

Report

Report 2: Canadian Insurance Industry Monthly Aggregate Data Analysis

February 2021

Document rp221023

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Introduction

As the COVID-19 pandemic continues to run its course throughout the world and in Canada, our collective understanding of the virus and its impact grows. Research projects and data collection efforts are happening on many fronts, and the Canadian Institute of Actuaries (CIA) and its members are making important contributions.

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), but this is an ongoing effort, with life insurance companies continuing to provide monthly data. The CIA will continue to collect and analyze the data as long as new or additional insight can be gleaned.

This is the second report in the series and is based on additional data collected up to end of September 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 September 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 and nine companies reported group 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%	\$1,489,640.6	68.9%
	Reported	2	3,119,109	25.3%	\$672,211.0	31.1%
	Total	13	12,334,408	100.0%	\$2,161,851.6	100.0%
2020	Actual	11	9,318,358	75.1%	\$1,587,421.4	69.5%
	Reported	2	3,096,419	24.9%	\$696,250.0	30.5%
	Total	13	12,414,777	100.0%	\$2,283,671.4	100.0%

Group

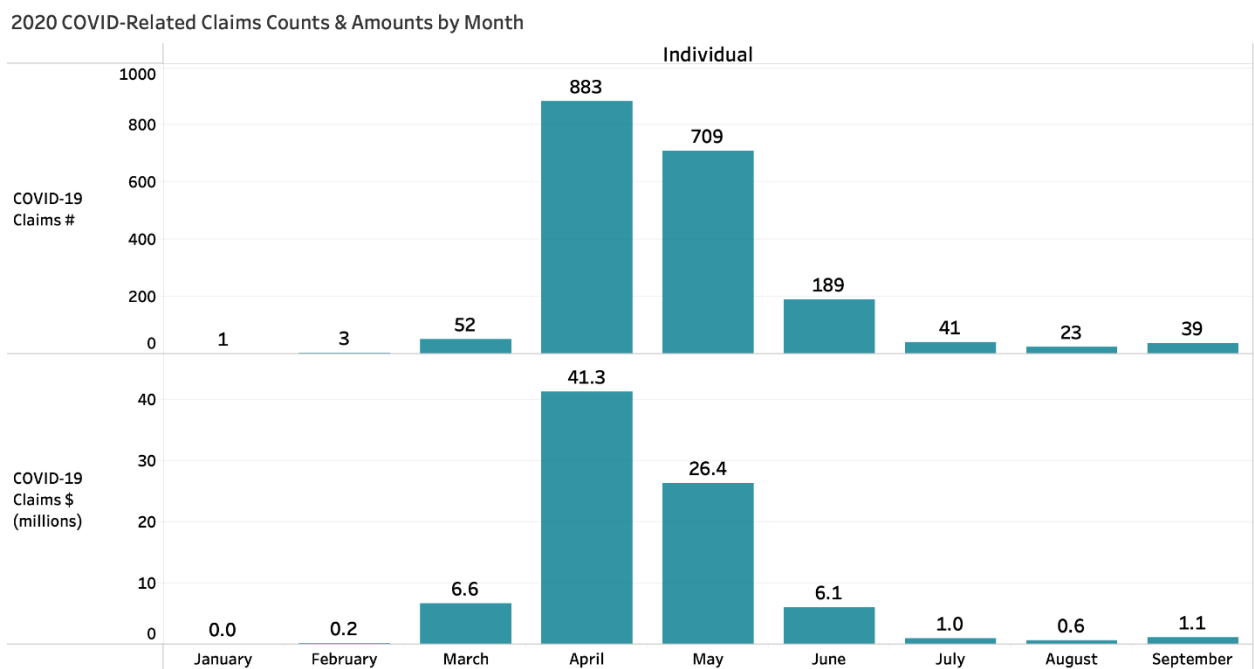
Year	Data Type	Companies	Total Exposure Counts	% of Exposure Counts	Total Exposure Amount	% of Exposure Amounts
2020	Actual	9	4,858,283	61.1%	\$400,707.1	53.8%
	Reported	2	3,092,473	38.9%	\$344,510.7	46.2%
	Total	11	7,950,756	100.0%	\$745,217.8	100.0%
2019	Actual	9	4,907,711	60.8%	\$393,983.7	53.3%
	Reported	2	3,169,625	39.2%	\$345,602.8	46.7%
	Total	11	8,077,336	100.0%	\$739,586.5	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 1,940 reported individual claims identified with COVID-19 as cause of death. As shown in Graph 1, COVID-19 numbers clearly peaked in April, with nearly half of reported COVID-19 claims in that month (883 cases, 46%), but COVID-related claims continued to be noticeable well into May and June (709 and 189, respectively).

Graph 1



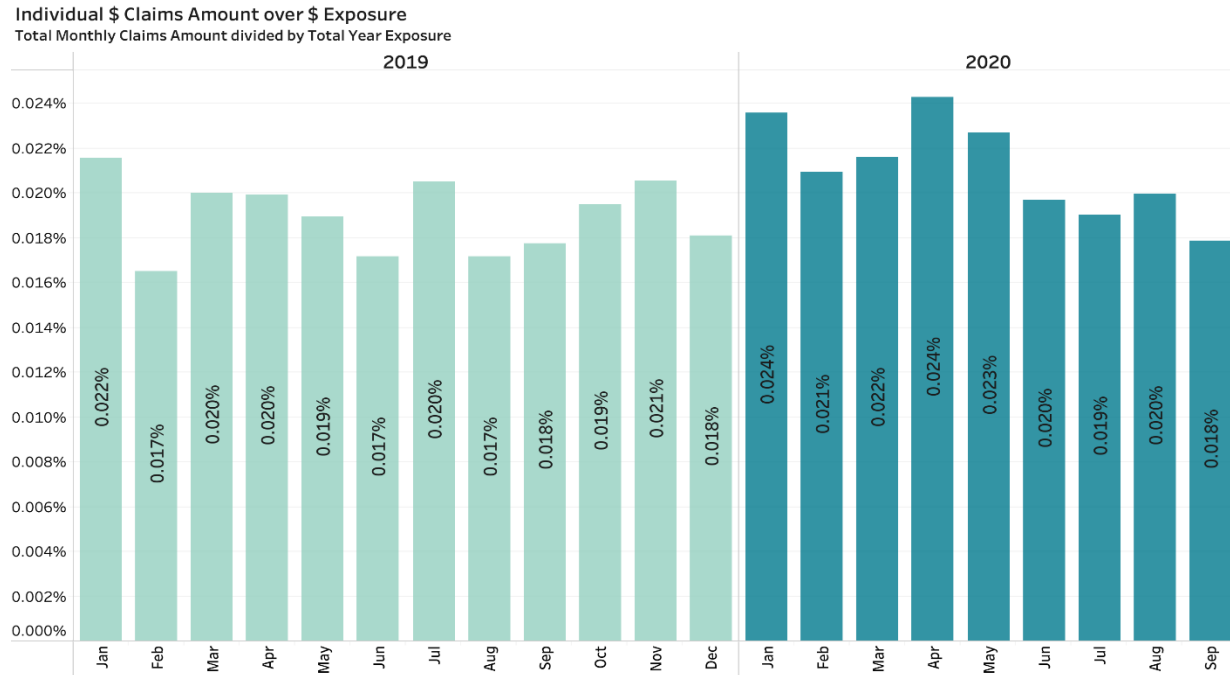
Even though very few claims were identified as due to COVID-19 in January to March 2020, aggregate individual insurance claims amounts exceeded the comparable monthly equivalent amounts in 2019 in those same months. It is conceivable that life insurance claims in the early months of 2020 were impacted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

In fact, the monthly aggregate individual insurance claims each and every month from January to June 2020 exceeded the comparable monthly aggregate amounts for the same months in 2019.

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 Appendix A for reference). After calibrating the individual claims to exposure at start of year, the peak in April was 120% of the equivalent month in 2019 (0.024% in April 2020 compared to 0.02% in April 2019).

Graph 2



Given the normal delay in claims reporting, there are likely some outstanding claims still to be reported, but the total aggregate monthly life insurance claims from July to September 2020 appear to be more consistent with the monthly aggregate claims in the same months in 2019. Note that only 103 individual claims in those three months of 2020 have so far been identified as due to COVID-19, as seen in Graph 1.

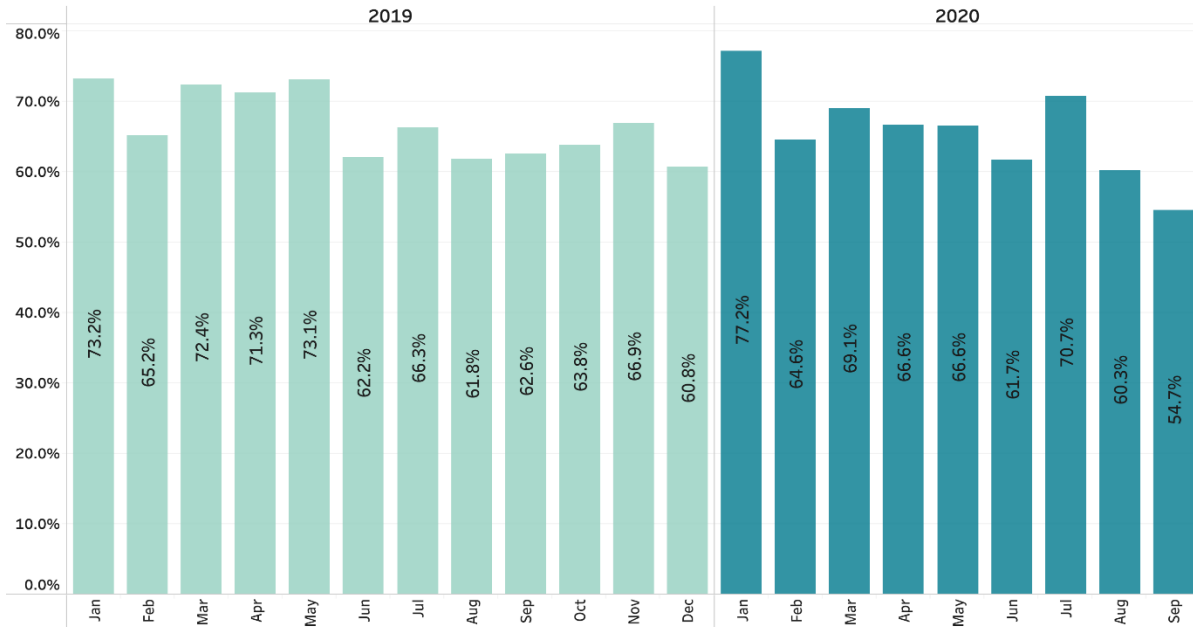
Main findings (group)

Very different from the outcome in individual life insurance claims, group claims in 2020 are generally lower than 2019 for the first half of the year. Although total aggregate monthly group claims in January 2020 were slightly higher than aggregate group claims in January 2019, they were lower in each month from February to June 2020 when compared to the same months in 2019.

Graph 3 below shows the pattern of monthly aggregate group claims from January 2019 to September 2020 calibrated by dividing the claims by total aggregate premium (the month-by-month pattern of claims before calibration is shown in the graph in Appendix A for reference). In 2020, monthly aggregate claims divided by total aggregate premium were equal to or greater than 70% in only two months: January and July. The peak of claims in April and May 2020 seen in aggregate individual insurance claims does not appear to have happened in group insurance to the same extent.

Graph 3

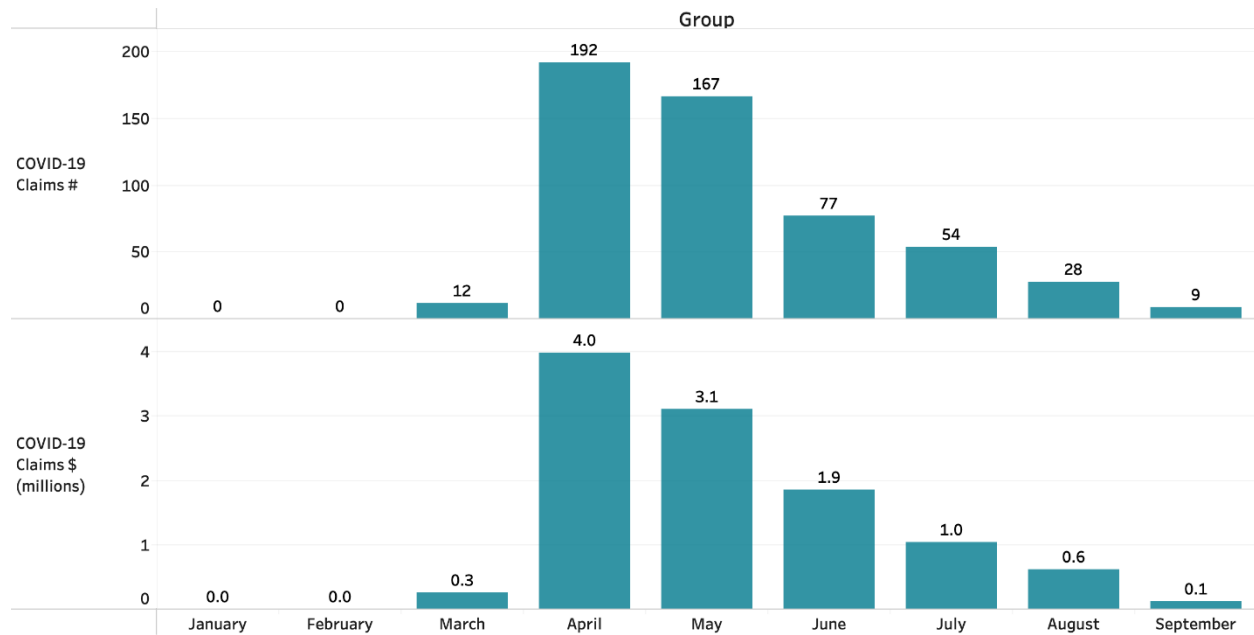
Group \$ Claims Amount over \$ Premium
 Total Monthly Claims Amount divided by Total Monthly Premium



Looking at claims by cause for group, shown in Graph 4 below, there were a small number of claims identified as due to COVID-19 in 2020 (539 cases). However, it is interesting to note that in the three months from July to September 2020, the number of group claims linked to COVID-19 is only slightly lower than the number of COVID-related individual claims at the same time period. Specifically, there were 103 COVID-19 individual insurance claims compared to 91 COVID-19 group claims for the three months of July to September 2020.

Graph 4

2020 COVID-Related Claims Counts & Amounts by Month



COVID-related claims compared to total claims

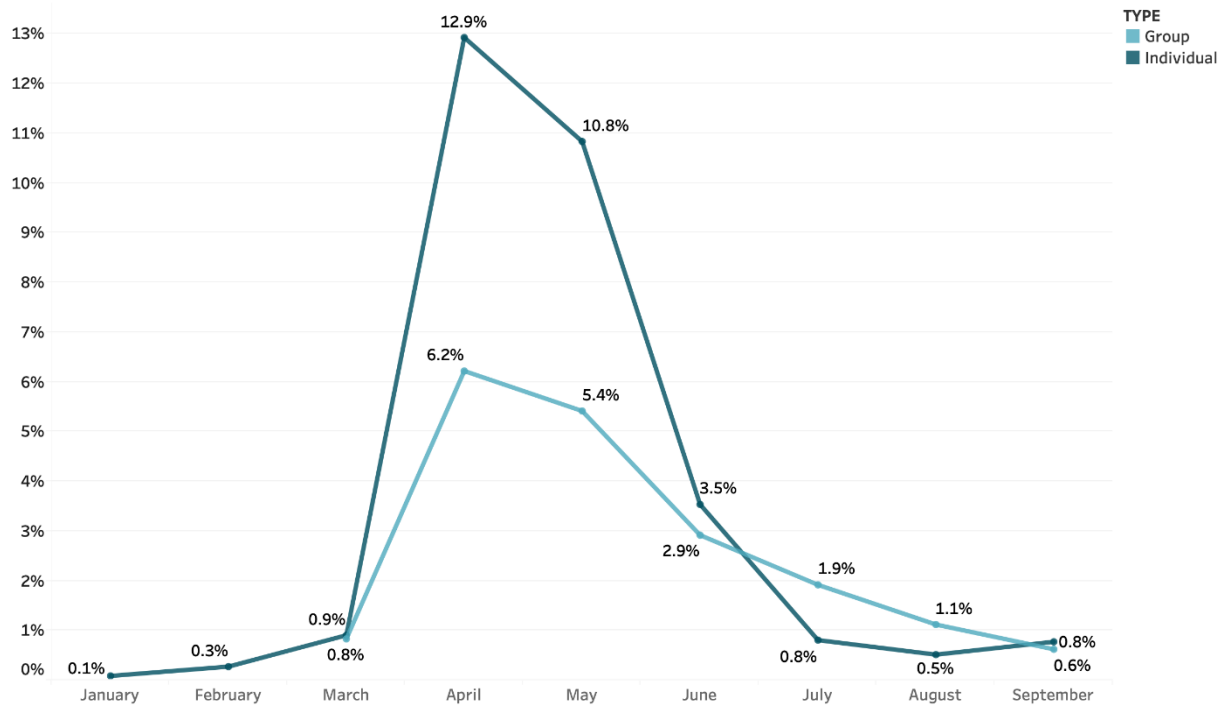
For the subset of companies that reported COVID-related claims, we calculated the ratio of COVID-related claims as a percentage of total claims. This is shown below in Graph 5.

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 10.8%.

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 6.2% in April. Also, the ratio of COVID-19 group claims to total group claims in July and August (1.9% and 1.1%) was actually higher than the equivalent ratios for individual claims in the same months (0.8% and 0.5%). This pattern suggests that COVID-19 is spreading more broadly in the population and impacting younger ages as the pandemic progresses.

Graph 5

Trend of COVID-19 cases out of total claims count by type (%)
 Group data available as of March 2020 onwards



Future updates

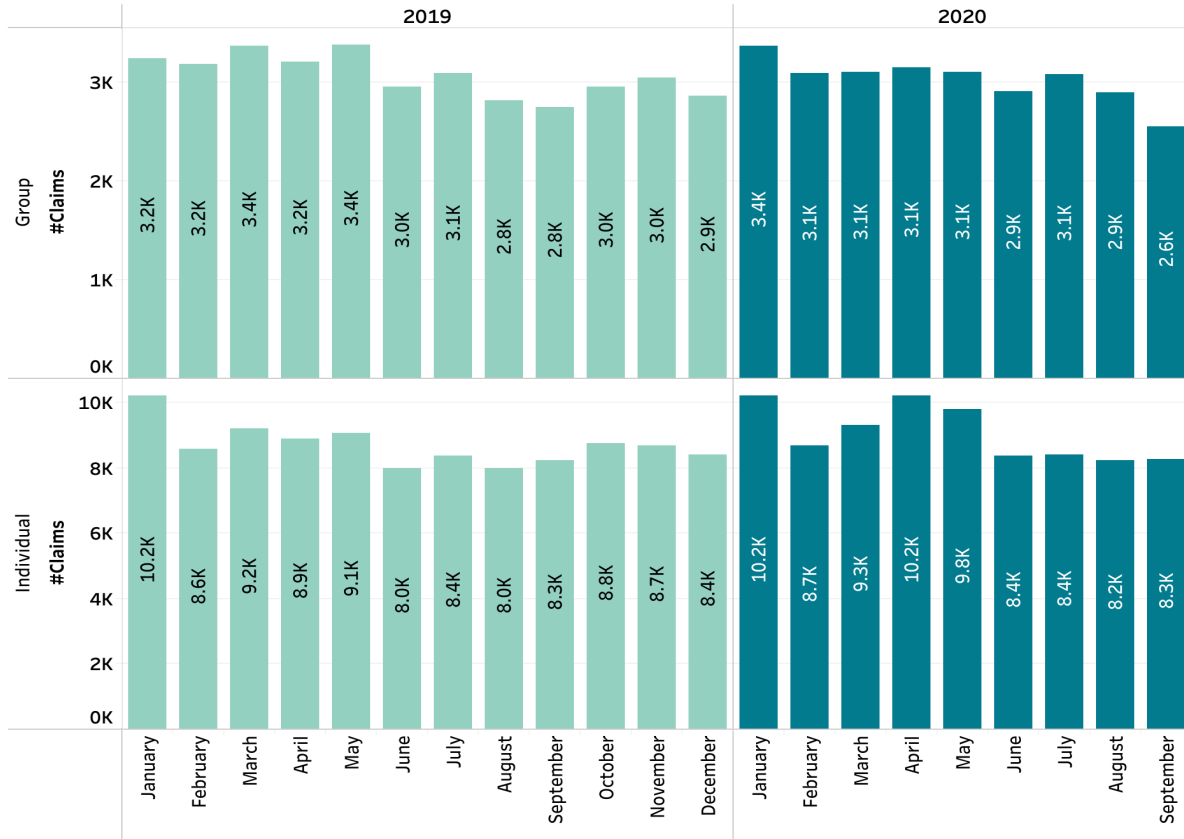
This report is based on data reported up to the end of September 2020. The CIA will continue to collect monthly aggregate data from Canadian life insurance companies, and provide additional updates as new data are analyzed. From general population data, we know that the “second wave” of COVID-19 infections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

As we look forward into 2021, there is hope that public health measures and vaccines will curtail COVID-19.

Questions about this report and the CIA aggregate data collection can be emailed to [Shlomit Jacobson](mailto:Shlomit.Jacobson).

Appendix A

Claims Count



Claims Amount (millions)

