



Safety Notice 018/21

Myocarditis and pericarditis after mRNA COVID-19 vaccines

18 August 2021

Distributed to:

- Chief Executives
- Directors of Clinical Governance
- Directors of Public Health

Action required by:

- Chief Executives
- Directors of Clinical Governance
- Medical Staff
- Public Health Units

We recommend you also inform:

LHD staff involved in delivering vaccination

Directors of:

- Emergency Departments
- Intensive Care Units
- General Medicine
- Cardiology
- Medical staff

Expert Reference Group

Content reviewed by:

- NSW Health Public Health Response Branch
- NSWISS
- ACI cardiology
- Emergency physicians
- Immunisation hub leads
- CSANZ

Clinical Excellence Commission

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Intranet Website: <http://internal.health.nsw.gov.au/quality/sabs>

Review date

February 2022

New guidance for myocarditis and pericarditis after mRNA COVID-19 vaccines

On 30 July the Australian Technical Advisory Group on Immunisation (ATAGI) and the Cardiac Society of Australia and New Zealand (CSANZ) released [new guidance](#) for myocarditis and pericarditis after mRNA COVID-19 vaccination. Clinicians should be alert to the **possibility of adverse events in people** including the small risk of myocarditis and pericarditis in people who have received mRNA COVID-19 vaccines. These conditions have been reported more commonly in males under 30 years of age after the second vaccine dose.

Background

Myocarditis refers to inflammation of the heart muscle, and pericarditis refers to inflammation of the thin sac that surrounds the heart. Myocarditis or pericarditis can occur separately or together and have been reported as rare side effects after mRNA COVID-19 vaccines, including Comirnaty (Pfizer) and Spikevax (Moderna). Most myocarditis and pericarditis cases linked to mRNA vaccination have been mild and patients have recovered quickly.

What to look out for following mRNA vaccination

Symptoms typically occur within 1-5 days of vaccination, more commonly after the second vaccine dose, and require **prompt medical attention**. Symptoms include:

- chest pain (including pleuritic pain), pressure or discomfort
- palpitations (irregular heart rate, skipped beats or 'fluttering')
- syncope (fainting)
- shortness of breath
- pain with breathing

Initial investigations for people presenting with symptoms of myocarditis or pericarditis should include:

- a 12 lead ECG
- troponin
- chest X-ray
- other tests for differential diagnoses as clinically indicated.

Findings consistent with **pericarditis** include a pericardial rub on auscultation, widespread ST elevation or PR depression on ECG, and pericardial effusion on imaging. Findings consistent with **myocarditis** include elevated troponin, ECG showing ST or T-wave abnormalities, premature atrial or ventricular complexes, abnormal echocardiogram or cardiac MRI. If the ECG and/or troponin are abnormal and/or there is a strong clinical history the patient will require further assessment and advice should be sought from an appropriate clinician.

Management of myocarditis and pericarditis after mRNA COVID-19 vaccines

Patients with established myocarditis should be admitted to hospital for cardiac monitoring, until the cardiac biomarker levels have peaked, and symptoms have resolved. Treatment is determined on a case-by-case basis and often supportive treatment is all that is required. People who have had confirmed myocarditis attributed to mRNA COVID-19 vaccine should be followed up by a cardiologist. Those with confirmed myocarditis or pericarditis should be advised to avoid high intensity exercise until resolution of symptoms and normalisation of cardiac function.

Suggested actions required by Local Health Districts/Networks

1. Ensure clinicians are aware of updated advice regarding mRNA COVID-19 vaccines including Pfizer COMIRNATY® COVID-19 vaccines
2. Remind clinicians to be alert to possible suspected adverse events following COVID-19 vaccination, and report to the local public health unit on **1300 066 055**.



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Myocarditis and pericarditis after mRNA COVID-19 vaccines

Pfizer COMIRNATY® COVID-19 vaccination indications and contraindications

Comirnaty (Pfizer) continues to be recommended for the following groups where no contraindication exists:

- all people ≥ 16 years
- children aged 12-15 years with specific medical conditions that increase their risk from COVID-19
- Aboriginal and Torres Strait Islander children aged 12-15 years.

Most chronic cardiac conditions are **not** contraindications to COVID-19 vaccination including prior myocarditis, pericarditis or endocarditis > 6 months ago, coronary artery disease, myocardial infarction, stable heart failure, arrhythmias, prior history of rheumatic heart disease (RHD), Kawasaki Disease, most congenital heart disease and people with implantable cardiac devices.

People with a history of any of the following conditions can receive an mRNA vaccine (e.g. Comirnaty) but **should consult a GP, immunisations specialist or cardiologist first about the best timing of vaccination and whether any additional precautions are recommended:**

- Recent (i.e. within the past 6 months) or current inflammatory cardiac illness e.g., myocarditis, pericarditis, endocarditis
- Current acute rheumatic fever
- People aged 12-29 years with dilated cardiomyopathy
- Complex or severe congenital heart disease
- Acute decompensated heart failure
- Cardiac transplant recipients.

Vaccination should be deferred in people with ongoing cardiac inflammation, or an alternative vaccine (e.g. COVID-19 AstraZeneca Vaccine) considered. People who develop myocarditis or pericarditis attributed to an mRNA COVID-19 vaccine are advised to defer further doses of an mRNA COVID-19 vaccine and to discuss with their treating doctor and should be referred to a cardiologist for further assessment and management.

ATAGI clinical guidance for COVID-19 vaccine in Australia can be found [here](#).

Safety information on reporting Adverse Events Following Immunisation can be found [here](#).

Specialist immunisation advice

If specialist advice is needed, for example in relation to recommendations about the second dose of vaccine, contact the National Centre for Immunisation Research and Surveillance (NCIRS) NSW Immunisation Specialist Service (NSWISS)

☎ Phone: 1800 679 477 (Mon-Fri 9am-5pm) **OR**

✉ Email: SCHN-NSWISS@health.nsw.gov.au

For urgent after-hours clinical support, contact NSWISS via The Children's Hospital at Westmead switchboard on

☎ 02 9845 0000

Contraindications and precautions to immunisation with COVID-19 vaccines

ATAGI and CSANZ COVID-19 Vaccination guidance on myocarditis and pericarditis after mRNA COVID-19 vaccines can be found here: [COVID-19 vaccination – Guidance on Myocarditis and Pericarditis after mRNA COVID-19 vaccines | Australian Government Department of Health](#).

It is important that patients are provided with the latest advice regarding which COVID-19 vaccine is recommended. Latest information for clinicians is available at <https://www.health.nsw.gov.au/Infectious/covid-19/vaccine/Pages/clinicians.aspx>. This advice changes regularly as additional information around vaccine safety becomes available.

Where clinical advice is required regarding interpretation of this advice please contact the National Centre for Immunisation Research and Surveillance (NCIRS) NSW Immunisation Specialist Service (NSWISS).