

NSW Health PFAS Expert Advisory Panel

NSW Health

Dr Kerry Chant
NSW Chief Health Officer

5 May 2025

NSW Health





Acknowledgement of Country



We acknowledge the traditional custodians of the land on which we meet today, the Cammeraygal (Gammaraygal) people. We honour the ancestors of yesterday, the custodians of today and those of tomorrow. We recognise the continuing connection to land and waters, and how culture is held, nurtured and shared. We pay our respects.

Left: The richly symbolic 'Interwoven' (2014) by artist Jessica Birk was commissioned by HealthShare NSW to illustrate the commitment to Closing the Gap in Aboriginal employment.

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Welcome and apologies

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Conflicts of interest

4

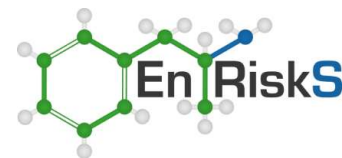
Previous minutes, outstanding actions
and out of session feedback

Previous minutes and follow up items

Follow up items from previous minutes	Status
A subset of Panel members will review the fact sheets and supporting materials available to the community and update as required.	In progress. Update provided in Item 6 Risk Communication
Discuss how best to communicate with community regarding their concerns around PFAS	Update provided in Item 6 Risk Communication
Further discussion on the role of blood testing	Item 5 Blood testing
Review available information on the potential neurological effects of PFAS	Agenda Paper 1. provided – Request comment/feedback from the panel

PFAS and Neurological effects

- Mixed and limited evidence of neurological effects
- Epidemiological studies do not support a probable link between exposure and adverse effects (C8 Science Panel and 2020 updated review of studies and data)
- Animal studies limited
- Some rodent studies identified neurotoxic and neurodevelopmental effects
- Studies were included in those relevant to develop TDI (FSANZ) – not most sensitive effect
- Recent studies provide evidence of PFAS (low MW and emerging) crossing BBB – suggests potential neurotoxic mechanisms, but no adverse evidence of effects



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Role of PFAS blood testing for individuals

Thresholds for PFAS in blood



2 to 20 µg/L

- NSAEM cut-off levels for guidance, German HBM, EFSA and ECHA
- Based on serum levels from epi studies

- Limitations with epi studies (associations only, adverse outcomes not known)
- Determined not suitable for guideline development in Australia (FSANZ and NHMRC) and recent studies (no MOA or mechanistic data to support epi associations; may be reverse causality or confounding)

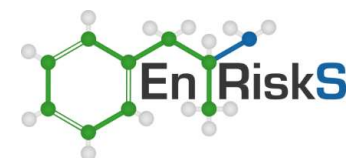


700-2000
(PFOS)

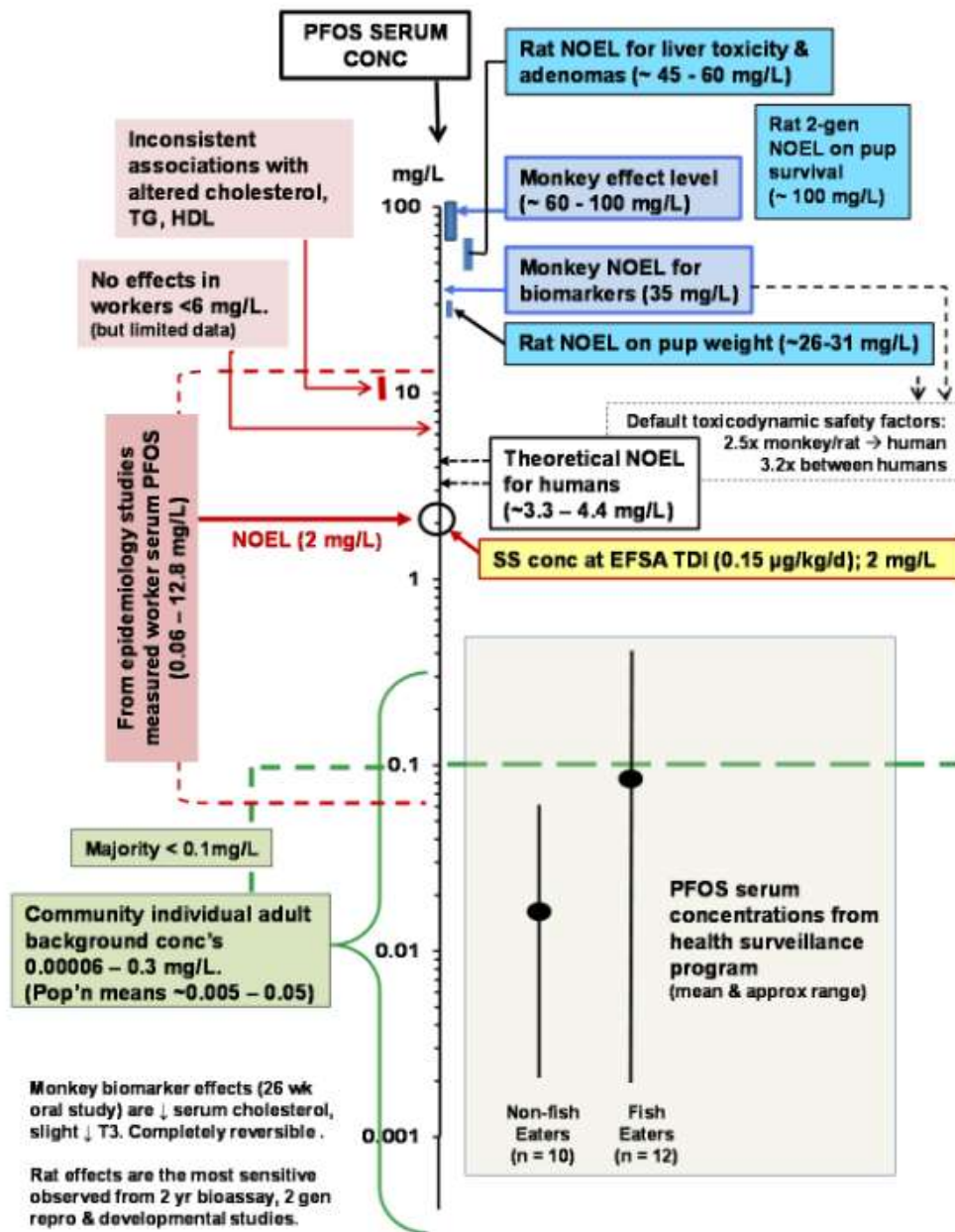
800 to 2400
(PFOA)

- Human serum NOELs from review of occupational and animal data (ToxConsult reviews)

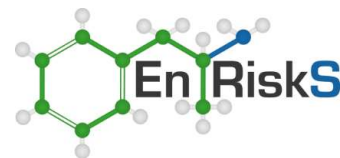
- Approach consistent with that used to establish TDI (FSANZ and NHMRC).
- Values adopted in Australian studies (Fiskville and Defence base assessments)



PFOS in blood



- NOEL of 2,000 µg/L (2 mg/L) – suitable for adults
- Apply 3 fold safety factor to address young children (and women of child-bearing age) = 700 µg/L
- Sample approach adopted for PFOA:
 - 800 µg/L for children and women of child-bearing age
 - 2,400 µg/L for other adults



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Risk Communication

Mel Devine

Presentation by A/Prof Claire Hooker

Definition of risk communication

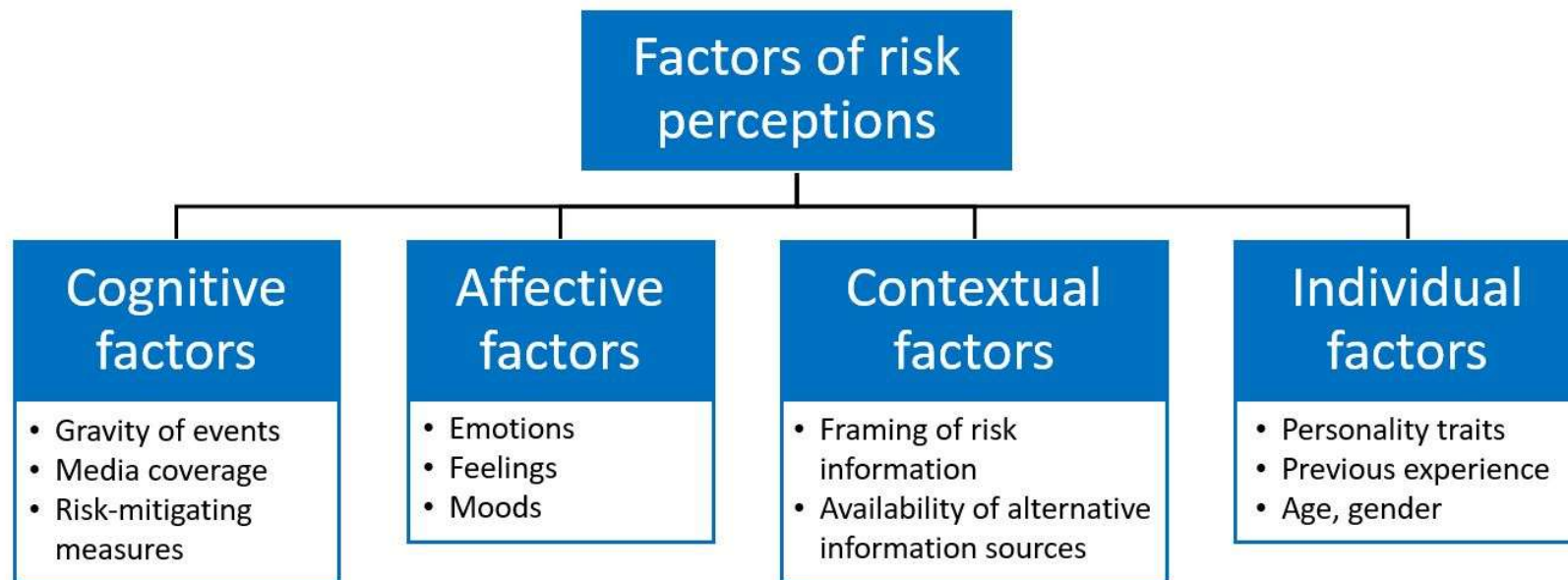
The term *risk communication* in this part of the course is not about communicating probabilities to individuals. It is a general term referring to...

an interactive process of exchange of information and opinion among individuals, groups, and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risk, that express concerns, opinions or reactions to risk messages or to legal and institutional arrangements for risk management”.

(National Research Council, 1989)

This slide has been provided by Dr Claire Hooker, Sydney Health Ethics, The University of Sydney

One cannot control how the audience will (differently) interpret the same message



This slide has been provided by Dr Claire Hooker, Sydney Health Ethics, The University of Sydney

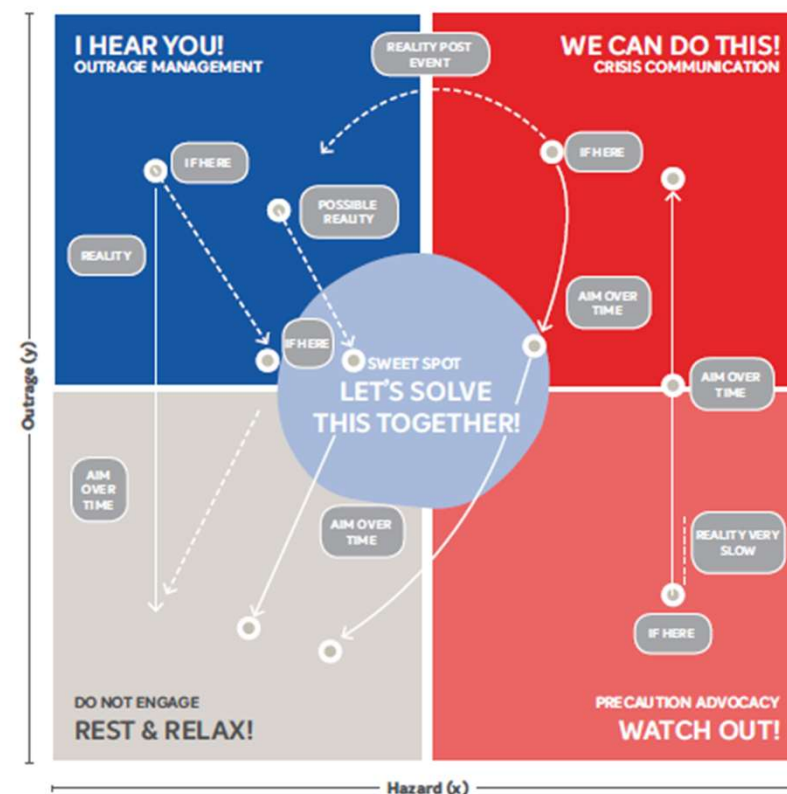
Elements of community PFAS outrage

- Highly stigmatized chemical with a scary name ('Forever chemicals')
- Involuntary exposure as a result of human / industrial activity, in communities with high nature oriented values
- Uncertain hazard assessment reliant on technical judgements whose key indicators are invisible at top-level report
- Inconsistent information & confusing governance and responsibility, due to involvement of multiple agencies
- **Communities lie in different quadrants, relevant to their local experience/proximity/salience, so goals and approaches to achieve them must reflect this.**

This slide has been drawn from presentation by Dr Claire Hooker, Sydney Health Ethics, The University of Sydney

Risk = f(Hazard, Outrage)

PFAS presents a common environmental risk communication challenge: High 'outrage', low/uncertain hazard



It is important to understand that different target audiences may have different communication needs (and therefore be in different quadrants) – Flexibility is needed to communicate with the different target audiences.

EnHealth Risk Communication Principles

Rule of thumb in Risk Communication

1. Accept and involve the public
2. Communicate early and often
3. Be honest, frank and open,
4. Acknowledge uncertainty
5. Accept early 'over' reactions
6. Plan and evaluate efforts and be careful with how you use numbers and comparisons
7. Listen and be responsive to specific public concerns
8. Involve and communicate with all stakeholders;
Address the needs of coalface professionals
9. Use lay language but don't dumb down
10. Work with other credible sources
11. Meet the needs of the media

		Principle	Action / description
1		Be human and develop relationships	Accept and involve the community as a legitimate partner in finding solutions Take the time to meet with people personally (if possible) and build rapport. Get feedback on how things are travelling, and ask yourself 'have I done everything I promised I would?' and 'Have I checked in after some time has lapsed to see how people are doing?'
2		Plan carefully, but assess quickly	Assess each new situation quickly Plan carefully, understanding the context and the people. Know your purpose and have clear objectives. But do not let preparation get in the way of action Understand the history of the issues, know the variation of views (boundary scanning) Plan for adequate time and resources and build in flexibility (adapt the plan)
3		Actively listen	Listen first, do not assume you know what people know, think or feel If you know there is an issue, be proactive, do not wait for people to notice, become concerned or seek alternate, and possibly unreliable, sources of information.
4		Be honest	Be honest, open and frank at all times – admit to limitations and uncertainties in risk assessment and to any changes to risk when new information is known.
5		Learn from experience	Monitor and evaluate the effectiveness of all communication and engagement activities during and at each stage of the process.
6		Choose the messenger	Find the most appropriate person for each situation to share the messages or lead the conversation. Trusted sources can vary depending on the situation and the issue. A local trusted voice (people like you, local leader or champion) will always have more influence than an unknown face.
7		Plan for diversity	Different communities with different communication needs will require specific tailored approaches. This MUST be planned for within each risk communication activity. Different communication needs might mean different languages, the use of infographics/pictographs, or using different channels to access communities they may not use or trust 'typical' communication channels.
8		Clear calls to action	Use clear calls to action or simple checklists to make behaviours stand out and easier to act on

This slide has been provided by Dr Claire Hooker, Sydney Health Ethics, The University of Sydney

EnHealth Risk Communication Principles

Primary audience segment

- **TAILORED:** Identify relevant groups/people in affected community/audience segment
- **EMPATHETIC:** Listen, acknowledge, credit, collaborate
- **PERSONAL:** Engage in 2-way, in person dialogue. They do the talking.
- Focus on the outrage objective, rather than content/reason or fact.

OUTRAGE MANAGEMENT – I HEAR YOU!

Low Hazard, High Outrage

When hazard is low and outrage is high, the task is "outrage management" – reassuring excessively upset people about small or low level hazards. "We're listening".

Audience	Very angry at you or your organisation. A small group of passionate people are usually accompanied by a larger, slightly less outraged group who are concerned and observing the interplay between you and the passionates
Task	<p>To reduce the outrage by listening, acknowledging, apologising, sharing control and credit, collaborating on solutions, sharing the dilemma etc. The controversy ends when the 'passionate people' declare a victory or their constituency thinks they have won enough. The task here is also to ensure your receptivity and ability to be empathetic. This would include demonstrating your understanding by using terms such as: concerns, worries, stresses and losses in a way that genuinely sees these issues as real problems to be addressed and not irrational thoughts.</p> <p>It is important to note that upset people do not process information rationally. Blame and anger are emotionally satisfying but they will impede understanding. A major task here is to manage the emotion (or the arousal) so that thinking can occur.</p> <p>Consider how you can reach all relevant groups in the affected population" (i.e. engagement with specific communities, information in relevant languages, interpreters etc.).</p>
Medium	Two-way, in-person dialogue – the "audience" does most of the talking, and you respond when asked and when the audience is ready. Journalists may also be watching
Barriers	<p>You need to work with the audience's outrage at you and manage your own outrage at the audience; coming to terms with the need to focus on outrage when you'd really rather talk about content. You may also need to influence reluctance within the organisation to let go of power.</p> <p>Some affected groups in the community may be more difficult to reach through conventional communication (inc. language, channels and approach) and there is a need to consider alternate and tailored approaches.</p>
Advantages	You have the audience's attention! The audience is taking their anger out at you rather than behind closed doors, talking to investors/media only

In practice: A dual approach

Outrage management (high outrage)

Community engagement (listen):

- Direct and small group engagement: local briefings, roundtables, meetings (1:1 and community/open meetings).
- Identify and engage with trusted messengers (community leaders, GPs, media, local groups 'Science at the Local').
- GPs – engage and educate via webinars, professional development, resources.
- Transparency, simplicity, clarity and consistency of communications/information resources
- Consider 'actions and policy' as communications

Informed and attentive (medium/lower outrage)

Information, education, risk communication

- Application of evidence-based, risk-communication principles (fact sheets, websites, public information sources, media relations)
- Support informed media reporting (local and state-wide)
- Identify and engage trusted, credible messengers
- Communicate progress, work done/underway and why.
- Transparency, simplicity and consistency of communications
- Respond to 'issue peaks' and misinformation, listen and monitor

FOR DISCUSSION

- Consider role/visibility of expert panel and associated benefits/risks in engagements
- How do we include the most vocal critics in a constructive way?

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Treatment for PFAS in response to blood levels

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Next meeting

Thank you for your time
and expertise.