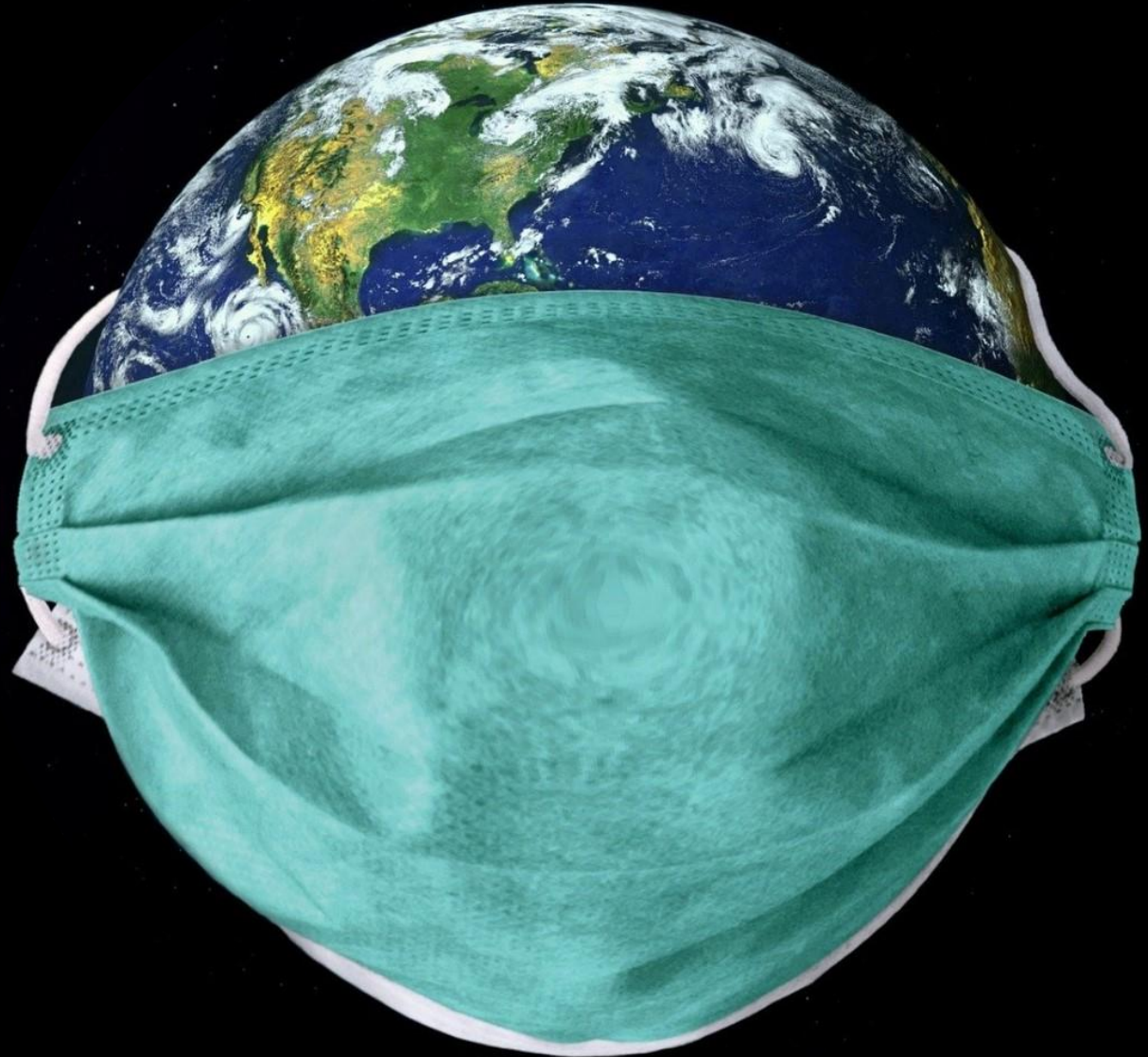


# COVID-19

## Vaccinations for RACF Workers

Hayley Ryan  
Authorised Vaccinator, CNC





# Disclaimer:

- The views expressed in this presentation represent best available evidence
- Please refer to local protocols & standards set by Governments / peak bodies
- Refer to manufacturers guidelines for all vaccinations
- None of the information provided should be a replacement for you to speak to your doctor



What we know about Coronavirus (Covid-19)

History of Vaccines

Vaccine Hesitancy

Vaccine Misconceptions

Case Study



# WHAT WE KNOW ABOUT CORONAVIRUS (COVID-19)... (1,2,4)

- The virus was first identified in 2019 in Wuhan China
  - 3<sup>rd</sup> coronavirus in 2 decades (MERs / SARs)
- Declared a Pandemic
- Spread by close contact via droplets (cough, sneeze, enhales)
- Majority of confirmed cases result in only mild symptoms
- However it can lead to;
  - Acute respiratory distress syndrome (ARDS)
  - Multi organ failure
  - Septic shock
  - Death
- The median time from symptom onset to ICU admission for the older person is 7-12 days
- Often placed on mechanical ventilation with prone positioning
- Any age can be affected

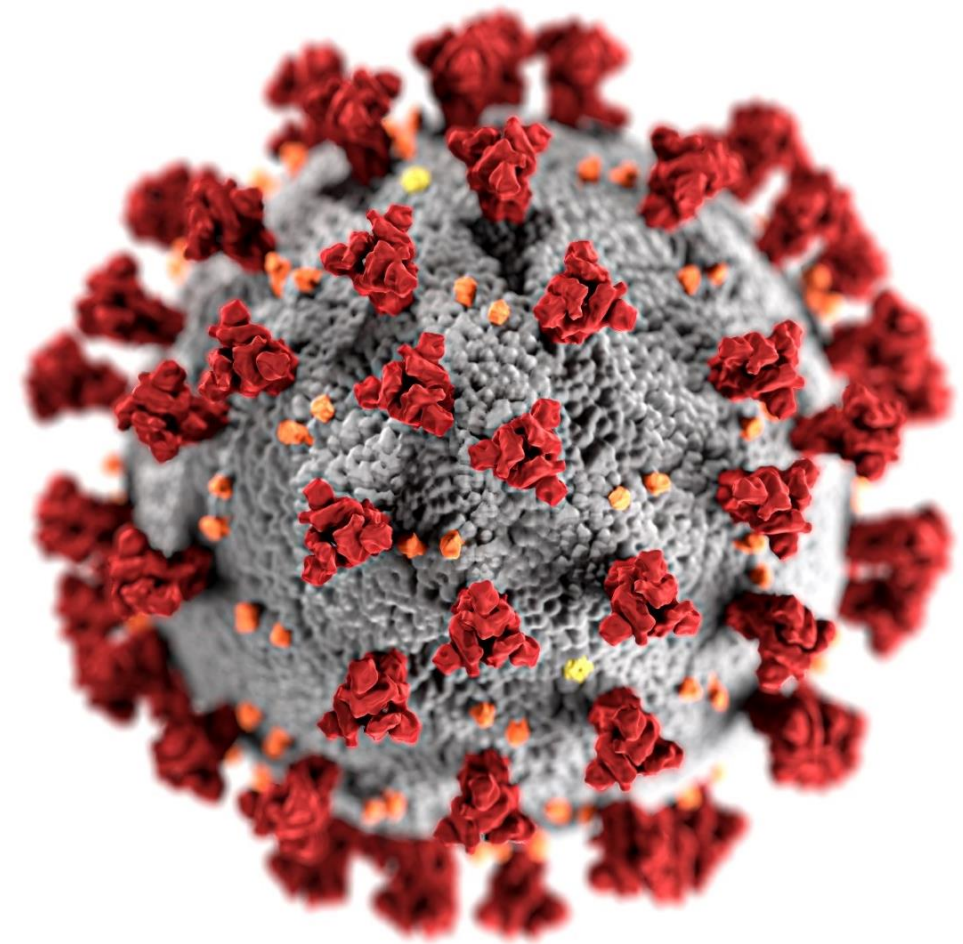




Prone Positioning <sup>(1,2,4)</sup>

# CORONAVIRUSES:

- Large family of enveloped RNA viruses
- Mostly infect birds and mammals
- In humans they cause mild infection in the upper resp. tract but more serious lower rep. tract infections
- These can manifest as bronchitis, pneumonia or severe resp. illness like SARS, MERS or COVID-19



# MERS (MERS-CoV)

- Sept 2012 in Saudi Arabia
- Zoonotic virus (animals to human)
- From dromedary camels

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**Pathogen:** MERS-CoV

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**Total number of cases:** 2,519

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**Total number of deaths:** 866

---

**Case fatality rate:** 34.3%

---

**Mode of transmission:** Droplets from person to person, unclear from camels to humans

---

**Key symptoms:** A fever, a cough, SOB

---

**At risk groups:** Men >60yrs, more so if underlying health conditions such as diabetes, high BP, kidney failure

---

**Treatment:** No specific treatment

---

**Vaccine:** No vaccine



# SARS (SARS-CoV)

- Nov 2002 from bats, civets & wet markets
- Cross from animals to human
- Mar 2003 WHO noted global alert
- Travel concerns raised – airports to screen
- April cease travel (Hong Kong, Toronto, China, Taiwan)

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**Pathogen:** SARS-CoV

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**Total number of cases:** 8,439, 21% of which developed in HCW

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**Total number of deaths:** 812

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**Case fatality rate:** 9.6%

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**Mode of transmission:** Droplets produced by coughing, sneezing, talking, or breathing

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**Mean incubation period:** 5 days

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**Key symptoms:** A cough (dry at first), fever, diarrhea

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**At risk groups:** People with underlying medical conditions

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**Treatment:** No specific treatment

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**Vaccine:** No vaccine

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# COVID-19 (SARS-CoV-2)

**CO** = Corona

**VI** = Virus

**D** = Disease

**19** = 2019

- Dec 2019 in Wuhan, China
- Has been reported on every continent except Antarctica

---

**Pathogen:** SARS-CoV-2

---

**Total number of cases:** 185,291,530 (As of 30,905)

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**Total number of deaths:** 4,010,834 (As of 910)

---

**Case fatality rate:** 3.4%

---

**Mode of transmission:** Droplets produced by coughing, sneezing, talking

---

**Mean incubation period:** 5 days

---

**Key symptoms:** A fever, a dry cough, SOB, fatigue, headache, muscle aches, loss of smell/taste, N&V, Diarrhea, skin rash, discoloration to fingers/toes, stroke

---

**At risk groups:** Adults 65yrs and over, all people with underlying medical conditions

---

**Treatment:** No specific treatment

---

**Vaccine:** Pfizer-BioNTech, Oxford/Astrazeneca, Moderna, Johnson & Johnson, Novavax

*\*Data as of 9/7/21 WHO*

# COVID-19 (SARS-CoV-2)

**Factors that increase the risk of becoming severely ill;**

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**Smoking**

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**Pregnancy**

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**Diabetes**

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**Obesity (BMI>30)**

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**Chronic Kidney Disease**

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**COPD**

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**Heart Disease**

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**A Weakened Immune System**

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**Sickle Cell Disease**

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**Cancer**

---

**Dementia or other Neurological Condition**

# COVID-19 (SARS-CoV-2)

## Recovery Time;

- Often feel better after 2 weeks
  - If hospitalised up to 42 days
- BUT
- Long term effects are now known;

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Fatigue

---

Difficult breathing

---

A long term cough

---

Chest pain

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Joint pain

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Difficulty focusing

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Muscle pain

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A fever that comes and goes

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Heart palpitations

---

Problems with taste and smell

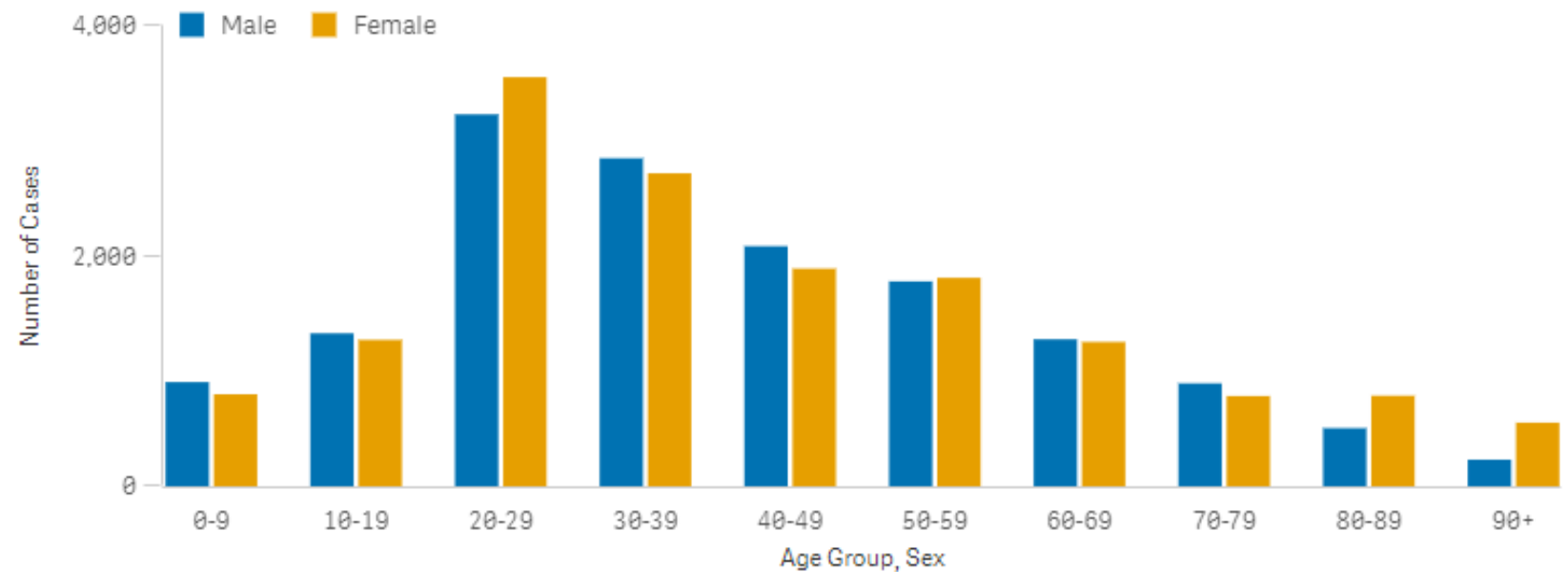
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Depression

# COVID-19 cases by age / sex

This graph shows the number of COVID-19 cases for males and females by age group since the first case was reported.

Source: NNDSS data 10/7/2021



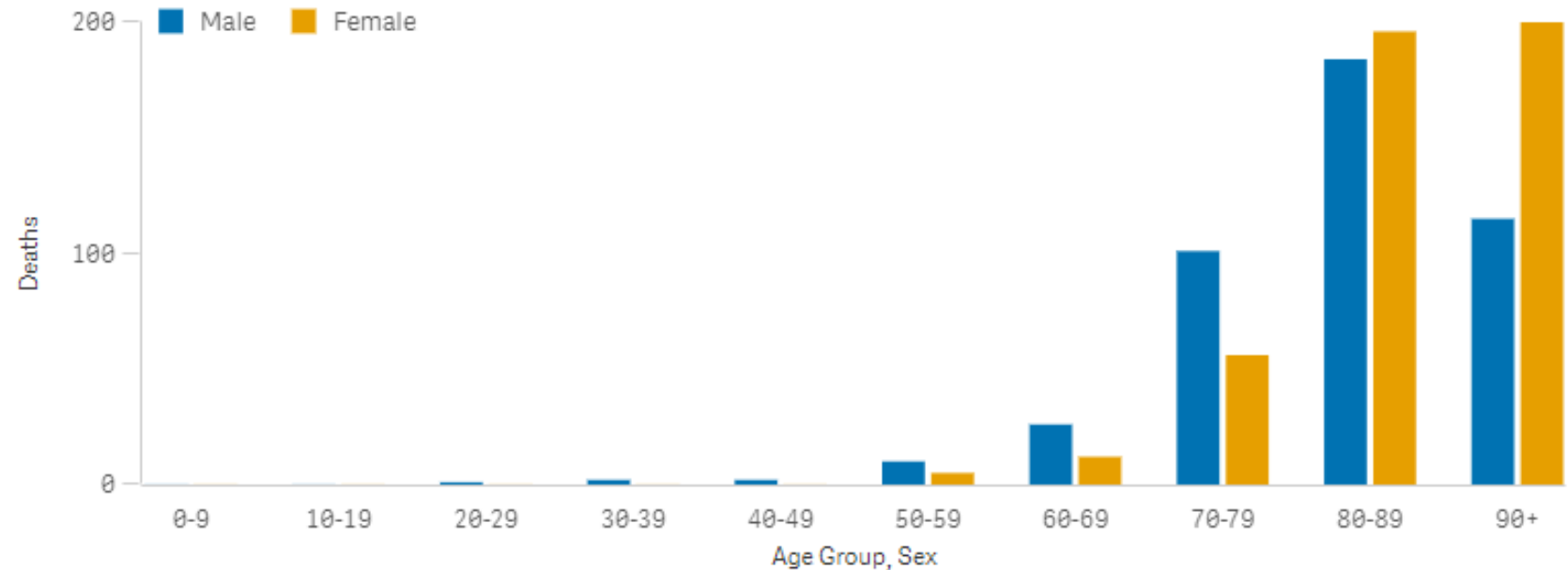
*The total number of deaths in this chart may be less than what is reported due to delays in notification to the National Notifiable Disease Surveillance System (NNDSS) or where the case's age or sex are unknown.*



# COVID-19 Deaths by age / sex

This graph shows the number of COVID-19 associated deaths in Australia for males and females by age group since the first case was reported.

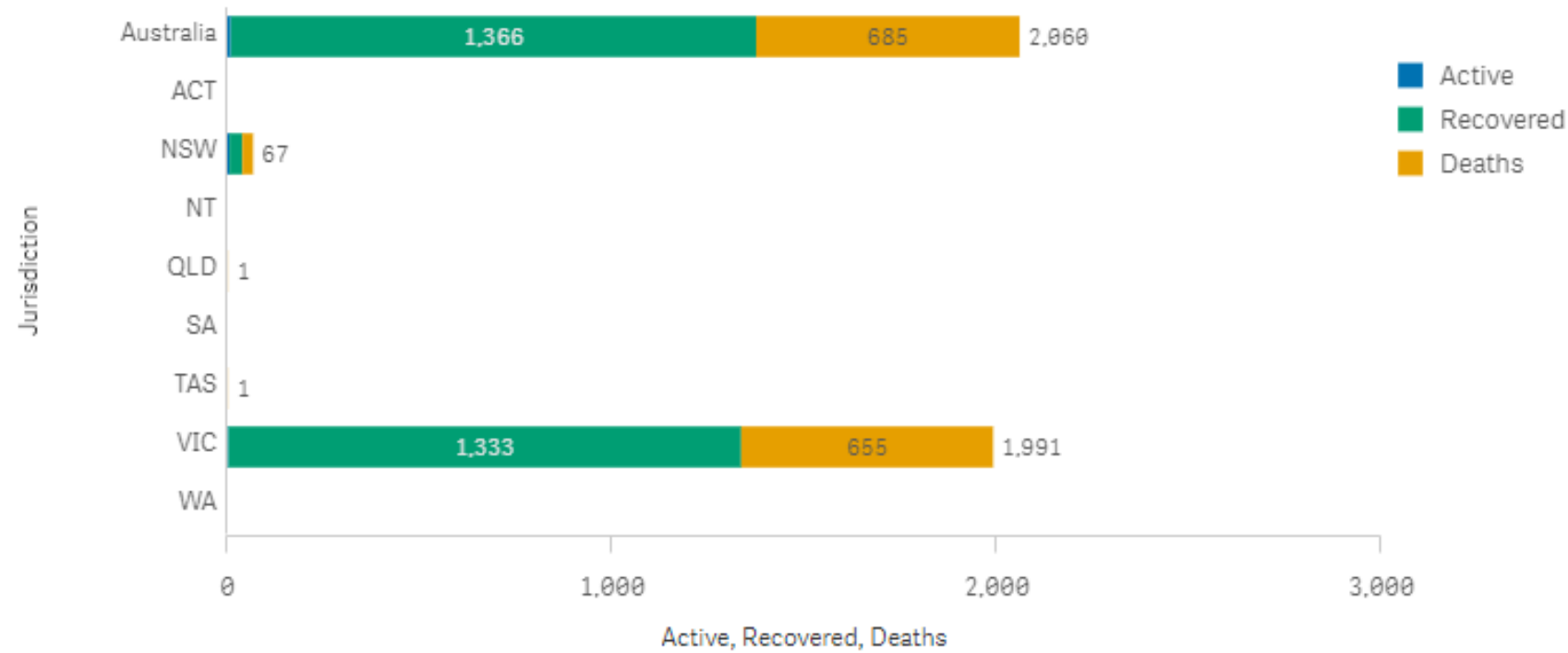
Source: NNDSS data 10/7/2021



*The total number of deaths in this chart may be less than what is reported due to delays in notification to the National Notifiable Disease Surveillance System (NNDSS) or where the case's age or sex are unknown.*

# COVID-19 cases in RAC

Source: Department of Health 10/7/2021



\* The aged care data comprises data sourced from the Victorian Public Health Events Surveillance System (PHESS) and Commonwealth sources

\*\*These figures are inclusive of transition care.

# HISTORY OF VACCINES

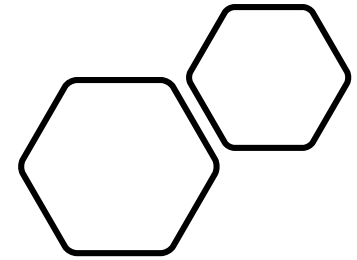




19th Century	cholera, rabies 1884 - 1885 tetanus, typhoid fever, bubonic plague 1890 - 1897
20th Century	tuberculosis, diphtheria, scarlet fever, pertussis 1921 - 1926 yellow fever, typhus, influenza 1932 - 1937 measles, mumps, rubella 1963 - 1970 chicken pox, pneumonia, meningitis 1974 - 1978 hepatitis A, Lyme disease, rotavirus 1991 - 1998
21st Century	HPV 2006 hepatitis E 2012 malaria, dengue fever 2015 Ebola 2019

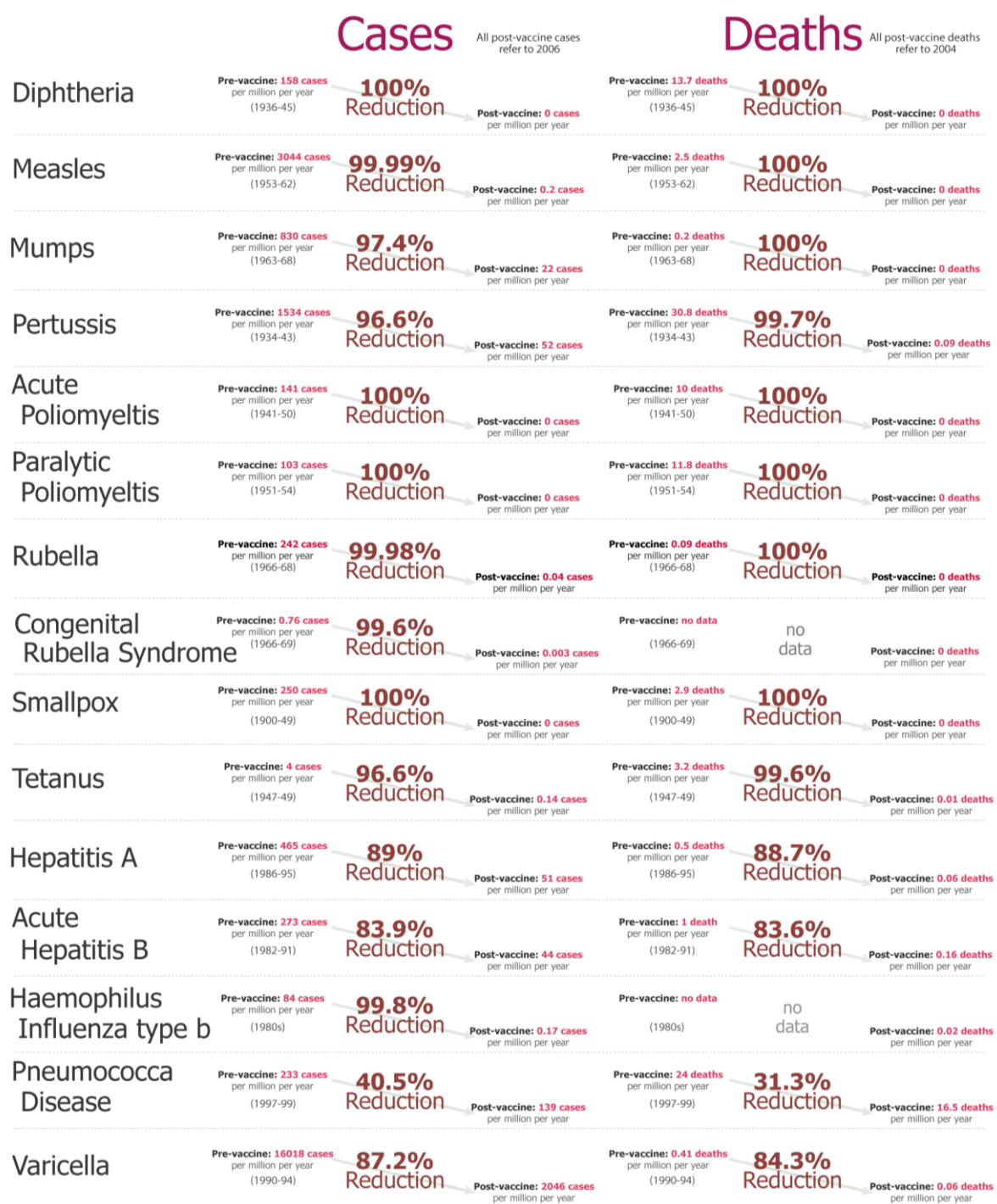






# Vaccine preventable diseases

*Shown is the reduction of cases and deaths after the introduction of the vaccine*



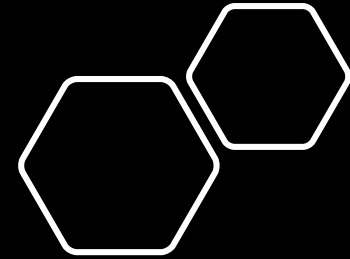


What's that mark  
on your arm, Mama?

It's my  
smallpox vaccine  
scar.

Why don't I  
have one

Because it  
worked.



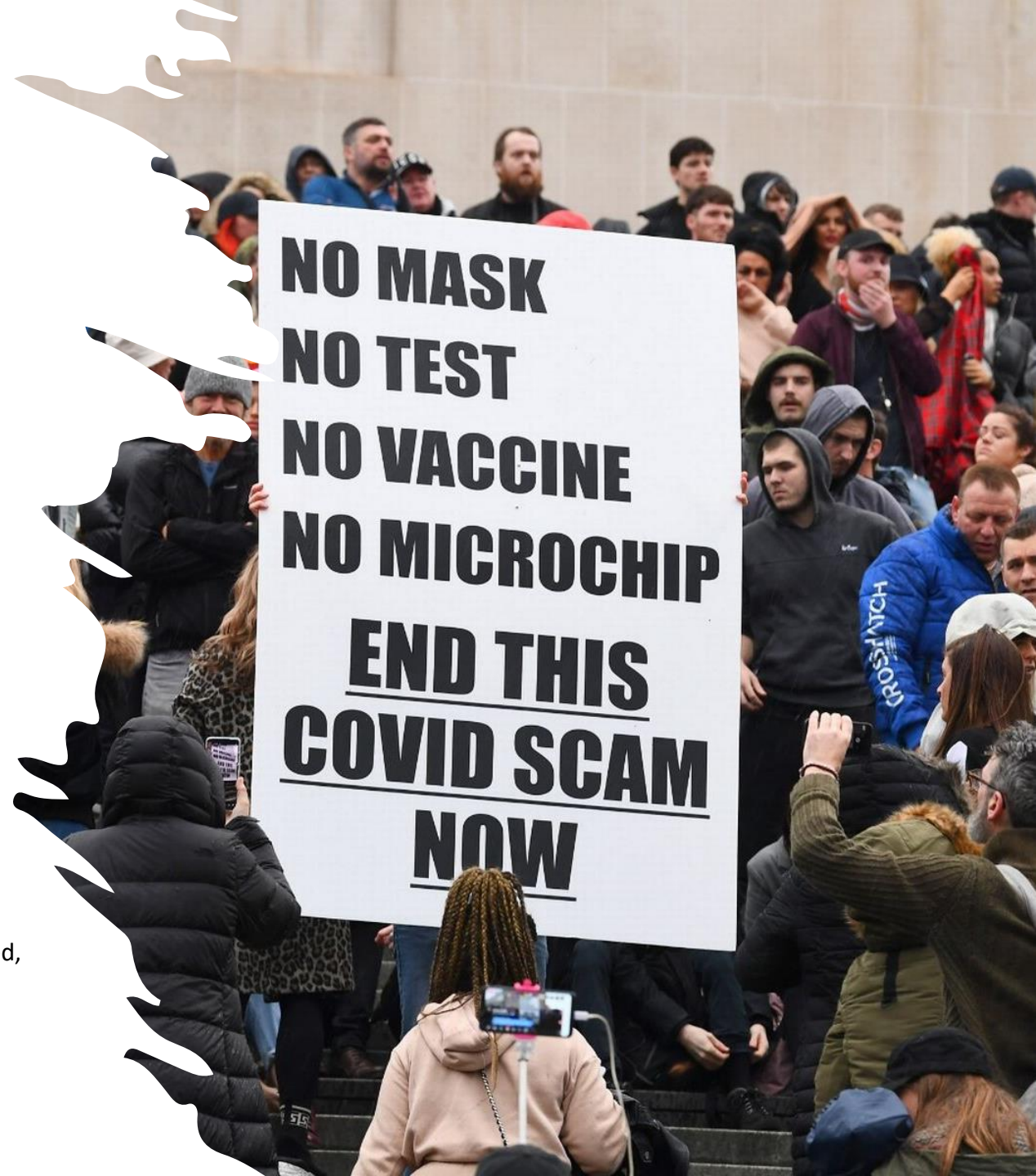


# Vaccine Hesitancy



# Vaccine Hesitancy

- Hesitancy & the anti vaccine movement traces back to 1840
- 1998 – Dr. Andrew Wakefield, UK
- Polio could have been eradicated
- Information overload
- When you hear the same message – you believe it!
- Anti-vaccine movement-↑followers by 7.8m since pandemic – 31m
- Most trusted resource is your GP
- Mistrust of Governments
- Three Groups of people:
  - Pro- vaccinators – just want to get it done
  - Vaccine hesitant – unsure given media influence
  - Those with strong views – often small group but influential, often non science based, conspiracies theories etc.



The background of the slide features a close-up, slightly blurred image of an open book. The pages are filled with Thai text. A silver pen is positioned diagonally across the lower right portion of the book. The overall lighting is soft, and the colors are muted, creating a scholarly or academic atmosphere.

# Religion

## Catholics in Australia encouraged to receive COVID-19 vaccine

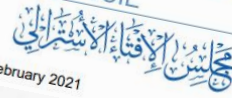
Congregation for the Doctrine of the Faith, approved by Pope Francis, gives the green light during the pandemic to the use of vaccines produced with cell lines

*"It is morally acceptable to receive Covid-19 vaccines that have used cell lines from aborted fetuses in their research and production process."*

**The following Christian denominations have no theological objection to vaccination:**

- Roman Catholicism,
- Eastern Orthodox
- Oriental Orthodox
- Amish
- Anglican
- Baptist
- The Church of Jesus Christ of Latter-Day Saints (Mormon)
- Congregational
- Episcopalian
- Jehovah's Witness - Note: This denomination originally denounced vaccination, but revised this doctrine in 1952.
- Lutheran
- Mennonite
- Methodist (including African Methodist Episcopal)
- Quaker
- Pentecostal
- Presbyterian
- Seventh-Day Adventist
- Unitarian-Universalist

## Australian Fatwa COUNCIL



13 February 2021

Based on what was conveyed by the trusted Muslim doctors and medical experts, the vaccine for the Coronavirus (COVID-19) is permissible according to the Islamic law as there is no known religious harm attributed to being vaccinated nor does it contain any forbidden substances. There is a religious obligation to preserve human life that has been honoured by Allah the Almighty. And Allah Knows better.

Quote from Pastor Pentecostal Church:

***"Whilst we must protect the holy spirit taking the vaccine should be the sensible approach to safe guarding our community"***



# VACCINE MISCONCEPTIONS...





## Misconception:

You can get covid-19  
from the vaccine

## Fact:

- You cannot get COVID-19 from the vaccine because it doesn't contain the live virus.
- The vaccine only tells your body how to make a small part of the virus so your body recognises the real thing later and protect you

## Misconception:

The vaccine must NOT work if I still need to wear a mask and social distance after!

## Fact:

- The vaccines are safe and effective at preventing disease in the vaccinated person
- Whilst the vaccine will prevent illness it is still unknown if you can carry it and spread it

## Misconception:

What about long term effects from the vaccine?

## Fact:

- Most side effects from vaccines occur within the first 30 days
- Prior to being TGA approved this was reviewed with studies extended to 3 months

## Misconception:

I'm healthy and never get sick so I don't need it!

## Fact:

- You can still contract the infection and spread it to others

## Misconception:

After 40 years of research there is no vaccine for HIV, Cancer or even the common cold?

## Fact:

- HIV: We have developed vaccines for HIV and spent millions of dollars BUT the virus is different and keeps mutating therefore shielding itself from the antibodies. Just because there is a vaccine does not mean we have not cured people from this.
- Common Cold: There are 200 viruses for the common cold and people do not die from this so there isn't a reason to vaccinate
- Cancer: We don't have a vaccine for cancer as its not a virus...but we do have HPV vaccines that prevent cancer



## Misconception:

The covid-19 vaccine includes a tracking device!

## Fact:

- This came about because of a video shared on Facebook
- Syringe maker Apiject Systems of America, which has a contract with the government to provide medical-grade injection devices for vaccines.
- The company has an optional version of its product that contains a microchip within the syringe label that helps providers confirm a vaccine dose's origin.
- The chip itself is not injected into the person getting the vaccine.
- There is no tracking devices in vaccines

## Misconception:

The vaccines are not safe for those who are pregnant, breastfeeding or planning pregnancy?

## Fact:

- Comirnaty (Pfizer) is the preferred vaccine for this group because;
  - Research has not yet been carried out with AstraZeneca
- Real-world evidence has shown that these vaccines are safe
- They may provide indirect protection to babies by transferring antibodies through the placenta or breastmilk
- The mRNA in Pfizer is rapidly broken down in the body therefore unlikely to pass into breastmilk, if it did it would likely be quickly destroyed in the baby's gut
- Any stage of pregnancy can be vaccinated
- If a pregnant woman gets covid-19 they increase their risk of their baby being born prematurely, stillborn & have a 5x higher chance of hospitalization, 3x greater chance of ICU

## Misconception:

The vaccines have fetus in them?

## Fact:

- Covid-19 vaccines do not contain any fetus
- Pfizer and Moderna did perform confirmation tests to ensure the vaccines worked using fetal cell lines
- AstraZeneca used kidney cell lines from a fetus aborted in 73
- Fetal cell lines are NOT the same as fetal tissue – they are cells that grow in a lab
- They descended from cells taken from elective abortions in the late 70s/80s
- Neither Pfizer or Moderna used fetal cell lines during the development or production phases (so no fetal cell lines were used to make the vaccine and therefore not inside any vaccine)

## Misconception:

The Covid-19 vaccines are unsafe because they were developed so quickly?

## Fact:

- Use technology that has been in development for decades allowing the vaccine development process to begin early
- China isolated and shared information early assisting scientist in the development of the vaccine
- No steps were skipped in testing the vaccine, steps were completed on an overlapping schedule
- World wide resources allowed quicker development.
- Utilization of mRNA allowed a faster approach.
- Social media assisted in finding study volunteers further decreasing delays in clinical trials (these took the same time)

No steps were missed, still went through the same rigorous testing as any other vaccine...they are proven safe and effective.

# Vaccine Trials

---



## CONTROL GROUP

Take a large group of people and:

do nothing\*  
and  
follow them over time

\*or almost nothing



## TRIAL GROUP

Take a large group of people and:

give them a vaccine  
and  
follow them over time



## COMPARE OUTCOMES

Compare how many people in each group got the disease, how many people had side effects (mild and serious), and calculate how effective the vaccine is at changing outcomes between the groups



# Pfizer Side Effects during trial

## MILD SIDE EFFECTS

Depending on age and dose #:  
Fatigue (35-60%), Headache (25-52%),  
Muscle and Joint Pain (11-30%)

## SEVERE SIDE EFFECTS

Generally 0-3%, except for severe fatigue  
(5% in dose 2 for people 18-55)

## KEY MESSAGES

- No vaccine-related deaths
- Severe side effects were very rare
- Side effects more common with second dose
- Side effects more common for people under 55 than over 55
- Common side effects (more than 1 in 10 people):
  - injection site pain
  - tiredness, headache, muscle pain
    - chills, joint pain, fever



What can  
we do to  
stop living  
in fear?

CLICK



## Where to get reliable information: <sup>(11)</sup>

- ❑ Therapeutic Goods Administration  
[www.tga.gov.au/covid-19-vaccine](http://www.tga.gov.au/covid-19-vaccine)
- ❑ Australian Department of health  
[www.health.gov.au/news/health-alerts](http://www.health.gov.au/news/health-alerts)
- ❑ World Health Organisation  
<https://covid19.who.int/>
- ❑ ACIPC [www.acipc.org.au/](http://www.acipc.org.au/)



# Case Study: Elizabeth McNeil

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- DOB: 24/1/1933
- Age 88 years
- No comorbidities
- No medications
- Loving mother to 4 children, 12 grandchildren, 13 great grandchildren



# Elizabeth McNeil 24/1/1933 to 26/1/21



Elizabeth tested for Covid-19, feeling tired but no other symptoms  
Family describe their mum as full of life, always ready for a laugh, always active in house/yard, always had the kettle on for people & loved a good red!

21st January 2021



Elizabeth weak & unable to get out of bed - ambulance called & admitted to hospital.

23rd January 2021



Niece visits Elizabeth & allowed to be in the same room - nurse advises due to current prognosis-may not make it & all family should visit

Symptoms by lunch time- breathing laboured, restless, by midnight commences morphine. Elizabeth struggles in/out consciousness during the night.

Passed away mid-afternoon 26th January, 2021

Family report she struggled to breath & was hard to watch. "it was a long, slow & ugly death"

25th January 2021

19th January, 2021

Daughter alerts family covid-19 in her workplace & need to isolate  
Next day returns +ve test  
Noted sore throat, chills, headache  
Noted to family lucky I had a mask on when we caught up on the weekend  
Mum only needs to be tested if symptomatic



22nd January 2021

Elizabeth informs her children she has tested +ve to Covid-19  
By the evening wheezing, SOB, cough



24th January 2021

Elizabeth's 88th Birthday, family celebrate via zoom.  
Brother also now +ve







# SO...SHOULD I GET THE VACCINE?

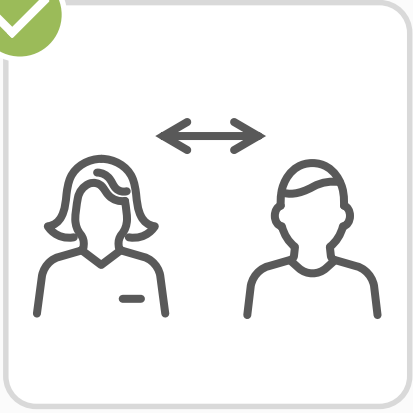
*Getting the vaccine is better and safer than getting COVID-19.*

*You can help protect yourself from severe disease, and you may also be protecting others at the same time.*

*It is a good idea for most people to get the vaccine, but ultimately you will need to make the decision that is right for you.*



# HOW TO PROTECT YOURSELF AND OTHERS



## Keep distance

Protect older people  
with sufficient distance

Keep your distance  
when standing in line

Keep away from events  
and meetings

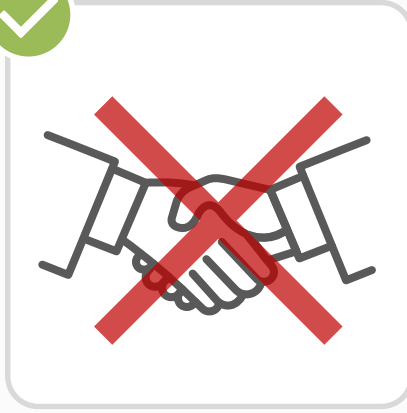


## Wash hands thoroughly

Wash your hands for 20  
seconds

Soap and water are most  
effective

Use hand disinfectant if  
soap and water are not  
available



## Avoid shake hands and contact

Even if it seems rude or  
unusual to you



## Sneeze into the crook of your arm or into a tissue

Discard paper tissues  
immediately after use  
AND wash your hands  
afterwards



## Stay at home with fever and cough

Contact your family  
doctor by telephone



**Thank you!**

**#staysafe**



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