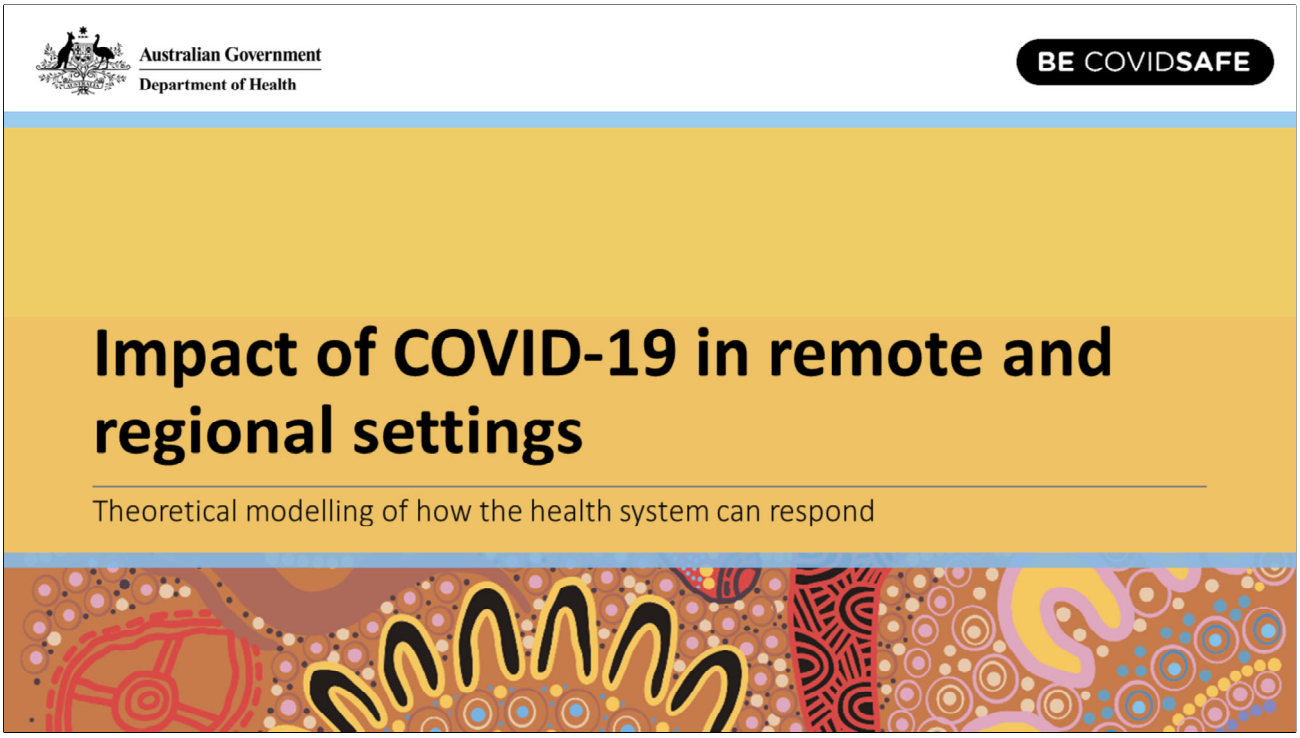


[This presentation should please begin with an Acknowledgement of the Traditional Owners of the land]

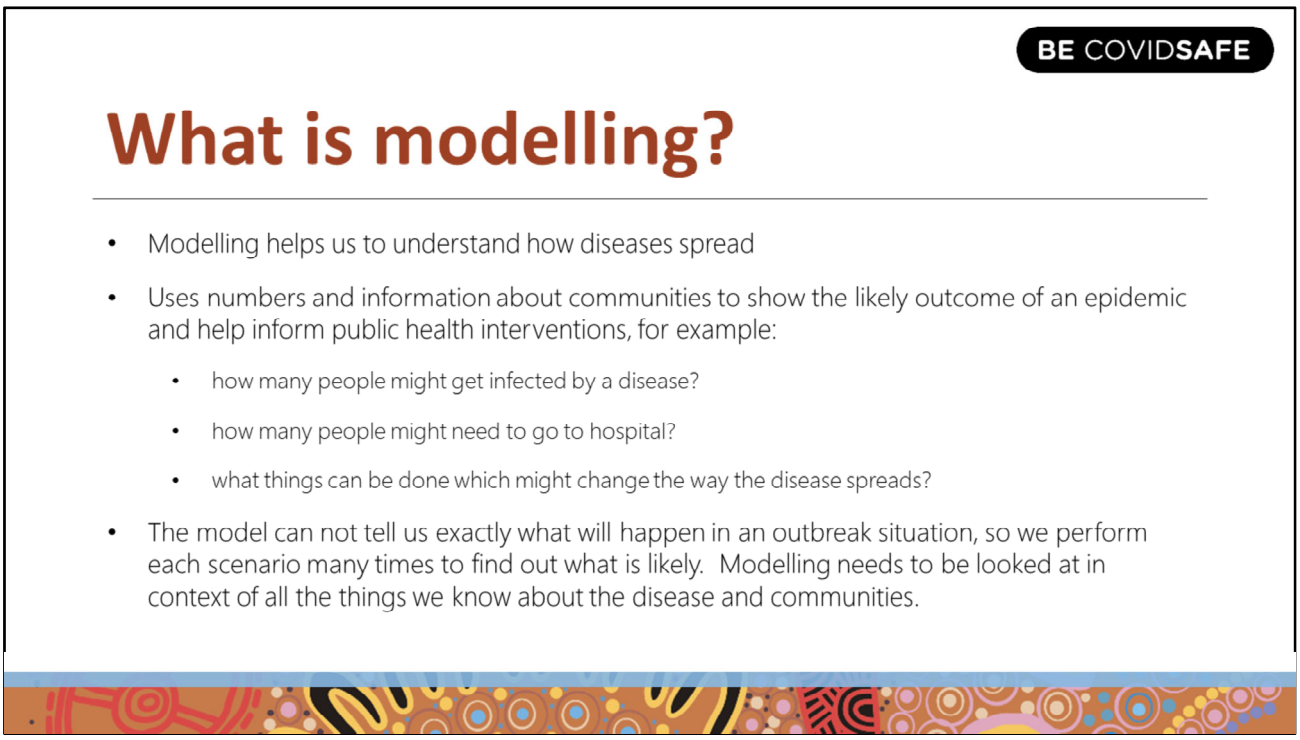
This presentation is intended to inform and support Health service decision makers and community leaders to decide how a remote community will respond to a COVID-19 outbreak.

It presents key messages from some modelling work undertaken by the University of Melbourne and the Kirby Institute pandemic modelling team.

It covers

- A bit about modelling
- How COVID-19 might spread in an Aboriginal and/or Torres Strait Islander community
- What individuals and communities can do to try to stop the spread

Further information is on the Department of Health website, and academic papers are being prepared by the researchers for publication.



Modelling uses all the information we know about a sickness and about how people live and behave, to make good predictions of what might happen.

This includes real information we have about how COVID-19 has spread in Australia so far, and in other countries, as well as about how long it takes for people to feel sick, and that some people do not feel sick at all.

It uses information about how many people may live in community , how many in each house; and how many houses they spend time in with extended family. This helps to work out the number of people who may become infected.

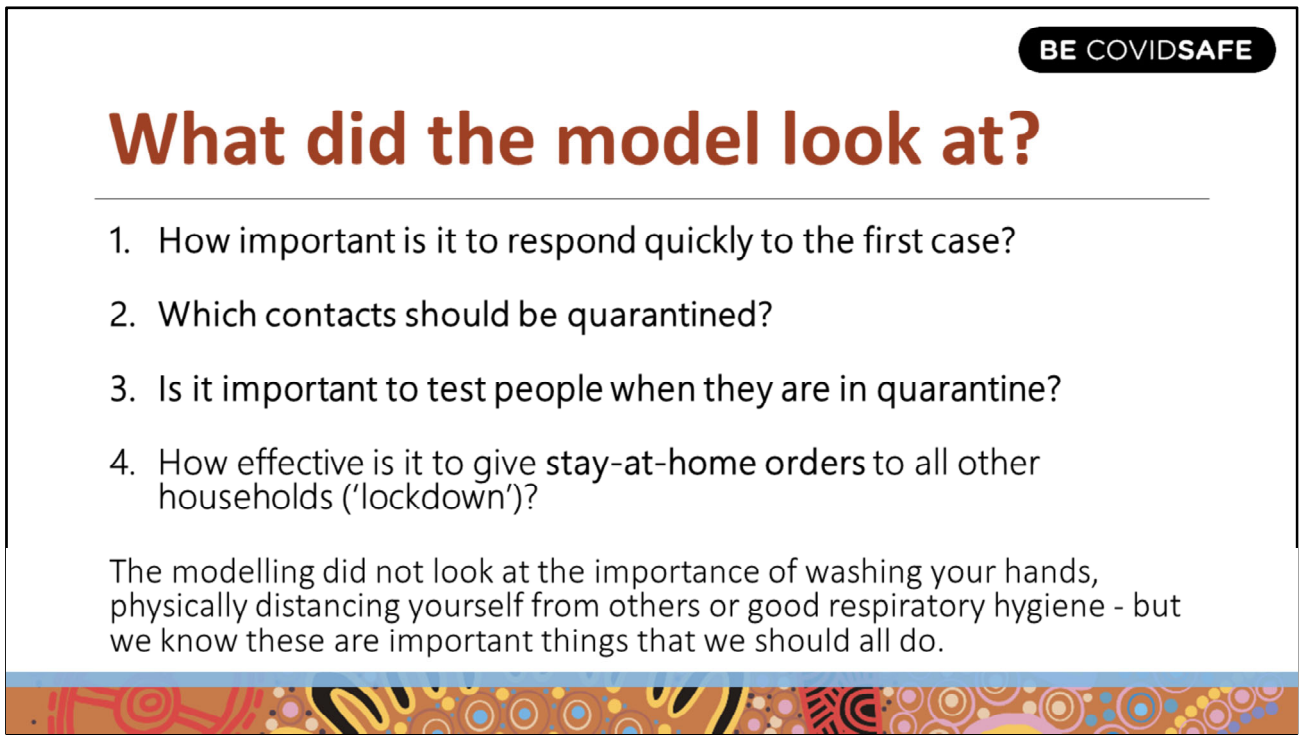
We can change parts of the model to see what impact it will have on the end result. For example, how many people live in houses together, whether people who are sick are still spending time with family and friends, or staying by themselves (“in isolation”)

Every community is different. But the modelling shows us what might happen, and how we can take steps to improve what might happen next.

The model includes information about:

- different sized communities
- different numbers of people living in houses together
- that people visit other houses and mix with other people in the community
- that people can have COVID-19 and never feel sick
- that it can spread or “infect” other people before you get sick
- that some people may not get tested when they feel sick
- different ‘rules’ about staying at home, or away from other people, as well as how many people may follow these rules, or for how long.

All these parts can be changed in the model, just like they can all be changed in real life by real people.



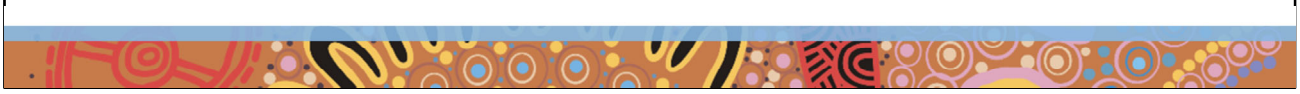
An uncontained outbreak in a remote community will spread fast, due to large families, connections in kinship and extended family relationships mixing within households and between other houses.

Early recognition of symptoms and presentation for testing for COVID-19 by community members is essential.

Although the modelling did not look at hand hygiene, physical distancing etc., these continue to be essential to minimising spread of the virus. Conversations with communities present an opportunity to remind and reinforce the continued importance of social / physical distancing sneeze and cough hygiene, some areas or situations where physical distancing is not possible people may have to wear a mask, and if there is an outbreak there may be a local decision to ask people to wear a mask.

BE COVIDSAFE

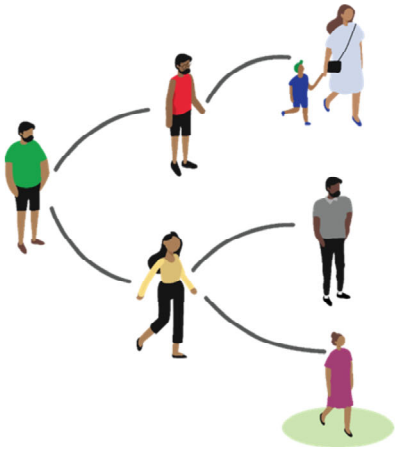
Results of the modelling



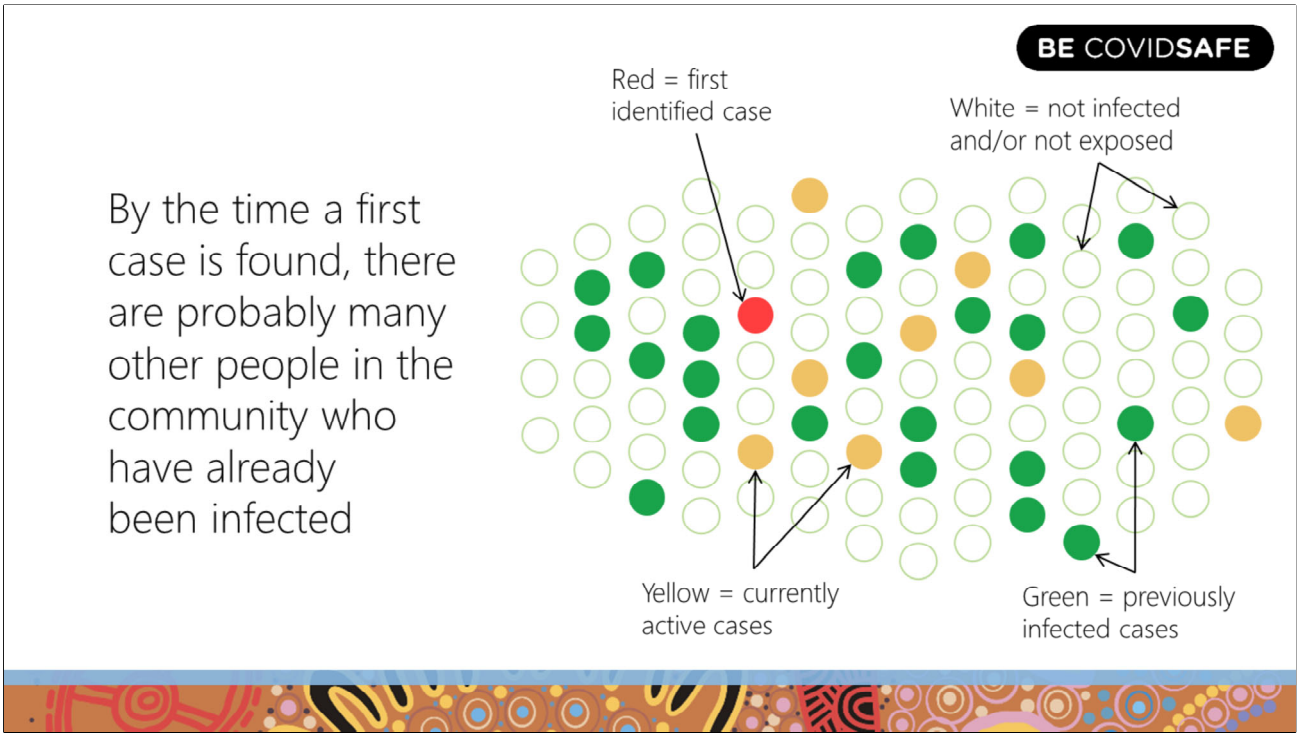
BE COVIDSAFE

A single case of COVID-19 in a remote community is considered an outbreak and will likely spread quickly

- Large households / families living together, close mixing in groups and between households will likely lead to the rapid spread of infection
- Once the first case in a community is identified, it is likely there are many other cases already in the community



Because COVID-19 can spread before a first person has any signs of sickness (symptoms), and because some people will never have any symptoms, by the time a first person feels sick and gets tested the virus may have already spread to other people in the community.



By the time a first case is found, there are probably other people in community who have already been infected. Some people will have symptoms but others may not. Some people may have already recovered from COVID-19.

The first case found may not be the first person infected.
The longer it takes to find the first cases, the more people who are likely to have or had COVID-19 in the community.
It's important to find the first case as quickly as possible, because the virus is probably already spreading in community.

These dots show that in a community of 100 people, by the time a first person is tested and identified as having COVID-19, there are probably 9 active cases (them plus 8 people) in community, as well as many other (in this case up to 23) who have been infected.

Not every one will have symptoms. Some people may have already recovered, but spread it to other people.

BE COVIDSAFE

What can we do about this?

It is most important that we find cases as soon as possible so that we can respond to them

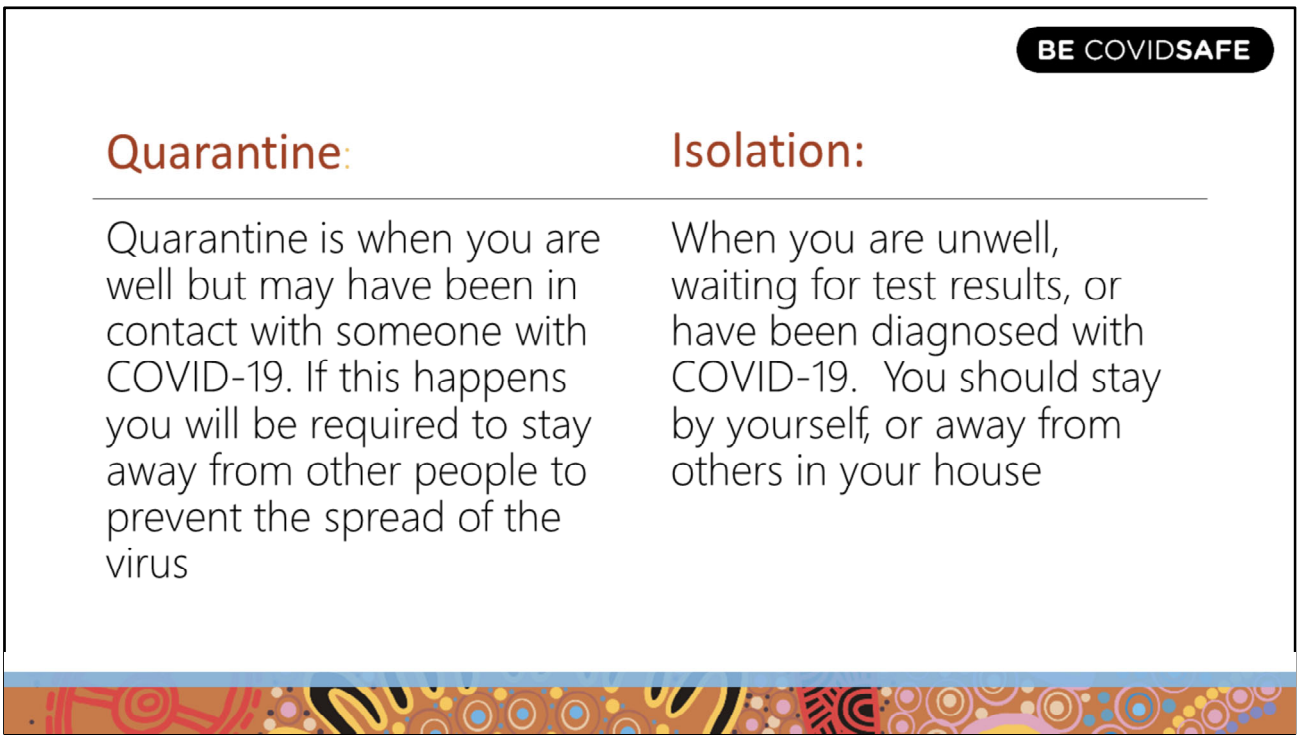
- Encourage people to get tested as soon as they have any symptoms, even if their symptoms are not strong
- Make sure test results don't take too long to come back and are delivered to person
- If you feel sick, or are waiting for test results, keep away from other people (in 'isolation')

Day 2

Day 5

The number of people infected in community will be less on day two, than if undetected until day five.

It is important to find cases as quickly as possible, and stop COVID-19 from spreading. Each day that we don't know about COVID-19 in the community it keeps spreading. The number of people infected in community at day 2 will be less than if you don't find the first case until day 5



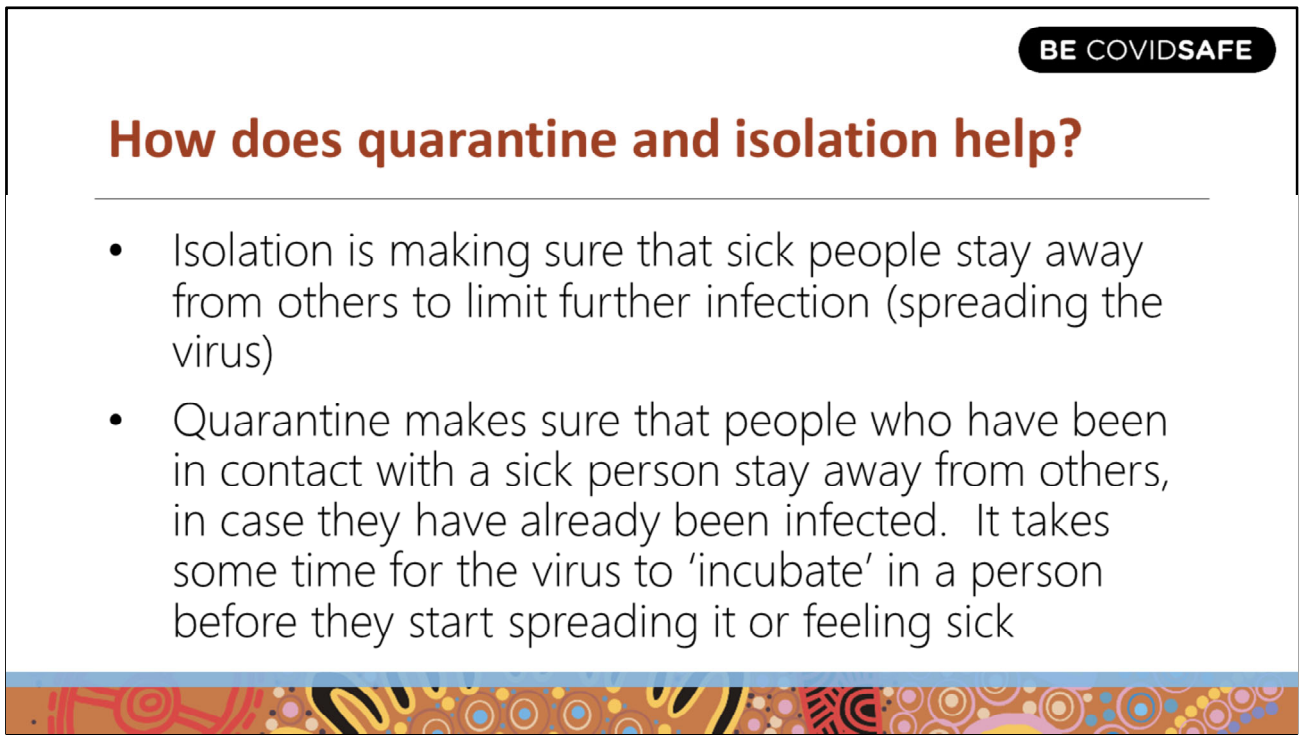
If a person is a 'contact' of someone with COVID-19 they may need to go into '**quarantine**' The quarantine period is 14 days from when the person may have been in contact with the virus /infected person. People may be tested while in quarantine, especially if they develop any symptoms.

- Do not leave your house or yard. This includes do not go to work, school, shops. Do not have any visitors.

A person with COVID-19 will need to **isolate**. This means stay by yourself and away from others. Eat meals separately, separate bathroom and sleeping areas if possible. Sometimes people may need to move out of their own house so they can isolate, and avoid spreading COVID-19 to others in their house.

Quarantine occurs when there is a suspected case of COVID and while waiting for test results. Contacts should be quarantined.

'Community lockdown' may occur once a case is detected, with everyone to stay in their own house and yard ('stay-at-home orders, with the whole community asked to quarantine). See from slide 16.

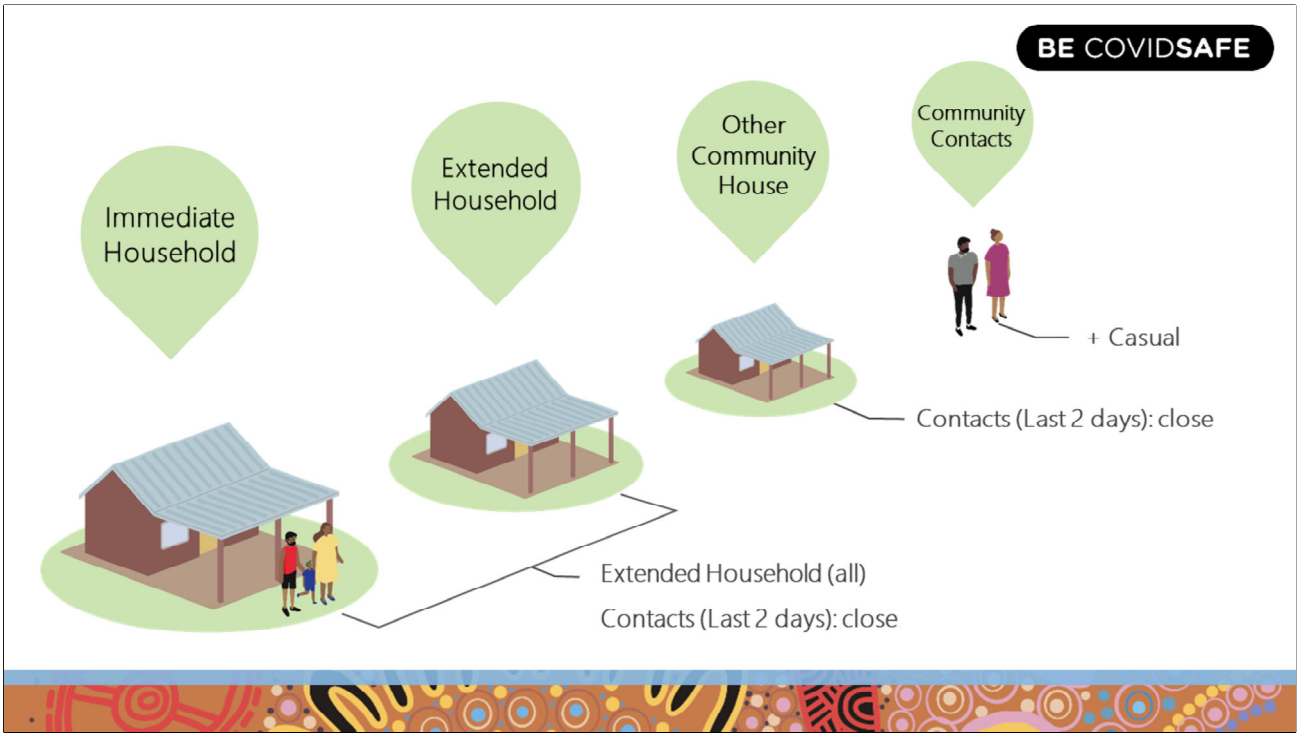


Quarantine and isolation are important parts of the public health response to COVID-19.

Immediate isolation of cases and quarantine of contacts is critical for outbreak control.

'quarantine' means people who live with or have been in close contact with an infected person keep themselves separate from each other and community even if they seem to be well, to help stop other people being infected. This might be in the community, or in a separate place.

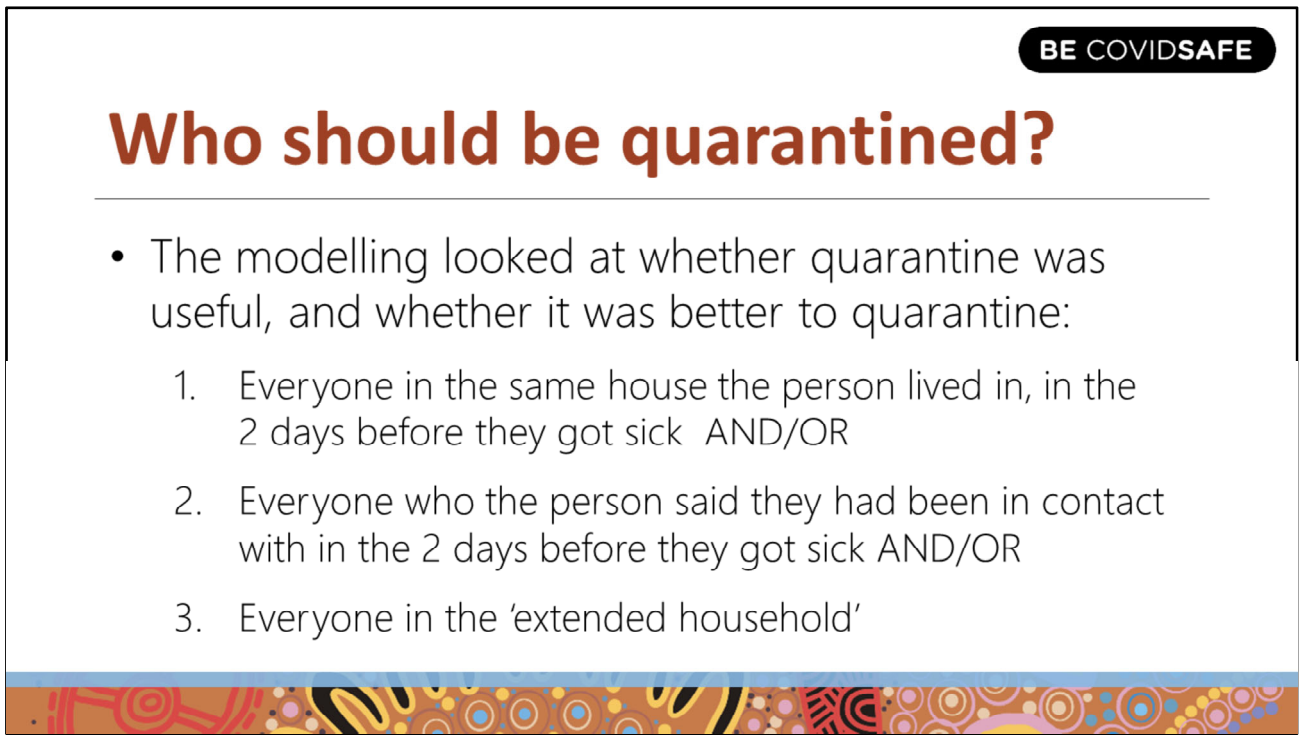
'isolation' means the infected person is cared for away from family and community members, or in hospital if required, to stop other people getting infected.



There are different ways that you may be a 'contact' of someone with COVID-19:

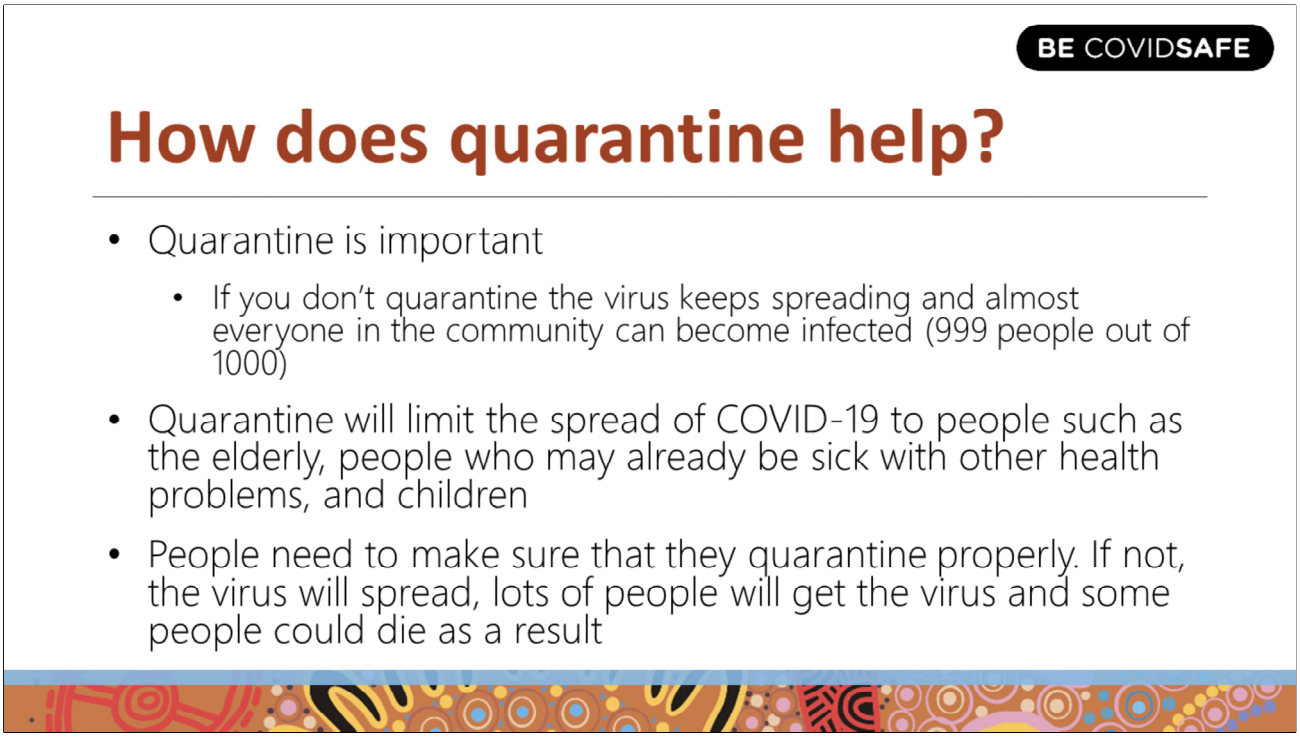
- People you live with in your house (your immediate household), plus the houses of your wider family (extended household)
- Other houses that you and your household mix with on a regular basis.
- Other people in the community may be a 'casual' contact.

In terms of COVID-19, the key factor is not how well you know someone, but how long you have spent close together, and therefore whether COVID-19 may have spread. It is less likely, but still possible, to spread between casual community contacts



Quarantining people based who lives in that person's extended household is most effective (number three), to reduce the total size of the outbreak (number of people) across the full time period. [note this was in a modelled community of 1000 people]

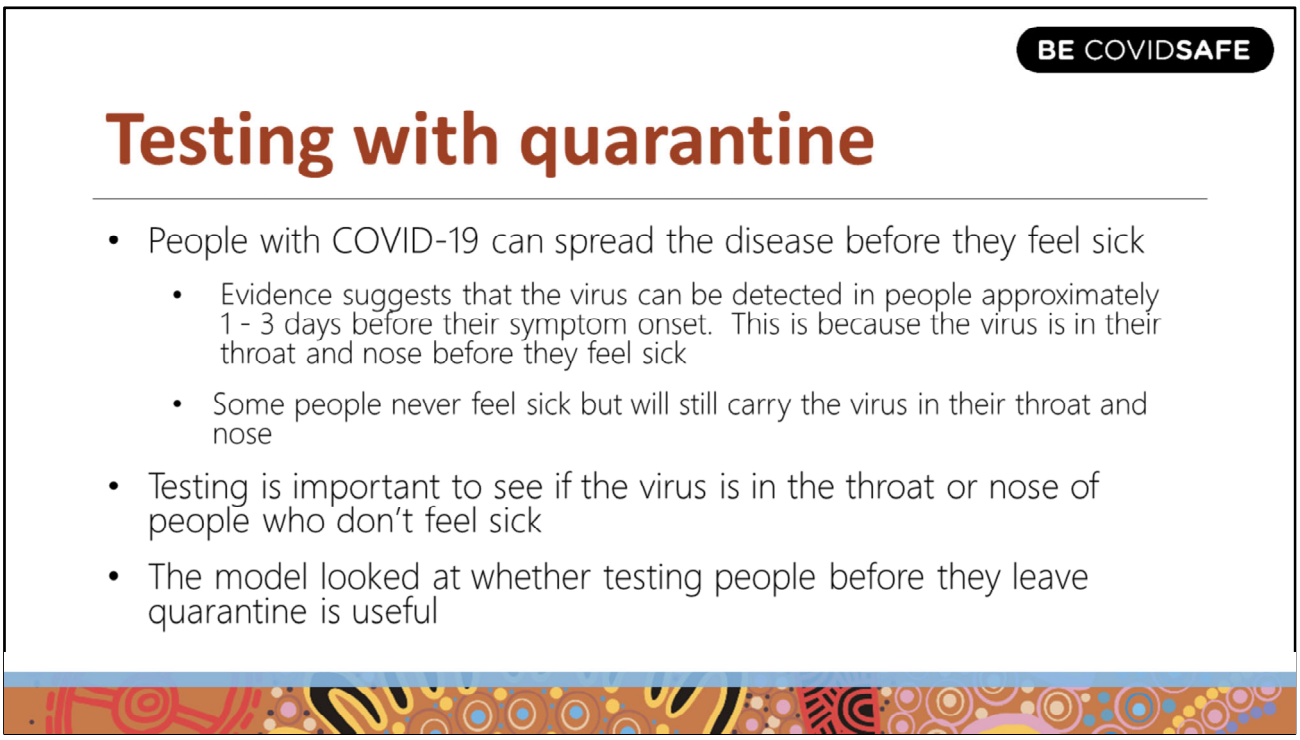
In a small community, e.g. of 100 people, this may mean most of the community should be quarantined, as the person with COVID-19 is likely to be connected through household membership.



Quarantine is making sure that people who have been in contact with the sick person stay away from others, in case they have already been infected. It takes some time for the virus to "incubate" in a person, before they can start spreading it or feeling sick.

The person who has COVID-19 may go into isolation, so they're not spreading it to more people, but other people in their extended household (that is, may be in more than one actual house) and who they have been close to in the two days before, need to quarantine properly as well. That is, for the full 14 days and with no visits.

People in quarantine or isolation need to stay in their own house and yard. Don't go shopping or visiting, don't have visitors to your house. Organise for people to drop off food or medicine outside your house.

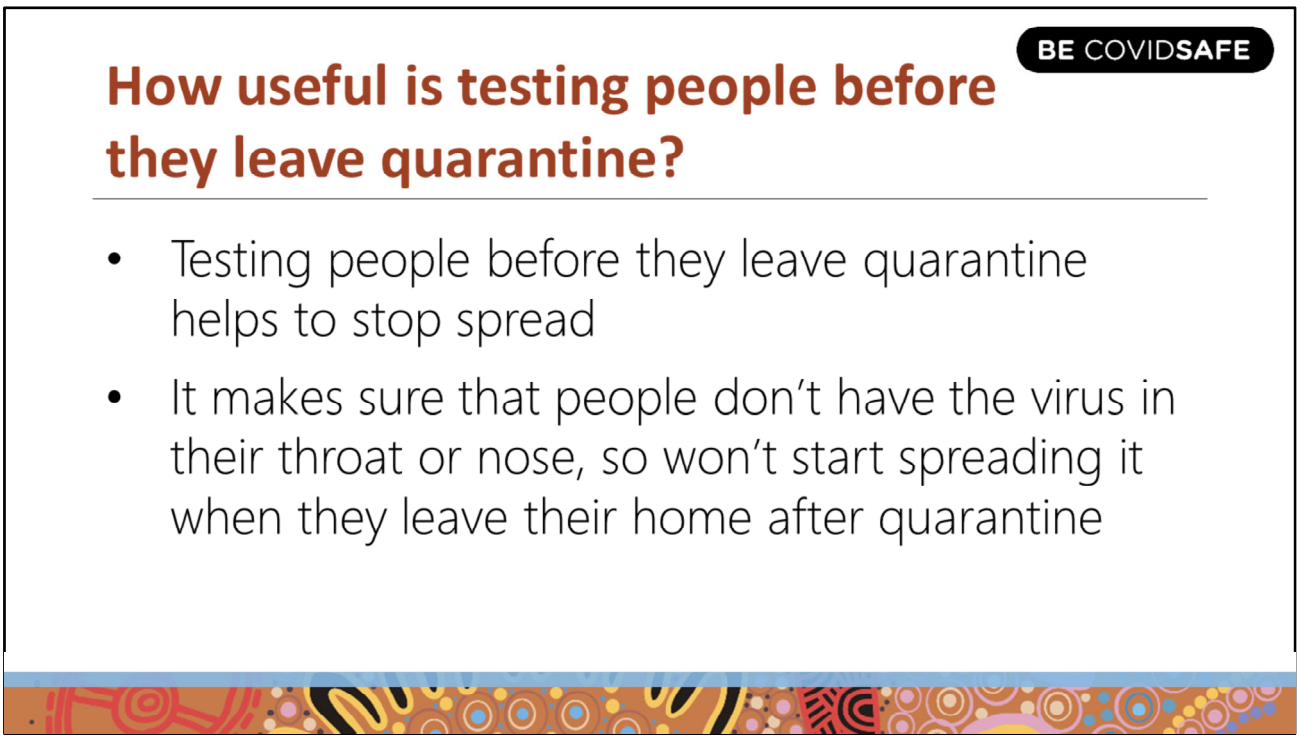


Testing helps to identify who is infected with COVID-19, even if they have no symptoms, and sometimes before they start spreading it (infecting other people).

People in quarantine can be tested for COVID-19. This helps to work out whether they were infected before going to quarantine, and now are at risk of getting sick or spreading it to other people. People who test positive should then go into isolation.

The quarantine period is 14 days. If someone gets sick during the quarantine period they will need to isolate (so total period may be longer than 14 days)

Even if you test negative during quarantine, you need to stay in quarantine for the 14 days

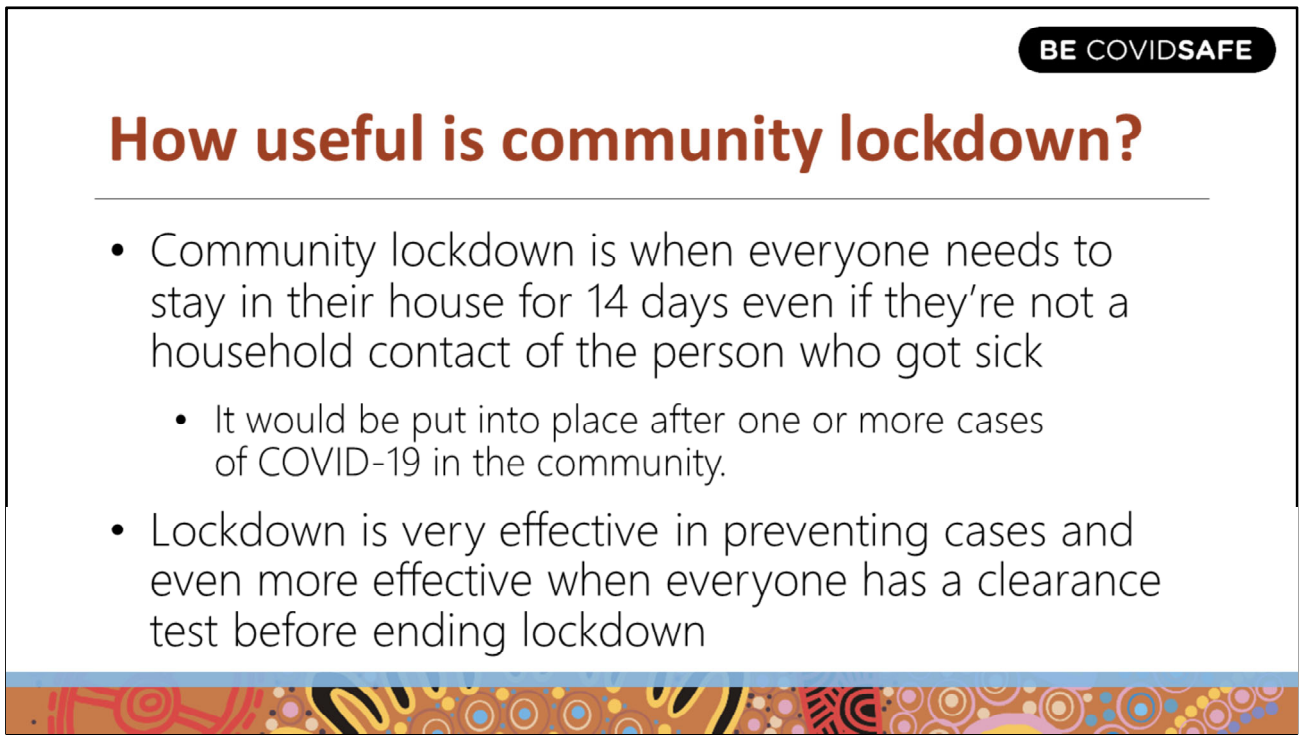


Exit testing, before people leave quarantine (after 14 days), also relies on them having quarantined properly. If people have not quarantined properly, e.g. left their home during quarantine, or had visitors, exit testing is not helpful.

Clearance testing, of all those in quarantine or for whole of community lockdown, on day 12 (so that results are available by day 14, the proposed duration of lockdown) significantly enhances the effectiveness of the public health response, reducing the likelihood of subsequent waves of infection. Positive cases identified on exit testing are isolated, with their immediate household again quarantined.

People in quarantined households where there have been more recent cases may need to stay in quarantine longer until at each exit point there are no new cases identified.

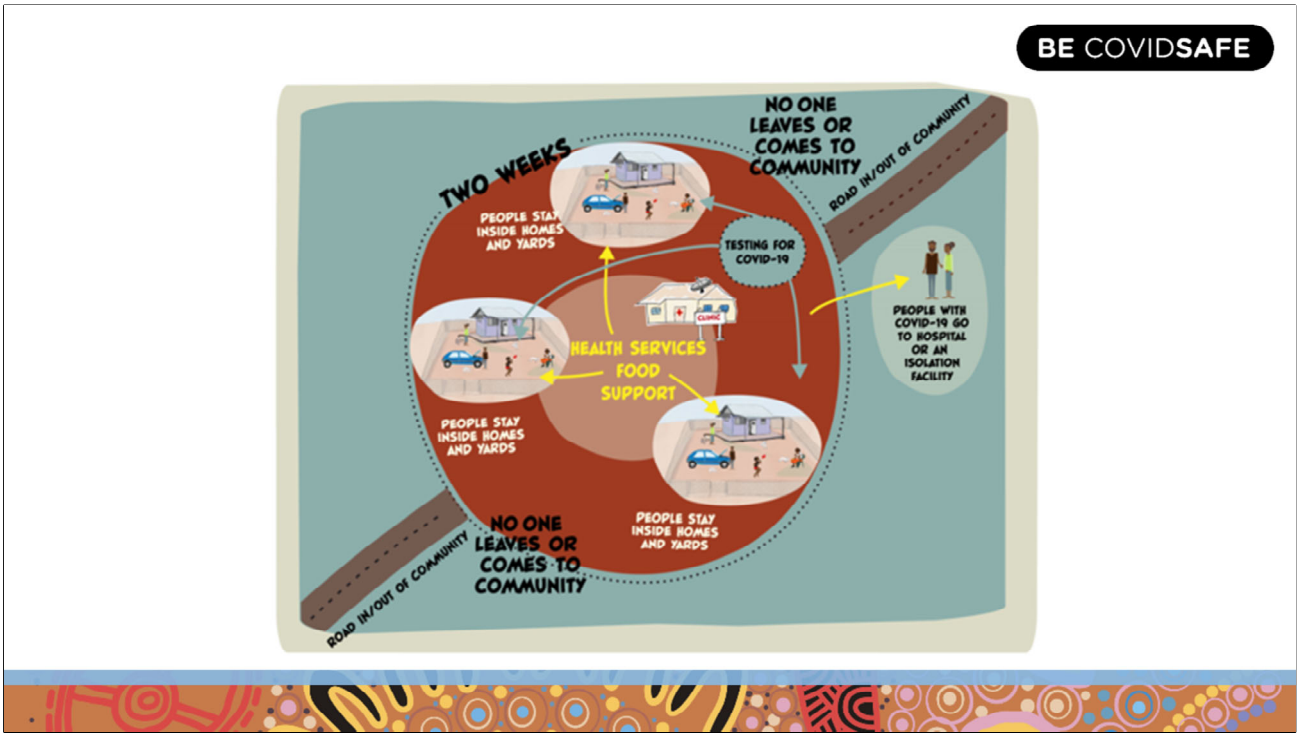
In almost all scenarios modelled, exit testing also reduces the total number of tests performed over the course of an outbreak.



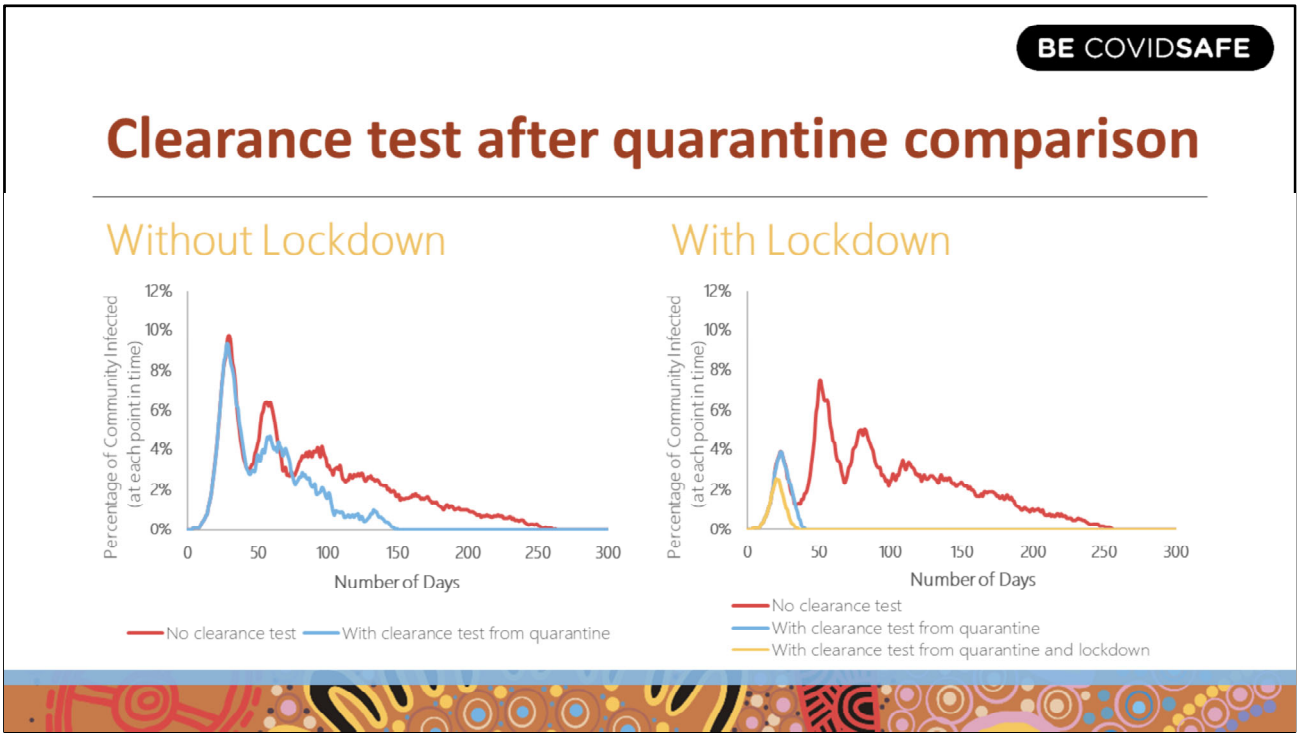
Community 'lockdown' or **stay-at-home order**, means everyone stays in their own house and yard; and away from other people's house / yard. Food, medicines and medical assistance including COVID19 testing will be brought to you. No visitors will be allowed into community

Clearance testing before ending lockdown (similar to clearance testing before leaving quarantine) is also effective in reducing the number of people that get sick.

Without clearance testing, people might end lockdown without knowing they are infected with COVID-19, and start to spread the virus in community again.

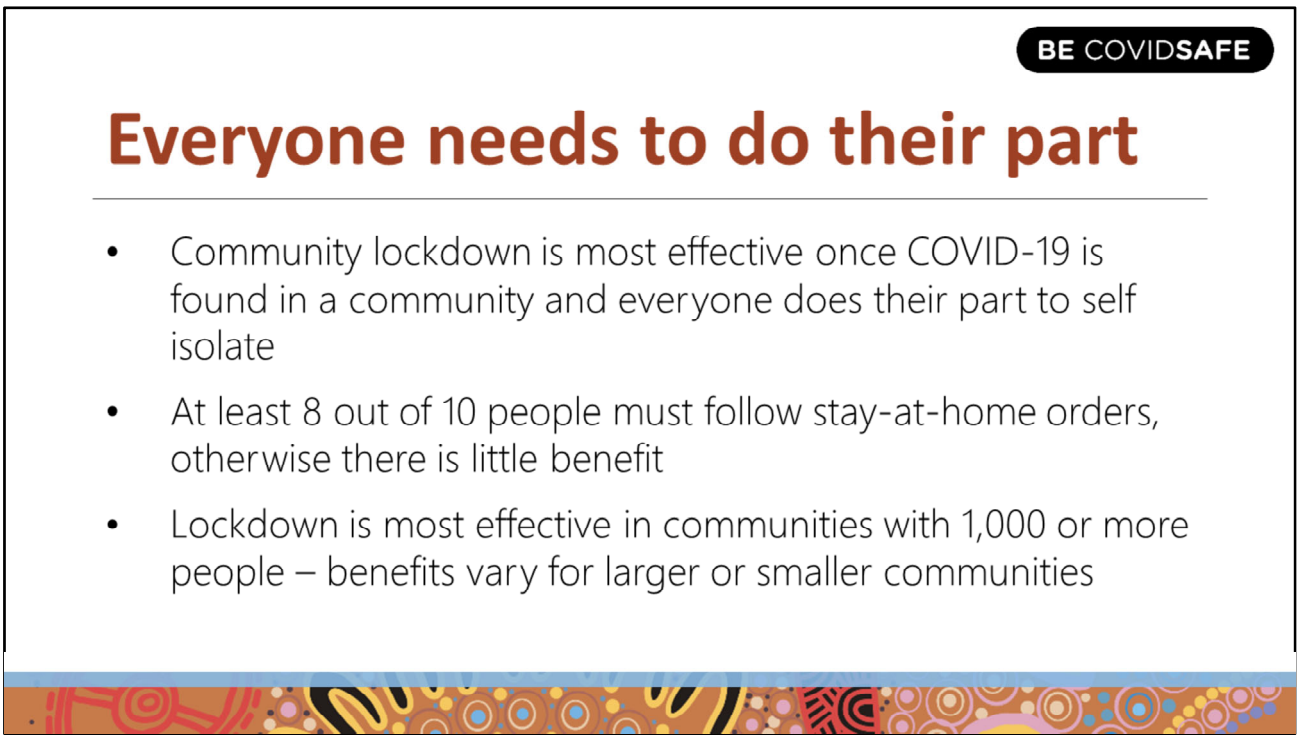


During community lockdown, no-one enters of leaves community except for the health response team who come in to provide medical support, ensure people have food, medicines etc.
People stay in their own house and yard.
The whole community needs to be 'in quarantine' and stay at home.



These graphs show how community lockdown and clearance testing helps reduce the number of cases (shown in these graphs as a percentage of the community infected at each point in time). For example without lockdown, around day 25 approximately 10% of the community is infected (100 in a community of 1000 people).

In the left graph, the red line shows the 'worst case scenario' without lockdown or clearance testing.
In the right graph, the yellow line shows the 'best case scenario' with lockdown and full clearance testing.



Everyone in community needs to be strong and work together. Everyone in the house / family need to make sure the whole family stays at home

'At least 8/10' does not mean that it's ok for 2 /10 people to not stay at home. It is to reinforce the importance of everyone doing the right thing. Because if some people are not doing the right thing and staying at home, then all the hard work of everyone else may be wasted.

In small communities where people have a lot of close contact with many other people and a lot of people are probably infected very early, by the time a first case is identified – lockdown has less benefit because people from many houses are probably already infected. People should still take steps to avoid spreading the virus in community, or to other communities.

This chart compares the effect of no lockdown, full community lockdown, and situations in between where some people do not stay in their own house and yard, or only do it some of the time.

The light blue line shows the 'worst case' scenario with no lockdown.
The brown line shows the 'best case' scenario where everyone in community 'locks down'.

If after the first cases are found in community everyone 'locks down' by staying in their own home with no visits for the full time needed, then the total number of people who get sick with COVID-19 in the community, and the amount of time that the virus is spreading in the community can both be reduced.

This is the same information as on the previous slide, but just looking at the difference between no lockdown (blue) and full lockdown (brown)

The blue line shows the 'worst case' scenario with no lockdown.
The brown line shows the 'best case' scenario, where everyone in community 'locks down'.

If after the first cases are found in community everyone 'locks down' by staying in their own home with no visits for the full time needed, then the total number of people who get sick with COVID-19 in the community, and the amount of time that the virus is spreading in the community can both be reduced.