



Reports of Suspected Adverse Reaction to COVID-19 Vaccines (01 March 2021 to 01 May 2022)

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About the report

- A summary is presented below of all received suspected adverse reaction reports following COVID-19 vaccination from 01 March 2021, the date when the first vaccine became available, up to 01 May 2022.
- Seven (7) vaccines under Emergency Use Authorization (EUA) are currently being used in the vaccination program: CoronaVac, Vaxzevria (AstraZeneca), Sputnik V/Sputnik Light, Comirnaty, Spikevax (Moderna), Janssen COVID-19 Vaccine, and COVID-19 Vaccine Sinopharm.
- Data are based on the VigiFlow, the national database of adverse reactions in the Philippines. It includes reports from various epidemiology surveillance units (ESUs) of the Department of Health (DOH), vaccination sites, hospitals, patients/consumers, and EUA holders.
- Symptoms or diseases that occur after vaccination are reported if there is a *suspicion* of a possible link. However, it cannot be assumed that there is a causal relationship between the suspected adverse reaction and the vaccine.
- This report contains all suspected adverse reactions regardless of any possible causal relationship.
- Additional information may become available in individual case reports at any time, verification and validation may be done which may change the assessment and figures presented.
- Adverse reaction reports are necessary for the safety assessment of the vaccines, making sure that the benefits always outweigh the risks.
- Reports are constantly reviewed and monitored for the possible emergence/identification of unknown adverse reactions also known as signal. If a signal is identified, the FDA and DOH perform investigations, regulatory actions, and timely communication.
- A weekly report is published to summarize reported adverse reactions to the COVID-19 vaccines.

Summary

This report is based on an assessment of adverse reaction reports received by 01 May 2022. As per benefit-risk assessment, these reports do not provide a basis for revising the current recommendations regarding the use of COVID-19 vaccines.

A report of adverse reaction does not necessarily mean that the vaccine caused the reactions. A mere suspicion may also be reported. Undiagnosed illness, underlying comorbidities, and pre-existing medical conditions unrelated to vaccination can be factors in reporting adverse reactions. The relative numbers should not be used to compare the safety of different vaccines.

Like any other vaccines, COVID-19 vaccines may cause adverse reactions in some people while others may not experience any adverse reaction. It is possible for several persons to experience the same adverse event but for the report to be serious for one person and non-serious for another person. Most of the reported reactions are generally in line with what is described in the product information and labels. Such reports are minor adverse reactions, which include body pain, chills, fatigue, fever, headache, nausea, and pain in the injection site. These usually appear on the first or second day of vaccination and may last for 2-3 days. Most people tolerate these adverse reactions while others experience greater discomfort.

Serious adverse reactions have also been reported. The FDA together with other public health partners are continuously monitoring the adverse experience as more people are being vaccinated with COVID-19 vaccines. Such monitoring will provide reassurance that the vaccines are safe and effective for use.

Considering the post-authorization experience on the use of COVID-19 vaccines, Vaxzevria (AstraZeneca) and Janssen COVID-19 Vaccine included in their label that individuals who have experienced thrombosis with thrombocytopenia syndrome (TTS) and capillary leak syndrome (CLS) are contraindicated on its use. In addition, special warnings and precaution for use for these vaccines were updated to include information on hypersensitivity and anaphylaxis, anxiety-related reactions, coagulation disorders, capillary leak syndrome, Guillain-Barré syndrome (GBS), and transverse myelitis.

The labels of mRNA vaccines Spikevax (Moderna) and Comirnaty (Pfizer-BioNTech) included the special warnings and precautions on hypersensitivity and anaphylaxis, myocarditis and pericarditis, anxiety-related reactions, thrombocytopenia and coagulation disorders.

The immunization program expanded its coverage to include adolescent individuals (12 to 17 years old) on the second week of October. Comirnaty and Spikevax are the only vaccines with EUA for the said population. Vaccination further expanded its coverage to include children ages 5-11 years last February 2022. Comirnaty and CoronaVac are the vaccines approved for use in such population. However, Comirnaty is the only vaccine currently used.

Seven (7) vaccines are currently used in the immunization program. Supplies of vaccines are either procured by the government and/or private sector or supplied under the COVAX facility.

COVID-19 vaccines with Emergency Use Authorization in the Philippines

At present, the FDA granted [nine \(9\) COVID-19 vaccines with emergency use authorization](#):

- Pfizer-BioNTech COVID-19 mRNA Vaccine (nucleoside modified) [Comirnaty]
- AstraZeneca COVID-19 Vaccine (ChAdOx1-S [recombinant]) [Vaxzevria]
- COVID-19 Vaccine (Vero Cell), Inactivated [CoronaVac]
- Gam-COVID-Vac (Sputnik V & Sputnik Light)
- COVID-19 Vaccine (Ad26.COV2-S [recombinant]) [Janssen COVID-19 Vaccine]
- COVID-19 Vaccine (Whole Virion Inactivated Corona Virus vaccine) [Covaxin]
- Moderna COVID-19 mRNA Vaccine [nucleoside modified] (Spikevax)
- Inactivated COVID-19 Vaccine (Vero Cell) (COVID-19 Vaccine Sinopharm BIBP/Wuhan)
- COVID-19 Vaccine (SARS-CoV-2 rS Protein Nanoparticle [Recombinant] [Covovax]

Various vaccine platforms have been approved for use in the Philippines. Comirnaty and Spikevax are mRNA vaccines; Vaxzevria and Janssen COVID-19 Vaccine are non-replicating viral vector vaccines while Sputnik V uses the same technology having two (2) different (dose) components of viral vectors, and Spuntik Light having a single dose component; CoronaVac, Covaxin, and COVID-19 Vaccine Sinopharm BIBP/Wuhan are inactivated vaccines; and Covovax is a protein subunit vaccine. Primary series are administered either in two doses (three doses for immunocompromised individuals) with an interval of few weeks or single-dose using Janssen COVID-19 Vaccine or Sputnik Light. Booster shots are administered as homologous or heterologous using only approved vaccines as listed above.

Statistics regarding reports of suspected adverse reactions

As of 01 May 2022, more than 146.8 million doses of COVID-19 vaccines (CoronaVac, Vaxzevria, Sputnik V/Sputnik Light, Comirnaty, Spikevax, Janssen COVID-19 Vaccine, COVID-19 Vaccine Sinopharm) were administered. Over 67.9 million individuals are now fully vaccinated (either given a single-dose or 2-dose vaccine series) while more than 4.7 million are partly vaccinated waiting for their second dose to be administered. 13,231,643 individuals already received their third or additional doses (either homologous or heterologous booster doses). A total of 99,246 suspected adverse reaction reports were received, evaluated, and analyzed by the FDA. To disaggregate, 34,853 have been reported for CoronaVac, 36,119 for Vaxzevria, 862 for Sputnik V, 16,633 for Comirnaty, 5,641 for Spikevax, 4,794 for Janssen COVID-19 Vaccine, and 344 for COVID-19 Vaccine Sinopharm.

Table 1. Data on vaccination and suspected adverse reaction reports.

Indicators	Value
Total number of doses administered	146,869,397
No. of fully vaccinated individuals	67,911,464
No. of individuals partly vaccinated	4,779,495
No. of individuals with booster shots	13,231,643
No. of suspected adverse reaction reports	99,246 (0.07% of doses administered)
No. of suspected serious adverse reaction reports	7,686 (0.005% of doses administered)

Distribution of reports of adverse reactions for each vaccine

Data shown below are cumulative reports from the start of the vaccination program on 01 March 2021 up until 01 May 2022.

Table 2. Distribution of reports of adverse reactions for each vaccine

Vaccine	Date started	Total vaccine doses administered ^b	Number of fully vaccinated individuals ^b	Number of individuals partly Vaccinated	Number of individuals with booster shots	Number of individuals with second booster	Total number of reports ^a	Reports of non-serious events	Reports of serious events
CoronaVac	01 Mar 2021	45,287,071	21,699,780	1,083,247	803,700	564	34,853	31,921	2,932
AstraZeneca	07 Mar 2021	21,521,022	8,905,429	865,175	2,844,064	925	36,119	34,532	1,587
Sputnik V/ Sputnik Light	04 May 2021	1,107,773	530,527	45,887	442	1,330	862	819	43
Comirnaty	13 May 2021	52,628,910	22,148,446	2,181,563	6,146,889	3,566	16,633	15,011	1,622
Moderna	30 June 2021	18,298,385	7,162,588	553,711	3,418,453	1,045	5,641	5,061	580
Janssen	20 July 2021	6,988,650	6,971,159	-	17,491	0	4,794	3,932	862
Sinopharm	25 Aug 2021	1,037,586	493,535	49,912	604	0	344	284	60
TOTAL		146,869,397	67,911,464	4,779,495	13,231,643	7,430	99,246	91,560	7,686

Data source: ^aVigiFlow, ^bNVOC daily report as of 01 May 2022

Notes: Additional information may become available in individual cases, which may change the figures presented

^bAn individual is considered partly vaccinated if they have received only one dose of a two-dose vaccine course. An individual is considered fully vaccinated if they have received a single-dose vaccine or both doses of a two-dose vaccine

^cData concerning various vaccines are not directly comparable. COVID-19 vaccines profile varies, they have not been used for equal periods of time and they have been administered to number of people with different profiles including various age and sex.

Demographics

The figures below provide a descriptive overview of the population who have experienced adverse reactions to COVID-19 vaccines. Figure 1 and Figure 2 shows the distribution of reports by gender and age. Click [here](#) to show disaggregated data.

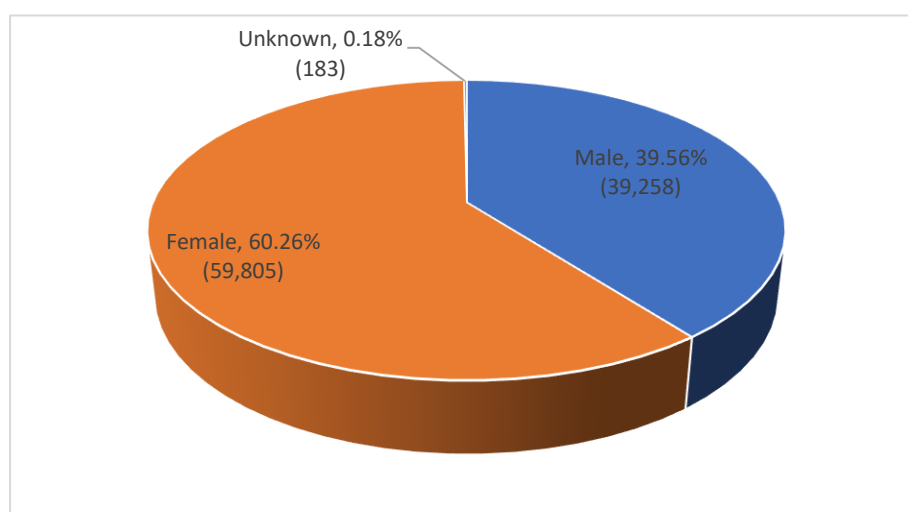


Figure 1. Report distribution by gender

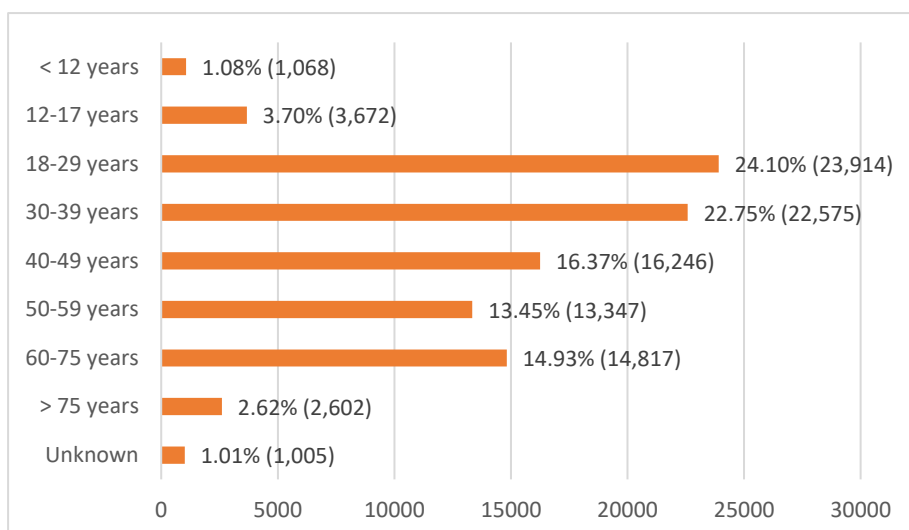


Figure 2. Report distribution by age

The early phase of the vaccination program is intended for the frontline health workers, thus, the high number in the female and younger population might be associated with the data that our health system is dominated by female (75%) and young adults under the age of 35 (65%).¹ An increasing number of reports from the age group 40 years and above this may be attributed to the coverage of priority groups of senior citizens and individuals with comorbidities. There were reports involving adolescents and children since they are now included in the vaccination coverage.

Relative to the inclusion of the frontline personnel in the priority groups, the observed increasing number of reports in the male population may be attributed to the vaccine coverage and statistics that more males are employed than females (6 in every 10).²

¹ Human Resource for Health in the Time of the COVID-19 Pandemic: Does the Philippines Have Enough?

<https://www.drdf.org.ph/sites/default/files/pdf/COVID-19-Research-Brief-08.pdf>

² Employment situation in July 2018, Philippine Statistics Authority

<https://psa.gov.ph/statistics/survey/labor-and-employment/labor-force-survey/title/Employment%20Situation%20in%20July%202018>

Pregnant women and lactating mothers

Pregnant women are included in the A3 priority group for COVID-19 vaccination. [Pregnancy is not a contraindication to getting the COVID-19 vaccine \(except for the Gamaleya vaccine, Gamaleya vaccine shall not be administered to the pregnant and breastfeeding populations\).](#) They are considered to have a low risk of contracting COVID-19; however, studies have shown that pregnant women have a higher risk of having severe COVID-19 infection compared to non-pregnant women thus the benefits of getting vaccinated outweigh the risks.

As of 01 May 2022, 475 suspected adverse reaction reports were received from pregnant women. Out of these reports, 266 reports were tagged as serious, 208 reports were non-serious, and one (1) report with no tag whether serious or non-serious. The most commonly reported adverse reactions from pregnant women include labor pain, vaccination/injection site pain, back pain, myalgia, and pyrexia.

Breastfeeding is vital to the health of infants and their mothers. COVID-19 vaccination is also recommended for breastfeeding mothers. Limited data is available on the effects of the vaccine on milk production and excretion.

As of 01 May 2022, 181 reports were received from the group of lactating mothers. Eleven (11) reports were tagged as serious and 170 reports were tagged as non-serious. The most commonly reported adverse reactions from lactating mothers include pyrexia, headache, vaccination/injection site pain, malaise, and myalgia.

Overall, data suggests that the benefits of receiving a COVID-19 vaccine outweigh any known or potential risks of vaccination during pregnancy and lactation.

References:

[WHO COVID-19 vaccines and pregnancy, breastfeeding, fertility](#)

[CDC COVID-19 Vaccines While Pregnant or Breastfeeding](#)

Vaccination in children

The roll out for vaccinating adolescent population (12-17 years old) started last 15 October 2021 initially for those with co-morbidities and expanded to include all adolescents (with or without co-morbidities) on 02 November 2021. Comirnaty and Spikevax are the only vaccines with EUA for the adolescent population.

As of 01 May 2022, 3,639 reports were received: 285 reports were tagged as serious (225 hospitalizations), 3,352 reports were tagged as non-serious, and the seriousness was not reported or unknown in the remaining two (2) reports. The most common reported reactions are dizziness, pyrexia, vaccination/injection site pain, headache, and blood pressure increased.

Vaccination in children ages 5 to 11 started last 07 February 2022. Initially, Comirnaty is the only vaccine used in this age group. Recently, CoronaVac has been authorized by the FDA to be used in individuals 6 years and above. Comirnaty for children ages 5 to 11 has a different formulation compared with the Comirnaty used in 12 years and older. Only 10-µg/dose is needed for active immunization to prevent COVID-19 caused by SAR-CoV-2 in children aged 5 to 11 years.

As of 01 May 2022, 1,067 reports were received: 72 reports were tagged as serious (62 hospitalizations), 992 reports are tagged as non-serious, and the seriousness was not reported in the remaining three (3) reports. The most common reported reactions are vaccination/injection site pain, pyrexia, rash, vomiting, and dizziness.

Of the total serious cases in age group 5 to 17 years old, 7 cases (2 anaphylaxis and 1 GBS) were assessed with casual association to vaccination, other reactions including anxiety reaction, hyperventilation, and syncope, which are classified as immunization anxiety-related reactions (4 cases). Three (3) serious cases were assessed as indeterminate and coincidental event.

Booster shots

The roll out of vaccination for the booster shots (third or additional doses) started last 17 November 2021 initially for healthcare workers. Senior citizens, immunocompromised, and individuals with comorbidities at high risk of developing severe COVID-19 on 22 November 2021 followed this. The general population ages 18 years and above who completed their vaccine doses may also receive booster shots, which started last 03 December 2021.

Individuals eligible for booster shots have the option of receiving a [homologous or heterologous booster](#) dose given that they have completed their primary dose series at least 3 months (initially six (6) months) after getting the second dose of either CoronaVac, Vaxzevria, Sputnik V, Comirnaty, or Spikevax and at least 2 months (initially 3 months) for Janssen COVID-19 vaccine and Sputnik V. The [interval for the administration of booster doses was shortened](#) effective 22 December 2021.

As of 01 May 2022, 3,579 suspected adverse reaction reports were received: 362 reports were tagged as serious and 3,217 reports were tagged as non-serious. The most common reported adverse reaction includes vaccination/injection site pain, pyrexia, headache, malaise, and blood pressure increased.

The roll for second booster started last 25 April 2022 for the immunocompromised population. The vaccines authorized for second booster are Comirnaty, Spikevax, CoronaVac, Sinopharm, and Vaxzevria. Second booster shots shall be administered at least three (3) months after the first booster shot.

As of 01 May 2022, four (4) suspected adverse reaction reports were received: one (1) report were tagged as serious and three (3) reports were tagged as non-serious. The most common reported adverse reaction includes pyrexia, nasopharyngitis, and cough.

National Vaccination Days

With the aim of increasing COVID-19 vaccination coverage nationwide, the first wave of Bayanihan, Bakunahan National Vaccination Days (NVD) were held last 29 November to 02 December 2021. Second and third wave were held last 15 to 22 December 2021 and 10-18 February 2022, respectively. Followed by a fourth wave last 10 to 18 March 2022 with extensions in other regions. During the vaccination days, reports of suspected adverse reaction were monitored and continuously reported and evaluated together with all other reports.

Roll out in pharmacies and clinics

The COVID-19 vaccination program aims to reach more Filipinos through its vaccination roll out in pharmacies and clinics which started last 20 January 2022 initially for booster shots. High-risk groups and children below 18 years old are not qualified to be vaccinated in drugstores while clinics may give shots to high-risk group such as senior citizens and individuals with co-morbidities. Initially, CoronaVac and COVID-19 Vaccine AstraZeneca were the only vaccines utilized in these settings.

Reports of suspected serious adverse reaction

Adverse reactions experienced after vaccination are considered serious when it resulted to any of the following criteria:

- In-patient hospitalization/prolongation of existing hospitalization
- Significant disability/incapacity
- Life-threatening (e.g. anaphylaxis) and death
- Birth defect or congenital malformations
- Considered to be medically important event

Hypersensitivity including severe allergic reactions

Severe allergic reactions have been reported on the use of COVID-19 vaccines including CoronaVac, COVID-19 Vaccine AstraZeneca, Sputnik V, Comirnaty, COVID-19 Vaccine Moderna, Janssen COVID-19 Vaccine, and COVID-19 Vaccine Sinopharm. It only occurs in a few vaccinated individuals. It usually happens in people with a history of severe vaccine reactions. Severe allergic reactions (anaphylaxis) generally occur soon after vaccination and are usually managed with Epinephrine in combination with other medicines. Thus, vaccinees are observed for at least 15 minutes after receiving their vaccine. Epinephrine is readily available in all vaccination sites in case of anaphylaxis.

The proportion of reported side effects of severe allergic reactions to COVID-19 vaccines proved to be statistically rare as the number of vaccinated populations increases. The current reporting rate for anaphylaxis is 2.14 per million doses administered.

Increased blood pressure

Blood pressure (BP) increased has been continuously reported as one of the top adverse reactions to all vaccine platforms. Monitoring BP has been part of the screening process for COVID-19 vaccination program in the country. The program recommends monitoring BP only in vaccine recipients with a history of hypertension, symptomatic hypertension, and based on the clinical judgement of the physician on the vaccination site. This is in relation to the recommendations of [the Philippine Heart Association and Philippine Society of Hypertension on elevated blood pressure readings during COVID-19 vaccination](#).

According to PRESYON 4 (Philippine Heart Association Report on the Study of Hypertension), a nationwide hypertension survey conducted in January to April 2021, the prevalence of hypertension in the Philippines alarmingly increased to 37% in 2021 among adults 18 years old and above from 28% (2013). Out of this 37%, 19% are aware of having hypertension while 18% are unaware. The BP control rate, with or without medications, is 36%. Only about 25% of hypertensive individuals monitor blood pressure at home.³ This study explains the increase in blood pressure observed in most vaccinated individuals.

³ Sison, J.A. (2021, May). Press Conference on PRESYON 4 – Nationwide 2021 Hypertension Survey Results [Video file]. Retrieved from <https://www.facebook.com/philheart.org/videos/159433679504182/>

Thrombosis-thrombocytopenia syndrome

Thrombosis-thrombocytopenia syndrome (TTS) are cases of unusual blood clots with low blood platelets. Following cases of TTS from other countries, COVID-19 Vaccine AstraZeneca and Janssen COVID-19 Vaccine revised their label to include warnings related to thrombosis with thrombocytopenia, a very rare side effect following vaccination.

Vaccinated individuals should watch out for the said adverse event and seek immediate medical assistance if they experience any sign of blood clots and low blood platelet such as:⁴

- shortness of breath
- chest pain
- leg swelling
- persistent abdominal (belly) pain
- neurological symptoms, such as severe and persistent headaches or blurred vision
- tiny blood spots under the skin beyond the site of the injection

Eleven (11) cases of thrombosis have been reported. One (1) case has been assessed as indeterminate meaning there is insufficient evidence that the vaccine caused the reaction and 10 cases are currently being reviewed. The FDA together with the Epidemiology Bureau of the DOH shall continue to monitor vaccine safety ensuring that the benefits always outweigh the risks.

⁴ AstraZeneca's COVID-19 vaccine: EMA finds possible link to very rare cases of unusual blood clots with low blood platelets
<https://www.ema.europa.eu/en/news/astrazenecas-covid-19-vaccine-ema-finds-possible-link-very-rare-cases-unusual-blood-clots-low-blood>

Confirmed COVID-19 infections

There were 4,484 confirmed reports of COVID-19 infections. Most of the reported infections were asymptomatic cases. There were 236 severe cases that resulted to a fatal outcome. Most of the fatal reports have not yet completed their vaccination course. Upon assessment, these cases were not related to the use of the vaccine, but these were actual COVID-19 natural infections.

The vaccines currently being used in the COVID-19 vaccination program are non-replicating viral vector, inactivated, and mRNA vaccines. It does not contain any live virus and therefore does not cause COVID-19 infection in vaccine recipients.

Inflammation of the heart

Myocarditis is an inflammation of the heart muscle that may present as chest pain, palpitations, arrhythmias, and/or symptoms of heart failure while pericarditis is an inflammation of the pericardial sac that surrounds the heart and fixes it to the mediastinum. Cases of myocarditis and pericarditis on the use of mRNA vaccine, such as Comirnaty and COVID-19 Vaccine Moderna, have been reported in many countries including the US, UK, Germany, and Israel. Most of the cases are young male. The US FDA announced the revision of fact sheets for Comirnaty and COVID-19 Vaccine Moderna suggesting increased risk of myocarditis and pericarditis following vaccination. EMA's safety committee has also concluded that myocarditis and pericarditis can occur in very rare cases following Comirnaty and COVID-19 Vaccine Moderna.

Vaccinated individuals should watch out for the said adverse event and seek immediate medical assistance if they experience the following symptoms after vaccination:⁵

- breathlessness
- a forceful heartbeat that may be irregular
- chest pain

Thirteen (13) cases of myocarditis and two (2) cases of pericarditis have been reported. Three (3) cases of myocarditis have been assessed as product related reactions (as per published literature) and 10 cases including two (2) cases of pericarditis are currently being reviewed. The FDA together with the Epidemiology Bureau of the DOH shall continue to monitor vaccine safety ensuring that the benefits always outweigh the risks.

⁵ *Comirnaty and Spikevax: possible link to very rare cases of myocarditis and pericarditis*
<https://www.ema.europa.eu/en/news/comirnaty-spikevax-possible-link-very-rare-cases-myocarditis-pericarditis>

Capillary Leak Syndrome

Capillary leak syndrome is a very rare, serious condition that causes fluid leakage from small blood vessels (capillary), resulting in swelling mainly in the arms and legs, low blood pressure, thickening of the blood, and low blood levels of albumin. Several cases were reported on the use of COVID-19 Vaccine AstraZeneca and Janssen COVID-19 Vaccine. The EMA's safety committee recommended contraindication in individuals with previous capillary leak syndrome and inclusion of capillary leak syndrome as a new side effect in the product information for both products.

Vaccinated individuals should watch out for the said adverse event and seek immediate medical assistance if they experience the following symptoms days after vaccination, which may occur together with feeling faint (due to low blood pressure):⁶

- rapid swelling of the arms and legs
- sudden weight gain

No case of capillary leak syndrome has been reported on the use of COVID-19 vaccines in the Philippines as of this time. The FDA together with the Epidemiology Bureau of the DOH shall continue to monitor vaccine safety ensuring that the benefits always outweigh the risks.

⁶ *COVID-19 Vaccine Janssen: Contraindication in individuals with previous capillary leak syndrome and update on thrombosis with thrombocytopenia syndrome*
<https://www.ema.europa.eu/en/medicines/dhpc/covid-19-vaccine-janssen-contraindication-individuals-previous-capillary-leak-syndrome-update>

Guillain-Barré syndrome

Guillain-Barré syndrome (GBS) is a rare, autoimmune disorder in which a person's own immune system damages the nerves, causing muscle weakness and sometimes paralysis. An increased risk for GBS has been observed following vaccination with Janssen COVID-19 Vaccine in the US. The US FDA has announced the revision of fact sheets for Janssen COVID-19 Vaccine to include the observed risk for GBS. EMA's safety committee considered that a

causal relationship between Janssen COVID-19 Vaccine and GBS is possible. COVID-19 Vaccine AstraZeneca already updated their product information.

Vaccinated individuals should watch out for the said adverse event and seek immediate medical assistance if they experience signs and symptoms suggestive of GBS such as:⁷

- double vision or difficulty moving eyes
- difficulty swallowing, speaking, or chewing
- coordination problems and unsteadiness
- difficulty walking
- tingling sensations in the hands and feet
- weakness in the limbs, chest, or face
- problems with bladder control and bowel function

Twenty-four (24) cases of GBS have been reported. Four (4) cases have been assessed as product related reactions (as per published literature), five (5) cases are indeterminate meaning there is insufficient evidence that the vaccine caused the reaction, and 15 are currently being reviewed. The FDA together with the Epidemiology Bureau of the DOH shall continue to monitor vaccine safety ensuring that the benefits always outweigh the risks.

⁷ COVID-19 Vaccine Janssen: Guillain-Barré syndrome listed as a very rare side effect

<https://www.ema.europa.eu/en/news/covid-19-vaccine-janssen-guillain-barre-syndrome-listed-very-rare-side-effect>

Bell's palsy

Bell's palsy is a form of temporary facial paralysis or weakness on one side of the face. It results from dysfunction of facial nerve, which directs the muscles on one side of the face. Cases have been reported in a number of people in Hong Kong, Canada, and UK on the use of CoronaVac, Comirnaty, and COVID-19 Vaccine Moderna. The overall number of these reports is relatively small. In relation to this, [CoronaVac vaccination fact sheet was revised to include bell's palsy as a very rare adverse reaction](#) in Hong Kong while Comirnaty product information was revised in Canada. COVID-19 Vaccine Moderna already contains this safety information.

Vaccinated individuals should watch out for the said adverse event and seek immediate medical assistance if they experience any combination of the following symptoms:⁸

- uncoordinated movement of the muscles that control facial expressions, such as smiling, squinting, blinking, or closing the eyelid
- loss of feeling in the face
- headache
- tearing from the eye
- drooling
- lost sense of taste on the front two-thirds of the tongue
- hypersensitivity to sound in the one ear
- inability to close an eye on one side of the face

Twenty-seven (27) cases of bell's palsy have been reported. Seven (7) cases have been assessed as product related reactions (as per published literature), two (2) cases are indeterminate meaning there is insufficient evidence that the vaccine caused the reaction, two (2) cases as coincidental or not related to the vaccine, and 16 cases are currently being reviewed. The FDA together with the Epidemiology Bureau of the DOH shall continue to monitor vaccine safety ensuring that the benefits always outweigh the risks.

⁸ Health Canada updates Pfizer-BioNTech COVID-19 vaccine label to reflect very rare reports of Bell's Palsy
<https://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2021/76203a-eng.php>

Immune thrombocytopenia

Immune thrombocytopenia is an autoimmune condition in which the immune system mistakenly targets blood cells called platelets that are needed for normal blood clotting. Very rare cases have been reported internationally after receiving the Janssen COVID-19 Vaccine and the COVID-19 Vaccine AstraZeneca. The product information for both vaccines have been recommended to update the imposition of the European Medicines Agency to include safety information on immune thrombocytopenia.

Vaccinated individuals should seek immediate medical assistance if they experience the following symptoms after vaccination:⁹

- unexplained bleeding
- unexplained bruising
- small purplish spots beyond the site of vaccination
- shortness of breath
- chest pain
- leg pain and/or swelling
- persistent abdominal pain

Five (5) cases of immune thrombocytopenia have been reported. Two (2) case has been assessed as coincidental or not related to the vaccine and three (3) cases are currently being reviewed. The FDA together with the Epidemiology Bureau of the DOH shall continue to monitor vaccine safety ensuring that the benefits always outweigh the risks.

⁹ Health Canada is updating the labels of the Janssen and Vaxzevria (AstraZeneca) COVID-19 vaccines
<https://recalls-rappels.canada.ca/en/alert-recall/health-canada-updating-labels-janssen-and-vaxzevria-astrazeneca-covid-19-vaccines>

Cases of hospitalization

One of the criteria for serious adverse reaction is hospitalization or extended hospital stay. Reports of adverse reaction that results in hospitalization does not necessarily mean that vaccine caused the reaction. An Expert Committee reviews and assesses whether the vaccine caused the reaction. Based on the reports received, the hospitalization-reporting rate is 3.55 per 100,000 doses administered. Commonly reported causes of hospitalization include pyrexia, cough, dyspnea, and headache.

Reports involving death

As of 01 May 2022, 2,237 fatal events were received. Reports of fatal events does not necessarily mean that the vaccine caused the events. Underlying conditions or pre-existing

medical conditions causing fatal events are usually coincidental on the use of the vaccine. It is expected that reports of fatal events will rise as the vaccination program covers more people including those with undiagnosed illness, underlying comorbidities, and pre-existing medical conditions.

The vaccinees reported to have fatal events were aged seven (7) years and above. The mean age of the fatal cases was 60.58 years. 59.23% (1,325) of the fatal cases were from age group 60 years and above, 26.78% (599) from age group of 40-59 years, 11.62% (260) from age group 18-39 years, 1.34% (30) from age group 12-17 years of age, 0.22% (5) from the age group 5-11 years, and 0.80% (18) were not identified to what age group they are classified.

Most of these events occurred in persons with multiple existing comorbidities. These include cardiovascular diseases, ischemic heart diseases, cerebrovascular diseases, cancer, diabetes, and infections including pneumonia. There were cases of confirmed COVID-19 infections leading to severe cases with fatal outcomes.

Number of suspected adverse reactions per category

A total of 99,246 case reports consisting of 211,534 suspected adverse reactions were received from the start of the vaccination program. More than one suspected adverse reaction might be reported in a single case. Suspected adverse reactions were coded using the Medical Dictionary for Regulatory Activities (MedDRA) terminology to allow international comparison of reports.

The data presented below are categorized by System Organ Class (SOC), the highest in the hierarchy of MedDRA. They are grouped by manifestation site (e.g. gastrointestinal, cardiac) and etiology (e.g. infections, examinations).

Reactions to inactivated vaccines

- CoronaVac
- COVID-19 Vaccine Sinopharm

Classification	Number of suspected reactions
General symptoms & reactions in the administration site <i>E.g. Pain and reaction in the injection site, chills, discomfort, fever, fatigue</i>	14,848
Cardiac symptoms <i>E.g. Palpitations, bradycardia, tachycardia</i>	972
Congenital, familial, and genetic disorder <i>E.g. Polycystic kidney</i>	4
Ear symptoms <i>E.g. Ear swelling, vertigo, tinnitus, ear discomfort</i>	63
Endocrine symptoms <i>E.g. Adrenal insufficiency, goiter, thyroid symptoms</i>	5
Examinations	12,623

<i>E.g. Increased blood pressure, increased heart rate, blood glucose increased, SARS-CoV-2 test</i>	
Eye symptoms <i>E.g. Eye itchiness, blurred vision, eye pain, eye swelling</i>	288
Gastrointestinal symptoms <i>E.g. Abdominal pain, diarrhea, nausea, vomiting, dry mouth, lip swelling</i>	3,997
Hepatobiliary symptoms <i>E.g. Jaundice</i>	20
Immune system symptoms <i>E.g. Allergic reactions, hypersensitivity</i>	206
Infections <i>E.g. Cold symptoms, rhinitis</i>	4,529
Metabolism and nutrition-related symptoms <i>E.g. Decreased appetite, increased appetite, starvation, dehydration</i>	537
Musculoskeletal symptoms <i>E.g. Back pain, joint pain, pain in extremities, muscle pain, muscle spasms</i>	2,445
Neoplasm <i>E.g. Liver cancer, endometrial cancer, uterine myoma</i>	14
Neurological symptoms <i>E.g. Dizziness, headache, syncope</i>	9,479
Pregnancy, puerperium, and perinatal conditions <i>E.g. Abortion, hemorrhage</i>	64
Procedural symptoms <i>E.g. Procedural hypertension, vaccination adverse reaction</i>	186
Psychiatric symptoms <i>E.g. Feeling anxious, insomnia, nervousness, disorientation</i>	176
Renal and urinary symptoms <i>E.g. Urine coloring yellow, urine frequency</i>	74
Reproductive symptoms <i>E.g. Vaginal bleeding, vaginal spotting</i>	107
Respiratory symptoms <i>E.g. Cough, nasal congestion, throat irritation</i>	7,530
Skin symptoms <i>E.g. Cold sweat, rash, redness</i>	4,494
Social circumstances <i>E.g. Hearing disability, walking disability</i>	3
Surgical and medical procedures <i>E.g. Tumor debulking, nasolabial flap</i>	18
Symptoms in blood and lymphatic system <i>E.g. Pain in the lymph nodes</i>	54
Vascular symptoms <i>E.g. Flashes, low blood pressure</i>	420

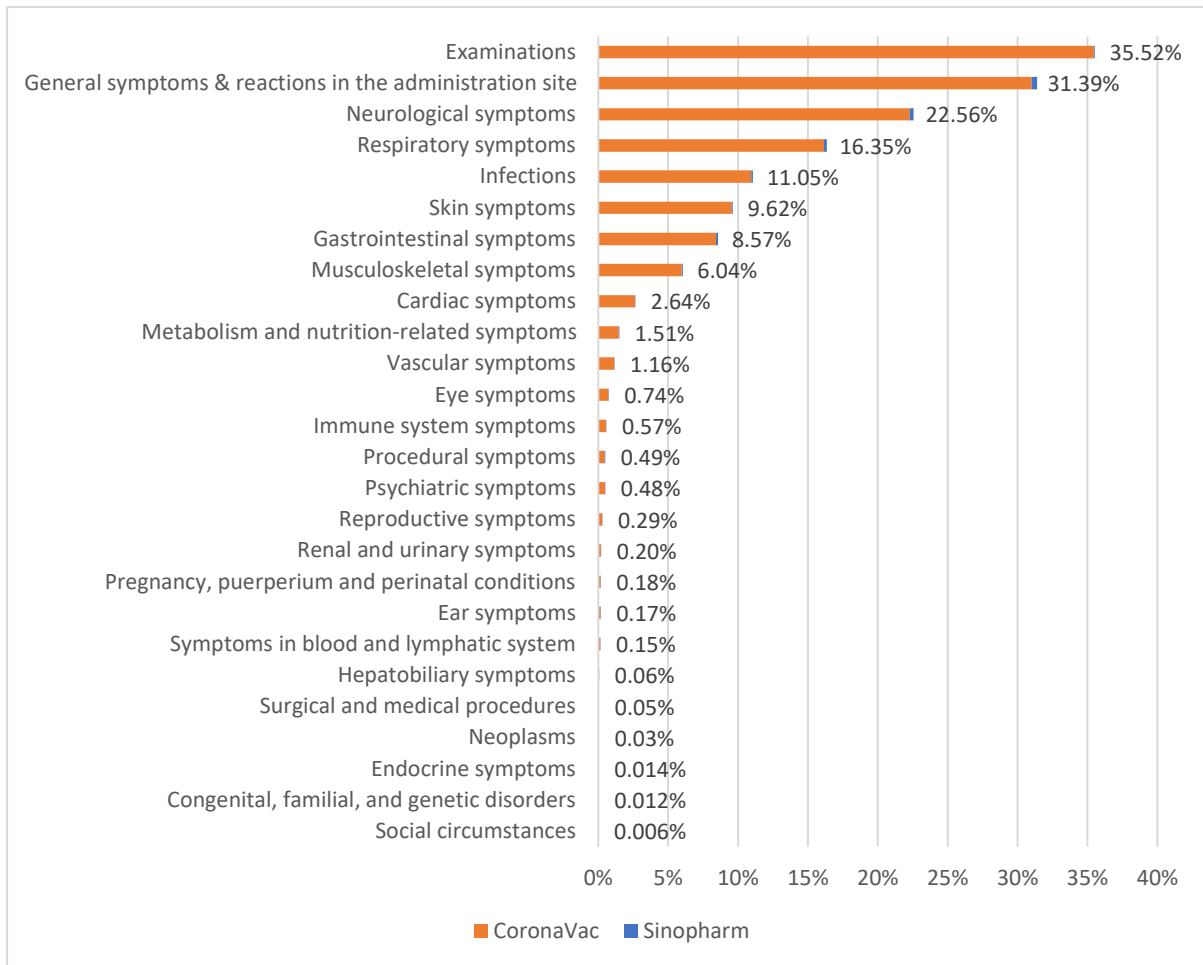


Figure3. Suspected adverse reaction distribution by SOC for inactivated vaccine

As shown in Figure 3, the SOC which consists of the greatest number of reports were examinations (12,503), followed by general symptoms and reactions in the administration site (11,048), neurological symptoms (7,940), respiratory symptoms (5,754), infections (3,890), skin symptoms (3,386), gastrointestinal symptoms (3,015), musculoskeletal symptoms (2,126), cardiac symptoms (929), and metabolism and nutrition-related symptoms (531).

The top reported events for CoronaVac are:

- blood pressure increased (35.11%)
- pyrexia (13.78%)
- headache (12.42%)
- cough (10.73%)
- vaccination/injection site pain (10.14%)
- dizziness (6.67%)
- rash (6.51%)
- nasopharyngitis (5.94%)
- dyspnea (5.05%)
- COVID-19 (5.03%)

The top reported events for COVID-19 Vaccine Sinopharm are:

- pyrexia (19.77%)

- cough (13.37%)
- dizziness (11.63%)
- headache (10.76%)
- dyspnea (6.69%)
- vaccination/injection site pain (6.10%), fatigue (6.10%)
- blood pressure increased (5.52%), COVID-19 (5.52%)
- nasopharyngitis (5.23%)
- rash (4.94%)
- diarrhea (4.65%)

Reactions to non-replicating viral vector vaccines

- COVID-19 vaccine AstraZeneca (Vaxzevria)
- Sputnik V
- Janssen COVID-19 Vaccine

Classification	Number of suspected reactions
General symptoms & reactions in the administration site <i>E.g. Pain and reaction in the injection site, chills, discomfort, fever, fatigue</i>	47,061
Cardiac symptoms <i>E.g. Palpitations, bradycardia, tachycardia</i>	868
Congenital, familial, and genetic disorder <i>E.g. Polycystic kidney</i>	5
Ear symptoms <i>E.g. Ear swelling, vertigo, tinnitus, ear discomfort</i>	74
Endocrine symptoms <i>E.g. Adrenal insufficiency, goiter, thyroid symptoms</i>	4
Examinations <i>E.g. Increased blood pressure, increased heart rate, blood glucose increased, SARS-CoV-2 test</i>	7,359
Eye symptoms <i>E.g. Eye itchiness, blurred vision, eye pain, eye swelling</i>	539
Gastrointestinal symptoms <i>E.g. Abdominal pain, diarrhea, nausea, vomiting, lip swelling</i>	5,489
Hepatobiliary symptoms <i>E.g. Jaundice</i>	27
Immune system symptoms <i>E.g. Allergic reactions, hypersensitivity</i>	287
Infections <i>E.g. Cold symptoms, rhinitis</i>	4,027
Metabolism and nutrition-related symptoms <i>E.g. Decreased appetite, increased appetite, starvation, dehydration</i>	840
Musculoskeletal symptoms <i>E.g. Back pain, joint pain, pain in extremities, muscle pain, muscle spasms</i>	9,463
Neoplasms <i>E.g. Liver cancer, endometrial cancer, uterine myoma</i>	15
Neurological symptoms <i>E.g. Dizziness, headache, syncope</i>	17,768

Pregnancy, puerperium, and perinatal conditions <i>E.g. Abortion, hemorrhage</i>	99
Procedural symptoms <i>E.g. Procedural hypertension, vaccination adverse reaction</i>	259
Psychiatric symptoms <i>E.g. Feeling anxious, insomnia, nervousness, disorientation</i>	131
Renal and urinary symptoms <i>E.g. Urine coloring yellow, urine frequency</i>	88
Reproductive symptoms <i>E.g. Vaginal bleeding, vaginal spotting</i>	106
Respiratory symptoms <i>E.g. Cough, nasal congestion, throat irritation</i>	5,749
Skin symptoms <i>E.g. Cold sweat, rash, redness</i>	3948
Social circumstances <i>E.g. Hearing disability, walking disability</i>	3
Surgical and medical procedures <i>E.g. Tumor debulking, nasolabial flap</i>	23
Symptoms in blood and lymphatic system <i>E.g. Pain in the lymph nodes</i>	93
Vascular symptoms <i>E.g. Flushes, low blood pressure</i>	419

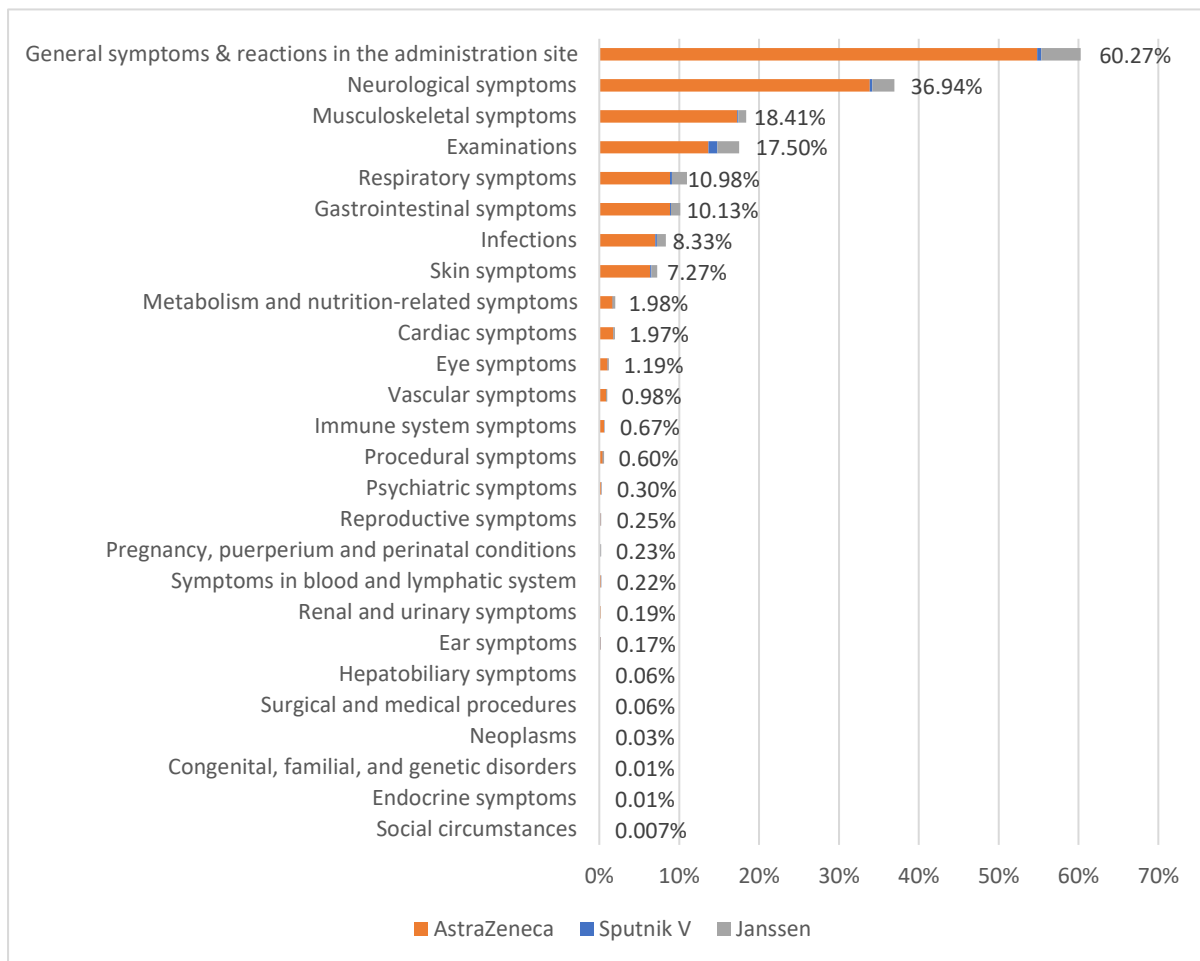


Figure 4. Suspected adverse reaction distribution by SOC for viral vector vaccines

As shown in Figure 4, the SOC which consists of the greatest number of reports were general symptoms and reactions in the administration site (25,178), followed by neurological symptoms (15,432), musculoskeletal symptoms (7,690), examinations (7,311), respiratory symptoms (4,586), gastrointestinal symptoms (4,231), infections (3,478), skin symptoms (3,035), metabolism and nutrition-related symptom (828), and cardiac symptoms (823).

The top reported events for COVID-19 Vaccine AstraZeneca are:

- pyrexia (38.90%)
- headache (32.01%)
- vaccination/injection site pain (22.16%)
- malaise (20.18%)
- chills (15.42%)
- blood pressure increased (15.39%)
- myalgia (14.63%)
- fatigue (10.96%)
- arthralgia (7.22%)
- dizziness (6.40%)

The top reported events for Sputnik V are:

- blood pressure increased (49.77%)
- pyrexia (14.27%)
- headache (8.58%)
- cough (6.96%)
- vaccination/injection site pain (6.15%)
- rash (5.45%)
- nasopharyngitis (5.34%)
- dizziness (5.10%)
- COVID-19 (4.18%)
- heart rate increased (4.06%)

The top reported events for Janssen COVID-19 Vaccine are:

- blood pressure increased (22.53%)
- pyrexia (18.46%)
- vaccination/injection site pain (15.48%)
- cough (10.49%)
- headache (10.24%)
- dyspnea (6.84%)
- dizziness (6.07%)
- COVID-19 (4.99%)
- hypoesthesia (4.90%)
- malaise (4.88%)

Reactions to mRNA vaccines

- Comirnaty
- COVID-19 Vaccine Moderna (Spikevax)

Classification	Number of suspected reactions
General symptoms & reactions in the administration site <i>E.g. Pain and reaction in the injection site, chills, discomfort, fever, fatigue</i>	14,861
Cardiac symptoms <i>E.g. Palpitations, bradycardia, tachycardia</i>	728
Congenital, familial, and genetic disorder <i>E.g. Skull malformation</i>	6
Ear symptoms <i>E.g. Ear swelling, vertigo, tinnitus, ear discomfort</i>	47
Endocrine symptoms <i>E.g. Adrenal insufficiency, goiter, thyroid symptoms</i>	7
Examinations <i>E.g. Increased blood pressure, increased heart rate, blood glucose increased, SARS-CoV-2 test</i>	4,839
Eye symptoms <i>E.g. Eye itchiness, blurred vision, eye pain, eye swelling</i>	259
Gastrointestinal symptoms <i>E.g. Abdominal pain, diarrhea, nausea, vomiting, lip swelling</i>	2,909
Hepatobiliary symptoms <i>E.g. Jaundice</i>	21
Immune system symptoms <i>E.g. Allergic reactions, hypersensitivity</i>	171
Infections <i>E.g. Cold symptoms, rhinitis</i>	2,245
Metabolism and nutrition-related symptoms <i>E.g. Decreased appetite, increased appetite, starvation, dehydration</i>	296
Musculoskeletal symptoms <i>E.g. Back pain, joint pain, pain in extremities, muscle pain, muscle spasms</i>	2,179
Neoplasms <i>E.g. Liver cancer, endometrial cancer, uterine myoma</i>	11
Neurological symptoms <i>E.g. Dizziness, headache, syncope</i>	6,788
Pregnancy, puerperium, and perinatal conditions <i>E.g. Abortion, hemorrhage</i>	189
Procedural symptoms <i>E.g. Procedural hypertension, vaccination adverse reaction</i>	254
Psychiatric symptoms <i>E.g. Feeling anxious, insomnia, nervousness, disorientation</i>	146
Renal and urinary symptoms <i>E.g. Urine coloring yellow, urine frequency</i>	61
Reproductive symptoms <i>E.g. Vaginal bleeding, vaginal spotting</i>	136
Respiratory symptoms <i>E.g. Cough, nasal congestion, throat irritation</i>	3,787

Skin symptoms <i>E.g. Cold sweat, rash, redness</i>	3,189
Social circumstances <i>E.g. Hearing disability, walking disability</i>	6
Surgical and medical procedure <i>E.g. Chemotherapy</i>	79
Symptoms in blood and lymphatic system <i>E.g. Pain in the lymph nodes</i>	115
Vascular symptoms <i>E.g. Flushes, low blood pressure</i>	260

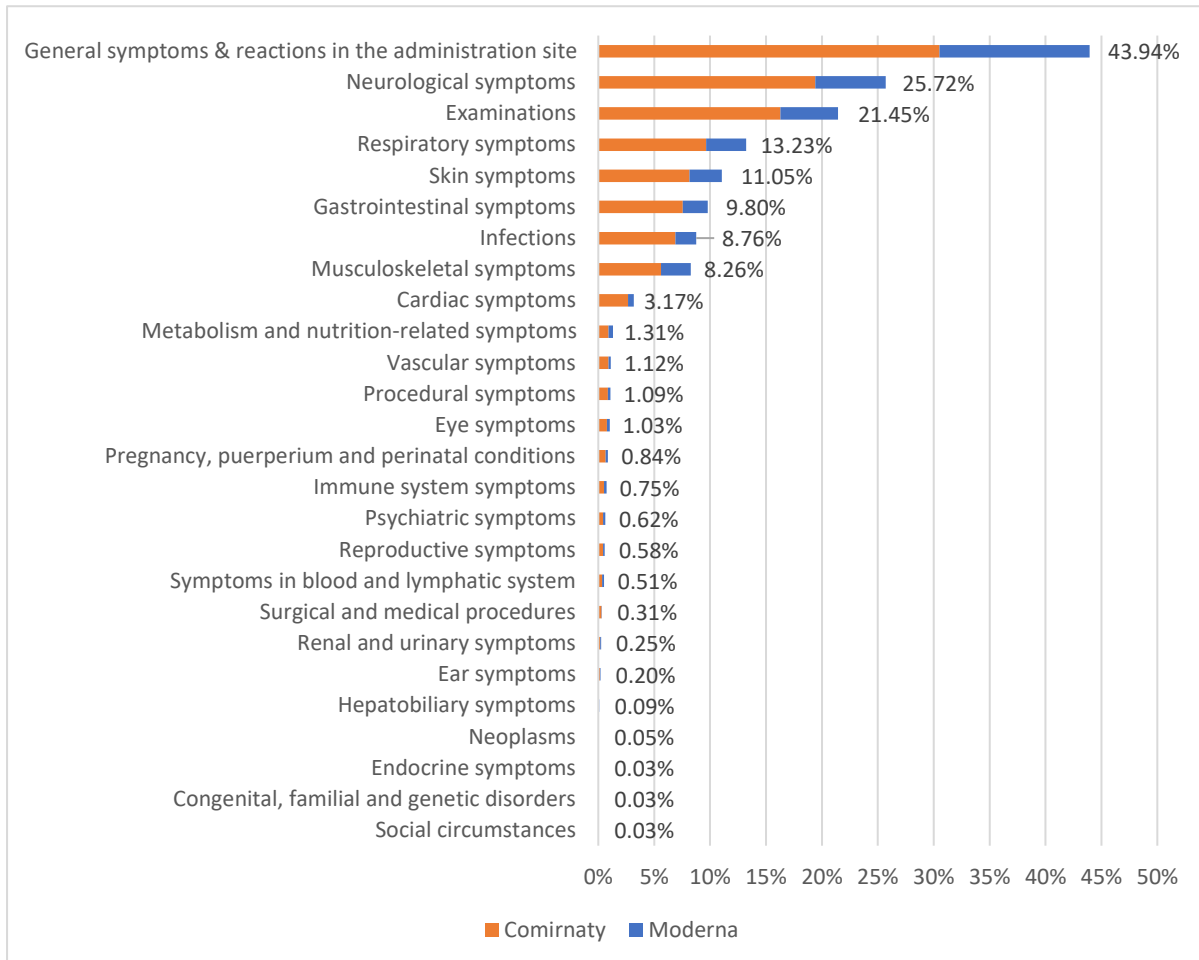


Figure 5. Suspected adverse reaction distribution by SOC for mRNA vaccine

As shown in Figure 5, the SOC which consists of the greatest number of reports were general symptoms and reactions in the administration site (9,786), followed by neurological symptoms (5,728), examinations (4,778), respiratory symptoms (2,947), skin symptoms (2,461), gastrointestinal symptoms (2,182), infections (1,951), musculoskeletal symptoms (1,840), cardiac symptoms (705), and metabolism and nutrition-related symptom (291).

The top reported events for Comirnaty are:

- blood pressure increased (19.99%)
- pyrexia (18.34%)
- vaccination/injection site pain (17.90%)

- headache (12.61%)
- dizziness (9.97%)
- rash (7.49%)
- cough (7.48%)
- malaise (5.58%)
- nasopharyngitis (4.83%)
- dyspnea (4.73%)

The top reported events for COVID-19 vaccine Moderna are:

- pyrexia (29.09%)
- vaccination/injection site pain (19.91%)
- blood pressure increased (18.51%)
- headache (15.21%)
- cough (8.33%)
- chills (7.68%)
- dizziness (7.45%)
- rash (6.95%)
- malaise (5.62%)
- myalgia (5.44%)

Outcome of suspected adverse reactions

The outcome of cases of suspected adverse reactions to COVID-19 vaccines is shown in Figure 6. Overall, most of the reported cases have *recovered/resolved* (74.10%), although there were few cases who have *recovered but with sequelae* (0.04%). Over 14% of the cases are *recovering/resolving* while more than 1% have *not recovered/not resolved* at the time of reporting. A proportion of 2.25% were reported with fatal outcomes as discussed in the section reports involving death.

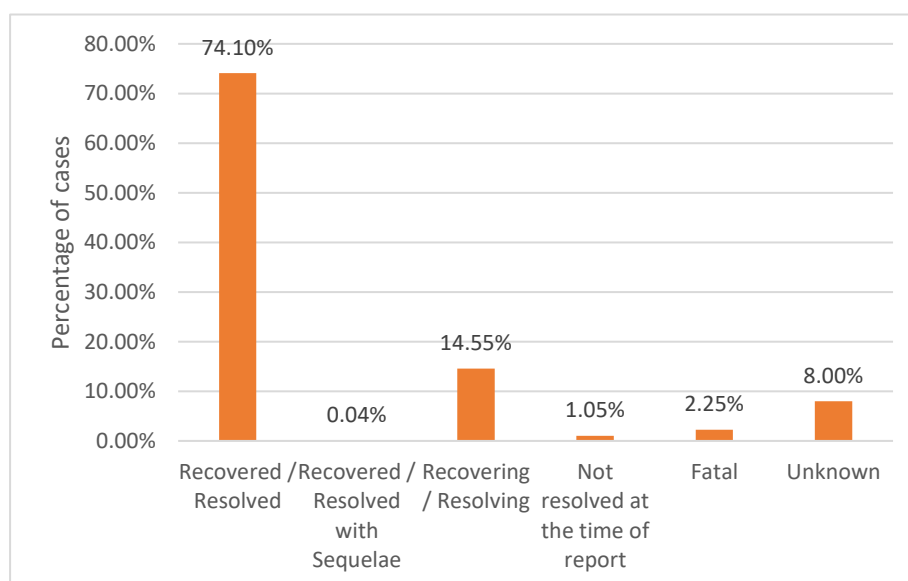


Figure 6. Case outcome

Reporting of suspected adverse reactions following vaccination

Individuals who have received their COVID-19 vaccination shots can report any suspected adverse reaction to any of the following:

- Immunization site where you were vaccinated
- Directly to the vaccine manufacturer or emergency use authorization holder
 - [Sinovac – CoronaVac & Covaxin](#)
 - [AstraZeneca – COVID-19 Vaccine AstraZeneca](#)
 - [Gamaleya – Sputnik V & Sputnik Light](#)
 - [Pfizer – Comirnaty](#)
 - [Zuellig – COVID-19 Vaccine Moderna](#)
 - Johnson & Johnson – Janssen COVID-19 Vaccine
 - Faberco – Covovax
- [FDA online reporting system](#)

Kindly **report only to one** of the above to avoid duplication of reports.