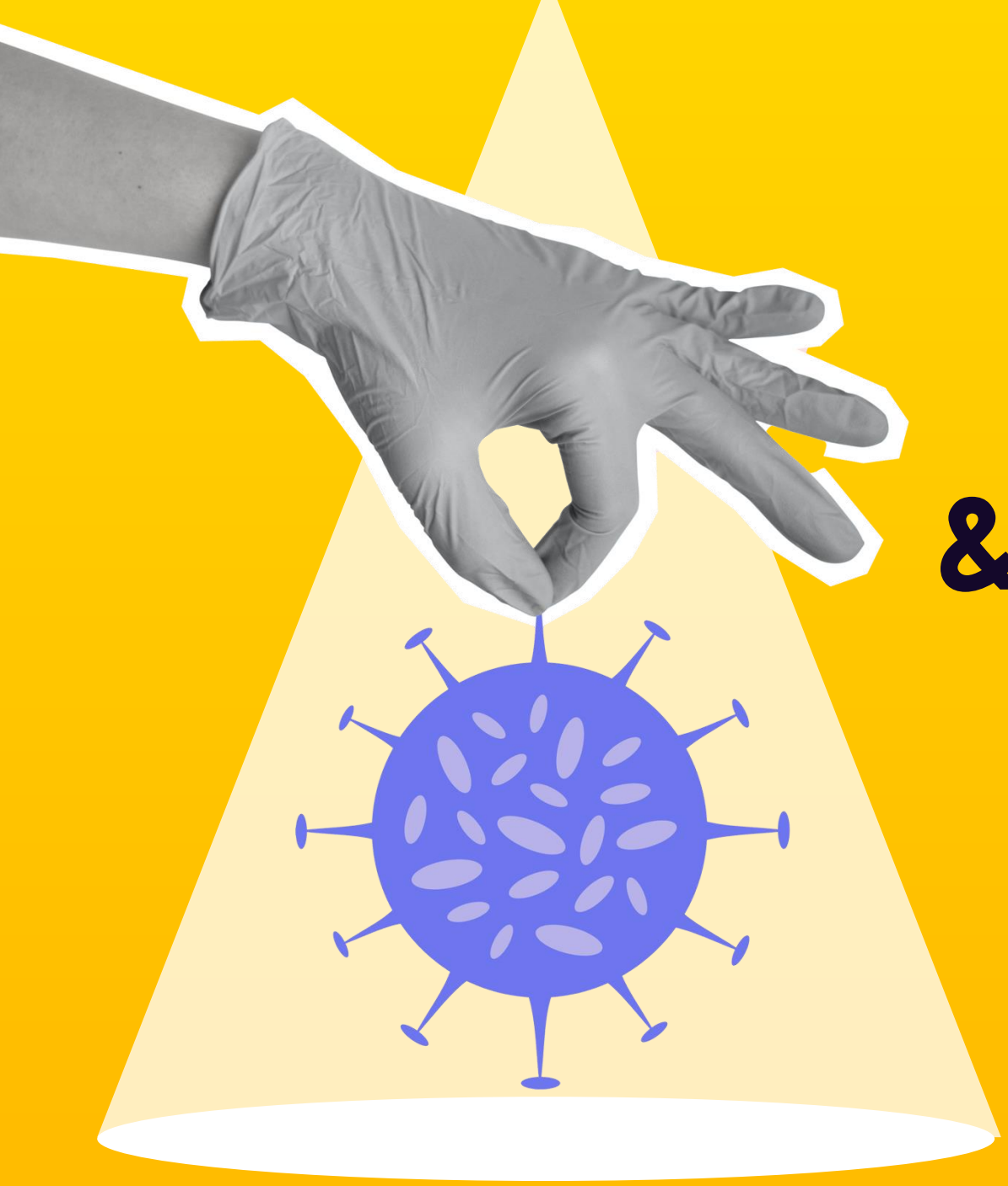

MMR, Autism, & the Evidence:

Having Confident, Compassionate Conversations

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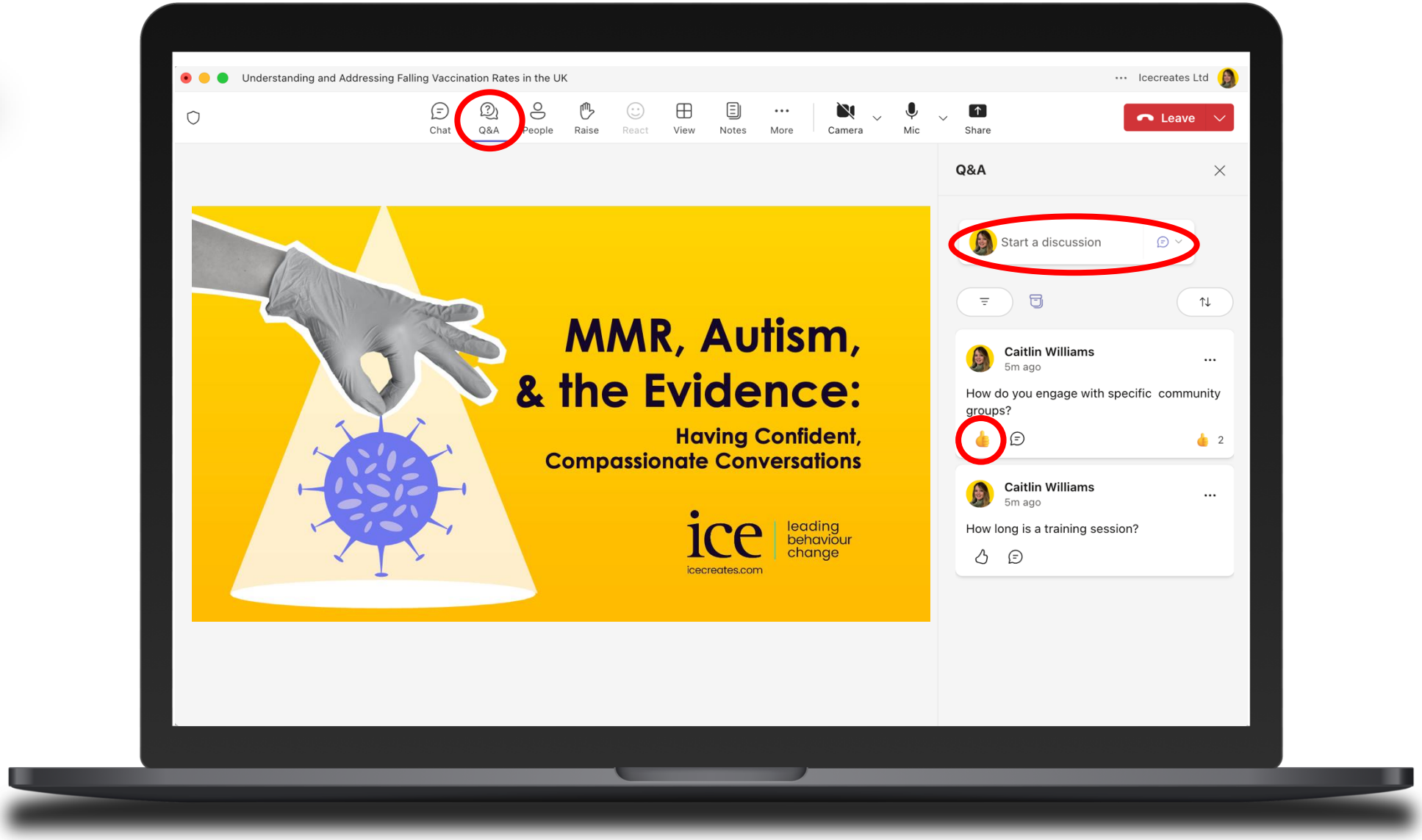
Using the Q&A


Understanding and Addressing Falling Vaccination Rates in the UK
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MMR, Autism, & the Evidence:
Having Confident, Compassionate Conversations
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Q&A
Start a discussion
Caitlin Williams
5m ago
How do you engage with specific community groups?
2
Caitlin Williams
5m ago
How long is a training session?

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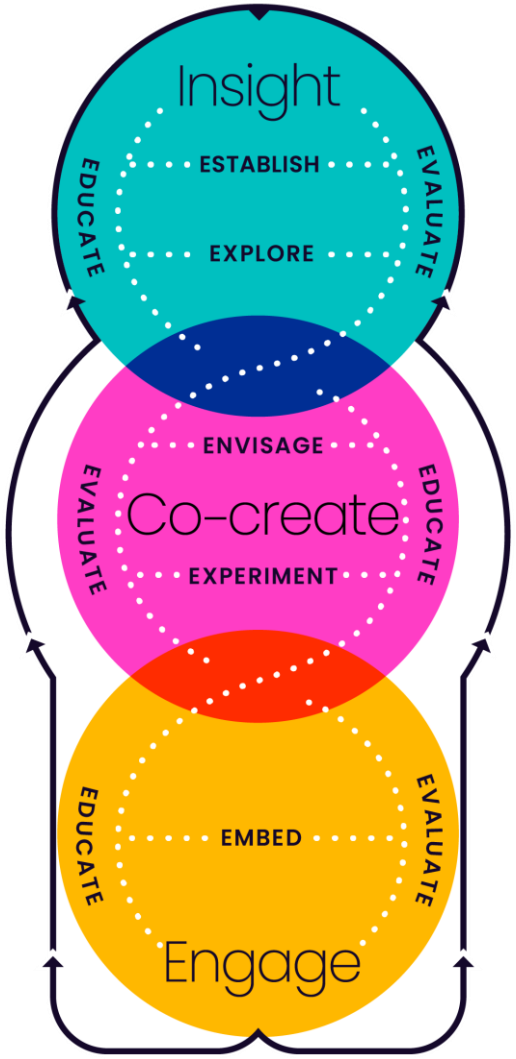
We work with **people**, their **communities and organisations** to overcome their toughest challenges and **make better happen.**

We take a person-centred approach…

To **engage** people in ways that are meaningful for them, are grounded in **insight** and are **co-created** with people.



Before we begin — an important note

We are not medical professionals. This webinar simply summarises what published scientific literature says.

We will be presenting **findings from peer-reviewed studies**, we did not conduct them. We will share all information sources, please refer to the original papers for full detail and context.

Why this question still matters

Despite decades of evidence, vaccine–autism concern persists and carries a real public-health cost.

Widespread concern

MMR and DPT are the vaccines most often blamed; a Google Scholar search for “vaccine” + “autism” returns ~67,700 results.

Diseases returning

Eroding trust has fueled the resurgence of preventable illnesses such as measles, mumps and rubella.

Parental anxiety

Parents often notice developmental differences in the first year and look for a cause, frequently the recent vaccine is blamed.

Decisions need evidence

Not vaccinating a child over autism fears must be weighed carefully against the current scientific record.

Autism spectrum disorder: a multifactorial condition

What ASD is

Lifelong developmental disorders marked by social, communication, and behavioral difficulties, with repetitive and inflexible patterns.

Spectrum includes autistic disorder, Asperger syndrome, and PDD-NOS; autism sits at the most severe end.

Often accompanied by epilepsy, GI disorders, intellectual disability, and in some cases hyperactivity.

Strongly genetic

Causes are multifactorial with a strong genetic component; a specific cause is identified in very few cases.

Present from birth

Neurological findings likely emerge in early embryonic development — before any vaccine is given.

Rising prevalence

Current estimates suggest around 1% to 2% of the population is on the autism spectrum. This translates to over 700,000 to 1.2 million autistic adults and children

Where the controversy began: Wakefield, 1998

A single Lancet paper sparked a **crisis of confidence** — and was ultimately retracted as fraudulent.

1998
The claim

Wakefield et al. linked MMR to bowel dysfunction and neurodevelopmental regression in just 12 children — 9 described as autistic.

"We identified associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers."

The flaws
Why it failed

2008–2011
The fallout

Wakefield AJ et al. *Lancet*. 1998;351:637-641 (Retracted) Çatlı NE, Özyurt G. Trends in Pediatrics. 2025;6(2):76-81.

Where the controversy began: Wakefield, 1998

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1998
The claim

The flaws
Why it failed

No defined source population and no unaffected control group.

- The reported ileocolonic lymphonodular hyperplasia may not even be pathological. In simple terms the swollen lymphoid tissue he reports is something that's commonly found in healthy children too.
- Wakefield et al. had failed to disclose financial interests (e.g., Wakefield had been funded by lawyers who had been engaged by parents in lawsuits against vaccine-producing companies)
- They conducted invasive investigations on the children without obtaining the necessary ethical clearances.
- They were found guilty of deliberate fraud (they picked and chose data that suited their case; they falsified facts)

2008–2011
The fallout

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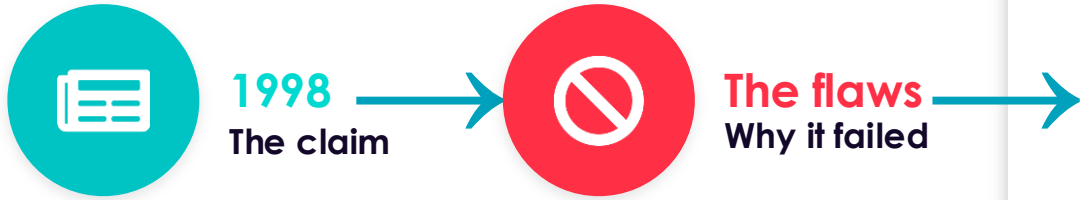


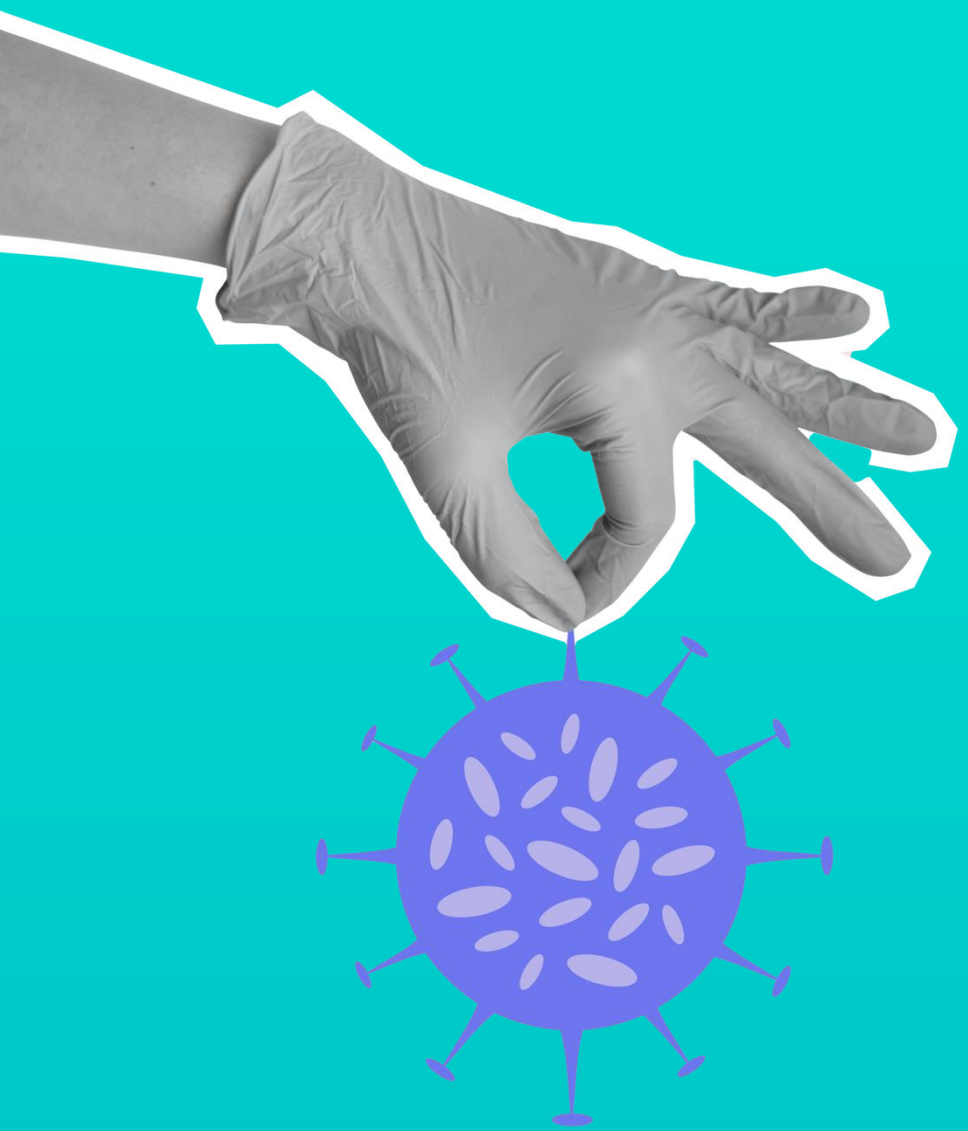
2008–2011
The fallout

Measles became endemic in England & Wales (2008) after 14 years; the paper was retracted 12 years on and judged fraudulent (BMJ, 2011).

We regained our measles elimination status in 2016 only to lose it again this January (2026).

Andrew Wakefield was struck off the UK medical board for lying.

Wakefield AJ et al. *Lancet*. 1998;351:637-641 (Retracted) Çatlı NE, Özyurt G. Trends in Pediatrics. 2025;6(2):76-81.



The Relationship Between Autism Spectrum Disorders and Vaccination: REVIEW OF THE CURRENT LITERATURE

Nermin Eylül Çatlı · Gonca Özyurt

Trends in Pediatrics, 2025;6(2):76–81 · DOI: 10.59213/TP.2025.222

Four hypotheses tested — and rejected

A systematic meta-analysis of 12 studies across 5 countries examined each proposed MMR–autism link.

1 Higher ASD in the vaccinated

✕ Not supported

Madsen et al. cohort: no significant difference in autism/ASD rates between MMR-vaccinated and unvaccinated children.

2 MMR raises ASD rates over time

✕ Not supported

Six UK / Sweden / US studies found no rise in ASD tied to the introduction of MMR vaccination programs.

3 A temporal (time-related) link to vaccination

✕ Not supported

Eight studies — no difference in mean age at diagnosis; no clustering of ASD onset after the shot.

4 A new “variant” form of ASD

✕ Not supported

Four studies: none of 31 children with post-MMR GI symptoms developed ASD; no rise in GI or developmental delay.

Çatlı NE, Özyurt G. Trends in Pediatrics. 2025;6(2):76-81.

The evidence, in numbers

Large population studies repeatedly find relative risks centered on 1.0 — i.e., no increased risk.

0.92

Relative risk of autistic disorder with MMR (Danish cohort, ~500,000 children)
95% CI 0.68–1.24

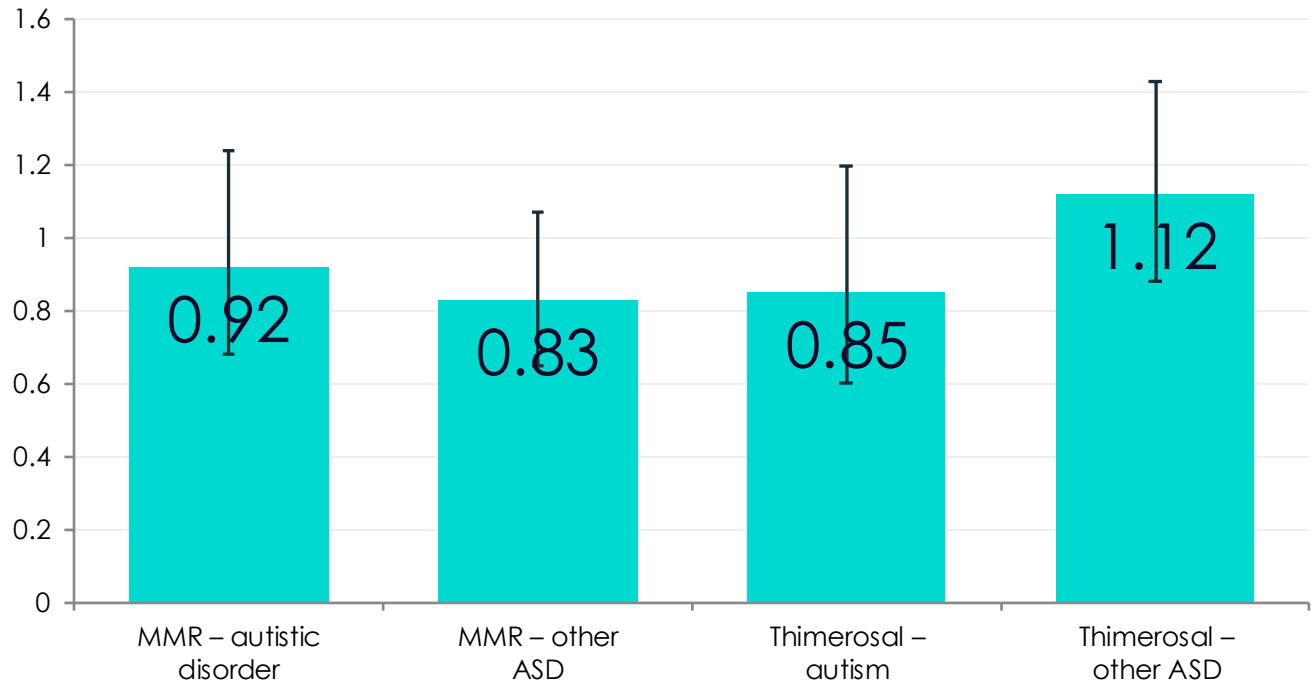
1.8M

People who received MMR with no ASD cases linked to the vaccine
Population study

21

Systematic studies (1998–2018) finding no causal vaccine–autism link
Mohammed et al. meta-analysis

Relative risk of autism / ASD vs. the no-effect line (RR = 1.0)



All confidence intervals cross 1.0 — none reaches statistical significance.

Madsen et al. *N Engl J Med*. 2002;347:1477–82.
Hviid et al. *JAMA*. 2003;290(13):1763–6.

Thimerosal and proposed biological mechanisms

The mercury-preservative theory was investigated directly — and not supported.

The proposed theory

- Thimerosal is a mercury-containing preservative, ~49.6% ethylmercury, used in vaccines since the 1930s.
- As more vaccines were added (1989–1998), cumulative infant mercury exposure could exceed the EPA methylmercury limit.
- An immune-system mechanism was proposed: repeated stimulation → microglial activation → inflammatory cytokines and excitotoxins → synaptic loss.
- Geier et al. reported a dose–response correlation in surveillance databases (VAERS, education data). *Geier & Geier. Med Sci Monit. 2004;10(3):PI33–9*

What the evidence shows

- ✓ Hviid et al. population cohort: no difference in autism/ASD between children given pertussis vaccine with vs. without thimerosal. *Hviid et al. JAMA. 2003;290(13):1763–6*
- ✓ RR 0.85 for autism and 1.12 for other ASD — with no dose–response relationship to ethylmercury.
- ✓ The Geier surveillance findings were not confirmed by controlled population studies.
- ✓ **Thimerosal was removed from infant vaccines as a precaution, despite no evidence of harm.**

Çatlı NE, Özyurt G. Trends in Pediatrics. 2025;6(2):76-81.

Natural experiments seal the case

When vaccination stopped or declined, autism rates kept rising — the opposite of a causal link.

Japan

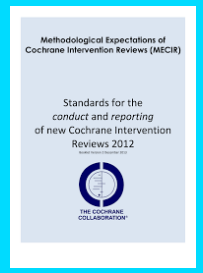
MMR was withdrawn entirely in 1993. Yet autism prevalence kept rising in children born 1988–1996 — with no decline after withdrawal.

Honda et al. J Child Psychol Psychiatry. 2005;46(6):572–9

Montreal, Canada

Autism and PDD prevalence rose from 1987 to 1998 even as MMR vaccination coverage fell over the same period.

Fombonne et al. Pediatrics. 2006;118(1):e139–50.



Cochrane 2012

A large review — RCTs, dozens of cohort and case-control studies — found no qualitative evidence of an MMR–autism association.

Di Pietrantonj et al. Cochrane Database Syst Rev. 2021;11:CD004407

Çatlı NE, Özyurt G. Trends in Pediatrics. 2025;6(2):76-81.

The bottom line

The scientific consensus strongly refutes the idea that vaccines cause autism.

No causal link

Neither MMR nor thimerosal-containing vaccines are associated with increased ASD risk.

Protocols stand

Evidence supports continuing current immunization programs unchanged — no protocol changes are warranted.

Protect public trust

The priority now is combating misinformation, rebuilding confidence, and safeguarding community health.

Çatlı NE, Özyurt G. Trends in Pediatrics. 2025;6(2):76-81. DOI: 10.59213/TP.2025.222

If not vaccines — why are autism rates rising?

A 20-year UK study of ~9.5 million patients finds the surge reflects how we diagnose — not a true epidemic.

787%

exponential rise in recorded autism diagnoses, 1998–2018

Near-perfect exponential fit ($R^2 = 0.98$) — a steady, accelerating climb across the whole period.

Age of diagnosis went UP

Mean age at diagnosis rose **from 9.6 to 14.5 years**. A real childhood epidemic would push the age of onset down, not up.

Adults & females rose fastest

The steepest growth was in groups long overlooked, with **no biological reason to suddenly 'develop' autism** in new numbers.

Recognition, not incidence

Authors conclude the rise is 'more likely' increased reporting and diagnosis, though a real increase can't be fully ruled out.

Russell G, et al. Time trends in autism diagnosis over 20 years: a UK population-based cohort study. J Child Psychol Psychiatry. 2022;63(6):674-682.

Recognition, not epidemic: what's driving the rise

Four shifts in how autism is defined, recognized, and serviced, not in the underlying biology.

Broader criteria, lower thresholds

DSM revisions widened the spectrum to include cognitively able people. In Sweden, population symptom levels stayed flat while recorded diagnoses soared.

Awareness & destigmatization

The neurodiversity movement, parent-led advocacy, and media coverage raised demand for assessment.

Policy & new services

The UK's 2009 Autism Act made adult diagnostic services a statutory duty; adult diagnoses accelerated sharply afterward.

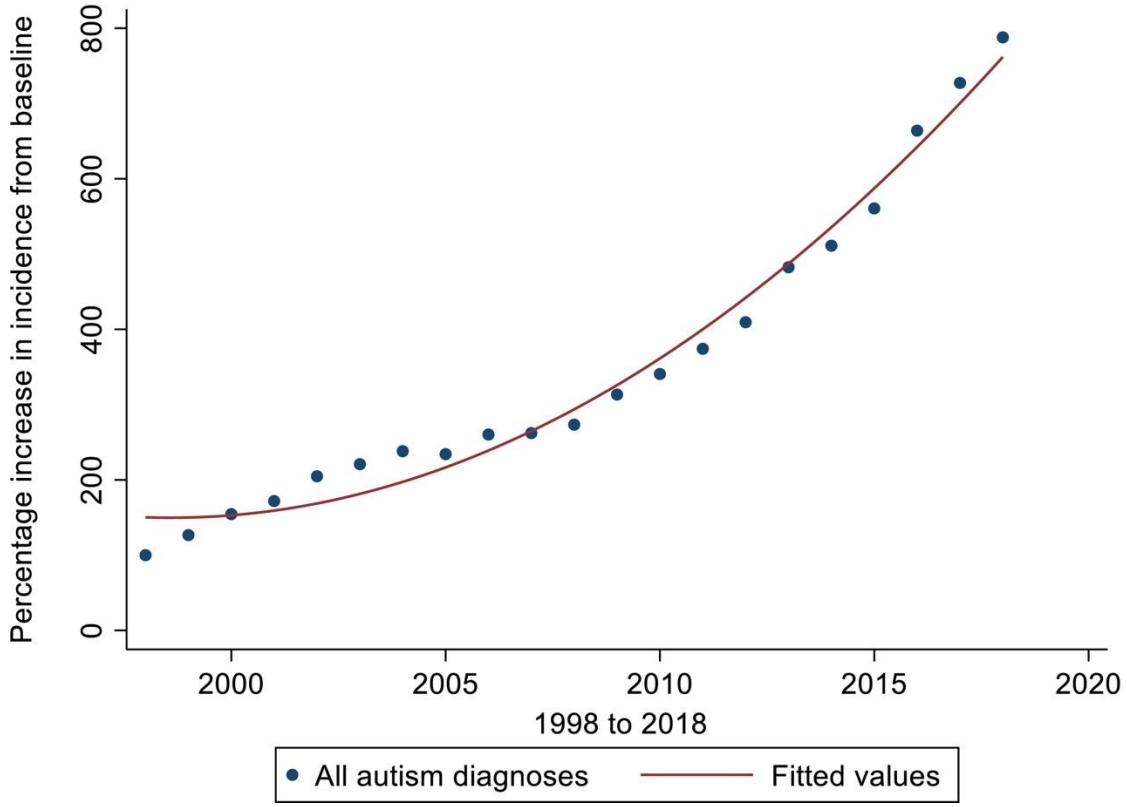
Recognizing missed groups

Females and adults: long under-identified, showed the steepest growth, reflecting concerted efforts to find people previously overlooked.

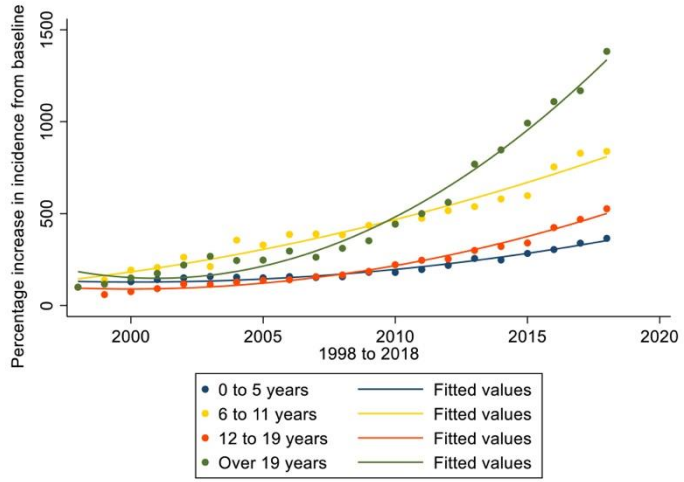
Why exponential? Autistic traits are normally distributed, so a small shift in the diagnostic cut-off pulls in a large number of new cases clustered near the population average.

Russell G, et al. J Child Psychol Psychiatry. 2022;63(6):674-682.

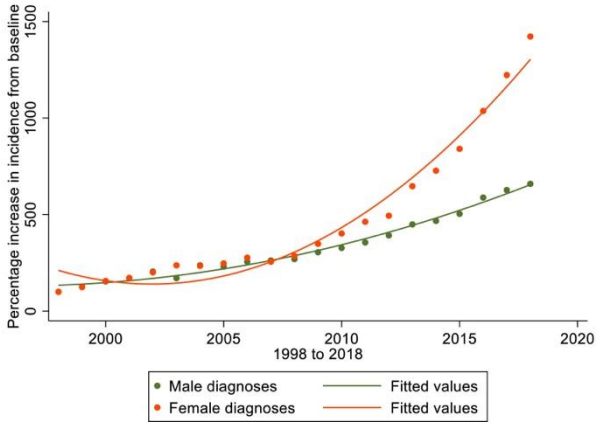
Time trends in autism diagnosis over 20 years: a UK population-based cohort study



(i) : Percentage increase in incidence of autism diagnosis from 1998 to 2018 by age-band.



(ii): By gender.



Russell G, et al. J Child Psychol Psychiatry. 2022;63(6):674-682.

Having the conversation ...

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We will do a separate more indepth webinar on this

We will share the **link now in the chat** for you to book on

But for today let's think about some of the basics;

What we need to do:

Help people to make an informed decision

- Based on fact
- Understanding the risks
- Understanding what the vaccine is and does
- Understanding the diseases it protects against

Keep the conversion

- Power balanced
- Free from conflict
- Free from drama/conflict

Debunk the myths

- We need to avoid it sounding like justification
- Stay in fact

Informed Consent

Our role is to have conversations that help people work through their thoughts and feelings on vaccination

It's **never to tell they that they must, should or have to** vaccinate

Rather to help them explore their thoughts and feelings, offering some facts when they will help 'would you like me to share more about Andrew Wakefield?'

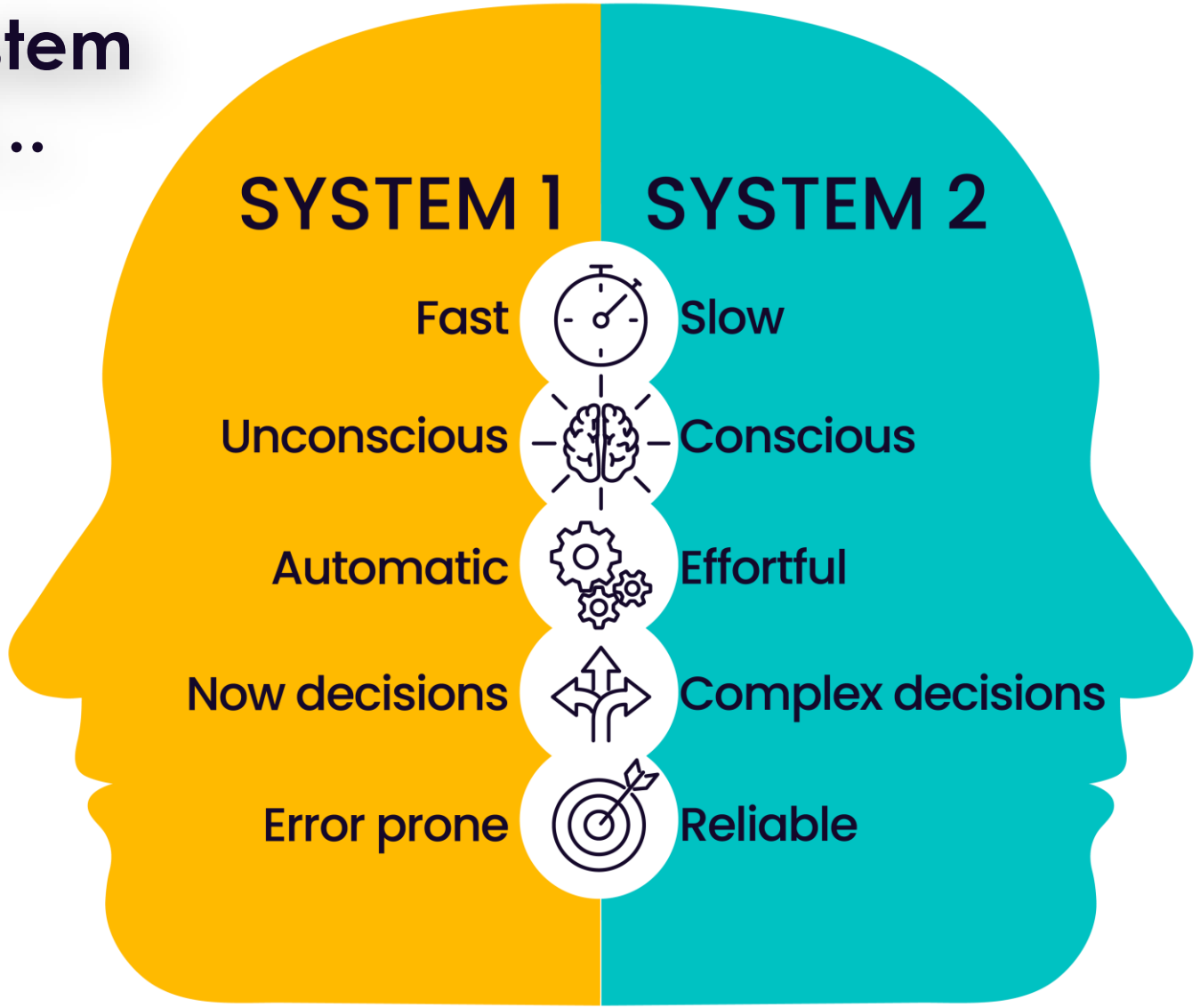
Keeping the conversation….

Power balanced, free from conflict, free from drama/conflict

This can absolutely be managed by you:

- Pass power to them or at least balance the power in the conversation
- Ask permission – can I share
- Watch the language – avoid definite words like do and use open and exploratory words like might
- Open the mins up to system 2 conversations

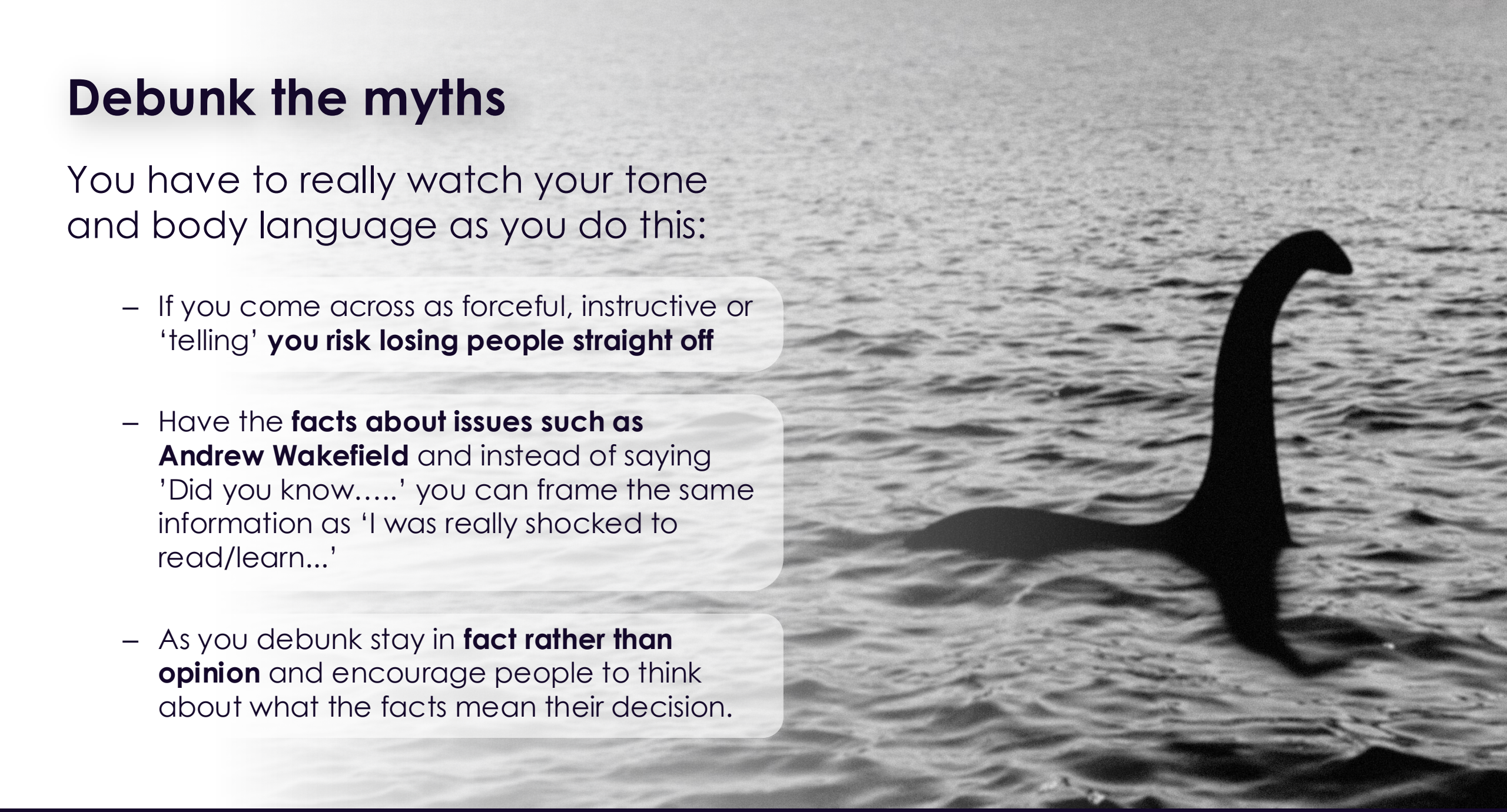
The importance of system two in conversations….



Debunk the myths

You have to really watch your tone and body language as you do this:

- If you come across as forceful, instructive or 'telling' **you risk losing people straight off**
- Have the **facts about issues such as Andrew Wakefield** and instead of saying 'Did you know…..' you can frame the same information as 'I was really shocked to read/learn...'
- As you debunk stay in **fact rather than opinion** and encourage people to think about what the facts mean their decision.



More on Better Conversations….

Contact us for information about **Better Conversations training**

Caitlin.Williams@icecreates.com

We will be launching **campaign in a box** in July – click and register if you want to be kept abreast of the resources available

Book on the following link for the **next webinar**

Enjoyed today?

Let us know what webinar topic you'd like next!

Or fancy a further chat,
reach out to us:
caitlin.williams@icecreates.com

Thank You

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