Adverse Events Following Immunization (AEFI) with COVID-19 Vaccines in Nova Scotia

December 16, 2020 to February 28, 2022

This Report in Context

- Between Dec 16, 2020 and Feb 28, 2022, Nova Scotia administered 2,242,053 doses of COVID-19 vaccine (+101,748 in the last month).
- In Nova Scotia, there have been 722 Adverse Events Following Immunization (AEFI), or 32.2 per 100k doses administered.
  - 599 (82.9%) were non-serious (26.7 per 100k doses)
  - 123 (17.0%) were serious (5.5 per 100k doses)
  - 24 new adverse events were reported in February 2022
    - 20 of these events were non-serious and 4 were serious
- The risk of adverse events varied by age and sex
  - Those aged 30-49 years old had the highest risk and those aged 5-17 years old had the lowest risk
  - Females had a higher risk than males
- In comparison, the rate of AEFIs reported in Canada, to date are:
  - 38 non-serious events per 100k doses administered
  - 10 serious adverse events per 100k doses administered.[i]

Overall Summary of Adverse Events Following Immunization

Between December 16, 2020 and February 28, 2022 Nova Scotia has administered 2,242,053 doses of COVID 19 vaccine and has received a total 722 reports of adverse events following immunization.

Table 1: Number and rate of AEFI reported following immunization for COVID-19, December 16, 2020 to February 28, 2022

	Number	Per 100k Doses Administered
Total AEFIs	722	32.2
Non-serious AEFIs	599	26.7
Serious AEFIs	123	5.5

Table 2: Number and rate of AEFI reported following immunization for COVID-19, by vaccine product, December 16, 2020 to February 28, 2022

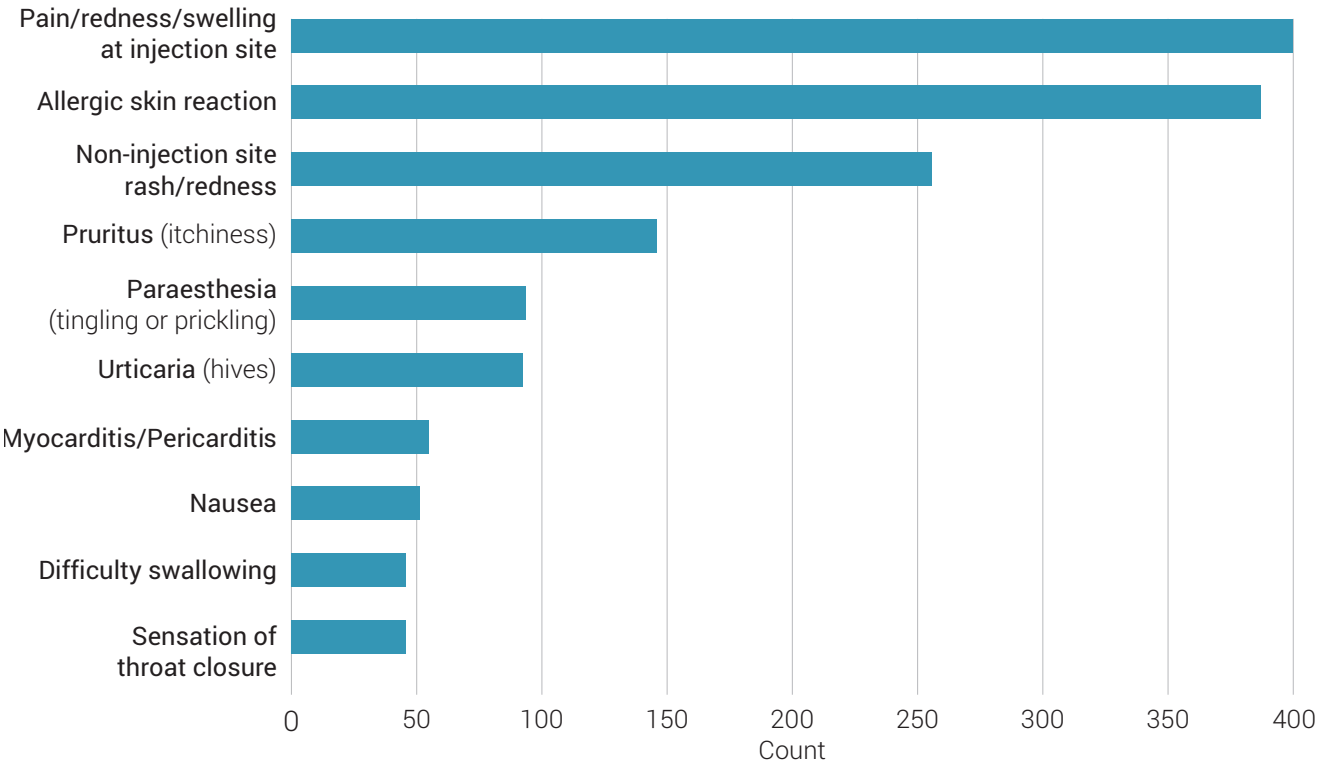
	Pfizer	Moderna	COVISHIELD/ AZ	Unknown/ Other	Total
Total number of AEFIs reported	427	229	60	6	722
Number of Non-Serious AEFIs	366	173	54	6	599
Number of Serious AEFIs	61	56	6	0	123
Total number of doses administered	1493053	681757	61667	5576	2242053
Total AEFI reported per 100,000 doses	28.6	33.6	97.3	107.6	32.2
Serious AEFI reported per 100,000 doses	4.1	8.2	9.7	0.0	5.5

Table 3: Number and rate of AEFI reported following immunization for COVID-19, by age group and sex, December 16, 2020 to February 28, 2022

Age Group	Female		Male		Total	
	N	Rate per 100,000 doses	N	Rate per 100,000 doses	N	Rate per 100,000 doses
5-17*	15	17.1	10	11.1	25	5.3
18-29	55	34.5	38	25.2	93	20.6
30-49	185	61.8	49	18.3	234	87.3
50-64	158	53.1	54	20.0	212	40.9
65-79	77	31.0	46	20.4	123	39.5
80+	24	28.2	11	18.8	35	59.8
Total	514	43.6	208	19.5	722	32.2

*2 AEFI report in children 5-11 years of age

Figure 1: Number of the ten most frequently reported adverse events following immunization for COVID-19, December 16, 2020 to February 28, 2022



*An AEFI report may contain multiple adverse events. The total adverse event-specific counts may not equal the total number of AEFI reports. This does not include AEFIs classified in the composite "Other" category.

Serious Adverse Events Following Immunization Summary

An event is serious if it occurs within a specified time period after vaccination and it results in hospitalization, is life threatening, or results in death.[ii] These reports do not imply a causal relationship between the vaccine and the adverse event. As more Nova Scotians are vaccinated, a greater number of adverse events that are incidental to vaccination will be reported.

Between December 16, 2020 and February 28, 2022, there have been a total 123 Serious Adverse Events Following Immunization reported in Nova Scotia.

113 of these adverse event reports required hospitalization

2 of these adverse event reports resulted in permanent disability

There were 10 reports of death within 30 days of vaccination. Reports of death are events temporally associated with vaccine that have not been clearly attributed to other causes. A preliminary review of these events indicated that none were clearly attributable to the vaccine.

Adverse Events of Special Interest Following Immunization

There are three adverse events of special interest (AESI) following immunization which are being actively monitored in Canada as safety signals. Nova Scotia has reported 62 cases of adverse events of interest.

Myocarditis/Pericarditis

- 54 cases
- Cases ranged from 18 to 71 years of age
- 68% (n=37) cases among adolescents/young adults under 30 years of age
- 89% (n=48) occurred after dose 2; one case occurred after dose 3
- 72% (n=39) required hospitalization
- 91% (n=49) occurred within 7 days of vaccination
- 70% (n=38) occurred after vaccination with Moderna; 30% (n=16) occurred after vaccination with Pfizer

Guillain-Barre Syndrome

- 5 cases; these 5 events occurred after Moderna (2=Dose 1), Pfizer (1=Dose 1, 1=Dose 2) and COVISHIELD/AstraZeneca vaccine (1=Dose 1)

Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT)

- 2 cases; 2 events occurred after vaccination with COVISHIELD/AstraZeneca

DATA NOTES

Data Sources:

Nova Scotia data: Panorama and CanImmunize

Definitions

Adverse Events Following Immunization (AEFI): A serious or non-serious reaction experienced by a patient following immunization.

The numbers included in the report reflect the number of AEFIs with a status of "Review complete", "Review complete, follow-up required" or "Follow-up complete" AND a Public Health Agency of Canada report date entered into Panorama

Serious AEFI: An adverse event following immunization that has resulted in at least one of the following:

- hospitalization or prolongation of existing hospitalization
- permanent disability
- death

Non-Serious AEFI: An adverse event following immunization that has resulted in at least one of the following:

- a reaction that did not require hospitalization or prolongation of existing hospitalization
- a reaction that did not result in permanent disability
- a reaction that did not result in death

Adverse Events of Special Interest (AESI): Adverse Events of Special Interest are reactions that are of special interest because they are monitored at a national and international level.

Safety Signal: When an Adverse Event Following Immunization occurs at greater than expected frequency for a specific vaccine type or within a specific population group

[i] https://health-infobase.canada.ca/covid-19/vaccine-safety/

[ii] https://health-infobase.canada.ca/covid-19/vaccine-safety/