How irrational?

A discussion of rationality and health choice, using the example of vaccination against measles, mumps, and rubella (MMR) as a specific case study to determine whether such decision making can ever be considered simply as the product of rational thought.

Dr Mark Jones
Massey University
WE SUPPORT ANDREW WAKEFIELD, PROFESSOR JIN WALKER-SMITH, PROFESSOR SIMON MURCH

VAXXED
FROM COVER-UP TO CATASTROPHE
DR ANDREW WAKEFIELD BREAKS SILENCE ON VACCINE VIOLENCE AGAINST CHILDREN

MMR a jab too far
stifle uncomfortable science

MMR authors deny finding autism link
MMR doctors disown Wakefield study

THE ENGINE OF THE NEW NEW ZEALAND
Vaccination objection rates steady: study

The number of Australian parents refusing to have their children vaccinated hardly changed from 2002 to 2013, say researchers.
READER REPORT:
'Too many parents immunise blindly'
KERRY ANDERSEN

Last updated 05:00 21/04/2015 193
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School bars anti-vaccine doco

Screenings moved to midwife’s home.

A school has banned the screening of a controversial documentary series about vaccines, prompting the organise to move the screening to her home.

Adele Van Weeren sought permission from Waitakere School near Raglan to hold screenings of the “doco-series” The Truth About Vaccines in the school’s hall.

Principal Margery O’Connell initially agreed but after a complaint from a parent, permission was retracted late last month.

Board of Trustees chairwoman Erin Cranfield did not want to comment but in a Facebook discussion the School Trustees Association recommended Waitakere not host the event on school grounds “due to the controversy of the topic.”

The Truth About Vaccines is described as threatening to “blow the lid off the lies and corruption of the vaccine industry” by revealing what is “really in vaccines.”

Promotional material for the series states viewers will learn about the history of vaccines, potential risks and alternatives to the injections.

On Friday the controversial anti-vaccination movie Parent was pulled from some independent cinemas.

Van Weeren, a Waikato midwife of 20 years currently on leave from the profession, said parents had a right to make an informed choice.

“I think we have to make informed consent about all decisions we make for the health of our children and ourselves, as a health professional.”

Van Weeren said she had always provided clients with Ministry of Health advice on immunisation but also offered alternative information.

“It’s a really sensitive subject and there almost seems to be a religious belief that vaccinations are good and if anyone challenges that it can get quite controversial.

“I think it is controversial but it shouldn’t be.” Van Weeren said she was disappointed the screening had been cancelled and would hold private viewings at her home instead.

The New Zealand College of Midwives said Van Weeren, who...

College midwifery adviser Alison Eddy said midwives need not support Government health targets, including the Increased Immunisation target of 95 per cent of 8-month-olds receiving six-week, three-month and five-month immunisations on time.

“It’s not written anywhere that midwives are required to support these [guidelines],” Eddy said.
So many people who have children with autism have thanked me—amazing response. They know far better than fudged up reports!
Motivation:

British Health Secretary John Reid

Launches heath White Paper premised on Notion people would be able to ‘...make rational, Informed choices when provided with accurate Information and support’.
Key concepts:

- Rationality
- Heuristics
- Game Theory
Rationality (classical economics)

Traditional economic theory postulates an ‘economic man’, who, in the course of being ‘economic’ is also ‘rational’. This man is assumed to have knowledge of the relevant aspects of his environment which, if not absolutely clear, is at least impressively clear and voluminous. He is assumed to have a well-organized and stable system of preferences, and a skill in computation that enables him to calculate, for the alternative courses of action that are available to him, which of these will permit him to reach the highest attainable point on his preference scale.

Classical Rationality – Bounded Rationality

• Postulated ‘classical detractors’:
  – Deliberative cost of decision making
  – Influence of emotion on decision making
  – Assessment of risk on decision making
  – Use of heuristics in information processing and decision making
<table>
<thead>
<tr>
<th>GROUP</th>
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<tr>
<td></td>
<td>Alison</td>
<td>1 vaccinated</td>
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Deliberative cost

Amy (FGSE2):

‘Bottom line – you’ve got to decide – one way of the other – but for me that was like balancing on a knife edge, and I couldn’t. Too much to take in and think about really, but time marched on and I had to shake myself, yes get a grip and decide, snap out of it like. Gotta say though, without the schedule I could have waited for ever, the date coming round, in the end that’s what made me move...but not easy, no, in fact it was quite frightening really’
Influence of emotion

Floss (FGSE2):

‘Well you can’t leave it until your child’s old enough to make…to say to you – well yes mum I want that done, because then it…they could have caught all the diseases, and it’s far too late, I mean they could as we said be blind, they could even die through it and then you’re thinking – God that’s my fault, that happened to my child because I didn’t take that decision. That would be torture. You’d never ever forgive yourself if something happened to your child because you dallied, that’s why we have our children, we love them, you go to the ends of the earth. I’d die for all three of my kids, I would…I’d put my life on the line for all three of mine’
Assessment of risk

Marla:

‘With more measles out there, the more the chance isn’t it? With the measles, and the rise of like more cases of measles…’

Hayley:

‘It is eh, just comparing the risks…’

Marla:

‘Yeah, like comparing with epilepsy. So when I went to the doctors…it was like the six week check, I brought it up then and the doctor got his book out and said what could happen if he got the injection. What could happen if he got measles and mumps and different things and I was horrified to think what he could have, but like I had epilepsy and was real scared about brain damage and stuff, makes me sick just thinking about it – like the autism risk is there right?’
Rational decision or leap of faith?

‘There is nothing in the world so false and so absurd that is not believed to be true by very sensible people, whenever their minds cannot find any way of coming to terms with the opposite and being at peace with it’

Horton 2004: 15
Rationality Bounded

Classical Rationality  \[\rightarrow\] Maximize Utility

\[\downarrow\]

Deliberative Effort

\[\downarrow\]

Use of Heuristics

Cognitive resources depleting

Emotional load in decision making

Information quantity and quality

Deliberation of risk in decision outcomes

BOUNDEDLY RATIONAL DECISION PROCESS
Vaccination decision model

Start

- Vaccinate with MMR

Actively seek information

Passively receive information

Deliberate on cost-benefit

Impacted on by range of rational detractors

Paralysis of indecision

Defer

Re-appraisal loop

Time variable

- Trust
- Risk
- Imagination
- Emotion
- Heuristics

- Can’t decide
- Frightened
- Extremes of yes or no
Power of The Group (couple)

Re-appraisal loop

Decide

YES
Right thing
Side-Effects

TRUST
RISK

NO
Don't believe
childhood diseases

END

Vaccinate / Don’t vaccinate
Key points:

• Reduction of deliberation cost and deliberative effort as a key goal of any immunisation strategy – protect cognitive resources amongst those being influenced

• Don’t underestimate potential for individuals to analyse a wide range of information sources within a reasonably sophisticated boundedly rational frame as they deliberate on their choice.

• Ensure information is available, accurate, easy to understand but not patronising
• Appreciate the ‘power of the group’. Develop strategies to facilitate group discussion – use key informants as convenors rather than health professionals

• Understand that whilst they have a role in the ‘power of the couple’ men and women operate in different spheres of reference and may well deliberate under risk and uncertainty in different ways. Target men as individuals and groups according to their specific points of interaction.