, were without work, had looked for work in the past four weeks, and were available for work. Those persons on layoff or who had a new job to start in four weeks or less are considered unemployed. Estimates in thousands, rounded to the nearest hundred.
- f. Unemployment rate: The unemployment rate is the number of unemployed persons expressed as a percentage of the labour force. The unemployment rate for a particular group (age, sex, marital status, etc.) is the number unemployed in that group expressed as a percentage of the labour force for that group. Estimates are percentages, rounded to the nearest tenth.
- g. Underemployment measures: Although the official rate of unemployment is a key indicator of job conditions, no single measure can capture the complexity of the labour market. For this reason, supplementary measures of unemployment have been developed to shed further light on the degree of labour market slack and the extent of hardship associated with joblessness. For more information, please see the summer 1999 issue of the Labour Force Update (catalogue 71-005-XPB), which presents supplementary measures of unemployment.
 - R4 is the official unemployment rate.
 - R5 is the first of the rates to factor-in people not normally included among the unemployed.
 Along with the unemployed, this rate also includes discouraged searchers. They are people who wanted and were available to take work but who did not look for a job because they believed none was available. This definition has changed and as a result, R5 is only available from 1997 onwards.
 - R6 includes those considered on the margins of the labour force, that is, those who are not searching for work but are available for work and are waiting for employment. They are either waiting to be recalled from a previous employer, or they have applied for a job and are waiting for replies. Also included are those who have lined up a job to start in five weeks or more. These people have a much higher likelihood of being in the labour force in the future than others not in the labour force.

- R7 adds a portion of those who are involuntary part-time workers to the official unemployed.
 There are two adjustments made to the number of involuntary part-timers to derive the
 portion used in R7. Firstly, involuntary part-timers who have a second job and work full-time
 hours between both jobs are excluded. Secondly, a large number of involuntary part-timers
 are removed because each involuntary part-timer is only partially utilized in the labour
 market.
- R8 is the most comprehensive and therefore, highest of the supplementary rates as it
 includes all of the groups in the preceding three rates. As such, R8 provides a single
 measure of labour underutilization. Included in this rate are the discouraged searchers, those
 waiting for recall, replies, long-term future starts and the underutilized portion of involuntary
 part-timers.
- h. Additional notes: To ensure respondent confidentiality, estimates below a certain threshold are suppressed. For British Columbia, suppression is applied to all data below 1,500.

3. BC COVID-19 SPEAK Survey

Survey administration details: The BC COVID-19 SPEAK Survey was primarily an online survey administered from May 12, 2020 to May 31, 2020 across British Columbia. A call centre was also created to support individuals who wished to take the survey with assistance. The survey was available in English and Simplified Chinese (online), with language guides in downloadable electronic format available for 9 other languages (Arabic, American Sign Language, Farsi, French, Korean, Punjabi, Spanish, Traditional Chinese and Vietnamese). All other languages were available through the call centre from PHSA Provincial Language Services. The BC COVID-19 SPEAK Survey was funded by the BCCDC Foundation for Public Health.

Sampling details: The target population for the survey was residents of British Columbia who were 18 years of age or older. In order to achieve a large and representative sample, a response target of 2% of the urban population and 4% for rural/remote communities were set as determined by the Community Health Service Area (CHSA) density designation. Targets were also established for age, gender, income, education and ethnicity by each geographic area. Progress towards these targets was monitored daily and purposeful promotion and stakeholder outreach was done in order to better reach certain geographies and population demographics. Population targets were surpassed for each Regional Health Authority. However, not all sub-regions or demographic groups by geography did reach their target. Specifically, rural communities, populations with lower education, lower incomes, and some visible minorities were less reached and were prioritized for outreach. The final analytical dataset, which only included surveys where a Health Service Delivery Area geography, age, and gender were assigned and where the respondent must have completed at least 33% of the survey, contained 394,382 responses.

Weighting details: Statistical weighting is often used in large surveys to ensure that the sample of collected responses reflects the overall target population. This type of weighting compensates for the fact that certain demographics are less likely to respond to a survey. By establishing detailed sociodemographic targets at the outset for each geographic area of interest within the survey area, it allowed for more focussed participant recruitment with the ultimate benefit of applying smaller weights. The final BC COVID-19 SPEAK Survey sample was weighted using 2016 Canadian Census data by geography (HSDA, LHA, and CHSA) for age, sex, education level, and ethnicity to account for residual differences in sample demographics and to ensure that the sample is as representative as possible of the overall geographic population that is being reported on.

Limitations: BC COVID-19 SPEAK Survey is a non-randomized voluntary survey subject to self selection bias among those who choose to respond to the survey. To adjust the sample to the population and enhance representativeness, quota-based sampling by geography and post collection weighting are used. Correction for unknown population characteristics is not possible. This limitation is not unique to non-randomized surveys as self selection bias is apparent in voluntary randomized surveys as well where a significant proportion of those offered to take a survey choose not to participate. Despite attempts for outreach to underrepresented communities and statistical weighting and the creation of multiple points of access, this survey may be limited in its ability to fully reflect the experiences of members of communities unable to complete the survey due to language or access barriers.

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