

SCIENCE, PUBLIC OPINION & POLICY



Sustaining Immunization Consensus

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VACCINE REFUSAL IN US

Physicians reporting parental refusal of at least one recommended vaccine*:

Pediatricians	92%
Family Physicians	60%

Current discussion:

When is it appropriate to “fire” a vaccine-refusing family from your practice?

* Survey of 750 pediatricians and 750 family physicians
Freed GL et al. APS-SPR 2001

DO PARENTS UNDERSTAND IMMUNIZATIONS?

A US National Telephone Survey*

84% would not opt out of any vaccines

84% believe school immunization mandates protect their children

79% do not believe unimmunized children should be allowed in schools

The majority of parents understand the benefits of immunizations and support existing policies, but...

* 1600 parents of children < age 6 years, April- May, 1999

Gellin BG, Maibach EW, Marcuse EK. *Pediatrics* 2000;106(5):1097-1102

DO PARENTS UNDERSTAND IMMUNIZATIONS?

A US National Telephone Survey

25% believe “immune systems are weakened by too many vaccines”

23% think “children get more vaccines than are good for them”

19% of parents “do not think vaccines are proven safe prior to use in the US”

Many parents have important misconceptions that could erode their confidence in immunizations.

Origins of Immunization Hesitancy I

SOCIAL & CULTURAL

- Decline in vaccine-preventable diseases
- Recognition of the present limits of medicine, science, technology
- Resurgence of complementary & alternative medicine
- Growth of consumerism
- Malpractice and product liability litigation

Williams and Bailey Law Firm, LLP

1-888-709-6674

Please Press:

#4: Fen-Phen

#5: Vaccines

#6: Welding Rods

(Available in English and Spanish)

VACCINATIONS HAVE REDUCED VACCINE-PREVENTABLE DISEASE BY MORE THAN 95 PERCENT. BUT THAT IS NOT THE WHOLE STORY.

VACCINE-RELATED INJURIES

Vaccinating children against infectious diseases has been one of the most effective public health initiatives ever undertaken in the United States.

Unfortunately, vaccination programs also carry a human cost. The United States Government acknowledges that "[a] vaccine can have severe side effects, including death or disabling conditions requiring lifetime medical care."¹ These reactions can be "devastating" to affected families.² Conditions that may be associated with vaccines include Autism, neurological injuries (such as encephalopathy, neuropathy, and transverse myelitis), seizures and a number of auto-immune disorders.

If you believe that you or a loved one has been injured as a result of a vaccination we may be able to help. We are committed to helping families in obtaining compensation for the devastating effects of vaccine-related injuries under the National Vaccine Injury Compensation Program and, in some cases, in traditional Civil Litigation against the vaccine manufacturers.

For more information about obtaining compensation for Vaccine-Related Injuries, browse our web site or call.

www.vaccineinjury.org • 1-888-709-6674

WILLIAMS & BAILEY LAW FIRM, L.L.P.

Houston, Texas

Not certified by the Texas Board of Legal Specialization.

¹United States, General Accounting Office Report, Dec. 22, 1999 p.14³ Ibid, p.6.

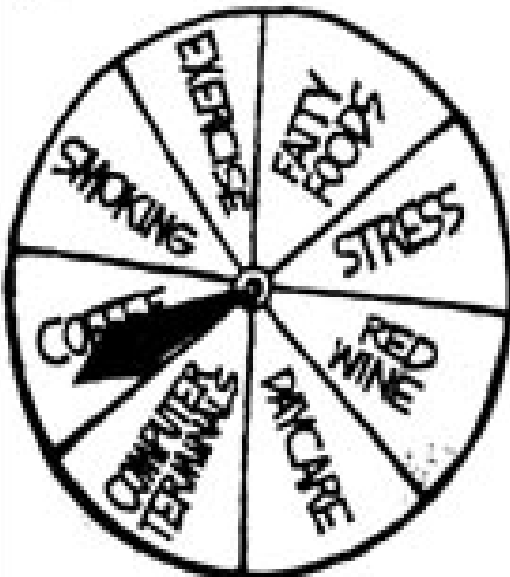
FEATURES OF POSTMODERN SOCIETY

- Greater attention to risk
- Readiness to refer to the judiciary
- Distrust of science
- Physicians as knowledge managers rather than knowledge repositories
- Better access to real-time information

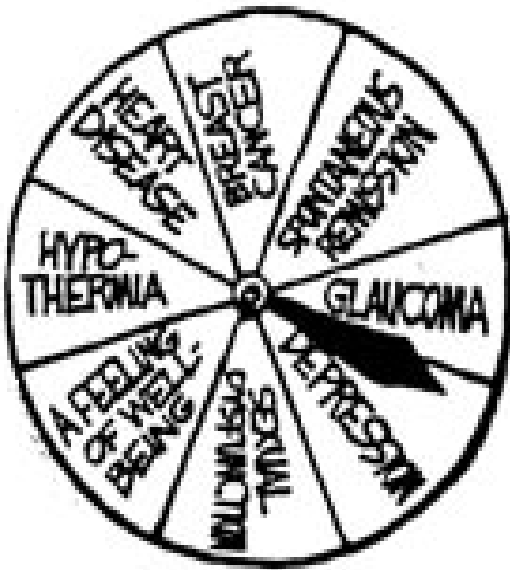
Today's Random Medical News

from the New England
Journal of
Panic-Inducing
Gobbledygook

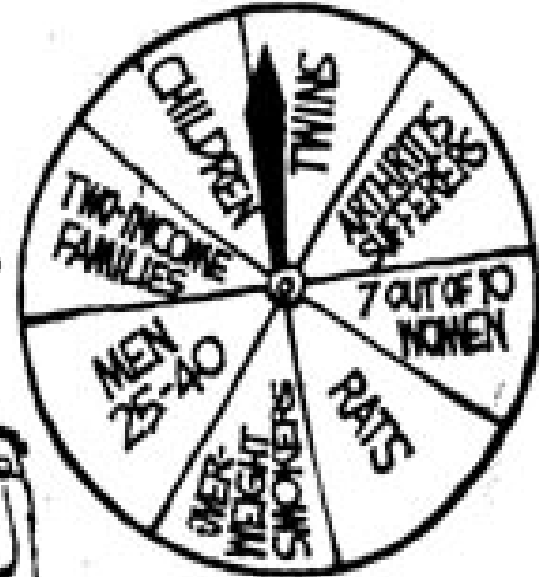
WES BRYAN



CAN CAUSE



IN



Origins of Immunization Hesitancy II

SCIENCE, MEDIA & THE INTERNET

- **Distortion of scientific process:**
hypothesis - hypothesis testing - accept - reject - refine
media: hypothesis “validated” by repetition
- **Differing criteria for causality:**
medical; legal; public opinion
- **Challenge of risk communication:**
power of case reports
science vs. freelance and feature writers; talk radio
- **21st century access to media, internet:**
source credibility, media concept of balance, utility to media
of controversy

The media value news over scientific “truth”, controversy over education, regard balance as evidence of journalistic integrity and equate one expert with another:

Alexander Wakefield

David Salisbury

Barbara Fisher

Margaret Rennels

NVIC

NNii

Most parents have no clear idea how to evaluate the credibility of their source of immunization information; communication trumps science.

POSTMODERNISM: PUBLIC HEALTH

In post-modern medicine risks receive much higher priority.

This is not an example of proponents of scientific health care being rational and others being irrational; rather it is an example of how multiple rationalities and truths now prevail...

POSTMODERNISM: PUBLIC HEALTH

There is no “truth” defined by experts.
Rather there are many opinions based on
different views and theories of the world.

Doctors, governments...might hanker after
a world where their view is dominant.
But that world is fast disappearing.



Parents Wonder: Is it Safe to **Vaccinate?**

Many families of autistic kids blame the MMR shot for the disorder. Experts say they shouldn't.



MURDER? or BAD VACCINE?

the question that ripped a family apart



Perceived

Benefit
or
Risk

= Magnitude × Probability
(Hazard)

×

or

Unacceptability

(Outrage)

Perceived

Acceptability

*Perception of a risk or benefit is subjective...
but it is both quantifiable and modifiable.*

RISK = HAZARD × OUTRAGE

The plural of anecdote is NOT data
in the context of hazard;

but the plural of anecdote IS data
in the context of outrage !!

Scientists must take care not to treat fear and reservation as ignorance and then try to destroy them with a blunt “rational” instrument.

Stephen Pattison

TOP 7 STRATEGIES TO SUSTAIN IMMUNIZATION CONSENSUS

7. Publicize the vaccine safety system
6. Assess the public's perception of the:
 - desirability of a benefit
 - acceptability of a risk
5. Make key concepts accessible:
 - association vs. causation, risk

DO AMERICANS UNDERSTAND SCIENCE?

70% say they are “interested in science”, but only:

57% know that light travels faster than sound

<50% know that the Earth orbits the sun yearly

27% are able to define an hypothesis

9% know what a molecule is

MMR & AUTISM

2001 IOM:

...the evidence favors rejection of a causal relationship at the population level between MMR vaccine and ASD [autism spectrum disorders]. However this conclusion does not exclude the possibility that MMR could contribute to ASD in a small number of children....

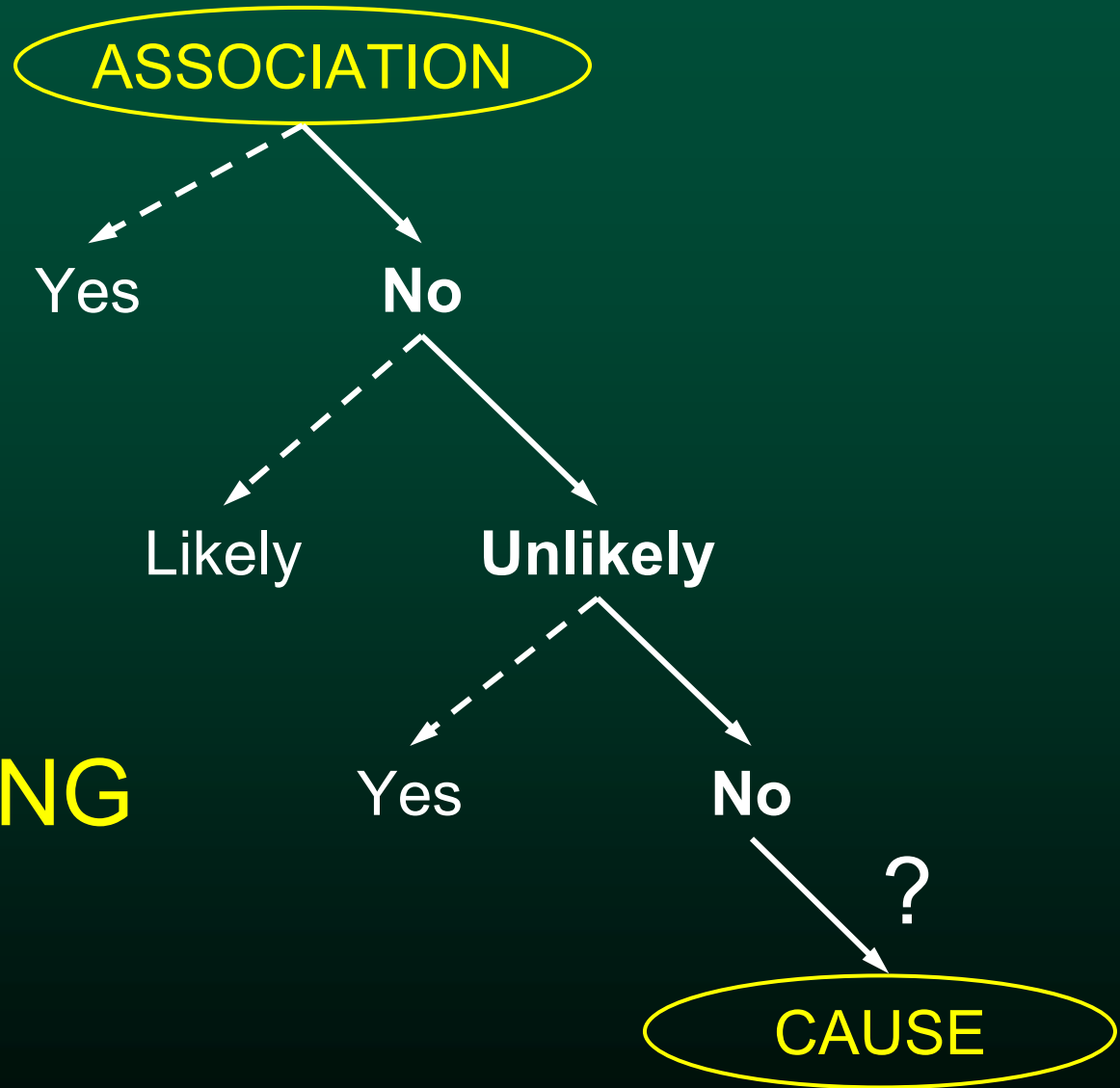
GETTING FROM ASSOCIATION TO CAUSE

BIAS

- Selection
- Measurement

CHANCE

CONFOUNDING



TOP 7 STRATEGIES TO SUSTAIN IMMUNIZATION CONSENSUS

4. Articulate both the personal and public health perspectives

- Differentiate health risks & benefits for the individual and for the community
- What constitutes a public health risk or benefit?
 - Contagion or epidemic
 - Illness, injury, disability, death
 - Adverse effect on children
 - Cost of care, disability

TOP 7 STRATEGIES TO SUSTAIN IMMUNIZATION CONSENSUS

4. Articulate both the personal and public health perspectives

3. Facilitate specific policy debates:

- safety vs. innovation
- individual freedom vs. community protection
- media responsibility

What is the optimal balance between:

- the state's duty to protect public health
- and*
- the right of an individual to choose?

What disease risk balanced by what assurance of vaccine safety justifies a:

- universal recommendation
- or*
- mandate?

TOP 7 STRATEGIES TO SUSTAIN IMMUNIZATION CONSENSUS

4. Articulate both the personal and public health perspectives

3. Facilitate specific policy debates:

- safety vs. innovation
- individual freedom vs. community protection
- media responsibility

2. Involve the public in public health policy:

- an open discussion of values

TOP 7 STRATEGIES TO SUSTAIN IMMUNIZATION CONSENSUS

1. Educate and equip:

- all health providers to elicit and respond to parents concerns; to be able to explain association vs. cause; to provide sources of understandable, scientifically credible information
- media-savvy spokespersons from public health, medicine and nursing to address both components of risk: outrage and hazard

“If concerned, where would you go first for information about your concern?”

(Unpublished 2001 data, CDC working paper)

	<u>% 1st Choice</u>	<u>% 2nd</u>	<u>% 3rd</u>
Physician	81%	10%	3%
Friend w/ med or nurse training	3%	34%	22%
Family member	10%	21%	22%
Internet site	2%	12%	11%
Magazine/newspaper	1%	8%	12%
Friends	1%	4%	10%
Religious/spiritual	1%	2%	2%

OPINION = EVIDENCE + VALUE

...a self-centred preoccupation with excellent science [is] no protection against the criticisms of a well-educated public; an openness [to discussing values] is the only option.