

# Provisional death counts and excess mortality, January to October 2020

*Released at 8:30 a.m. Eastern time in The Daily, Thursday, December 24, 2020*

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COVID-19 continues to affect communities and families across the country and many have lost family members and friends. Beyond deaths attributed to the disease itself, the pandemic could also have indirect consequences that increase or decrease the number of deaths due to various factors, including delayed medical procedures or increased substance use. To understand both the direct and indirect consequences of the pandemic, it is important to measure excess mortality, which occurs when there are more deaths during a period of time than what would be expected for that period. It should be noted that, even without a pandemic, there is always some variation in the number of people who die in a given week from year to year. This means that the number of deaths that would be expected falls within a certain range of values and excess mortality occurs when the number of deaths exceeds that range.

From January to October 2020, there were an estimated 241,257 deaths in Canada, representing an excess of 10,090 deaths above and beyond what would have been expected if there was no pandemic. In comparison, for the same period, there were 228,058 deaths in 2018 and 226,994 in 2019.

Today, as part of Statistics Canada's commitment to provide timely and relevant information on COVID-19 and its impact on Canadians, an updated provisional dataset from the Canadian Vital Statistics Death Database covering the period from January to the end of October is now available.

Updates were also made to the provisional death estimates, which were adjusted, where possible, to account for the incomplete nature of the counts. The provisional estimates will continue to be revised in future releases as more information is reported by provincial and territorial vital statistics agencies.

## **With COVID-19 deaths on the rise, Canada is again experiencing excess mortality since the end of September**

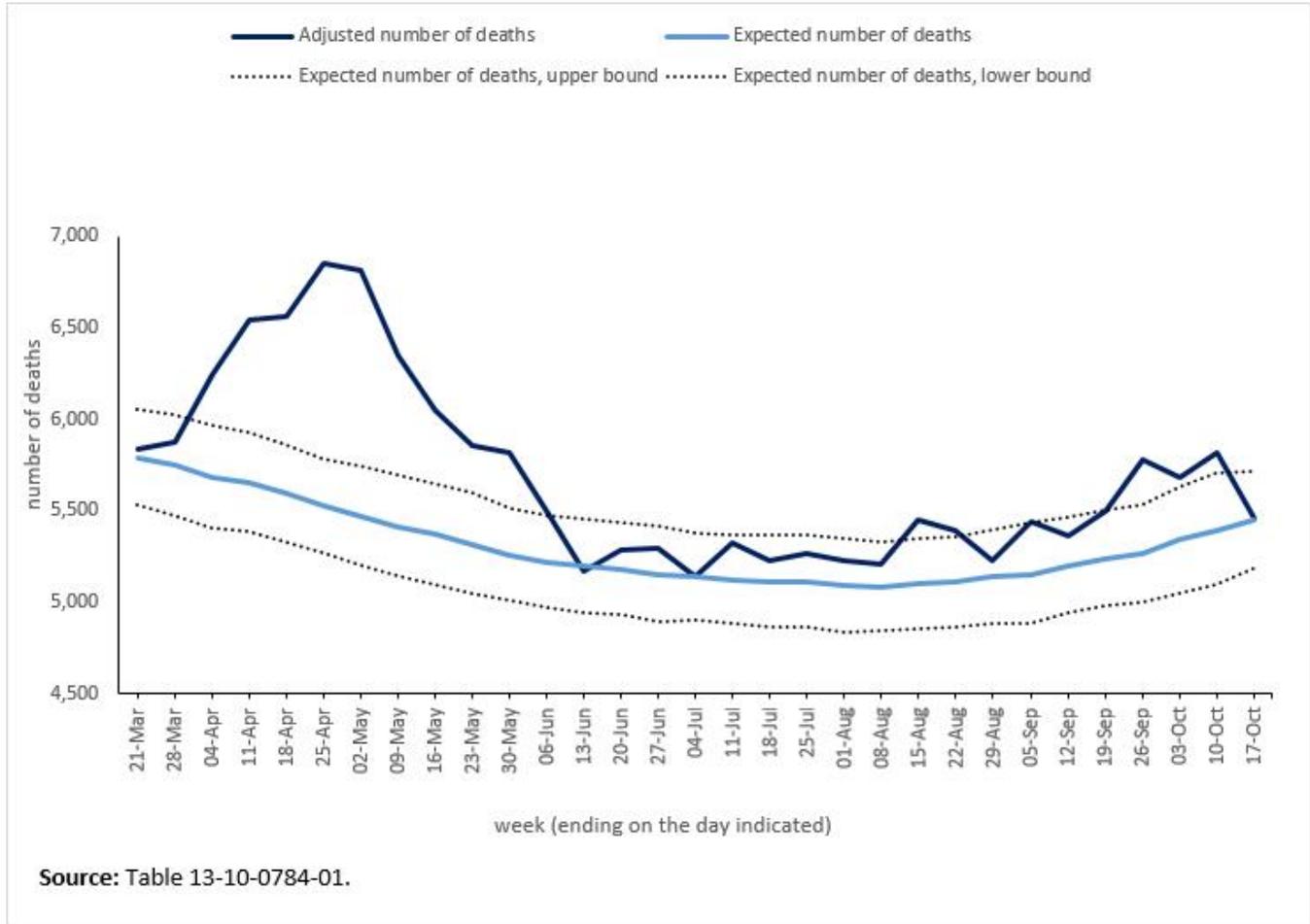
From the end of September to the end of October, 22,741 Canadians died, or 1,292 more than would have been expected had there not been a pandemic.

Excess mortality through the first months of the pandemic, from March to June, aligned closely with the number of deaths caused by COVID-19 over that same period, which disproportionately affected Canadians over the age of 64, particularly in Quebec and Ontario. By July, the weekly number of deaths fell back and were mostly within the range of what would have been expected had there been no pandemic. However, since the end of September, excess mortality is once again being observed at the national level.

While the national number of deaths recorded from June to mid-September mostly remained within the expected range, the figures were always on the higher end of the range and people continued to die due to COVID-19. By the end of September, the numbers had risen beyond the expected range for three consecutive weeks for the first time since June. This shift is likely a direct result of an increase in deaths due to COVID-19 over the same period and, once again, the increase in deaths appears to disproportionately affect individuals over the age of 64. Of the 1,292 excess deaths observed over the period from the end of September to the end of October, just over two-thirds (872) were attributable to people older than 64.



**Infographic 1 – Provisional adjusted weekly number of deaths and expected number of deaths, Canada**



**Higher than expected mortality among younger males in the summer months**

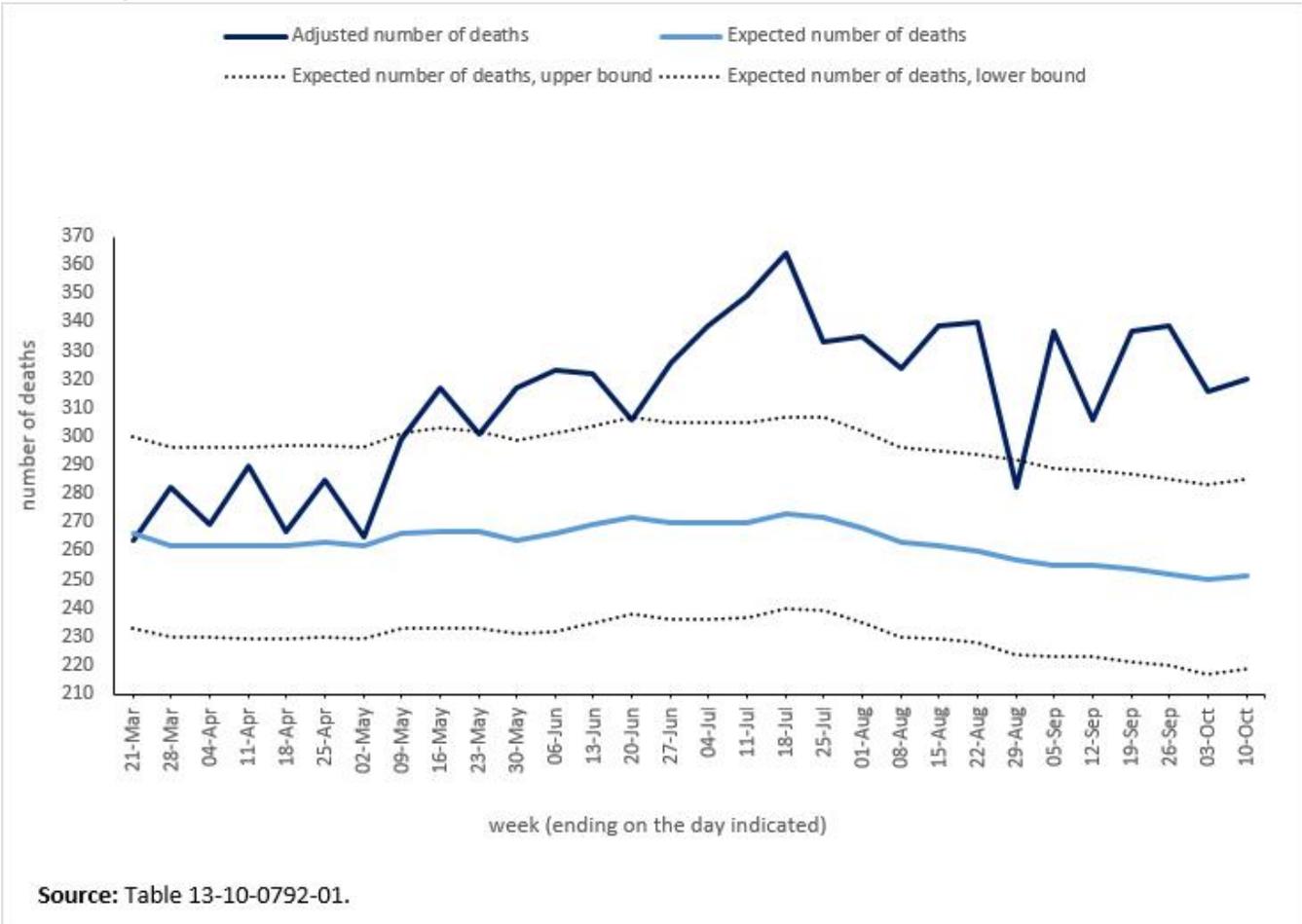
While, overall, mortality levels since March have largely been driven by the number of deaths due to COVID-19, a different pattern among people under the age of 45 emerged in May and continued into October.

From mid-May to mid-October, an estimated 7,172 deaths were reported among Canadians aged 0 to 44, an excess of 1,385 deaths. Males accounted for 81% of these excess deaths.

This pattern was seen particularly in Alberta and British Columbia, which were the only provinces with evidence of excess mortality among this age group. Alberta accounted for 298 excess deaths for males under the age of 45, while British Columbia accounted for 260.

Excess deaths among this age group cannot be attributed directly to COVID-19 alone. From March until the end of October, there were fewer than 50 deaths attributed to COVID-19 among Canadians under the age of 45. However, beyond COVID-19 itself, increases in mortality could also be due to indirect consequences related to measures put in place to address the pandemic, such as missed or delayed medical interventions and other possible changes in behaviour such as increased substance use. For example, in British Columbia, the Chief Coroner's Office has reported increases in deaths due to overdoses since the start of the pandemic.

**Infographic 2 – Provisional adjusted weekly number of deaths and expected number of deaths, people aged 0 to 44, Canada**



Statistics Canada will continue to provide timely information on a regular basis on excess deaths as it becomes available throughout the pandemic.

### Note to readers

The data released today are provisional as they are not based on all deaths that occurred during the reference period due to reporting delays, and do not include Yukon. Provisional death counts are based on what is reported to Statistics Canada by the provincial and territorial vital statistics registries. Provisional death estimates have been adjusted to account for incomplete data, where possible. The numbers of excess deaths discussed in this analysis refer to provisional estimates. Information on the methods used can be found in the Definitions, data sources and methods for Survey 3233— [Vital Statistics - Death Database](#).

The provisional death counts and estimates released today for the first 44 weeks of 2020 may not match figures from other sources, such as media reports, or counts and estimates from provincial or territorial health authorities and other agencies.

Prior to this release, the 2020 numbers published in Tables [13-10-0768-01](#) and [13-10-0783-01](#) were not adjusted to account for reporting delays: they reflected the number of deaths that were registered in the respective provinces and territories and communicated to Statistics Canada on or before a specified date. Beginning with today's release, however, these tables now present estimates of observed mortality for 2020 that have been adjusted to account for deaths not yet reported to Statistics Canada.

Table [13-10-0810-01](#) presents a weekly series of the number of deaths, by selected grouped causes of death. While the Total, all causes of death figures in this table reflects the number of estimated deaths, the individual cause of death categories are not adjusted for deaths not yet reported to Statistics Canada. Therefore, the number of deaths by cause category may not account for all deaths over the reference period. The Information unavailable category reflects deaths where either the cause has yet to be determined or the death has not yet been reported. This table replaces Table [13-10-0785-01](#).

References to the period from the end of March to June refer to the period from the week ending March 28 to the week ending June 6. References to the period from mid-May to mid-October refer to the period from the week ending May 16 to the week ending October 10. References to the period from the end of September to the end of October refer to the period from the week ending September 26 to the week ending October 17.

The number of deaths in Canada caused by COVID-19 comes from the Canadian Vital Statistics Death Database (CVSD). The CVSD is the authoritative source for death information in Canada as it includes all registered deaths and the causes of death have been certified by a medical professional, coroner or medical examiner. For more information on COVID-19 as a cause of death, please refer to the study "[COVID-19 death comorbidities in Canada](#)."

More information on excess mortality during the COVID-19 pandemic in Canada is available in the article "[Excess mortality in Canada during the COVID-19 pandemic](#)."

**Available tables:** [13-10-0768-01](#), [13-10-0783-01](#), [13-10-0784-01](#), [13-10-0792-01](#) and [13-10-0810-01](#).

**Definitions, data sources and methods:** survey number [3233](#).

To facilitate the identification of trends in excess deaths by province and territory, the interactive visual tool "[Weekly adjusted number of deaths, expected number of deaths and estimates of excess mortality: Interactive Tool](#)" has been updated.

To facilitate the identification of trends in the number of weekly deaths by age group and sex, and by province and territory, the interactive visual tool "[Weekly death counts: Interactive tool](#)" has been updated.

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; [STATCAN.infostats-infostats.STATCAN@canada.ca](mailto:STATCAN.infostats-infostats.STATCAN@canada.ca)) or Media Relations (613-951-4636; [STATCAN.mediahotline-ligneinfomedias.STATCAN@canada.ca](mailto:STATCAN.mediahotline-ligneinfomedias.STATCAN@canada.ca)).