

# The principles of vaccine risk communication

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**Australian Vaccinology Course**

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THE UNIVERSITY OF  
**SYDNEY**



**SABII.**  
Social and Behavioural  
Insights in Immunisation



# This session

## Objective

- Apply the principles of public risk communication to a vaccine safety issue

## Overview

- What makes vaccine safety communication difficult?
- What is risk communication?
- What are the principles?

This session focuses on public communication for vaccine safety issues.

We will cover person-to-person communication on day 3.


You will later apply what you learn in a hypothetical scenario.

**What makes vaccine safety communication difficult?**

# The outcome narratives are powerful

Vaccine-related death – Lyla Rose

April 7, 2012 | 19 Comments | Filed under Children's Gallery - Vaccine Injured



My daughter Lyla Rose Belkin died on September 16 1998 at the age of five weeks, shortly after receiving a Hepatitis B vaccine booster shot. The following comments are intended to be a heads up to parents and potential parents about the risks of the Hepatitis B vaccine (HBV), and a firsthand report questioning the scientific legitimacy of the vaccine industry, which provides \$800 million of annual revenue to Merck – the company which makes the Hepatitis B vaccine distributed in the US.



July 2016 - women claiming side effects from the cervical cancer vaccine sued Japan's government.

SOURCE: THE YOMIURI SHIMBUN VIA AP IMAGES  
<https://www.science.org/content/article/critics-assail-paper-claiming-harm-cancer-vaccine>

## Seemingly credible sources can champion a theory



Andrew Wakefield  
MMR-autism



Gordon Stewart  
DTP - encephalopathy



Sheik (Dr) Datti Ahmed  
Polio – Northern Nigeria

**Some safety scares are real or there is uncertainty while information evolves**



# People have common heuristics when thinking about risk



## AVAILABILITY BIAS

Assessing the likelihood of an outcome by how readily it comes to mind.



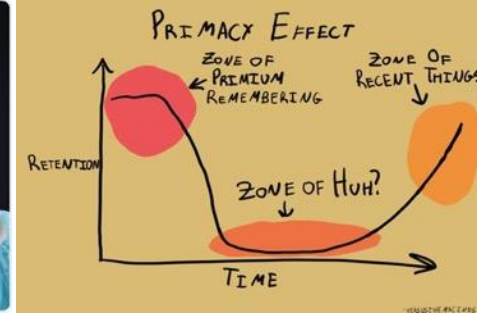
## CONFIRMATION BIAS

Our prior beliefs affect how we accept or reject new information.



## AMBIGUITY AVERSION

People avoid taking risks when the outcome is uncertain.



## PRIMACY AND RECENCY

People tend to recall information at the beginning or end than in the middle.

Luz PM, Nadanovsky P and Leask J. How heuristics and cognitive biases affect vaccination decisions. *Cadernos de Saúde Pública/Reports in Public Health*. 2020; 36 Sup 2:e00136620

# Context is important



## Social, cultural, community and religious influences

People with shared values and beliefs in tight-knit communities where ideas spread readily.



## Historical issues affecting trust

Groups most at risk may include people living on a low-income, different kind of minorities, disabilities, or members of communities with inadequate health service access



## Organisational influences

Mistrust among HCWs as a result of workplace infections and a perception of having been unsupported by governments in the face of overwhelming COVID-19 case numbers



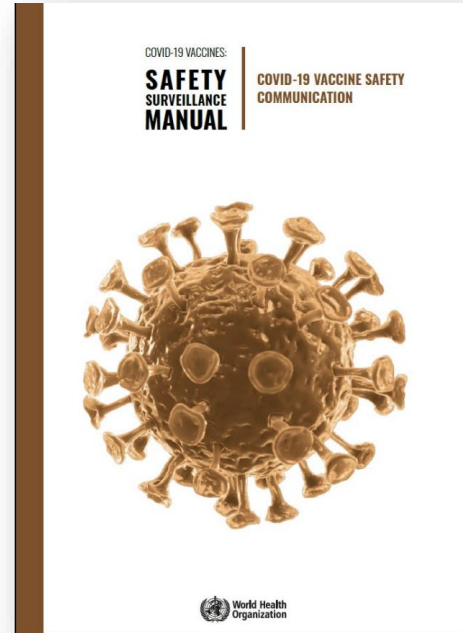
## Vaccination services

Negative previous experiences with health services may influence acceptance in adults.



## Political influences

Leaders may create high expectations of COVID-19 vaccines. Over-confident communication could lead to mistrust if expectations are not met.



**What helps?**

**RISK COMMUNICATION**

## Risk communication is not just ...

- Communicating probability
- “Messaging”
- Getting people to do what we want them to...

... although these can be important



**Industry**



**Government**



**Community Groups**



**Public**



**Journalists**



**Specialists**



**“Risk communication is an interactive process of exchange of information and opinion among individuals, groups, and institutions.”**

**(National Research Council, 1989)**

# Covello's cardinal rules of risk communication

1. **Accept and involve the public**
2. Listen and be responsive to specific public concerns
3. Be honest, frank and open
4. **Speak clearly and with compassion**
5. Involve and communicate with all stakeholders
6. **Work with other credible sources**
7. Meet the needs of the media
8. **Plan and evaluate efforts**

Adapted from Vincent Covello's Seven Cardinal Rules of Risk Communication, US EPA



The Blangkon Jogja Sumping worn by the Sultan of Yogyakarta signifies the importance of listening

## What can justify more proactive public response?

Safety signal is real

The event or story is gaining public attention

Stories are actively shared by a group of people who experience the outcome

An opinion leader is advancing a view

The confidence of HCW is likely to be affected

BE COVIDSAFE

## ATAGI STATEMENT

### Summary

- [ATAGI](#) notes further evidence of a rare but serious side effect involving [thrombosis](#) (clotting) with [thrombocytopenia](#) (low blood platelet count) following receipt of [COVID-19 Vaccine AstraZeneca](#)
- ATAGI recommends that the [COVID-19 vaccine by Pfizer \(Comirnaty\)](#) is preferred over COVID-19 Vaccine AstraZeneca in adults aged under 50 years. This recommendation is based on the increasing risk of severe outcomes from COVID-19 in older adults (and hence a higher benefit from vaccination) and a potentially increased risk of thrombosis with thrombocytopenia following AstraZeneca vaccine in those under 50 years.
- COVID-19 Vaccine AstraZeneca can be used in adults aged under 50 years where the benefits are likely to outweigh the risks for that individual and the person has made an informed decision based on an understanding of the risks and benefits.

## Communicating vaccine safety to the public

Be honest, frank, and open

Acknowledge uncertainty, don't over-reassure

Give people things to do

Speak with compassion

Consider needs of priority populations

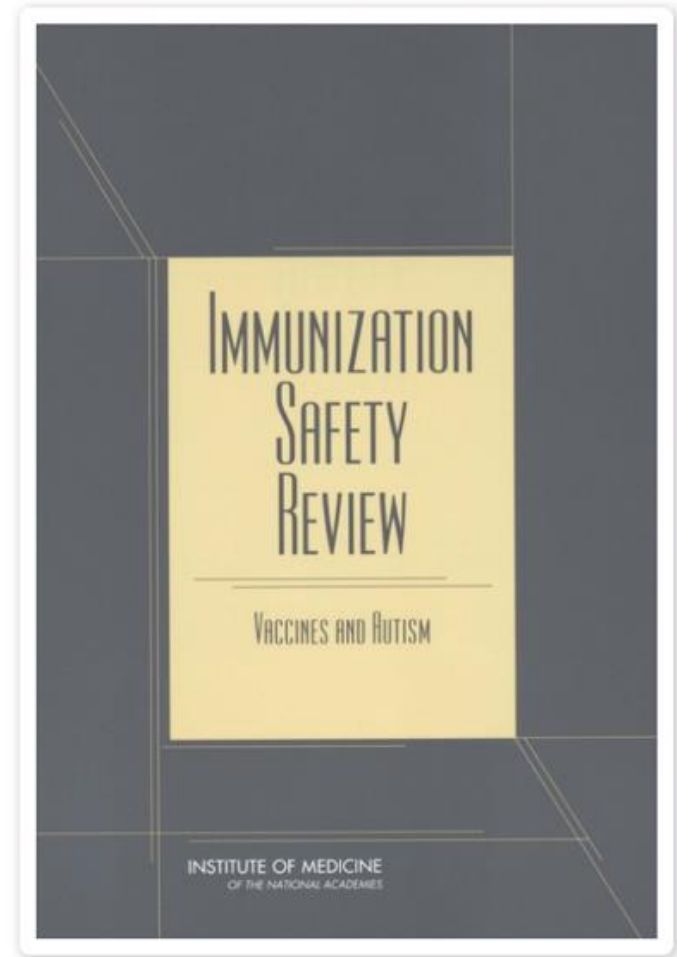
<https://www.pmo.gov.sg/Newsroom/PM-Lee-remarks-COVID-19-Outbreak-12-Mar-2020> 0 to 4:30

## Communicate clearly ...

### Avoid jargon

“The committee concludes that the body of epidemiological evidence favors rejection of a causal relationship between the MMR vaccine and autism (and) potential biological mechanisms for vaccine-induced autism that have been generated to date are theoretical only.”

Immunization Safety Review: Vaccines and Autism 2004.



# Put most important information first – an example

## VERSION 1

### Reports of death in people who have been vaccinated

Large scale vaccination means that some people will experience a new illness or die within a few days or weeks of vaccination. These events are often coincidental, etc etc

The [regulator] has identified x reports where the cause of death was linked to vaccination from y reports received and reviewed.

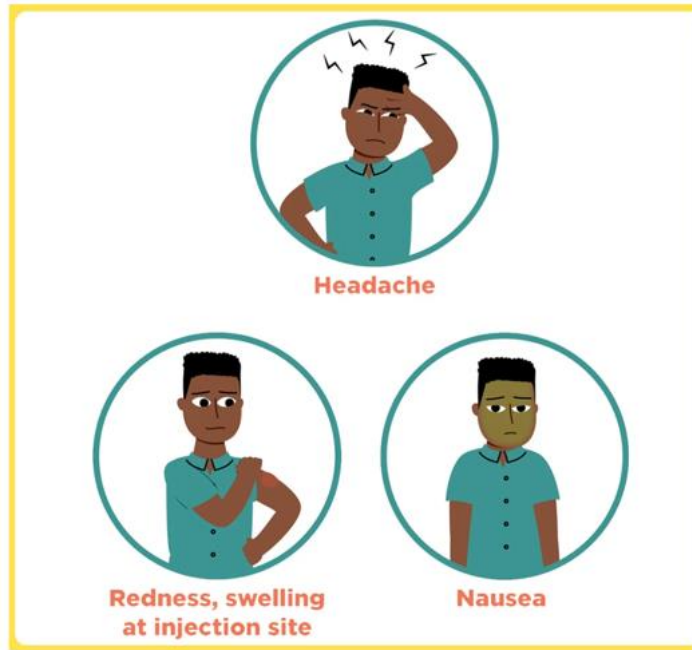
## VERSION 2

### Reports of death in people who have been vaccinated

Vaccines can lead to death in extremely rare instances. However, most deaths that occur after vaccination are not caused by the vaccine. In large populations in which a new vaccine is given, there are people with underlying diseases who may die from these diseases. When a vaccine is given in that same population, the link between the vaccine and death is usually coincidental – not caused by the vaccine. These deaths are carefully reviewed for whether vaccines could be the cause and for the vast majority that is not the case.”

# What does it mean to communicate clearly?

- Use plain language but don't over-simplify
- Check messages for understandability and actionability
- Use visuals
- Give words and numbers
- Acknowledge uncertainty
- Don't over-reassure

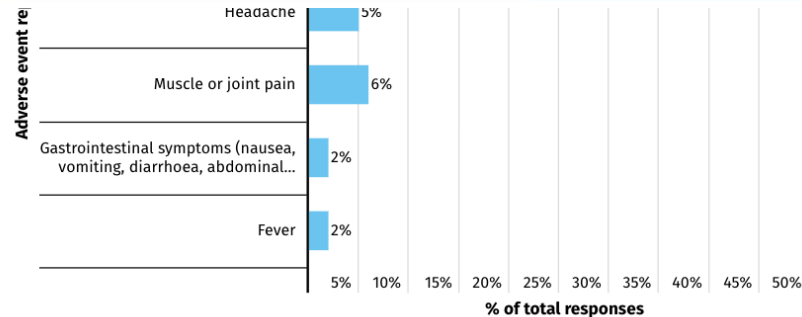


## Are there any side-effects?

There might be some minor side-effects

These are normal and shouldn't last more than a day or two

Only around 1 in 100 people will develop nausea



1. Mac OA, Muscat DM, Ayre J, Patel P, McCaffery KJ. The readability of official public health information on COVID-19. *Med J Aust.* 2021 Oct 18;215(8):373-375
2. Bonner C, Trevena LJ, Gaissmaier W, et al. Current Best Practice for Presenting Probabilities in Patient Decision Aids: Fundamental Principles. *Medical Decision Making.*

# Accept and involve the public

## Some methods of involvement

- Create links to publics before the event
- Community governance
- Employing people from the community
- Public dialogue and two-way communication
- Questionnaires, in-depth interviews and focus groups
- Invitation to public comment
- Deliberative democracy

Crooks K, Law C, Taylor K, Brett K, Murray P, Kohlhagen J, Hope K, Durrheim DN. Embedding Aboriginal cultural governance, capacity, perspectives and leadership into a local Public Health Unit Incident Command System during COVID-19 in New South Wales, Australia. *BMJ Glob Health*. 2023 Jul;8(7):e012709.

Renn O (2008) *Risk Governance* pp 255-262.

*Risk communication and public health 1999*. Ed. P. Bennett and K. Calman, Oxford: Oxford University Press.



# Work with credible sources

## Community champions training



Refugee leader training, Auburn NSW



Australia  
Minnesota  
Kenya  
Fiji  
Tonga  
Vietnam

Indonesia (image)  
Papua New Guinea  
Eastern Highlands  
Province



Peer-to-peer communication training modules, US, Kenya and Indonesia



## Keeping mob safe: *yarning about vaccinations*



Workshops with community and health workers in Awabakal and Gomeroi country

Champions practice their skills, Bandung Indonesia

# Work with credible sources

Ibu Evi Susanti, Aceh Health Service, Immunization Manager



Laura Brennan, 1992-2019

**Don't be swayed by rumours**

Get the facts from the HSE at [hpv.ie](http://hpv.ie)

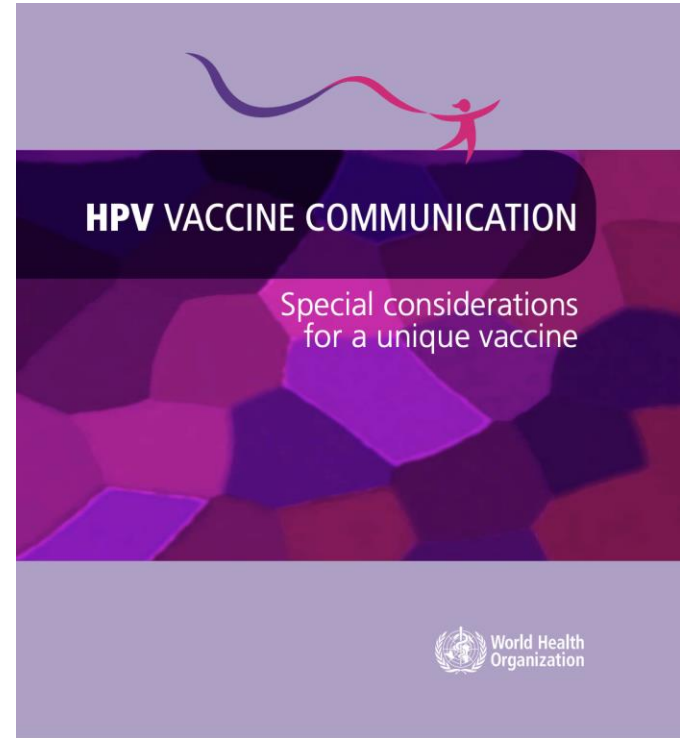
Laura, 25



# Plan ahead

## ELEMENTS OF AN “AEFI” PLAN

- Standard operating procedures for handling the situation
- Description of how and when investigations will occur
- Description of how and when information and updates are communicated
- Authorized spokespeople
- Contact lists internally, for media, partners
- Strategies to communicate with different stakeholders
- Funding
- Consensus on the plan amongst key players



Source: [https://www.iccp-portal.org/system/files/resources/WHO\\_HPV\\_vac\\_communication\\_2013.pdf](https://www.iccp-portal.org/system/files/resources/WHO_HPV_vac_communication_2013.pdf)

# Challenges ahead

Robert F. Kennedy Jr.  
Head of US Health and Human Services  
Vaccine skeptic since 2005

## Actions since February 2025

- Retired all 17 NITAG members
- Replaced with 8 lockdown skeptics, vaccine skeptics, expertise in other fields.
- Bypasses standard processes to cease recommendation of COVID vaccine for healthy children and pregnant women
- Fails to strongly endorse MMR vaccine during measles outbreak
- Commissions investigation on causes of autism, led by David Gier
- Calls for retraction of Danish study showing no link between aluminium-containing vaccines and autism
- Cancels \$US500 million in grants and contracts for mRNA vaccines people without going through normal processes
- Ceases important vaccine trials
- Cancels vaccine hesitancy research
- Leading FDA and CDC staff leave on ethical grounds

## Broader changes

- Big Beautiful Bill - \$880 billion cuts to Medicaid over 10 years
- Estimated 10.8m uninsured
- Funding for outreach clinics removed
- Dismantles USAID



"We are finding interventions - certain interventions now that are clearly - almost certainly - causing autism. And we're gonna be able to address those in September."



# Responding to misinformation

**MSNBC** RFK Jr. is targeting aluminum in vaccines – and children could pay the price

Opinion **RFK Jr. is targeting aluminum in vaccines – and children could pay the price**

Science does not support aluminum as a culprit of autism. Yet RFK Jr. and his associates continue to find ways to support the claim.



MEASLES CASES IN THE U.S.

**1,288**  
CONFIRMED CASES

July 27, 2025, 8:00 PM GMT+10

By Alex Morozov, CEO and founder of Eviva Partners, Helen Petousis-Harris, vaccinologist and associate professor at the University of Auckland and Stephan Lewandowsky, cognitive scientist at the University of Bristol

- Be discerning
  - Is it salient
  - Is it being shared a lot?
  - Is it affecting behaviour?
- Prepare people – “you may hear” (prebunking/innoculation)
- If repeating misinformation, include a correction
- Correct quickly in public arena
- Use trusted spokespeople

- Lewandowsky, S., Cook, J., Schmid, P., et. al. The COVID-19 Vaccine Communication Handbook. A practical guide for improving vaccine communication and fighting misinformation. Vaccine misinformation management field guide: Unicef, First Draft, Yale Institute for Global Health, and PGP (The Public Good Projects)
- Ecker, U.K.H., Lewandowsky, S., Cook, J. *et al.* The psychological drivers of misinformation belief and its resistance to correction. *Nat Rev Psychol* **1**, 13–29 (2022).
- Steffens MS, Dunn AG, Marques MD, Danchin M, Witteman HO, Leask J. Addressing Myths and Vaccine Hesitancy: A Randomized Trial. *Pediatrics*. 2021;148(5).
- van der Linden, S. Misinformation: susceptibility, spread, and interventions to immunize the public. *Nat Med* **28**, 460–467 (2022). <https://doi.org/10.1038/s41591-022-01712-6>

## Which cardinal rule do you most want to apply in the scenario?

1. Accept and involve the public
2. Listen and be responsive to specific public concerns
3. Be honest, frank and open
4. Speak clearly and with compassion
5. Involve and communicate with all stakeholders
6. Work with other credible sources
7. Meet the needs of the media
8. Plan and evaluate efforts

**Does your organization have a vaccine safety event communication plan?**

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# Prof David Isaacs

1950 - 2025

