

# Planning for a COVID-19 Future: Resilience

## Part 2 ~ Transitioning to Recovery from the Pandemic: Risk Appraisal, Concern Assessment and Vaccine Hesitancy

Dr Ted Christie, 30 September 2021



### Disclosure Statement

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*“The Prime Minister says 70 per cent of eligible Australians will need to be **fully vaccinated against COVID-19** for the country to begin reopening and returning to normal, and 80 per cent to end lockdowns”.*

The need for mass vaccination as the supply of vaccine ramps up should not be in dispute. However, achieving the targets for vaccination set by Government has proved to be problematic.

Research by [Essential Report](#) (August 2021) into a range of issues related to mass COVID-19 vaccination in Australia found the general population was split on the question of the main barrier to vaccination: -

- “Just under half (48%) think it’s an **unwillingness** among people who are eligible for a COVID-19 vaccine to get vaccinated”. The barrier of **vaccine hesitancy** refers to the delay in acceptance or refusal of vaccines despite availability of vaccine services.
- “Just over half (52%) think the biggest barrier is a **shortage of supply of COVID-19 vaccines** for people who are eligible and willing to get vaccinated”. The ability of Government to manage the logistics of delivering vaccines safely and competently is critical for maintaining public **trust**.

Where vaccination and health-related risks and decisions are matters of **individual choice and responsibility**, the factors that determine whether the problem of vaccine hesitancy may arise need to be understood .

‘*Complacency*’ is one factor if vaccination is not considered a necessary measure to prevent the risk of COVID-19 infection. The polar opposite to complacency is ‘*collective responsibility*’, or willingness to protect others by one’s own vaccination.

It is commonly called “*herd immunity*” where enough people in a population have become immune to stop a disease to spread freely.

*Public confidence and trust in decision-making by Government  
that address community concerns  
on the need for COVID-19 vaccination  
has a significant role in offsetting vaccine hesitancy.*

The trust-building approach taken within Australia in public health messaging to encourage the spread and uptake of COVID-19 vaccination to offset vaccine hesitancy concerns, was to rely on scientific risk assessment as the basis for better-informed decision-making: By comparing the potential benefits against risk of harm from COVID-19 vaccination.

*But what may be an acceptable level of risk for COVID-19 vaccination  
for science e.g., epidemiologists, clinicians  
or politicians,  
may be quite different from public opinion  
and community perceptions of vaccine risk.*

### ***Vaccine Hesitancy and Risk Communication: AstraZeneca Risk Assessment Case Study***

The *Federal Government’s Department of Health’s* “[COVID-19 Vaccination Report \(June 2021\)](#)” is a good example of the role of science and the application of a technical health risk assessment for decision-making.

Vaccination with AstraZeneca may lead to a “rare” but menacing severe side effect, life threatening blood clots.

The risk of a condition called *thrombosis with thrombocytopenia syndrome* (“TTS”) after COVID-19 Vaccine AstraZeneca was assessed: -

*“Current data indicates that TTS occurs in around 2 out of every 100,000 people who receive the first dose of COVID-19 Vaccine AstraZeneca. TTS appears to be far more rare following second doses, with data from the United Kingdom indicating a rate of 1.5 per million second doses.”*

One [\*\*risk comparison of health risks\*\*](#) concluded that the risk of blood clotting from AstraZeneca vaccination was far lower (“*miniscule*”) compared to the fatality rates for COVID-19 itself - notwithstanding that fatality rates vary greatly by age, location, and other factors.

At the end of the day, the practical problem for better informed community decision-making goes beyond a *scientific (or “technical”)* risk assessment based on objective scientific data or predictions from mathematical models.

*A technical risk assessment does not reflect  
how a particular risk is viewed  
when values and emotions come into play.*

So, should risk appraisal - the steps to assess, evaluate, manage, and communicate COVID-19 health risks - also account for *community perceptions, concerns, and opinions* – by what is termed a “*concern assessment*”.

This is a feature of the framework for risk appraisal applied by the [\*\*International Risk Governance Council\*\*](#) (“IRGC”) protocols.

*Under IRGC Governance protocols  
concern assessment is just as necessary  
as the technical assessment and management of risk.*

*Risk appraisal includes  
both a risk assessment and concern assessment.*

- **“RISK ASSESSMENT seeks to establish the technical link(s) between risk agent(s), cause(s) and consequence(s), specifying the probabilities (‘likelihood’) of occurrence”.**
- **“CONCERN ASSESSMENT complements this information with insight from risk perception studies and interdisciplinary analyses of a risk’s social and economic implications to better understand the values and emotional issues that could be associated with a risk”**

## **Conflict Management: Risk Assessment, Concern Assessment & Vaccine Hesitancy**

***"No matter how much the specialists sneer at an "irrational" and "ignorant" public, lay judgements about possible dangers are equally as important as scientific or technical analysis."***

***Emeritus Professor Tim O'Riordan***

*As risks and decisions for COVID-19 vaccination are matters of individual choice and responsibility, a risk appraisal of COVID-19 health risks that included both a **risk assessment and concern assessment**, would be an aid to offset vaccine hesitancy concerns and lead to better-informed decision-making. Australia's [COVID-19 Vaccination Report \(June 2021\)](#) makes no mention of concern assessment.*

*A key question when comparing the benefits and risks of COVID-19 vaccination is what is an **"acceptable level of risk"** or **"how safe is safe enough"**? This question lies at the interface between science and politics and is referred to as a [trans-scientific question](#): That is, **"Questions which can be asked of science and yet which cannot be answered by science"**.*

*Whether society considers a risk to be acceptable is, in part*

*influenced by perceptions of its impacts.*

*Risk perception involves people's feelings,  
beliefs, attitudes, and judgements.*

*It is at the core of understanding vaccine hesitancy.*

*Risk appraisal based on both risk assessment and concern assessment leads to better-informed decision-making by the public as well as enhancing **public trust and confidence** in vaccination and COVID-19 vaccines.*

*It would also overcome any confusion that ordinary people have to understand concepts such as risk assessment, relative risk, and acceptability of risk - especially when it involves a very rare but menacing side effect such as life-threatening blood clots following AstraZeneca vaccination. Having concern assessment as part of a risk appraisal would promote public health literacy.*

**TAGS:** COVID-19; resilience; transition; recovery; public health; vaccine hesitancy; acceptable risk; trans-science; International Risk Governance Council; risk assessment; concern assessment; health literacy.