

Report

Report 4: COVID-19 Canadian Insurance Industry Monthly Aggregate Data Analysis

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Introduction

The Canadian Institute of Actuaries (CIA) and its members are making important contributions to research and analysis of the impact and implications of the COVID-19 pandemic.

One area of interest and importance to many actuaries is the impact of COVID-19 on the life insurance industry in Canada. In April 2020, the CIA and representatives of a number of Canadian life insurance companies agreed to a program of data collection and analysis in order to answer key questions, including:

- Is the overall level of life insurance claims during the pandemic different from previous years?
- Is COVID-19 a significant cause of death for insurance claims in Canada?

The CIA is supporting this analysis by collecting aggregate data from Canadian life insurance companies. The data collected include data on exposure, total insurance claims, and claims related to COVID-19 at an aggregate level monthly, covering both individual and group lines of business.

An [initial report](#) was published on October 26, 2020. A [second report](#) with additional data collected up to the end of September 2020 was published on February 23, 2021, and a [third report](#) including data up to the end of December 2020 was published on June 22, 2021.

This report, the fourth report in the series, includes data up to the end of May 2021.

CIA data collection with Canadian life insurance companies

- Participating companies: Canada Life, Manulife, Sun Life, The Co-operators, Foresters, RBC, SSQ, Industrial Alliance, Assumption Life, Equitable Life, Humania Assurance, La Capitale, Wawanesa Mutual Insurance Company
- Timeline: January 2019 to May 2021 – aggregate data are submitted monthly
- Number of companies for this analysis:
 - Individual: 13
 - Group: 11

A few key points to note in the data collected:

- The majority of companies report claims as of actual date of death.
- Specifically, 11 companies reported individual data according to the **actual** date of death; only two reported according to the **reported** date of death.
- Although this reporting based on actual date of death results in changes in reporting of claims by month as more data are reported, it provides a better analysis of the impact of the pandemic over time.

The following tables show the split of companies and exposure (by count and amount in \$millions of sum insured) reporting according to actual date of death vs. reported date of death.

Table 1

Individual	Data type	Number of companies	Total exposure by count	% of total exposure	Total exposure by amount (\$mil)	% of total exposure
2019	Actual	11	9,215,299	74.7%	\$1,536,390	69.6%
	Reported	2	3,119,109	25.3%	\$672,211	30.4%
	Total	13	12,334,408	100.0%	\$2,208,601	100.0%
2020	Actual	11	9,318,358	75.1%	\$1,636,951	70.2%
	Reported	2	3,096,419	24.9%	\$696,250	29.8%
	Total	13	12,414,777	100.0%	\$2,333,201	100.0%
2021	Actual	11	9,560,914	75.6%	\$1,740,659	70.7%
	Reported	2	3,079,905	24.4%	\$720,093	29.3%
	Total	13	12,640,819	100.0%	\$2,460,752	100.0%

Table 2

Group	Data type	Number of companies	Total exposure by count	% of total exposure	Total exposure by amount (\$mil)	% of total exposure
2019	Actual	10	7,899,417	97.8%	\$725,063	98.0%
	Reported	1	177,919	2.2%	\$14,524	2.0%
	Total	11	8,077,336	100.0%	\$739,586	100.0%
2020	Actual	10	7,770,259	97.7%	\$730,545	98.0%
	Reported	1	180,497	2.3%	\$14,673	2.0%
	Total	11	7,950,756	100.0%	\$745,218	100.0%
2021	Actual	10	7,673,173	97.7%	\$716,739	98.0%
	Reported	1	177,905	2.3%	\$14,625	2.0%
	Total	11	7,851,078	100.0%	\$731,364	100.0%

Although cause of death is not consistently collected by life insurance companies in Canada, most of the companies have been able to provide data on COVID-related deaths. Of the companies providing data on individual claims, 12 reported COVID-related claims separate from other claims.

Context and general population statistics

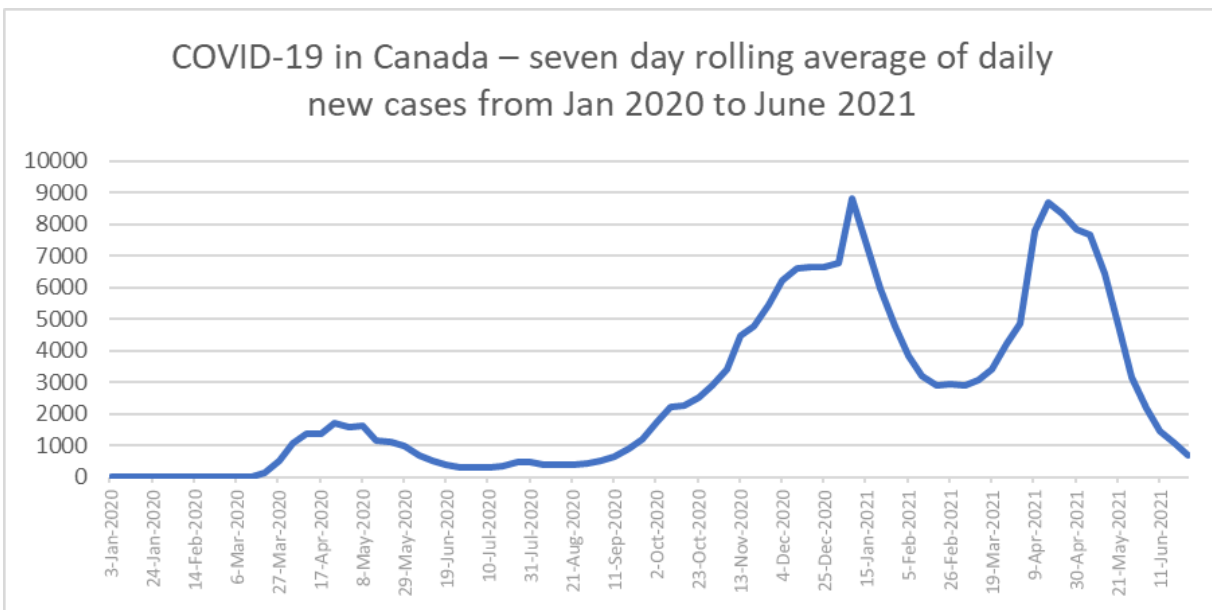
In the 16 months from March 2020 to May 2021, Canada experienced three distinct waves of COVID-19 infections and deaths. The pattern of these three waves is shown in the graphs below. The [first graph](#) shows a rolling seven day average new COVID-19 cases and the [second graph shows](#) excess deaths in the Canadian population as reported by Statistics Canada (source: Provisional death counts and excess mortality, January 2020 to June 2021).

The first wave peaked in early May 2020 and although lower than the two subsequent waves in terms of new cases, this was the highest wave in terms of excess deaths in the general population.

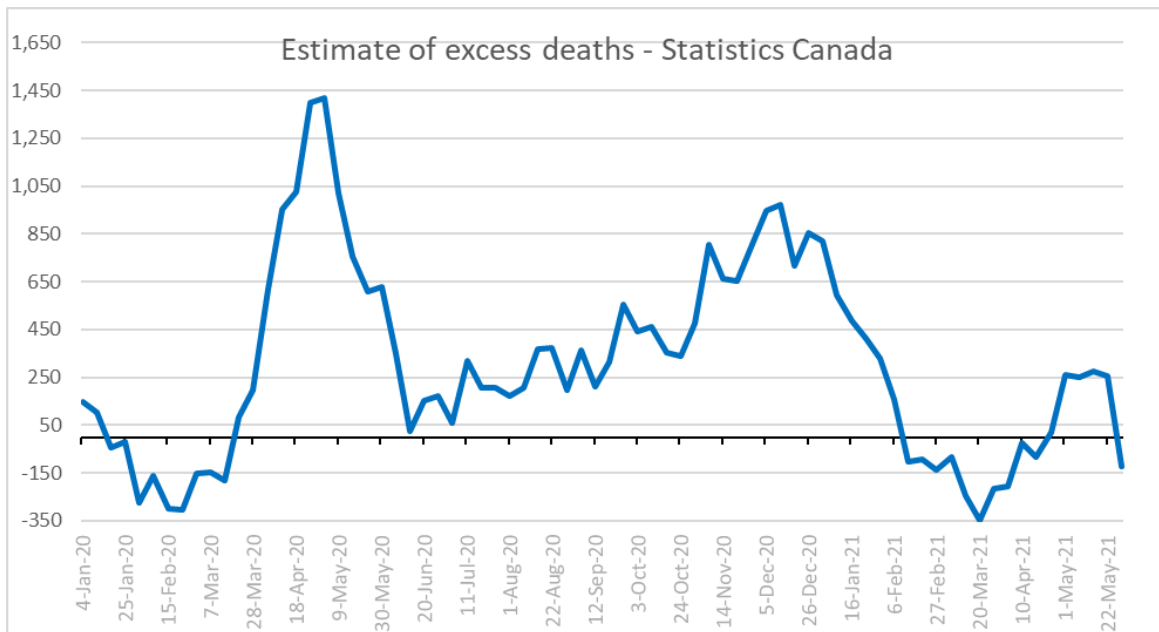
The second wave was more prolonged in overall duration, building up in the later months of 2020 and peaking in January 2021.

During the third wave, which reached its peak in terms of new cases in late April 2021, the overall excess deaths in the Canadian population were lower. This may be due, at least in part, to the early impact of the rollout of vaccines in the country.

Graph 1 – Source: Worldometer

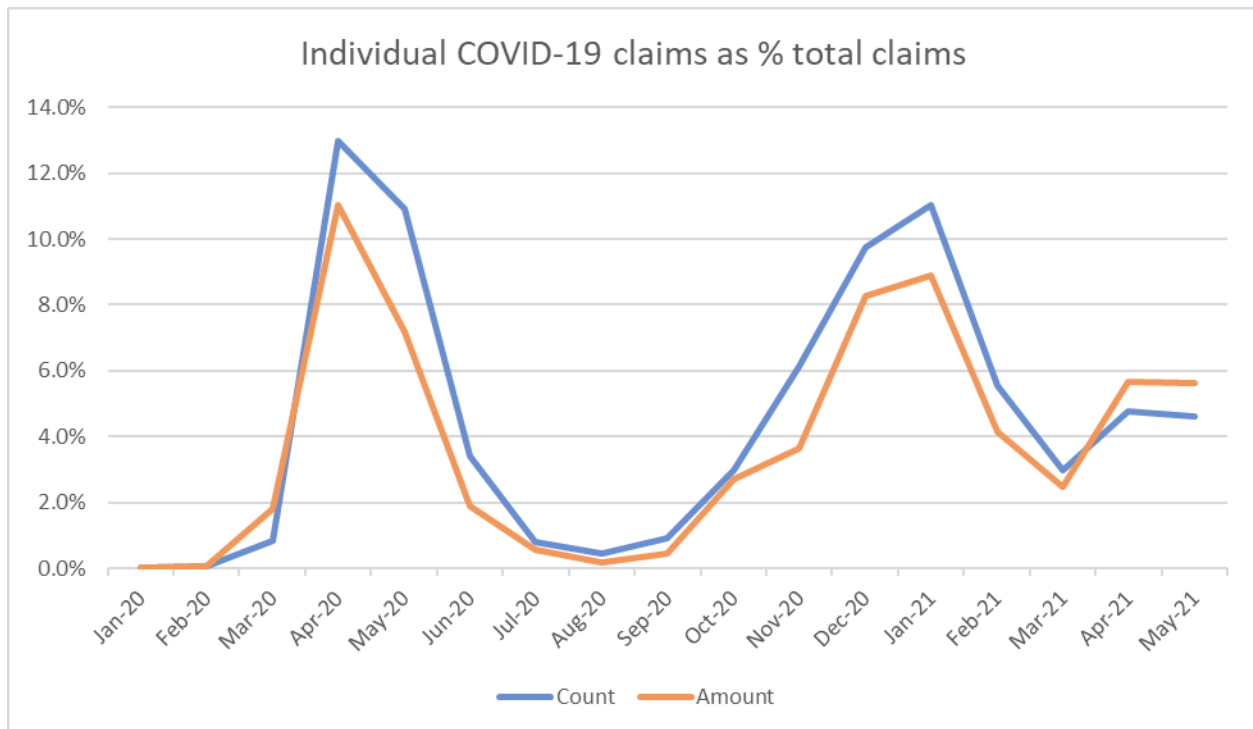


Graph 2 – Source: Statistics Canada



Main findings (individual)

Although not all companies were able to capture cause of death, there were a total of 3,244 reported individual claims identified with COVID-19 as cause of death in 2020, and a further 1,678 reported from January 2021 to May 2021. As shown in Graph 3 below, COVID-19 individual claims as a percentage of total claims peaked in April 2020, but the second wave of COVID-19 also had a significant impact on individual life insurance claims. At the peak of the second wave in January 2021, individual life insurance claims due to COVID-19 reached 11% of total claims by count and 9% of total claims by amount – second only to April 2020 in terms of COVID-19 impact on claims.

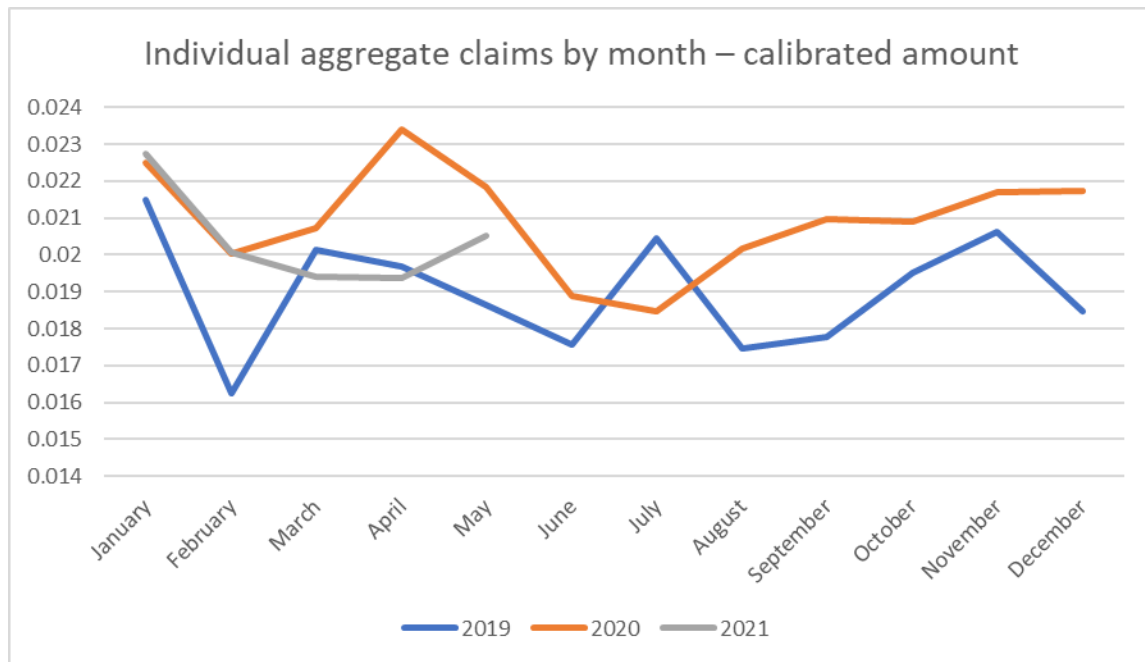
Graph 3 – Source: CIA monthly aggregate data collection

Even though very few claims were identified as due to COVID-19 in January to March 2020, aggregate individual insurance claims amounts exceeded the comparable monthly equivalent amounts in 2019 in those same months. It is conceivable that life insurance claims in the early months of 2020 were impacted by COVID-19 even though the specific cause of death was not recorded.

In order to ensure greater comparability, the total monthly aggregate claims amounts were calibrated by dividing each month's claims amount by the total exposure as reported at the start of the year of those claims. The month-by-month pattern of claims after calibration is shown in Graph 4 (the month-by-month pattern of claims before calibration is shown in the graph in Appendix A for reference). After calibrating the individual claims to exposure at start of year, monthly claims 2020 exceeded 0.02% in every month other than two summer months of June and July.

The monthly aggregate individual insurance claims in all but one of the months in 2020 exceeded the comparable monthly aggregate amounts for the same months in 2019 (every month except July – a point in the year when the impact of the pandemic was relatively limited).

January and February 2021 total monthly aggregate individual insurance claims followed a similar pattern to the early months in 2020, with claims elevated over the same level in 2019. However, as the second wave of COVID-19 in Canada receded, the pattern of individual insurance claims dipped to a level more consistent with what was seen in 2019. Consistent with pattern of excess deaths in the population in total, individual insurance claims increased in May 2021, but still remained below the elevated level seen in 2020.

Graph 4 – Source: CIA Monthly Aggregate Data Collection**Main findings (group)**

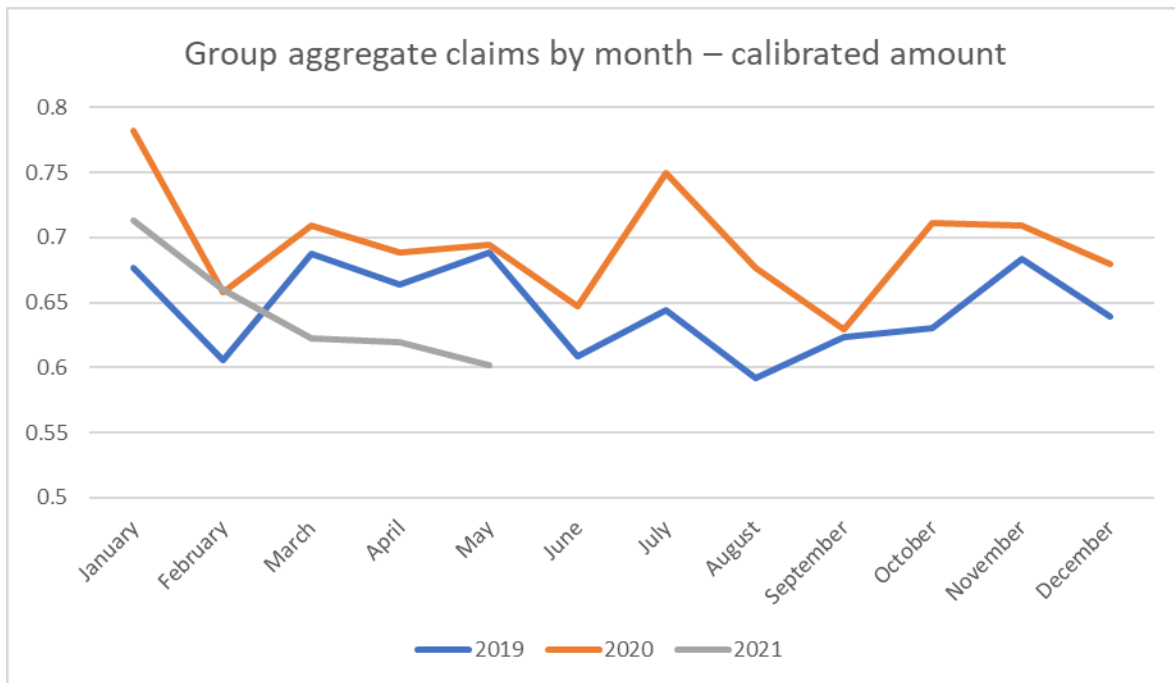
Different from the outcome in individual life insurance claims, group claims in 2020 and 2021 did not follow as closely the notable waves within the general population statistics.

Graph 5 below shows the pattern of monthly aggregate group claims from January 2019 to May 2021 calibrated by dividing the claims by total aggregate premium. Although aggregate monthly group claims (after calibration) in January and February 2020 were higher than aggregate monthly group claims in January and February 2019, this was unlikely to be as a result of COVID-19 claims.

The second half of 2020 showed a more persistent pattern of elevated claims as the second wave impacted Canadians. Aggregate monthly group claims divided by total aggregate premium in the six months from July 2020 to December 2020 were on average 9% higher than during the same months in 2019.

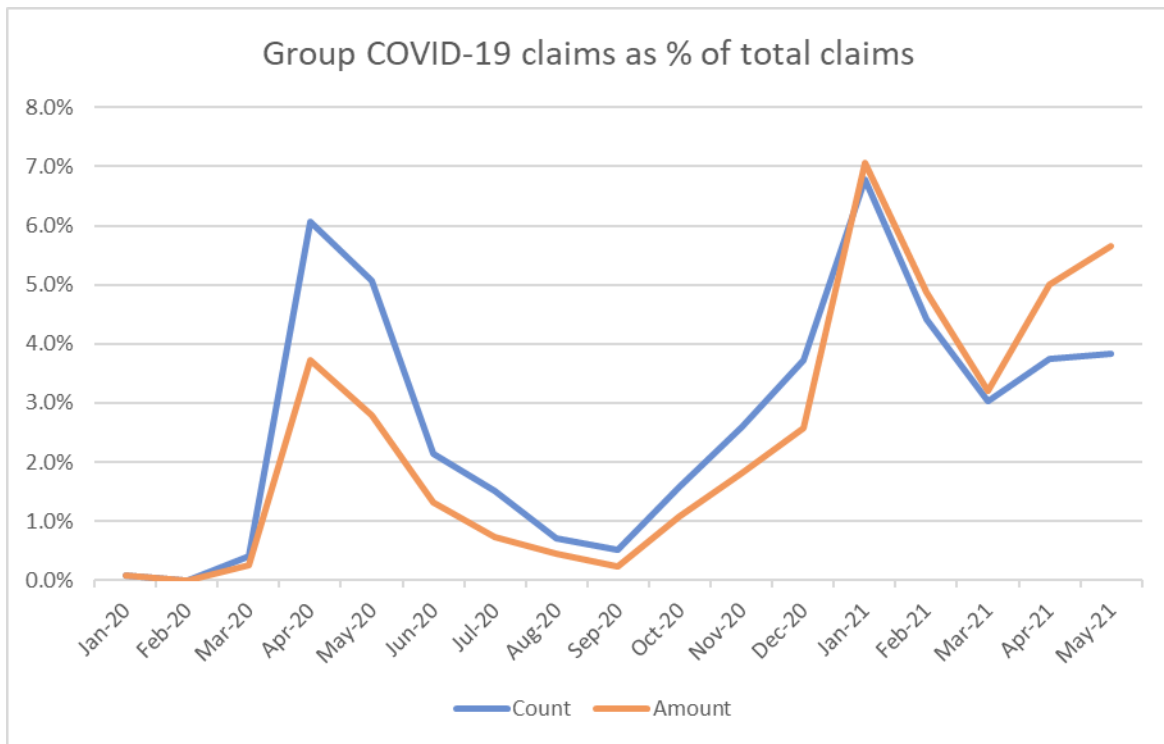
Monthly aggregate group claims divided by monthly aggregate premium in March, April, and May 2021 were lower than the level of claims seen in the same period in both 2020 and 2019. However, given the lag in reporting of some claims, it is reasonable to assume that the level of claims in these months will increase as additional claims are reported.

Graph 5 – Source: CIA Monthly Aggregate Data Collection



Looking at claims by cause for group shown in Graph 6 below, when compared to individual there were a smaller number of claims identified as due to COVID-19 (804 claims in 2020 and 690 claims in the period from January to May 2021). As a percentage of total group claims by count, COVID-19 claims reached highest levels of 6.1% in April 2020 and 6.8% in January 2021.

Graph 6 – Source: CIA Monthly Aggregate Data Collection



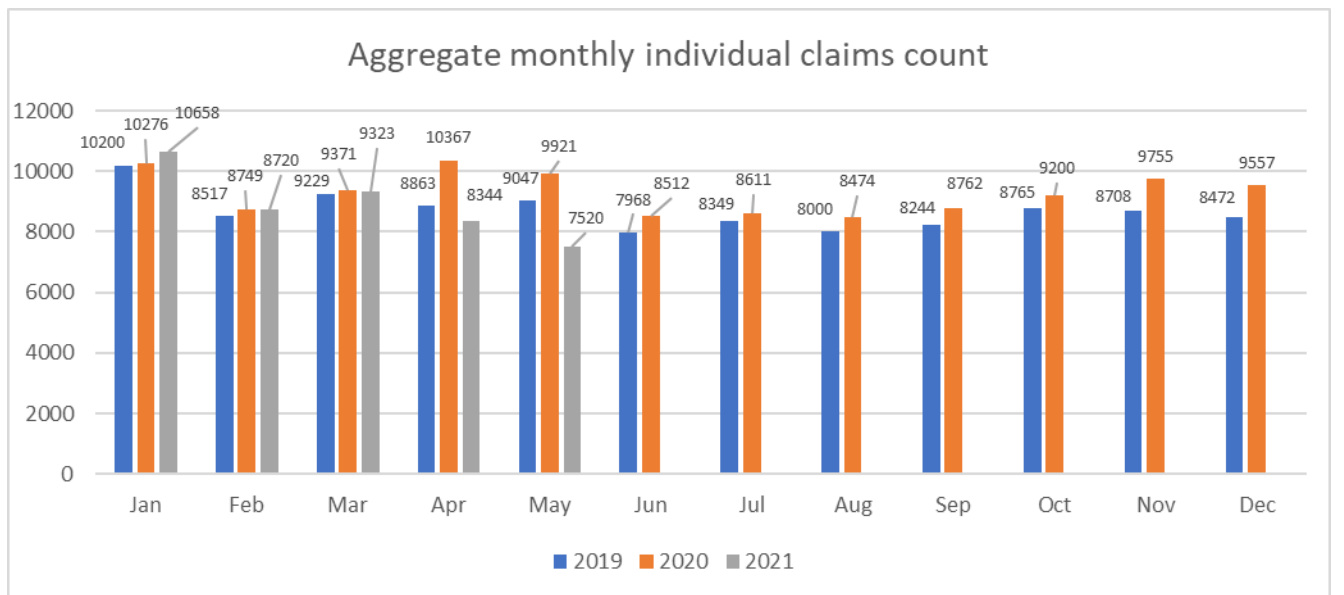
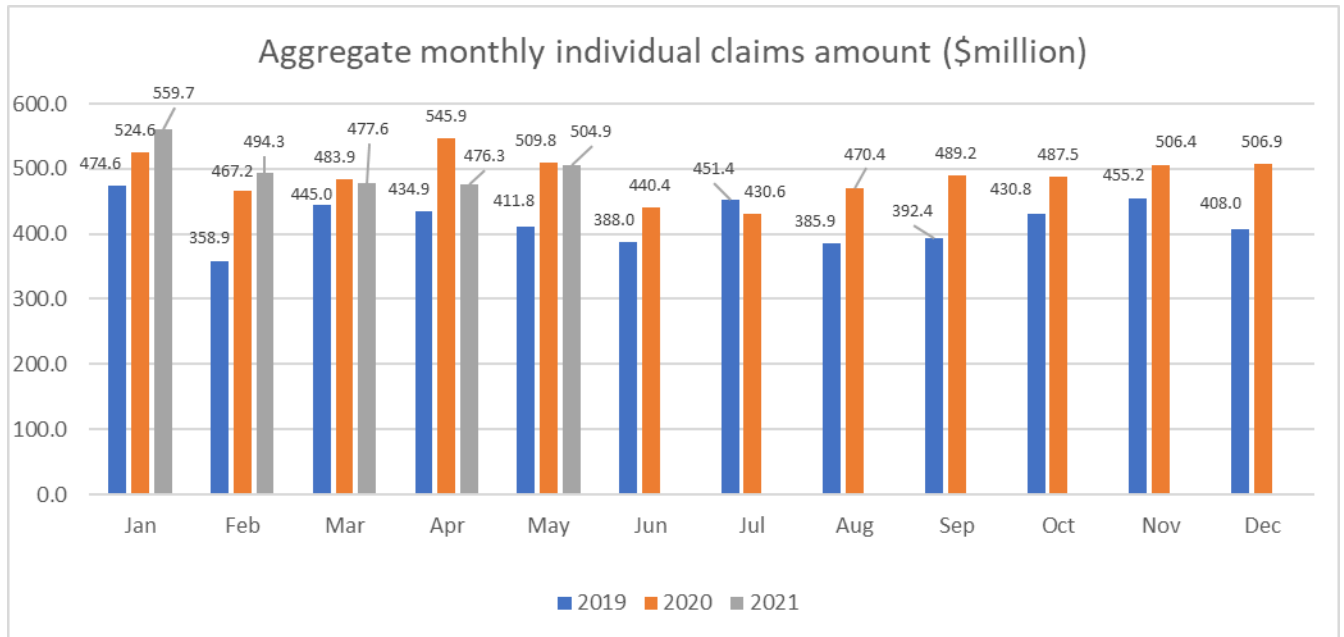
Ongoing updates

This report is based on data reported up to the end of May 2021. From general population data, we know that the level of overall deaths due to COVID-19 have decreased with the further rollout of vaccines. However, with more aggressive variants and inconsistencies in vaccine rates and public health measure adoption, additional waves of COVID-19 infections are likely to impact Canada. Therefore, the CIA will continue to collect data and report on the aggregate life insurance claims levels throughout 2021.

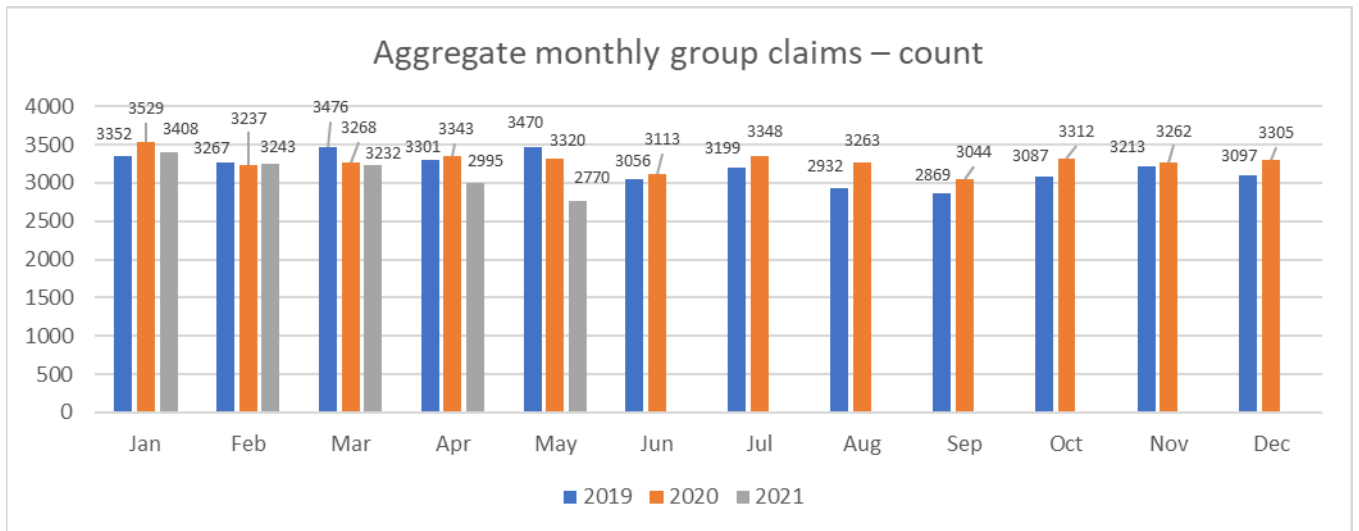
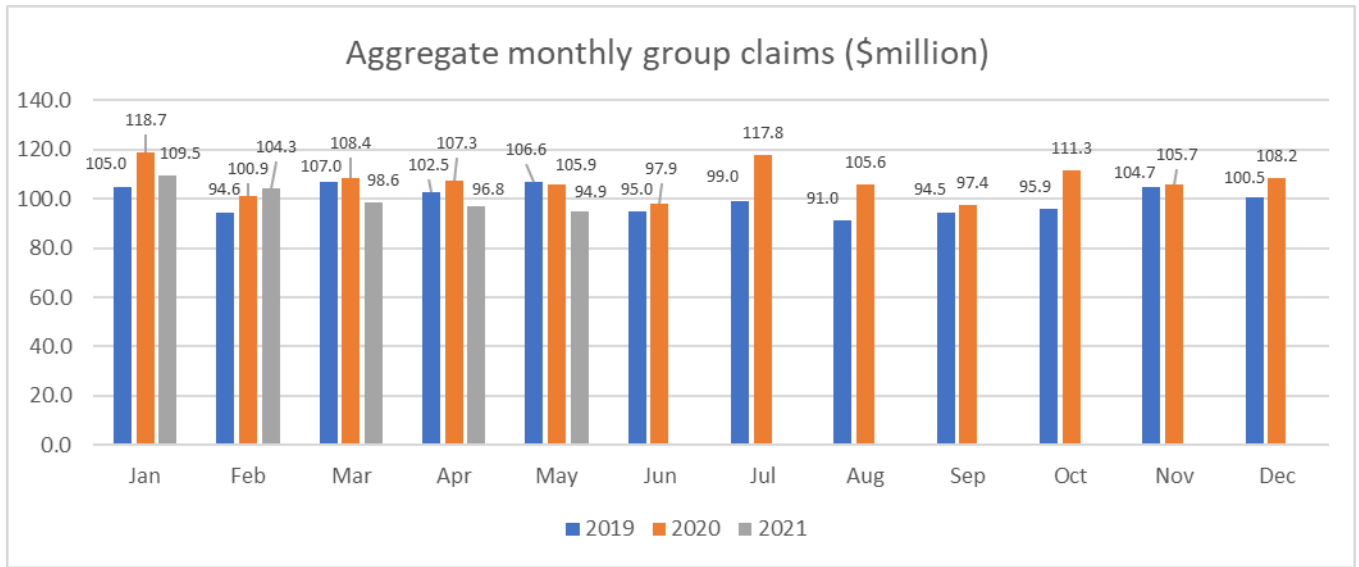
The CIA would like to thank the insurance industry participants for their ongoing contributions to this study.

Appendix 1 – Aggregate total monthly claims

Individual

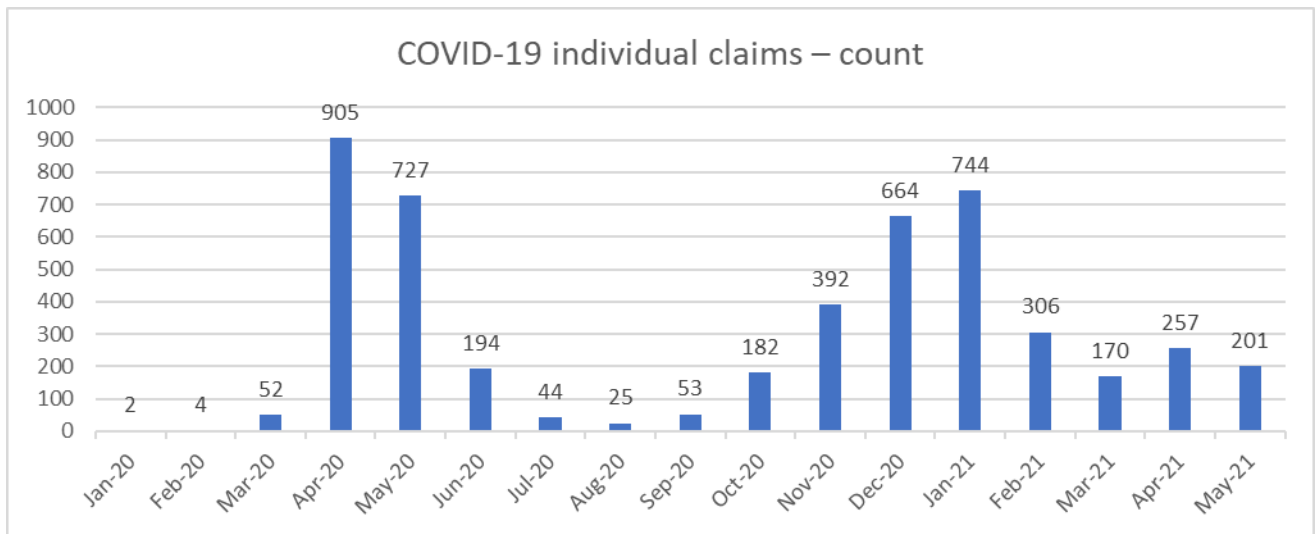
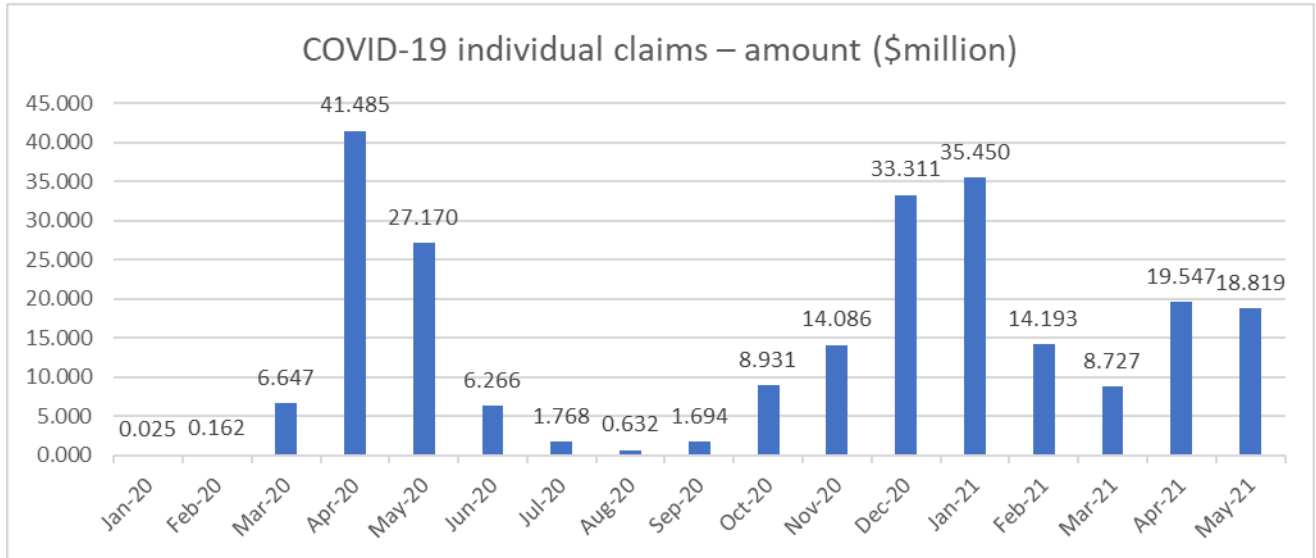


Group

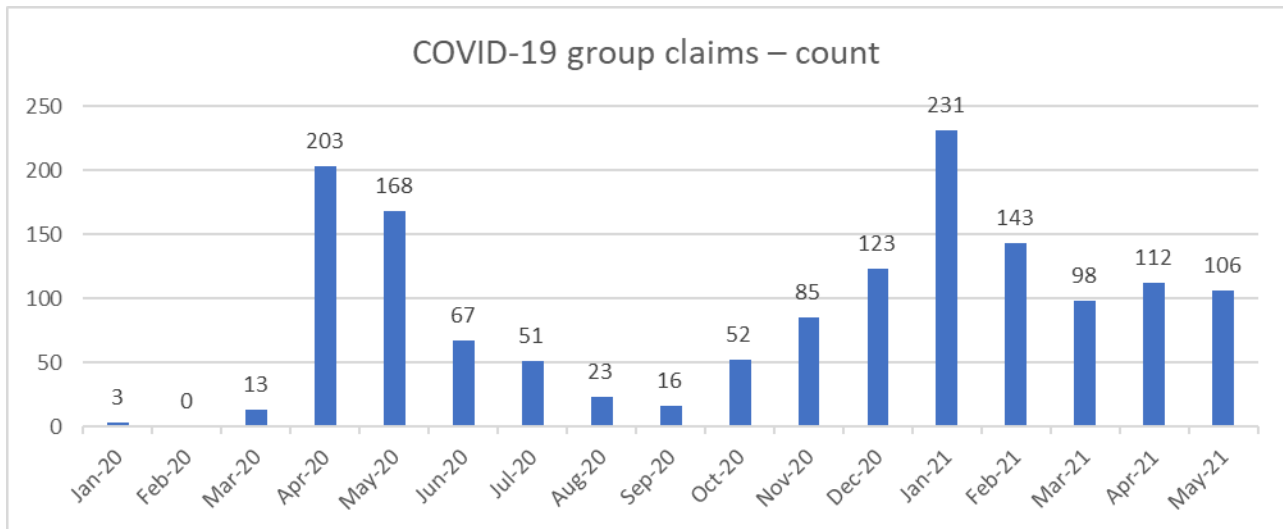
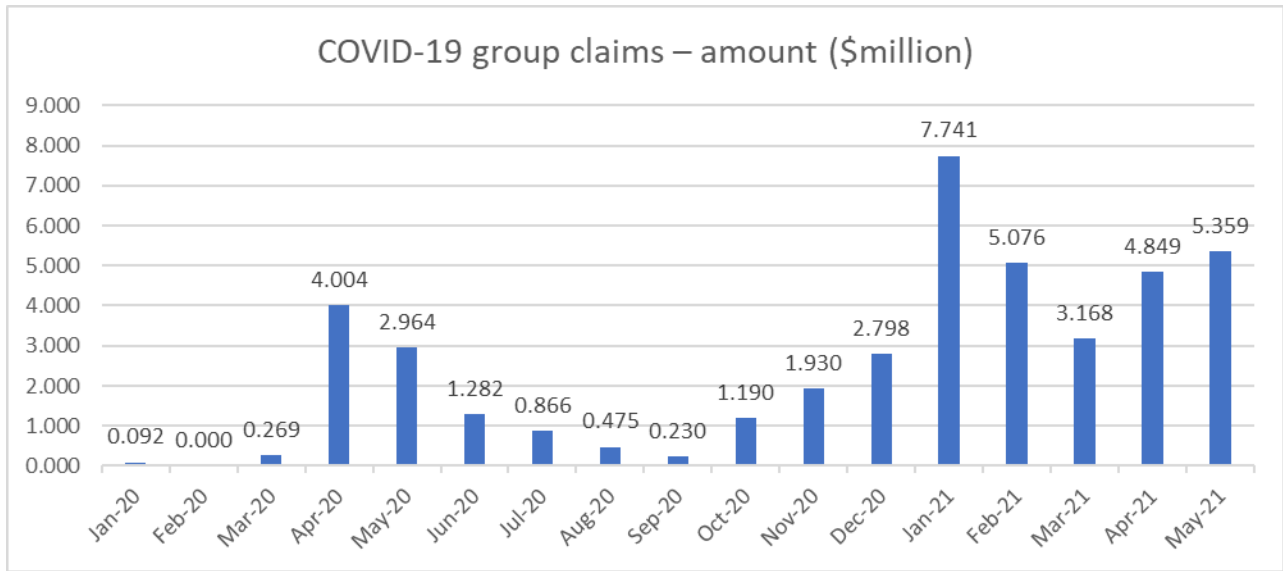


Appendix 2 – Aggregate monthly COVID-19 claims

COVID-19 claims – individual



COVID-19 claims – group





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