

COVID-19 sequential scaffolded information for Aboriginal people whose First Language is an Aboriginal language

Authors of this framework are drawn from language and communication specialists familiar with Aboriginal languages in the Northern Territory. This group includes experts in Public Health.

Lead Author: Dr Alice Mitchell, PhD Public Health, MA Applied Linguistics

Additional authors: Dr Melanie Wilkinson, Dr Michael Cooke, Howard Amery



A Framework to assist Improved Communication and Understanding

1. Use a positive tone

The framework for creating health messaging around the COVID-19 pandemic must use a positive approach that values Aboriginal ways of knowing, being and doing and clearly shows the intention of authors as wanting to assist Aboriginal people in an urgent situation. Many groups are resistant to negatively framed messages and such messages may even do harm (1, 2).

2. Essential background knowledge needed to understand key messages

Many current resources around COVID-19 assume underlying foundational knowledge that enables people to make sense of instructional information. Designers of health messaging need to determine if those groups who speak an Aboriginal language as their First Language have such underlying knowledge that enables them to scaffold information around the new virus.

Health messages around COVID-19 rely on some understanding and acceptance of germ theory in order to make sense. Providing purely directive and instructional messaging is inadequate, and risks delivering wrong or unintended messages.

3. Work with local speakers with relevant expertise

Linguistically and culturally appropriate ways of providing important information within the Aboriginal groups referred to here are also needed to enable COVID-19 messages to be heard. This means that messages need to be created with people rather than for them(1).

Some Northern Territory Aboriginal groups have been involved in participatory research that has provided opportunity to see live bacteria and white blood cells with a microscope. They have used meaning-based translations to describe this new information in their first or 'home' languages. At times new terms have been coined or words have been assigned new meanings or the English is borrowed. Decisions about Aboriginal language must be undertaken by 'owners' of that language.

Even where such language work has occurred, most of the associated community groups are likely to still hold alternative beliefs about disease causation. This increases the impetus to work together with First Peoples around how to provide urgent health messages in the right way. It has taken centuries for knowledge of germ theory of disease to become widely accepted in Western societies.

4. Work with translation experts

Translation experts who are familiar with Aboriginal languages can create Plain English texts that assist translation or interpreting of health messages into different languages/cultures. Translation

experts are aware of Aboriginal language structures and utilising these structures in the Plain English text makes the translating/interpreting task much easier.

Process

Learning and teaching about COVID-19 is best done in a dialogue setting with people who have the previously mentioned expertise. Ample time is needed. Questions are invited at each point in the story. Discussions can be launched from any point. This is best process for scaffolding new knowledge.

However, in the urgent situation of the COVID-19 pandemic, and when some Indigenous communities or geographic regions are 'locked down', balance is needed between giving people time to understand new information and arriving at an understanding for why certain behaviours are being requested by governments and health departments such as physical distancing, frequent handwashing with soap, and travel restrictions.

Pandemics occur every now and then. The COVID-19 pandemic has provided an opportunity to enable Aboriginal people, whose first language is an Aboriginal language, to gain understanding about germ theory. The unexpected outbreak of the COVID-19 has amplified what is already well known about health communication for Aboriginal people (3-5): equitable health communication is minimal, BUT urgently required to enable full participation in healthcare strategies.

'Storyline' is how we describe the way that Aboriginal people use a story to deliver information.

The COVID-19 storyline uses the term 'cell'. ARDS Aboriginal Corporation has produced a dictionary of anatomy which includes a plain English definition of 'cell'. The lead author of this document was a member of the team that developed the dictionary. The dictionary is now available as an app named Rumbalpuy Dhäwu. It is freely available on the app store for android and apple devices.

The following text is from Rumbalpuy Dhäwu:

"Cell: Everything that is living is made up of cells joined together. A cell is the smallest part of living things that can reproduce itself. Human bodies are made up of millions of cells. There are many different types of cells, that build our heart, our skin, our liver and all the different parts of our body. Cells are so small that we cannot see them with our eyes, only with a microscope"

The following abbreviated storyline is suggested for developing full understanding of the COVID-19 information. This storyline, based on germ theory, has been used with success in Arnhem Land and Kenya. This text can be used as a foundation to create tools for Aboriginal Language Interpreters, NT schools with ESL Aboriginal students, radio programs and children's texts.

COVID-19 Storyline

a) Germ theory of disease

Throughout history, people in all nations have searched for the causes of sickness.

Each group of people found explanations based on the evidence around them.

Evidence for ideas (i.e. what people thought at a particular time in history) of disease causation are found in ancient writings and artwork.

For instance, the term influenza indicates a previous idea that the stars caused a respiratory sickness called, 'the flu'. Today doctors know that influenza is caused by a germ, not stars. The term malaria indicates the previous idea that bad air caused malaria (mala= bad, aria= air in Italian). Today doctors know that malaria is caused by mosquitoes, not bad air. <https://www.etymonline.com/>

Slowly, information about germs became known among many people. This knowledge is now held all around the world. A key to people gaining understanding of germs as causing diseases was the invention of the microscope.

Invention of microscope

In the 1600s, a Dutch scientist named Antonie van Leeuwenhoek made curved glass, called a lens. Glass in windows is flat (not curved). When we look through the window, things on the other side look the same as when you are outside. But the curved glass lens makes small things appear bigger. This curved lens with strong light allowed Leeuwenhoek to see tiny, tiny things that we cannot see with our eyes. This curved lens with a light is called a microscope.

Leeuwenhoek looked at water with his microscope. He saw tiny living animals in the water. He scratched some plaque from his teeth. He looked at the plaque through the microscope and saw thousands of tiny living animals present in the plaque. No one knew the names of these tiny animals. This was the first time a person had seen them.

Slowly, over time, other scientists learned more about the tiny animals. They learned what the tiny animals looked like, where they lived and how they behaved. They called the tiny creatures 'germs'- from the word 'germinate' meaning to grow from a seed.

Scientists gave the tiny creatures names based on the shape of their bodies. The names were in Latin. English developed from Latin. So, a germ with a body shape like a rod or stick was called 'bacillus' which means rod or stick in Latin.

Scientists discovered that some germs are harmless, some are helpful to our bodies and a few are harmful, they caused sicknesses.

Scientist developed better microscopes and learnt more and more about germs.

They found that there are different groups: one group is bacteria, one group is viruses, one group is fungi and one group is protozoa. We can only see these tiny living animals with a microscope, not with our eyes (<http://sciencenetlinks.com/student-teacher-sheets/whats-germ/>)

b) What do germs look like?

Scientists study germs through the microscope:

The **bacteria** group have different body shapes. Some bacteria bodies are round, some are curly, and some are shaped like a rod or stick. Some bacteria have tails and can move like a water snake.

Viruses are another group of germs. They are much smaller than bacteria. Scientists use a very powerful microscope called an electron microscope to see viruses. Viruses have different shapes. Many viruses have a kind of shell around their body.

Protozoa are another group that we only see through a microscope. Protozoa are bigger than bacteria. Most of them live in water like the sea or rivers and billabongs.

Fungi are another group of tiny animals. Mould is one kind of fungi.

c) Where do germs live?

Germs live in different places.

First, we will talk about bacteria.

Bacteria look for a place to live where there is food to sustain them.

Some bacteria live in our gut and help our body.

Some bacteria live in river water, some live in soil and some live in other places.

A few bacteria are harmful and can make people sick. Like TB, melioidosis, pneumonia and syphilis.

Viruses live inside the cells of other animals or people. They cannot live on their own. They get their food from the cell of an animal or person to keep them alive and growing. Some viruses can help our body by killing bad bacteria in our body.

Some viruses make people sick. Like HIV, chicken pox, measles and other sicknesses.

Now, scientists are working to find out where the new coronavirus lives (see later section)

d) How do germs behave?

We will discuss bacteria and viruses as these are most common. Remember, not all germs make people sick, only a few are harmful.

Scientists learned that some bacteria or viruses get inside our bodies and reproduce there. It is like they find a good camping place. This is called 'infection'.

Some examples of bacteria that make people sick are:

TB bacteria; these bacteria live and reproduce in a person's lungs. The TB bacteria damages the person's lungs. The person with TB has fevers, coughing and sometimes spits out blood from their lungs. When this person coughs, a few bacteria may come out from their lungs into the air. Maybe a person standing close by breathes in the TB bacteria from the air. These bacteria then start to reproduce in that person's lungs.

Some examples of viruses that make people sick are:

HIV- this is the virus that causes AIDS. This virus is passed from one person to another through body fluids, such as during sex or having contact with a person's blood. The HIV virus enters a person's body, reproduces and causes sickness. (HIV enters a person's white blood cells, reproduces inside the cells and then burst out and look for more white blood cells to enter. In this way, the white blood cells are slowly destroyed).

Measles- is caused by another virus. The measles virus moves from one person to another when the sick person coughs. A person nearby may breathe in the virus that the sick person has coughed into the air. These days we have a vaccination needle to stop measles, so we don't see measles sickness very often.

Warts are caused by another different virus. Mostly warts do not harm people. However, one kind of wart causes cancer in women. Scientists have created a vaccine to stop this wart virus. The vaccine is called HPV.

Common cold- is also caused by a virus. This common cold virus reproduces in the nose and throat of a person and the person gets a runny nose, sneezing, coughing and fever. After about 2 weeks the person becomes well again.

The common cold is one virus from a group of viruses. Scientists name this group, 'coronaviruses'. Many people get the common cold virus each cold season. Scientists have been studying this group of viruses for a long time(6).

Our Immune System

Our body protects us from many foreign and harmful germs. In our blood we have red blood cells and white blood cells. These white cells look out for any foreigners that enter our body. They move anywhere in our body, always looking for harmful germs. Our white blood cells are like body soldiers protecting our body and stopping us getting sick.

When a foreign germ enters our body and starts to reproduce inside our body, our white blood cells work like an army. They fight the germs. Some white blood cells make special 'spears' called antibodies. These spears wound the germs and other white blood cells find the wounded germs and kill them. When we see pus, perhaps in skin sores, this shows where our white blood cells have been fighting and killing harmful germs. The pus contains dead germs and dead white blood cells.

Our white blood cells learn to recognise different germs like bacteria and viruses. They remember the specific characteristics of each germ.

Coronavirus

Many technical English words come from Latin or Greek. These words sound strange, but they often simply describe the appearance of a germ. In Latin, corona means 'crown'. When scientists look at coronaviruses through a microscope, they see that these viruses appear to have light around them. The scientists think that coronaviruses look like they have crowns.

There are many kinds of coronaviruses. One kind of coronavirus causes the common cold in people. We call it the 'common' cold because people often get this sickness in the cold season. Our body's immune system recognises this coronavirus because it often invades our body. After about 2 weeks our immune system has killed all the coronavirus and we fully recover. Doctors have not found medicine to cure the common cold.

COVID-19

A new coronavirus emerged in November 2019. Scientists use the name COVID-19. The name comes from the words **Corona Virus Disease** = COVID. The virus was first found in 2019 so the name is COVID-19. This new coronavirus has spread very quickly around the world from place to place and country to country. It makes some people very sick. Many people have died from this new coronavirus. Doctors call this sickness COVID-19.

Because this sickness is now in lots and lots of countries it is called a 'pandemic'. Pandemic comes from Greek language: *pan* means 'all' and *demos* means 'people' <https://www.etymonline.com/>. This means it is found in lots of communities, towns and cities all over the world. However, our Australian government took quick action to stop this new coronavirus before it spread everywhere. Also, some states closed their borders and checked all passengers travelling on planes to make sure they did not have the COVID-19 sickness.

Where do Coronaviruses come from?

Many viruses that cause disease in humans originate in wild animals. Examples are HIV (from chimpanzees), Ebola (possibly from fruit bats), MERS (from camels) and SARS (possibly from bats).

Sometimes viruses jump across from animal populations to people. Viruses might jump across from animals when people make changes to where animals live, like cutting down forests of trees or building towns close to wild animal's homes. Or bringing alive wild animals into markets. Wild animals are then closer to people and the virus may jump to people.

Scientists know that lots of different coronaviruses live in bat populations, but do not make bats sick. Scientists are not sure if the new coronavirus came from a bat to a person. The virus may have jumped from a bat to another animal and then from that animal to a human.

In some countries, people sell wild animals like bats in the markets. Scientists think that the virus jumps from animals to people in the market because the people and the animals live very closely together there. The new coronavirus was first found in a market in China. It then moved from person to person.

When people travelled from one place in China to another place, they carried the coronavirus in their bodies. Then when people travelled from China to other countries, they carried the coronavirus in their bodies. People travelled on planes and boats. This is how the COVID-19 virus travelled to Australia. When a person breathes in the COVID-19 virus it takes a few days for that person to start to feel sick. Some people travelled when they did not know that they already had the COVID-19 virus in their body.

This Radio National Health Report episode was recorded in 2018, prior to the coronavirus pandemic. It explains origins of viruses 'jumping' to people from animal reservoirs.

<https://www.abc.net.au/radionational/programs/healthreport/to-fight-coronavirus-look-to-pandemics-past/11681802>

<https://www.theguardian.com/world/2020/apr/28/how-did-the-coronavirus-start-where-did-it-come-from-how-did-it-spread-humans-was-it-really-bats-pangolins-wuhan-animal-market>

(NOTE there is still uncertainty as to the exact origins of the COVID_19 coronavirus)

What does COVID-19 virus do in our body?

The virus enters our mouth or nose. It moves into our throat and lungs and reproduces there. After a few days there are millions of viruses in our throat and lungs. Our body sends its body soldiers (white blood cells) to our throat and lungs to fight the virus. The fight between the viruses and the white cells gives the person a fever.

The fighting in the lungs between the virus and the white blood cells causes the person to cough and get short of breath. They feel very unwell.

Some people with the virus get very tired just trying to breathe. Doctors may help them with a machine called a ventilator that does the breathing work for the sick person. Doctors give the person medicine to keep them asleep while the machine breathes for them.

Scientists are still learning how the new coronavirus damages our body.

Many people recover but other people don't. There is no existing medicine to kill the COVID-19 virus. Also, because COVID-19 virus is new, doctors have not had enough time to find a medicine that will kill it in our bodies. Finding new medicines might take one or two years, or maybe longer.

Some people who become sick with COVID-19 virus only become a little bit sick. Others get severe pneumonia and pass away. Because the COVID-19 virus is new, no one's white blood cells recognise it. So the white blood cells don't know how to fight it. The white blood cells must learn as quickly as they can.

People who get COVID-19 and recover, their white blood cells will now recognise the new virus. So, if they breathe in this virus again, their white blood cells will be ready to fight it quickly. However, scientists do not know how long people's white blood cells will remember the new virus. Maybe six months, maybe one or two years. Maybe longer. Scientists are still trying to find this story.

How can we stop COVID-19 virus?

When we learn how the virus moves from person to person, we can work out how to stop it.

Coughing:

When a person with COVID-19 coughs, the coronavirus travels out into the air around them. Other people near that sick person may breathe in the virus. This is one way the virus travels from person to person. This is why, doctors are asking people to stay apart from each other and to cough into their elbow. Doctors think this will help most people not to breathe in the virus from a sick person when they are coughing.

The virus can also take a ride on the sick person's hands, or on things that the person touches with their hands. Or things that they cough onto.

Our hands

Our hands are like buses or cars for the coronavirus to travel around on. The coronavirus may be sitting on our money, cards, EFTPOS cards, benches, doorknobs, cups and plates or clothes. Or anything that a person with COVID-19 coughs onto or touches. Remember, we cannot see the virus with our eyes, so we don't know where it may be sitting.

Therefore, scientists are asking everyone to wash their hands because maybe they have the coronavirus in on their hands. They are asking people to wash with soap and water many times during the day. After we have been to the shop or after touching something another person has touched, it is very helpful to wash our hands.

Scientists are also asking people not to touch their face with their hands just in case a virus is on their hands. When a person touches their face, this might help the virus get a ride into that person's mouth or nose.

Soap: we don't need to use antiseptic soap. Normal soap kills the virus on our hands and clothes. The coronavirus's skin contains lots of fat that is easily broken up by soap. Normal soap kills the virus.

Physical or Social Distancing

Doctors are asking families, or people who live together in one house, to stay apart from all other people. They are asking this to try to stop the COVID-19 virus moving from house to house or person to person. Try to stay about 1.5 metres apart. This distance is like each person putting out their arms from their side and staying that far apart.

Because we cannot see the COVID-19 virus, we don't know who already has it in their body or on their skin. A person may already have the COVID-19 virus reproducing in their throat, but they don't yet feel sick. Remember it takes a few days for a person with coronavirus to feel unwell.

The chief doctors for Australia and for the Northern Territory and Aboriginal leaders have asked that Aboriginal communities be closed to outsiders. This is a good way to protect the community from the COVID-19 virus. They realise that there are not enough houses in communities, and it is hard for people to stay far enough apart.

Also, there are only a few health services in communities. So, if many people became sick with COVID-19 at the same time, it would be too hard for the health clinic staff to look after them properly.

Also, we know that many Aboriginal adults have other sicknesses like diabetes and heart disease. If these people get COVID-19, they may pass away quickly. This is because their body's white blood cells are already fighting other diseases. Or their body may be weak from the other sicknesses.

How long does virus live on surfaces like benches?

Doctors think the virus can stay on our kitchen benches and other things that we often touch for several hours or maybe even a few days. Therefore, doctors are asking people to clean kitchen benches, bathroom basins and door handles lots of times each day. Clean with normal soap first, then clean with a chemical spray that is very powerful because it contains alcohol. The alcohol kills all the COVID-19 viruses on the lying on the bench or door handles. The label on the spray bottle tells us about how much alcohol is in the spray.

References

1. Marika M, Mitchell A, Ralph AP, Marawili B, Haynes E, Marawili M. Words from Arnhem land: Aboriginal health messages need to be made with us rather than for us. The Conversation [Internet]. 2018 26/11/18. Available from: <https://theconversation.com/words-from-arnhem-land-aboriginal-health-messages-need-to-be-made-with-us-rather-than-for-us-100655>.
2. Anderson A, Peat B, Ryland J, Ofanoa M, Burgess H, Malungahu G, et al. Mismatches between health service delivery and community expectations in the provision of secondary prophylaxis for rheumatic fever in New Zealand. Australian and New Zealand journal of public health. 2019.
3. Cass A, Lowell A, Christie M, Snelling P, Flack M, Marrnganyin B, et al. Sharing the true stories: improving communication between Aboriginal patients and healthcare workers. MJA. 2002;176:466-70.
4. Lowell A, Maypilama E, Yikaniwuy S, Rrapa E, Williams R, Dunn S. 'Hiding the story': Indigenous consumer concerns about communication related to chronic disease in one remote region of Australia*. International Journal of Speech-Language Pathology. 2012;14(3):200-8.
5. Lowell A. Communication and cultural knowledge in Aboriginal health care. Darwin: Cooperative Research Centre for Aboriginal and Tropical Health. 2001.
6. Wertheim JO, Chu DKW, Peiris JSM, Kosakovsky Pond SL, Poon LLM. A case for the ancient origin of coronaviruses. J Virol. 2013;87(12):7039-45.

Creative Commons License



This work has creative commons license: attribution, non-commercial and share alike. You may alter the work but must attribute original authors, and must share with this same license.