

Report

Report 3: 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 in 2020 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 (www.cia-ica.ca/docs/default-source/research/2020/rp220143e.pdf). A second report with additional data collected up to the end of September 2020 was published on February 23, 2021 (www.cia-ica.ca/docs/default-source/research/2021/rp221023e.pdf).

The CIA will continue to collect and analyze the data as long as new or additional insight can be gleaned. This is the third report in the series and is based on additional data collected up to the end of December 2020. The number of contributing companies is the same. Details of the participants are as follows:

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 December 2020 – 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 are reporting 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 table shows 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.

Individual

YEAR	data type	Companies	Total Exposure Counts	% of Exposure Counts	Total Exposure Amount	% of Exposure Amounts
2019	Actual	11	9,215,299	74.7%	1,489,641	68.9%
	Reported	2	3,119,109	25.3%	672,211	31.1%
	Total	13	12,334,408	100.0%	2,161,852	100.0%
2020	Actual	11	9,318,358	75.1%	1,587,421	69.5%
	Reported	2	3,096,419	24.9%	696,250	30.5%
	Total	13	12,414,777	100.0%	2,283,671	100.0%

Group

YEAR	data type	Companies	Total Exposure Counts	% of Exposure Counts	Total Exposure Amount	% of Exposure Amounts
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%

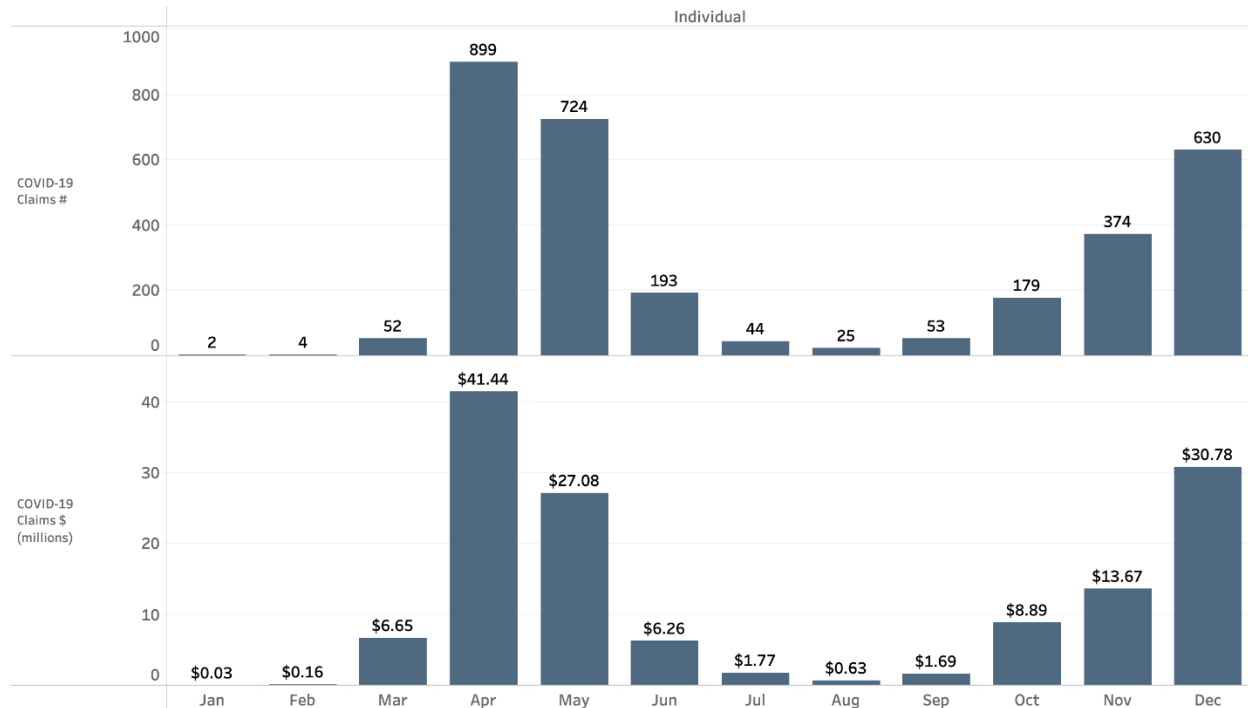
- Although cause of death is not consistently collected by life insurance companies in Canada, most of the companies have been able to provide data on COVID-related deaths. Of the companies providing data on individual claims, 12 reported COVID-related claims separate from other claims.

Main findings (individual)

Although not all companies were able to capture cause of death, there were a total of 3,179 reported individual claims identified with COVID-19 as cause of death in 2020. As shown in Graph 1, COVID-19 individual claims peaked in April, but the second wave of COVID-19 also had a significant impact on individual life insurance claims. When measured by claims amount, individual life insurance claims due to COVID-19 in December 2020 were the second highest monthly claims in 2020 and reached approximately 75 per cent of the peak level of claims in April 2020.

Graph 1

2020 COVID-Related Claims Counts & Amounts By Month



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 fact, 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).

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 2 (the month-by-month pattern of claims *before* calibration is shown in the graph in the Appendix for reference). After calibrating the individual claims to exposure at start of year, monthly claims in 2020 exceeded 0.02% in every month other than two summer months of June and July. For comparison, this level was only exceeded in one month in 2019.

Graph 2

Individual \$ Claims Amount over \$ Exposure
Total Monthly Claims Amount Divided by Total Year Exposure



Main findings (group)

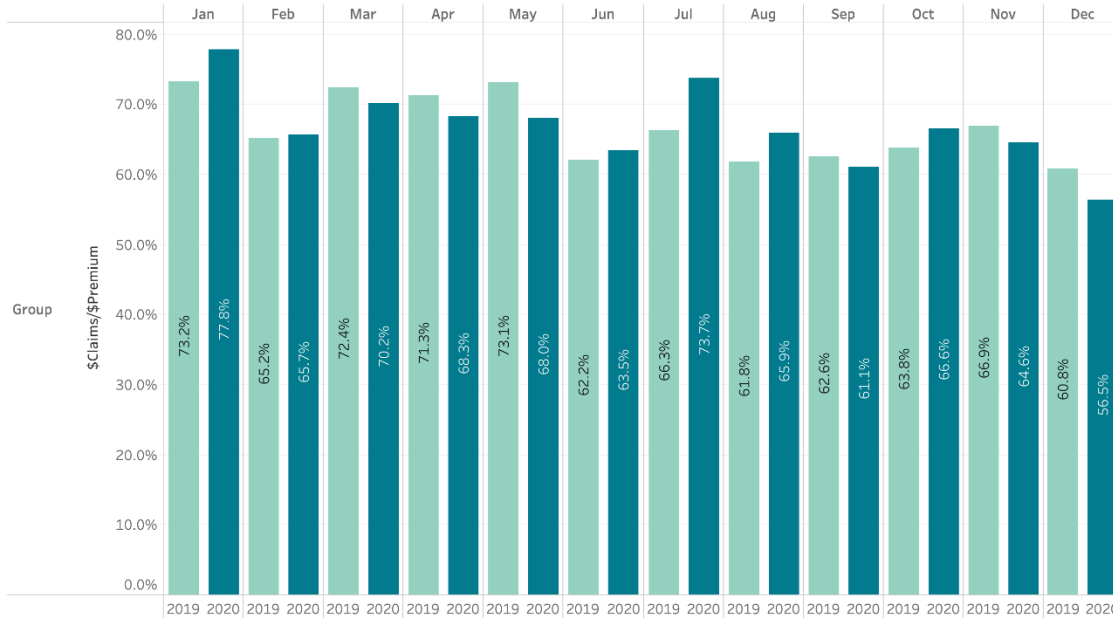
Different from the outcome in individual life insurance claims, group claims in 2020 are generally consistent with the level of claims in 2019, at least in the first half of the year.

Graph 3 below shows the pattern of monthly aggregate group claims from January 2019 to December 2020 calibrated by dividing the claims by total aggregate premium. Although aggregate monthly group claims (after calibration) in January and February 2020 were slightly higher than aggregate monthly group claims in January and February 2019, they were lower in each month from March to May 2020 when compared to the same months in 2019. This is despite the peak of the first wave of COVID-19 in Canada during that time frame.

However, the second half of 2020 may show a different picture as the second wave impacts Canadians. For example, aggregate monthly claims divided by total aggregate premium in October 2020 were greater than the equivalent month in 2019. As additional claims are reported for the later months of 2020 (due to lags in reporting), it is reasonable to assume that November and December 2020 will also exceed the equivalent months in 2019.

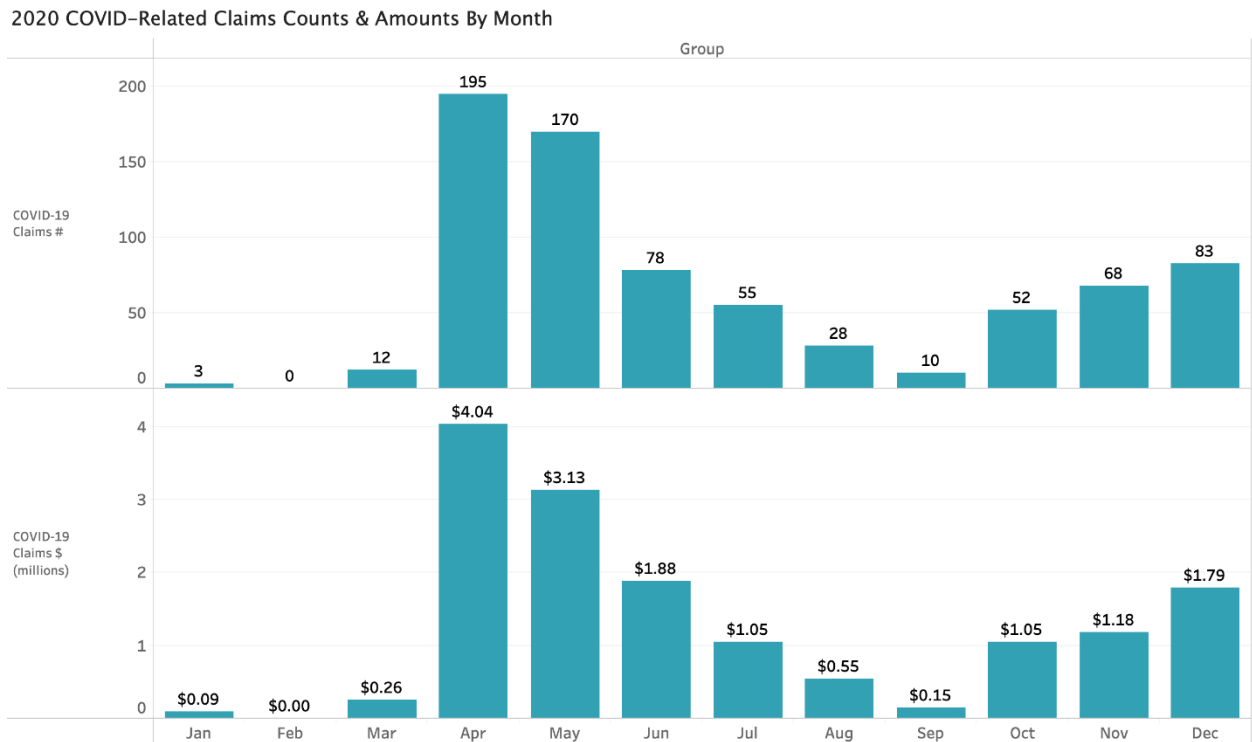
Graph 3

Group \$ Claims Amount over \$ Premium
 Total Monthly Claims Amount divided by Total Monthly Premium



Looking at claims by cause for group, shown in Graph 4 below, when compared to individual there were a smaller number of claims identified as due to COVID-19 in 2020 (754 cases). However, it is interesting to note that the peaks of COVID-related claims in group are not as extreme and there is a more persistent pattern of COVID-related claims even during the time periods of lower overall infection rates. Specifically, there were 83 COVID-19 group insurance claims compared to only 69 COVID-19 individual claims for the two months of July and August 2020.

Graph 4



COVID-related claims compared to total claims

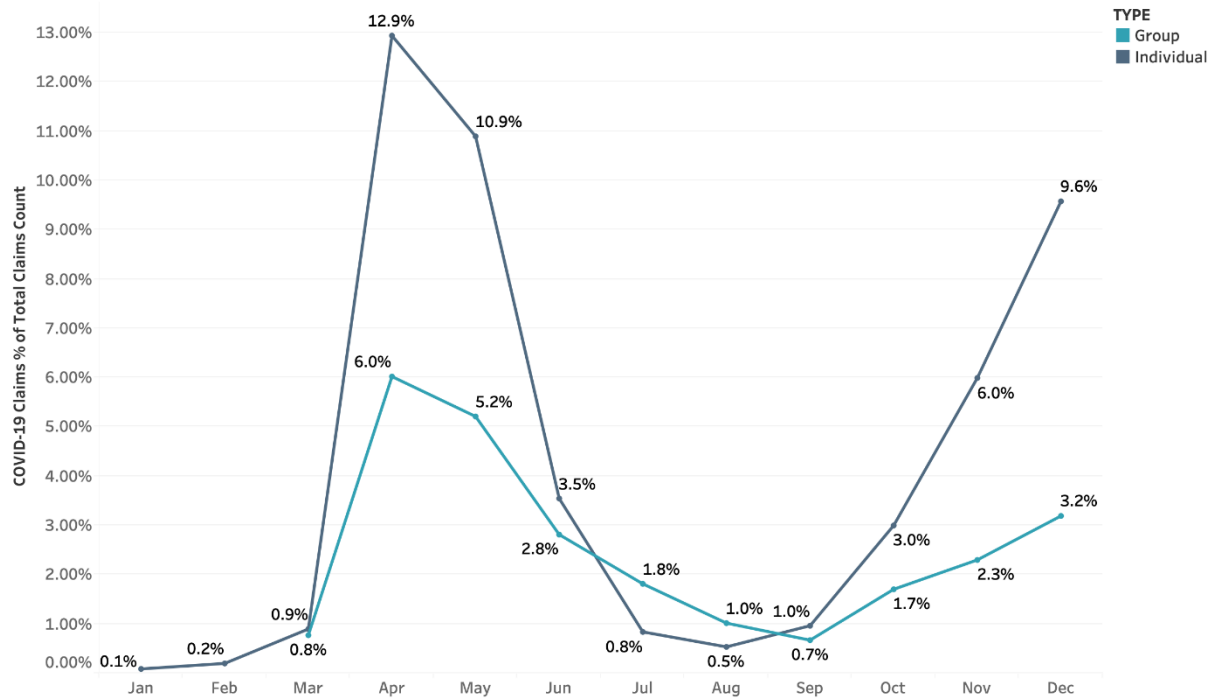
For the subset of companies that reported COVID-related claims, we calculated the ratio of COVID-related claims as a percentage of total claims. This is shown below in Graph 5.

At the peak of the COVID-19 impact in April, total COVID-related individual insurance claims were 12.9% of total claims. In May, the same ratio was 10.9%.

Although the impact of COVID-19 on group claims in 2020 was less pronounced, the ratio of COVID-19 group claims to total group claims reached a high of 6.0% in April. Also, the ratio of COVID-19 group claims to total group claims in July and August (1.8% and 1.0%) was actually higher than the equivalent ratios for individual claims in the same months (0.8% and 0.5%).

Graph 5

Trend of COVID-19 Cases out of Total Claims Count by Type
 (Group data available as of March 2020 onwards)



Future updates

This report is based on data reported up to the end of December 2020. The CIA will continue to collect monthly aggregate data from Canadian life insurance companies and provide additional updates as new data are analyzed. From general population data, we know that the second wave of COVID-19 infections and deaths continued impacting Canada during the early months of 2021, and it will be important to analyze the further impact of this second wave and of subsequent waves of COVID-19 on life insurance claims in 2021.

Questions about this report and the CIA aggregate data collection can be emailed to Shlomit Jacobson.

APPENDIX

Claims Count



Claims Amount (millions)

