

Effect of the Omicron Variant on COVID-19 in Newfoundland and Labrador

Objective

To examine the impact of the Omicron variant on the epidemiology of the COVID-19 pandemic in Newfoundland and Labrador (NL).

Practice Points

1. The Omicron variant was first reported in NL on 15 Dec 2021.
2. Compared to other variants, Omicron has a greater ability to evade immunity provided by vaccination and earlier COVID-19 infection.
3. Observational data suggested the Omicron variant was less severe but more transmissible and could still be severe in certain high-risk groups.
4. The high number of cases due to the Omicron variant can still result in a cumulative excess of COVID-19 associated hospitalizations and deaths compared with other variants.

Methods

1. Demographic and outcome data was obtained for each cohort of 5,000 PCR confirmed cases diagnosed with the Omicron variant from 01 Dec 2021 to end of April 2022.
2. Chronic disease data for those who died was obtained from the chronic disease registry.

Results

Table 1. Outcomes of Cohorts of 5,000 PCR Confirmed Cases, Dec 2021 – Apr 2022

	Average Age	Age 50+ Years	Age 0–4 Years	Not Vaccinated	Hospitalized	ICU	Deceased
1st 5,000	37.8	1510 (30.2%)	114 (2.3%)	434 (8.7%)	16 (0.32%)	6 (0.12%)	8 (0.16%)
2nd 5,000	39.2	1637 (32.7%)	148 (3.0%)	427 (8.6%)	20 (0.40%)	7 (0.14%)	9 (0.18%)
3rd 5,000	38.8	1587 (31.2%)	294 (5.9%)	519 (10.4%)	35 (0.70%)	15 (0.30%)	21 (0.42%)

Table 1 continued

	Average Age	Age 50+ Years	Age 0–4 Years	Not Vaccinated	Hospitalized	ICU	Deceased
4th 5,000	35.9	1235 (24.7%)	253 (5.1%)	451 (9.0%)	46 (0.92%)	13 (0.26%)	15 (0.30%)
5th 5,000	37.3	1328 (26.5%)	161 (3.2%)	303 (6.1%)	38 (0.76%)	14 (0.28%)	11 (0.22%)
6th 5,000	39.7	1552 (31.0%)	144 (2.9%)	285 (5.7%)	37 (0.74%)	5 (0.10%)	17 (0.34%)
7th 5,000	47.4	2237 (44.7%)	104 (2.1%)	258 (5.2%)	56 (1.1%)	12 (0.24%)	21 (0.42%)
8th 5,000	53.1	2862 (57.2%)	142 (2.8%)	291 (5.8%)	84 (1.7%)	14 (0.28%)	30 (0.60%)
Next 1,548	55.1	953 (61.5%)	44 (2.8%)	102 (6.6%)	23 (1.5%)	3 (0.19%)	4 (0.26%)

- On 3 Jan 2022, due to the high demand for testing, public health revised the criteria for PCR testing. Anyone who was a close contact of a case and had symptoms of COVID-19 was considered a positive case and did not need testing to confirm. Those who tested positive on a rapid antigen test were also considered a positive case and did not need confirmation testing. PCR testing was still recommended for anyone who was a close contact and did not have symptoms, and anyone who had symptoms but who had not been identified as a close contact of someone who tested positive for COVID-19.
- On 17 Mar 2022, public health further revised the eligibility criteria for PCR testing to symptomatic individuals who were at an increased risk for severe disease, lived or worked in congregate settings, or were essential to keeping the health system running. Individuals who developed symptoms and were not eligible for PCR testing were asked to use rapid antigen tests.
- From the first cohort to the 8th, age increased, as did hospitalization rate and mortality, reflecting the change in eligibility criteria for testing and the impact of these criteria on mortality.

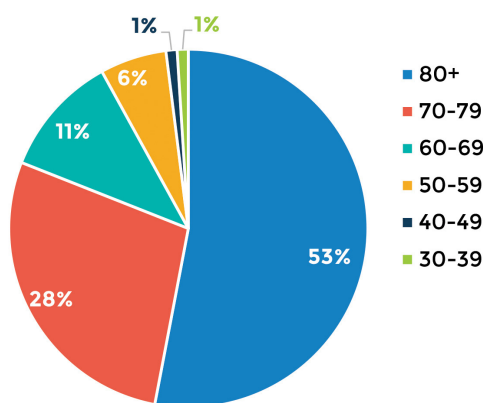


Figure 1. Age Breakdown for Those who Died (N=139), Dec 2021 – Apr 2022

- Over 80% of those who died were 70 years of age and older.

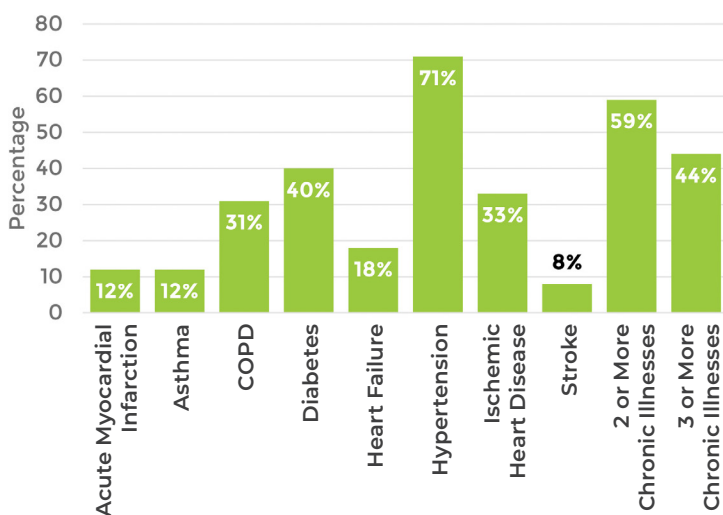


Figure 2. Chronic Disease Prevalence for Those who Died (N=139), Dec 2021 – Apr 2022

- Almost 60% of those who died had a history of two or more chronic illnesses and 44% had a history of three or more.

Table 2. Deaths of Residents in Long-Term Care Facilities (LTCFs) versus the Community by Hospital Setting (N=139), Dec 2021 – Apr 2022

	Deaths in Hospital		Deaths not in Hospital	
	N	%	N	%
LTCF	29 ¹	21	39	28
Not in LTCF	59	42	12	9
Total	88	63	51	37

¹24 from personal care home or assisted living

- Twenty-nine of 68 LTCF residents (43%) died in hospital.

Conclusions

- Over time, those diagnosed with PCR confirmed COVID-19 were seen to have higher rates of hospitalization and death. This was likely skewed by the change in eligibility criteria for PCR testing. Despite this selection bias, mortality in the 8th cohort of 5,000 patients was 0.6%.
- Older age and a history of chronic illness were associated with death from Omicron. Over 80% of those who died were 70 years or older and almost 60% of those who died had a history of two or more chronic illnesses.
- Forty-nine per cent of those who died were residents of a LTCF.