



The Impact of Vaccine Hesitancy: Anti-vaccine phenomenon



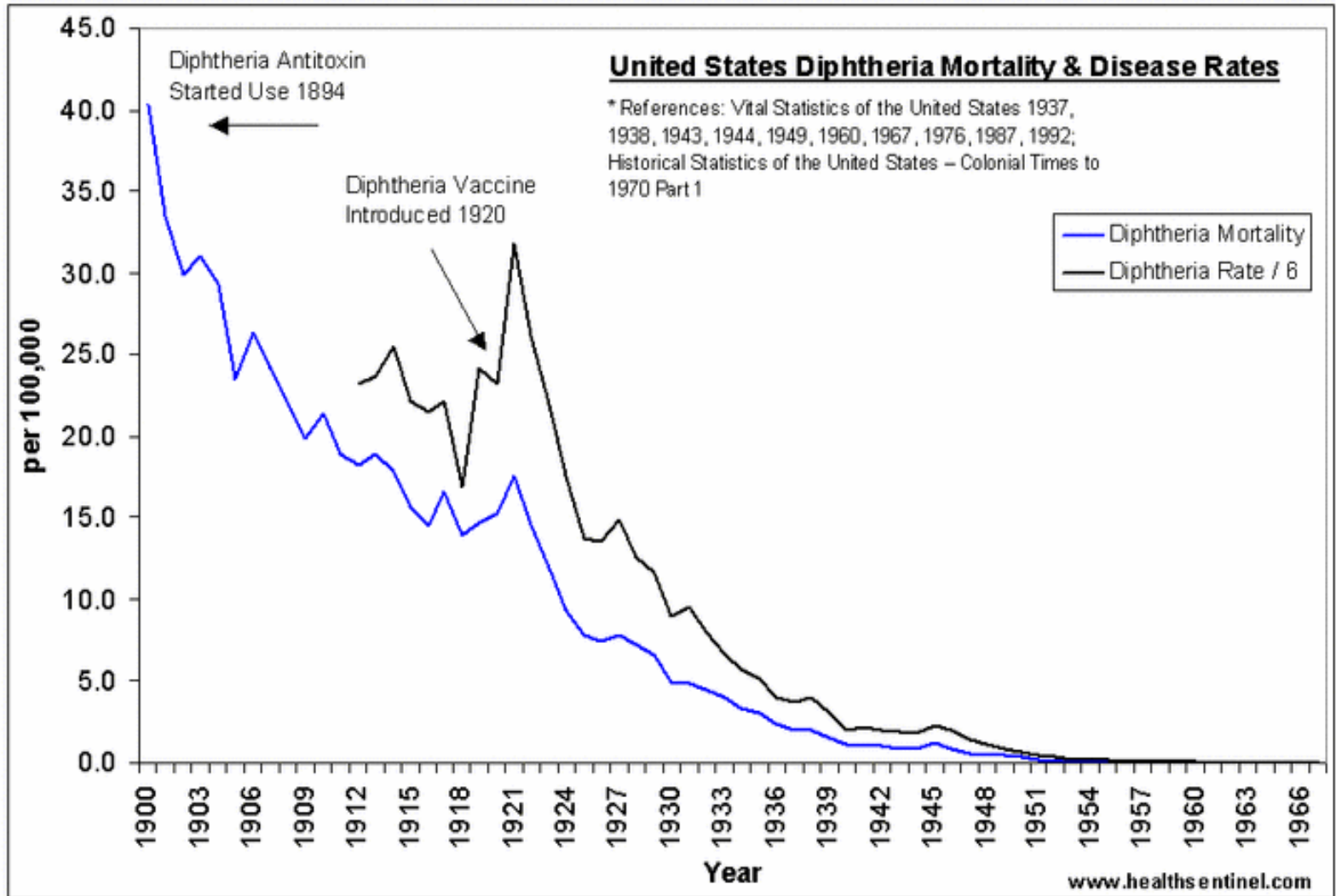


Deaths due to Vaccine preventable diseases (VPD) were declining long before vaccines were introduced



Improvements in social and economic conditions led to declining death rates for many common diseases.

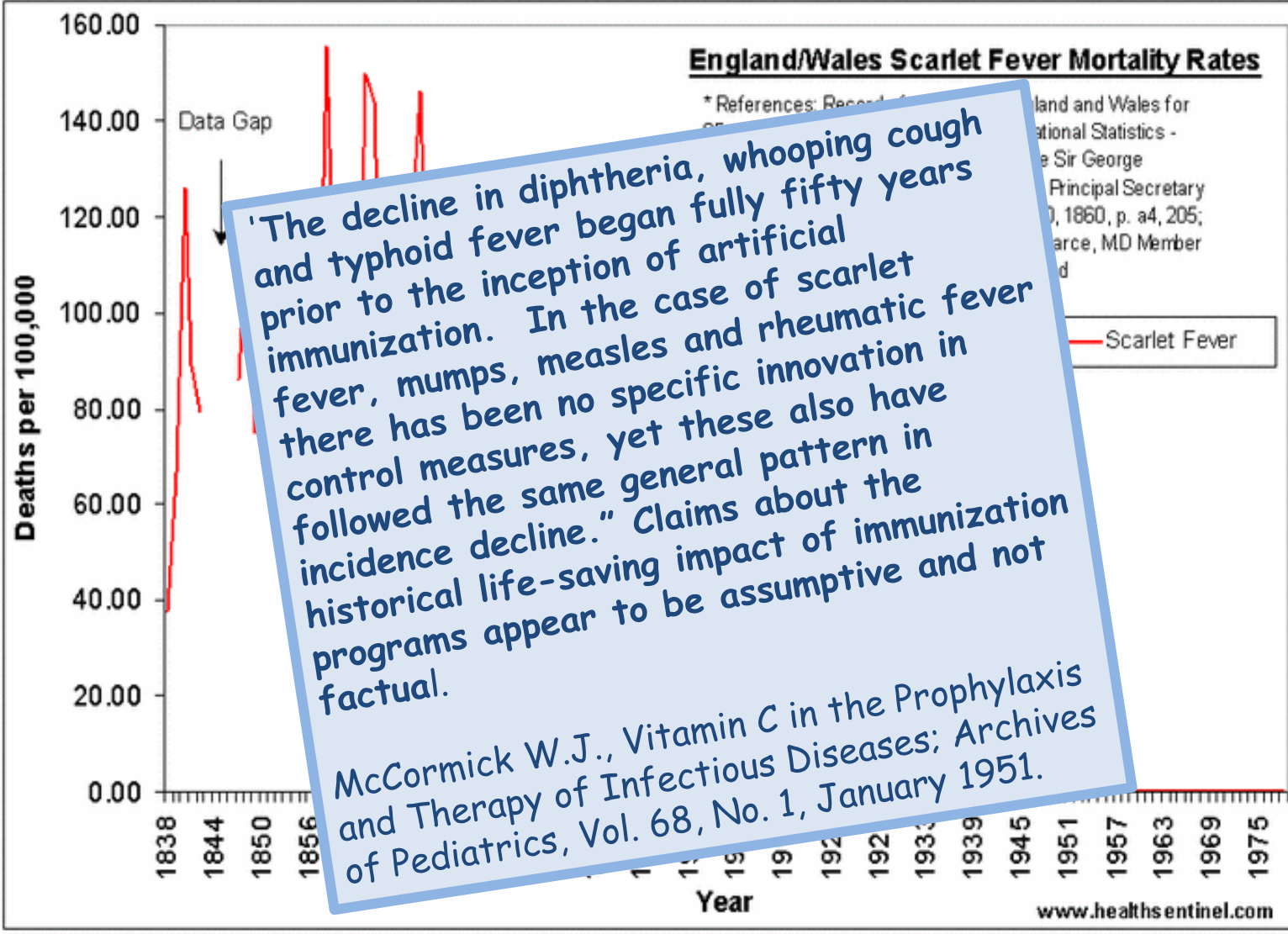




www.healthsentinel.com




Dr. H.T. Wickramasinghe



'The decline in diphtheria, whooping cough and typhoid fever began fully fifty years prior to the inception of artificial immunization. In the case of scarlet fever, mumps, measles and rheumatic fever there has been no specific innovation in control measures, yet these also have followed the same general pattern in incidence decline.' Claims about the historical life-saving impact of immunization programs appear to be assumptive and not factual.

McCormick W.J., Vitamin C in the Prophylaxis and Therapy of Infectious Diseases; Archives of Pediatrics, Vol. 68, No. 1, January 1951.





In the 14th century the Bubonic Plague killed 25 million Europeans in just 5 years. Now people no longer die of it, and there was no vaccine to credit it's decline.

The tropical disease **yaws**, which mainly affects the skin and bones, has virtually disappeared. Was it due to a vaccine?

All diseases have become milder throughout history, and mortality rates have reduced and it's nothing to do with vaccination



Does vaccine really works?



Reemergence of invasive haemophilus influenzae type b disease in a well-vaccinated population on remote

Journal of Infectious Diseases, vol. 174, pp. 102-106.

EFFICACY OF VACCINES

The incidence of disease among vaccinees was much higher than rates reported previously by other authors. "Varicella vaccine seems to be effective in modifying the symptoms of varicella, but not potent enough in protecting from VZV infection." High incidence of breakthrough varicella observed in healthy Japanese children immunized with live attenuated varicella vaccine (Oka strain), Acta Paediatrica Japonica, vol. 39, no. 6, December 1997, pp. 663-8:



Dr. H.T. Wickramasinghe

Measles outbreaks despite vaccination



The 1989 measles outbreak in the province of Quebec has been largely attributed to an incomplete vaccination coverage. In the Quebec City area (pop. 600,000) 1,363 confirmed cases of measles did occur.

A case-control study conducted to evaluate risk factors for measles allowed us to estimate vaccination coverage. This population included 8,931 students aged 5 to 19 years old. The vaccination coverage among cases was at least 84.5%. Vaccination coverage for the total population was 99.0%. Incomplete vaccination coverage is not a valid explanation for the Quebec City measles outbreak.

Boulianne N, et al.(1991) [Major measles epidemic in the region of Quebec despite a 99% vaccine coverage]. Can J Public Health. 1991 May-Jun;82(3):189-90. French. PMID: 1884314; UI: 91356447.



Dr. H.T. Wickramasinghe

Whooping cough....



"Vaccination against whooping-cough, Efficacy versus risks.

Calculations based on the mortality of whooping-cough before 1957 predict accurately the subsequent decline and the present low mortality... Incidence [is] unaffected either by small-scale vaccination beginning about 1948 or by nationwide vaccination beginning in 1957... No protection is demonstrable in infants."

The Lancet, vol. 1, January 29, 1977, pp. 234-7



Dr. H.T. Wickramasinghe



Are vaccines safe?



Dr. H.T. Wickramasinghe

The truth about Chicken pox

'Chickenpox is a mild, but highly infectious disease that most children catch at some point.'

Chickenpox is most common in children who are between 2-8 years of age, although you can develop chickenpox at any age. You, or your child, should stay at home until all of the blisters have fully crusted over, and this usually happens 5-7 days after the first blister appears. After the last blister has burst and crusted over, you are no longer infectious.

NHS web site



Dr. H.T. Wickramasinghe

And here is a manufacturer's data sheet for Chickenpox vaccine and the side-effects

Common side effects include:

Pain, tenderness, soreness, erythema, swelling and pruritus at the injection site, varicella-like rash, upper respiratory infection irritability, rash and fever. Rarely, serious side effects have been reported and include thrombocytopenia, pneumonia, pulmonary congestion encephalitis, anaphylaxis, cerebrovascular accident Convulsions, Guillain-Barré syndrome, transverse myelitis, ataxia, Stevens-Johnson syndrome, erythema multiforme and Henoch-Schönlein purpura

The vaccine virus may rarely be transmitted to contacts of vaccinees who develop a varicella-like rash.

Which one do you think sounds more serious?



Polio Vaccine and malignancies



The Leukemia and Lymphoma journal wrote in 2003:

'Millions of people worldwide were inadvertently exposed to live simian virus 40 (SV40) between 1955 and 1963 through SV40-contaminated polio vaccines. Although the prevalence of SV40 infections in humans is not known, numerous studies suggest that SV40 is a pathogen resident in the human population today. SV40 is a potent DNA tumor virus that is known to induce primary brain cancers, bone cancers, mesotheliomas, and lymphomas

[Leuk Lymphoma](#). 2003;44 Suppl 3:S33-9.



Dr. H.T. Wickramasinghe

Hepatitis B vaccine and Multiple sclerosis

Web MED

Sept. 13, 2004 --The [hepatitis](#) B vaccine series has been administered to more than 20 million people in the U.S. and more than 500 million people in the world. It is more than 95% effective in preventing an infection that kills millions annually. However anecdotal evidence has linked the vaccine to an increased risk for [multiple sclerosis](#).

Now a new study in the Sept. 14 issue of the journal *Neurology* offers the strongest evidence supporting the link.

In the study, researchers report that vaccination with the recombinant hepatitis B vaccine is associated with a threefold increased risk of multiple sclerosis.



Dr. H.T. Wickramasinghe



1. Hepatitis B is a sexually transmitted disease, caught by people who have casual sex, drug abusers and prostitutes.
2. A baby cannot get Hepatitis B unless his mother is a carrier, which most women aren't.
3. The best way to protect yourself from liver cancer brought about by Hepatitis B is not have sex with multiple partners. Fall in love and have a committed relationship!
4. If you want to have casual sex, **USE A CONDOM**. Don't take drugs and don't engage in prostitution, and then you won't get hep B related liver cancer.

Why do you want the Vaccine?



Dr. H.T. Wickramasinghe

MMR VS Autism

Even though Dr. Andrew Wakefield was found guilty for his great observation that MMR has a linked to causation of Autism in Children, Every mother would know that her child got Autism after MMR vaccine. Truth cannot be hide..

Global Vaccine Institute Web site



Dr. H.T. Wickramasinghe

Do vaccines contain formaldehyde, aluminum, mercury, or other toxic chemicals?



Pertussis, inactivated polio vaccines, Both tetanus and diphtheria toxins are inactivated with formaldehyde.

Several vaccines such as diphtheria and tetanus toxoids, and hepatitis B vaccine contain a complex salt of aluminum called alum.

Diphtheria, tetanus, pertussis and hepatitis B vaccines, are made with a mercury-containing preservative called thimerosal





**Wouldn't you think twice before you
vaccinate your own child?**



Dr. H.T. Wickramasinghe

What have I done to convince you?



Freely available medical literature

Skewing of scientific research - cherry picking studies, endorsing bad science that supports antivaccine agenda

1. Outdated observations reported in the medical literature
2. Isolated case reports
3. Findings disproved by larger cohort studies





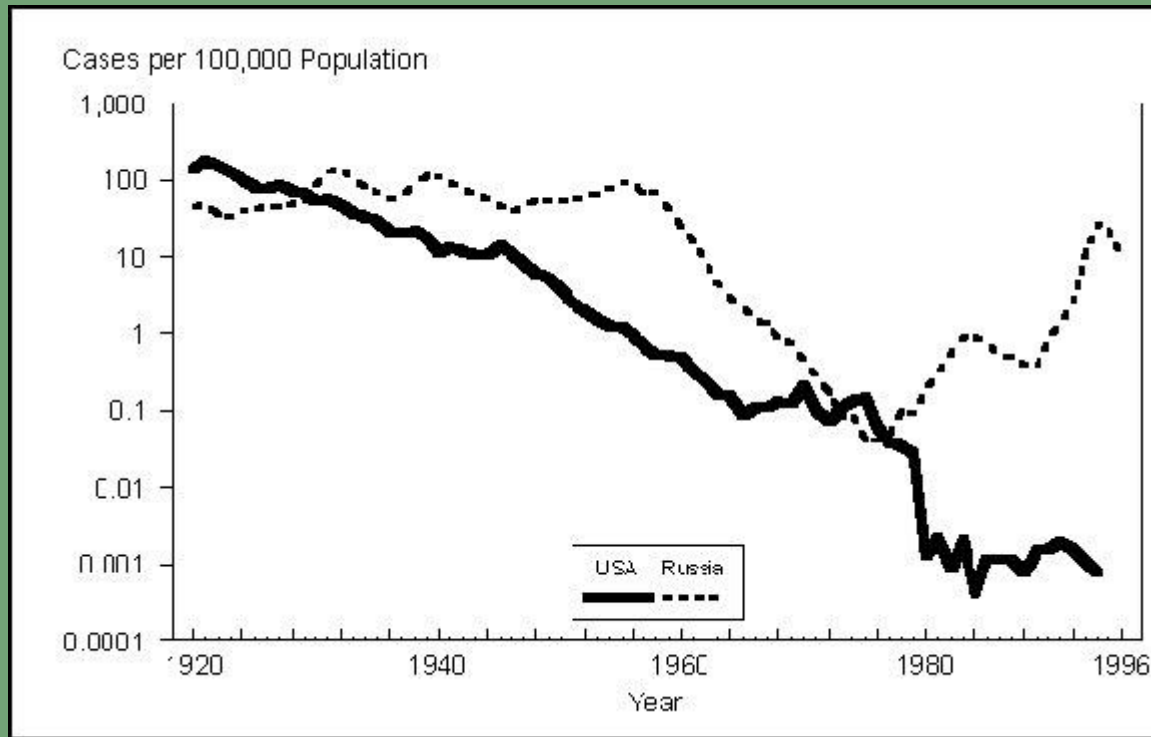
Deaths due to Vaccine preventable diseases (VPD) were declining long

No one denies that proper sanitation, personal hygiene, safe water and alleviation of poverty reduce mortality and morbidity of both communicable and non-communicable diseases.

declining death rates for many common diseases.



Drop in Vaccination in developed countries



Diphtheria epidemic in Soviet Russia 1980-1996

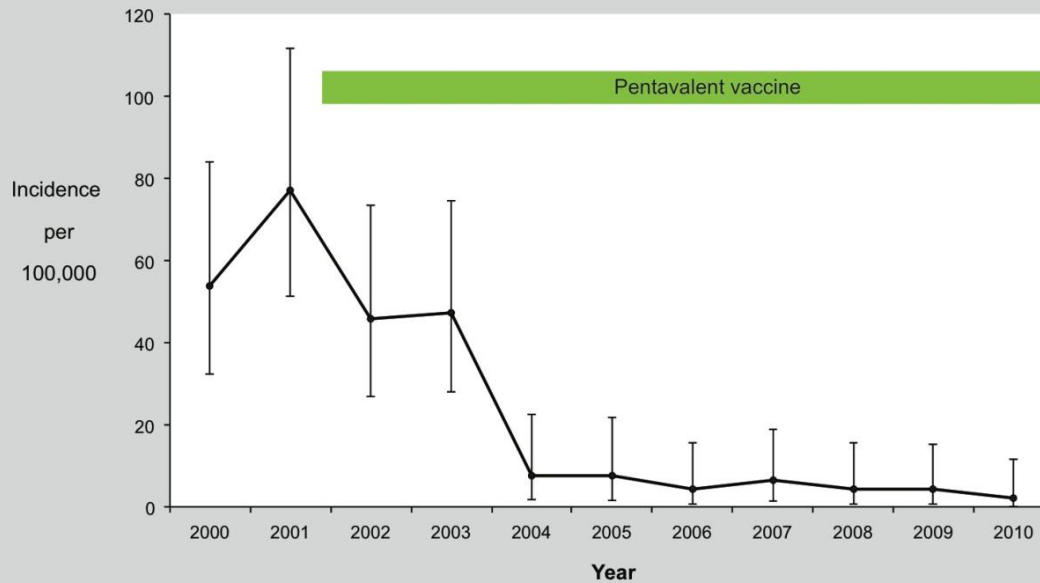


Effect of Vaccination on countries with poor sanitation and hygiene

Incidence of Hib meningitis in children under 5 yrs of age, cases per 100000 per year

Invasive *H. influenzae* type b disease in children aged <5 years in Kilifi Epi-DSS

Kenya



Dr. H.T. Wickramasinghe



Isolated incidences, disproved by large cohort studies

"Reemergence of invasive varicella in a well-vaccinated community in remote Alaska" (Journal of Infectious Diseases, vol. 179, no. 1, January 1999, pp. 101-106).

the rate of varicella [chicken pox] occurrence among vaccinees was found to be much higher than rates reported previously by other authors. "Varicella vaccine seems to be effective in modifying symptoms of varicella, but not potent enough to prevent infection."

single dose may not be effective,

incidence of breakthrough varicella observed in healthy Japanese children immunized with live attenuated varicella vaccine (Oka strain)," Acta Paediatrica Japonica, vol. 39, no. 6, December 1997, pp. 663-8:



Dr. H.T. Wickramasinghe

Measles outbreaks despite vaccination

Statistical Hoax...

Total population Vaccinated is 99% of 600,000 That is 594,000.

Unvaccinated population is 6000 only

Assuming that there is 5% vaccine failure then there will be 594,000 X 5% that is 29700 children are susceptible though Immunized.

Total number of susceptible people will be 29,700+6000= 35700

Total number of measles cases were 1363.

84.5% vaccinated that is 1151 pts had vaccination out of 29,700 vaccine failures. As a % 3.875%.

Unvaccinated group is 1363-1151= 202 as a %

$202/6000 \times 100 = 3.36\%$

Boul
cove



Dr. H.T. Wickramasinghe

And here is a manufacturer's data sheet for Varivax Chickenpox vaccine and the side-effects (Sanofi Pasteur MSD):

Common side effects include:

Pain, tenderness, soreness, erythema, swelling at injection site, varicella-like rash, unresponsiveness, irritability, rash and fever. Side effects reported and include: cough, cold, sore throat, congestion, conjunctivitis, otitis media, sinusitis, Strep throat, pneumonia, meningitis, encephalitis, Schistosomiasis, hepatitis, myelitis, ataxia, Scurvy, measles, mumps, rubella, and Henoch-Schönlein purpura. The virus may rarely be transmitted to contacts who develop a varicella-like rash.

In order to avoid litigations, drug manufacturers always quote all remote complications

Which one do you think sounds more serious?





We examined the impact of measles vaccination upon these conditions. Prevalence of Crohn's disease, ulcerative colitis, coeliac disease, and peptic ulceration were determined in 3545 people who had received live measles vaccine in 1964 as part of a measles vaccine trial. A longitudinal birth cohort of 11,407 subjects was on unvaccinated comparison cohort and 2541 partners of those vaccinated was another. Compared with the birth cohort, the relative risk of developing Crohn's disease in the vaccinated group was 3.01 (95% CI 1.45-6.23) and of developing ulcerative colitis was 2.53 (1.15-5.58). Increased prevalence of inflammatory bowel disease, but not coeliac disease or peptic ulcerations, was found in the vaccinated cohort compared with their partners.

These findings suggest that measles vaccination may play a part in the development not only of Crohn's diseases but also of ulcerative colitis.

Thompson NP, Montgomery SM, Pounder RE, **Wakefield AJ**. Is measles vaccination a risk factor for inflammatory bowel disease? *Lancet*. 1995 Apr 29;345(8957):1071-4.



Dr. H.T. Wickramasinghe



Do vaccines contain formaldehyde, aluminum, mercury, and other toxic chemicals?

All humans have detectable quantities of natural formaldehyde in their circulation (about 2.5 ug of formaldehyde per ml of blood).

Pertussis, inactivated polio and diphtheria toxins are inactivated with formaldehyde.

Several vaccines contain aluminum. Aluminum-containing vaccines have more than a 75 year record of safety around the world. Hepatitis B vaccines contain a complex salt of aluminum called alum.

Diphtheria, tetanus, and hepatitis B vaccines. More recent NIAID-supported studies at the University of Rochester and National Naval Medical Center in Bethesda, MD examined levels of mercury in blood and other samples from infants who had received routine immunizations with thimerosal-containing vaccines. [Pichichero ME, et al. Lancet 360:1737-1741 (2002)]

Since 1999, Most vaccines removed Thimerosal





We examined the impact of measles vaccination upon these conditions. Prevalence of Crohn's disease, ulcerative colitis, coeliac disease, and peptic ulceration were determined in 3545 people who had received live measles vaccine in 1964 as part of a measles vaccine trial. A longitudinal birth cohort of 2545 subjects was on unvaccinated comparison cohort and 2541 partners of the unvaccinated cohort. Compared with the birth cohort, the relative risk of Crohn's disease in the vaccinated group was 3.01 (95% CI 1.45-6.27) and of ulcerative colitis was 2.53 (1.15-5.58). Increased prevalence of inflammatory bowel disease, but not coeliac disease or peptic ulcerations, was observed in the vaccinated cohort compared with their partners.

Andrew J. Wakefield

These findings suggest that measles vaccination may play a part in the development not only of Crohn's diseases but also of ulcerative colitis.

Thompson NP, Montgomery SM, Pounder RE, **Wakefield AJ**. Is measles vaccination a risk factor for inflammatory bowel disease? Lancet. 1995 Apr 29;345(8957):1071-4.



Dr. H.T. Wickramasinghe

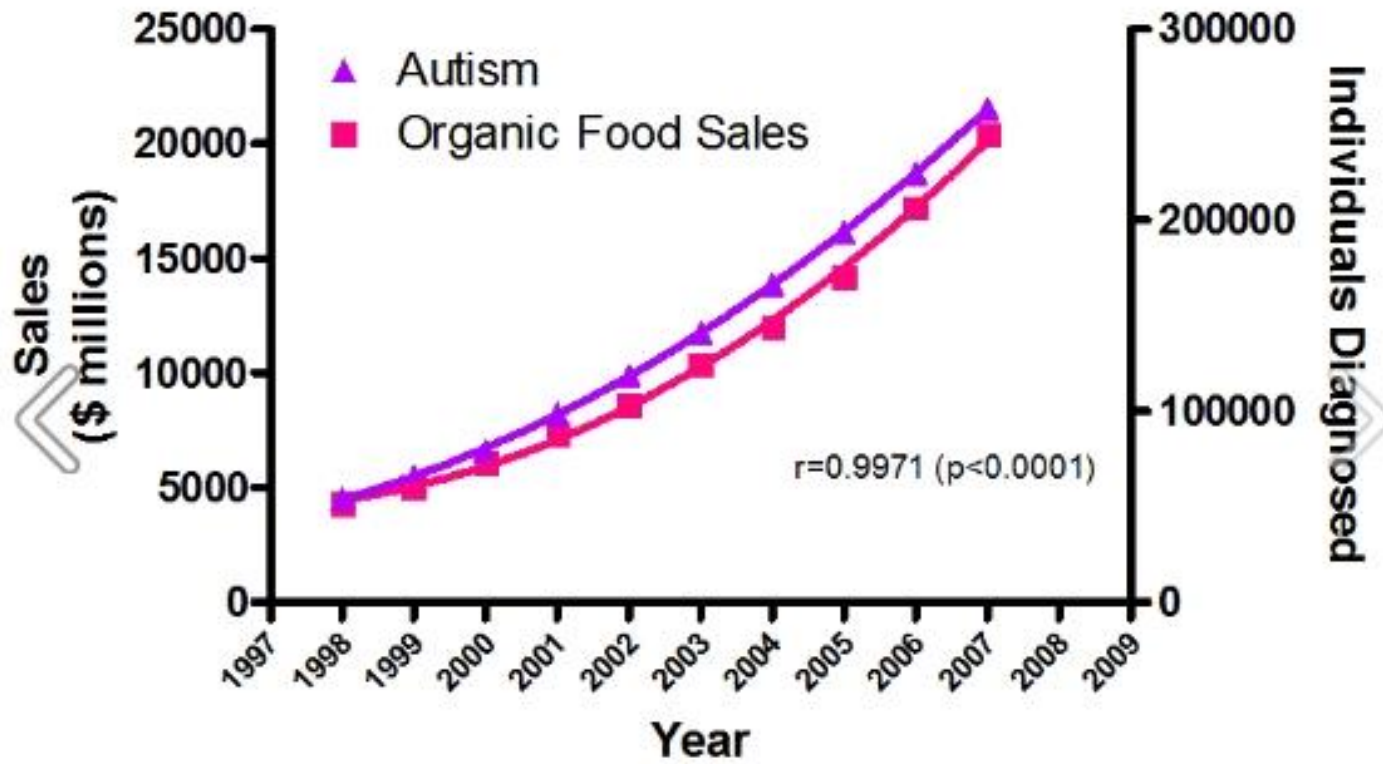


The vaccine-autism connection is "the most damaging medical hoax of the last 100 years"

Flaherty DK (October 2011). "The vaccine-autism connection: a public health crisis caused by unethical medical practices and fraudulent science". *Ann Pharmacother* **45** (10): 1302–4



Dr. H.T. Wickramasinghe



Sources: Organic Trade Association, 2011 Organic Industry Survey; U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS), OMB# 1820-0043. *Children with Disabilities Receiving Special Education Under Part B of the Individuals with Disabilities Education Act

Science is not just observation



Dr. H.T. Wickramasinghe

Their Web based propaganda

Think twice, Global vaccine institute,
National Vaccine information center
Australian Vaccine net work
Vaccine truth
Vaccine free
Antivaccine body count
Voice for vaccines
Vaccination liberation





Viewing anti-vaccine material for only **five to ten minutes** increased the perception of risk of vaccination, and decreased the perception of risk of omitting vaccines, compared to viewing neutral websites. It also lowered vaccination intentions.

[J Health Psychol.](#) 2010 Apr;15(3):446-55. doi: 10.1177/1359105309353647.
The influence of vaccine-critical websites on perceiving vaccination risks.
[Betsch C](#), [Renkewitz F](#), [Betsch T](#), [Ulshöfer C](#).



Dr. H.T. Wickramasinghe

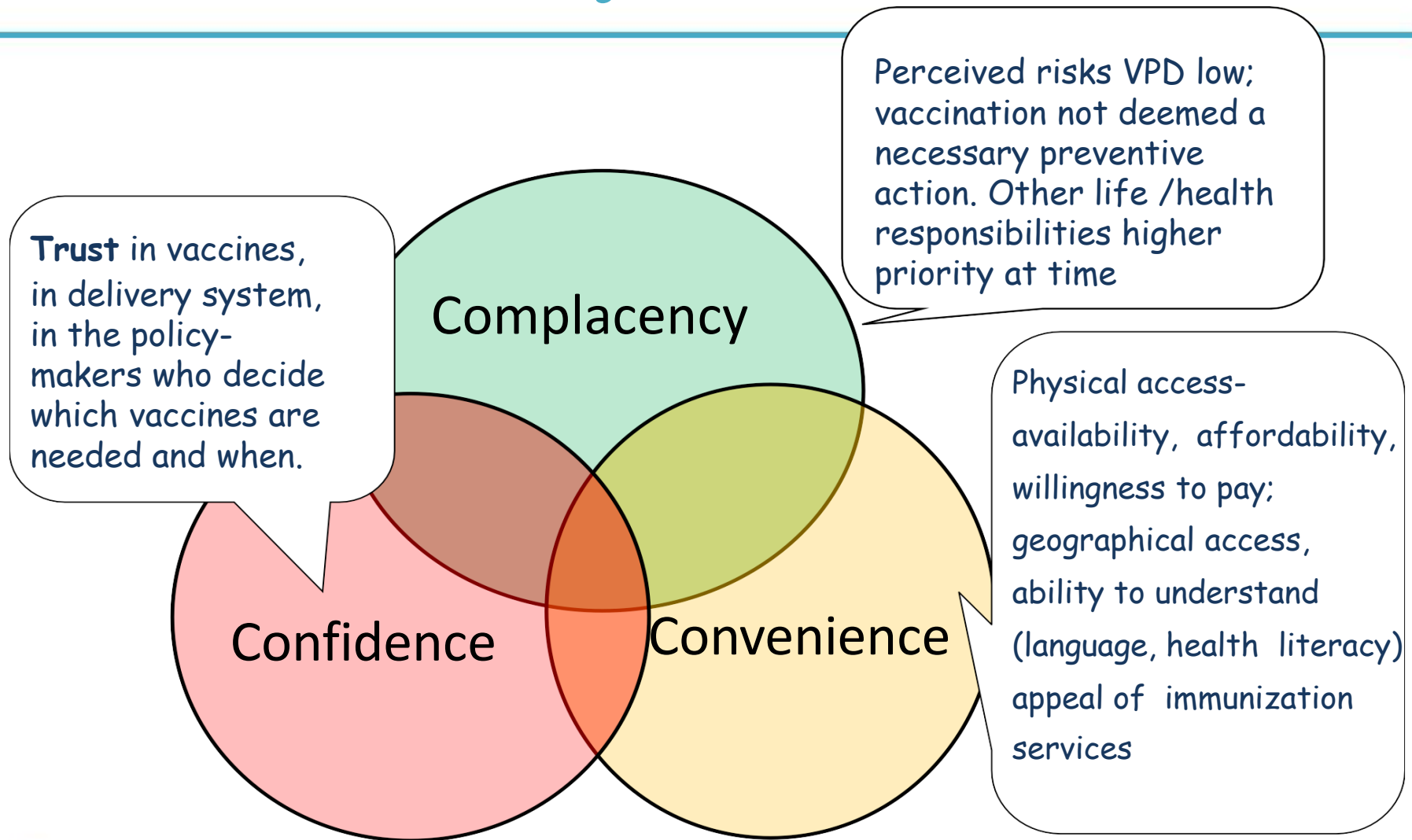
What is Vaccine Hesitancy?



- Vaccine hesitancy refers to delay in acceptance or refusal of vaccines despite availability of vaccine services.
- Vaccine hesitancy is complex and context specific, varying across time, place and vaccines.
- It is influenced by factors such as complacency, convenience and confidence.



Vaccine Hesitancy Model





The Cow-Pock — or — the Wonderful Effects of the New Inoculation! — visé. the Publications of y^e Anti-Vaccine Society.

The cowpox. Wonderful effects of the new inoculation

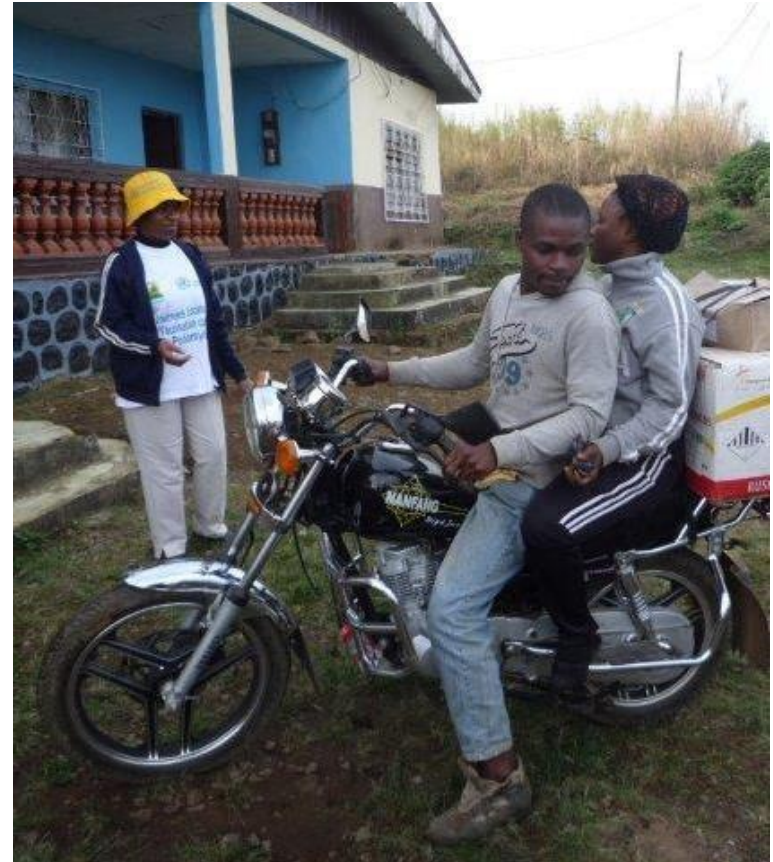


Dr. H.T. Wickramasinghe

Determinants of vaccine hesitancy

- Contextual influences, including socio-cultural and health systems factors
- Individual and group influences, including those arising from personal perceptions of a vaccine
- Vaccine or vaccination-specific issues, including individual assessments of risks and benefits and the effects of the mode of administration

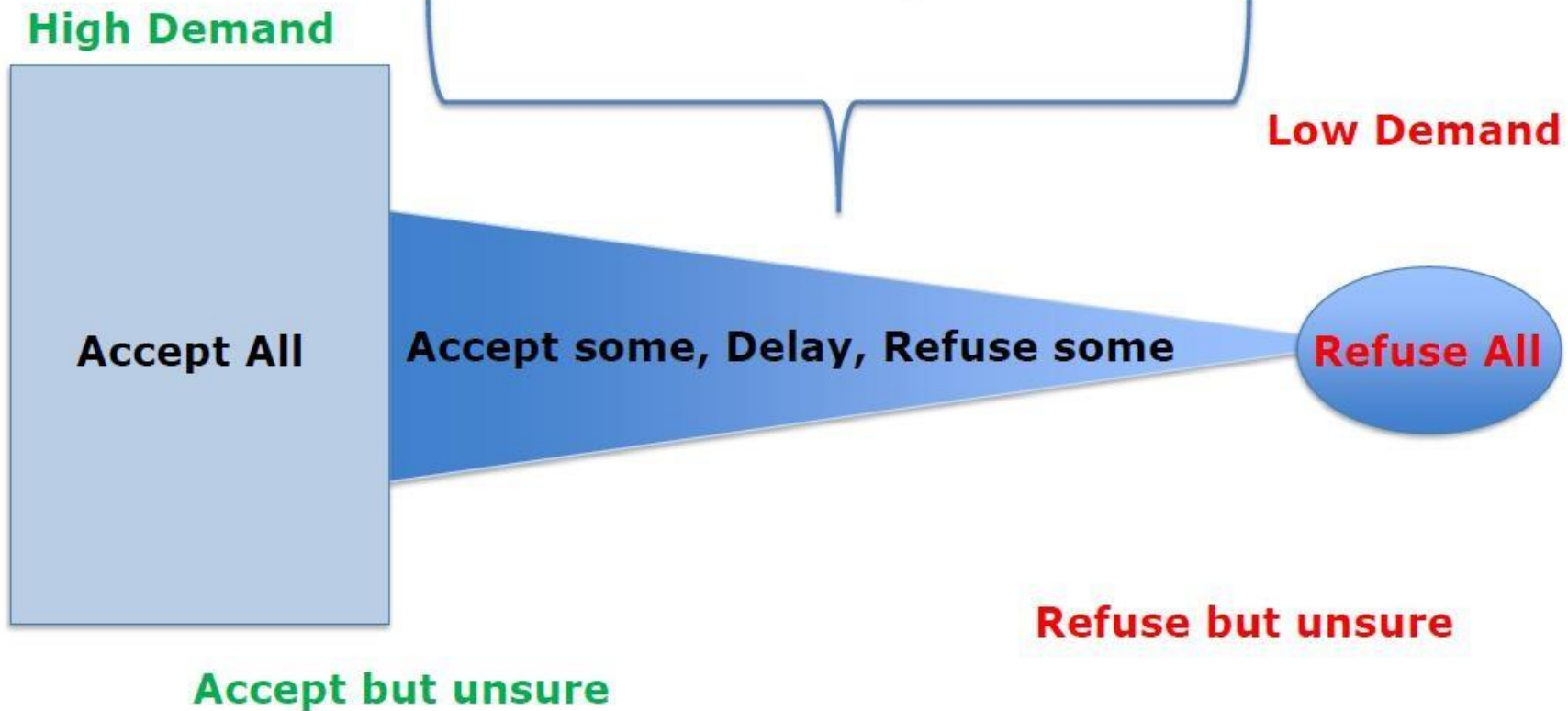
WHO. What influences vaccine acceptance: a model of determinants of vaccine hesitancy. The SAGE Vaccine Hesitancy Working Group.



Vaccine Hesitancy



Vaccine Hesitancy Continuum



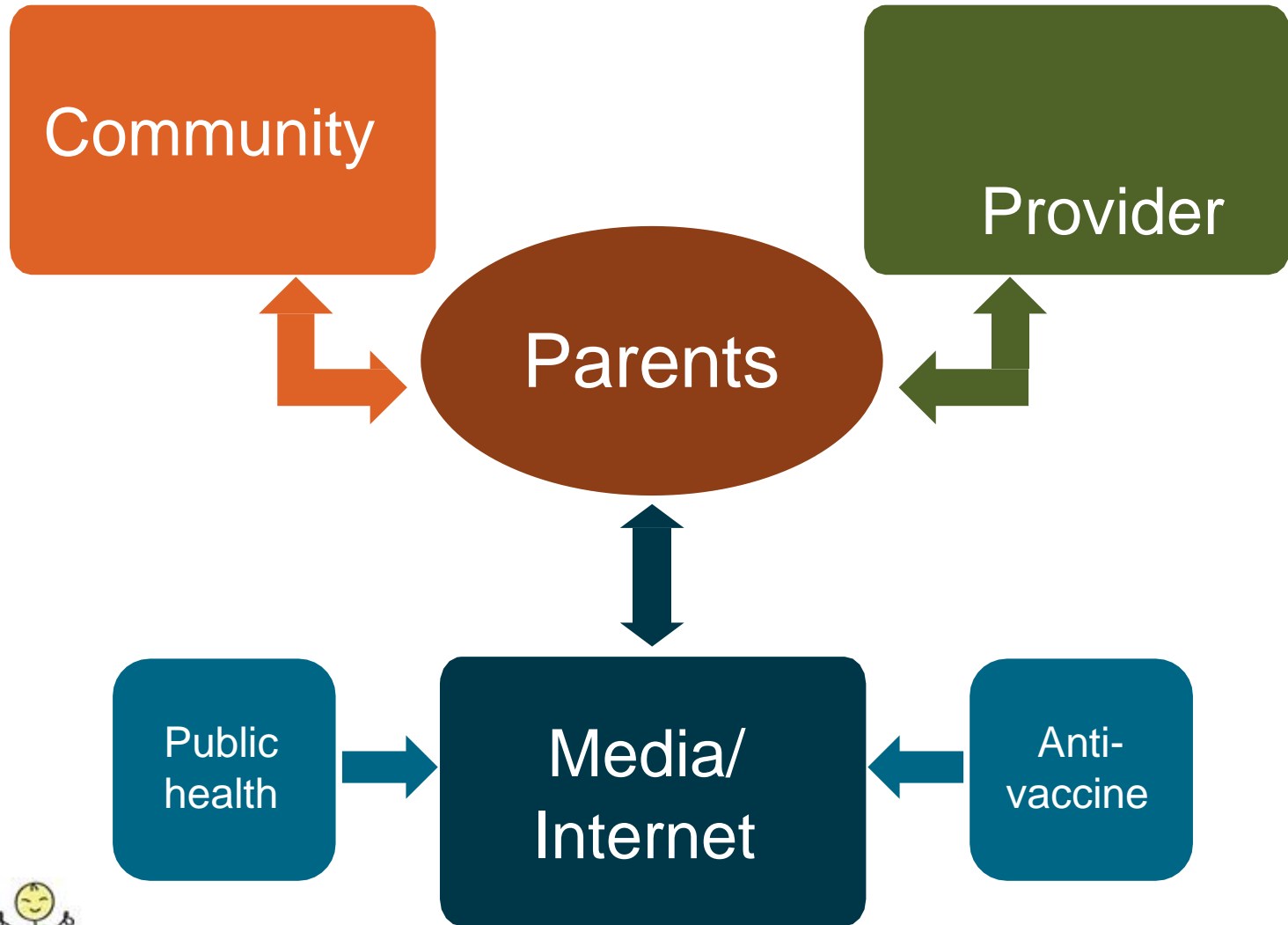
SAGE Working Group on Vaccine Hesitancy 2014

www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf?ua=1

Dr. H.T. Wickramasinghe



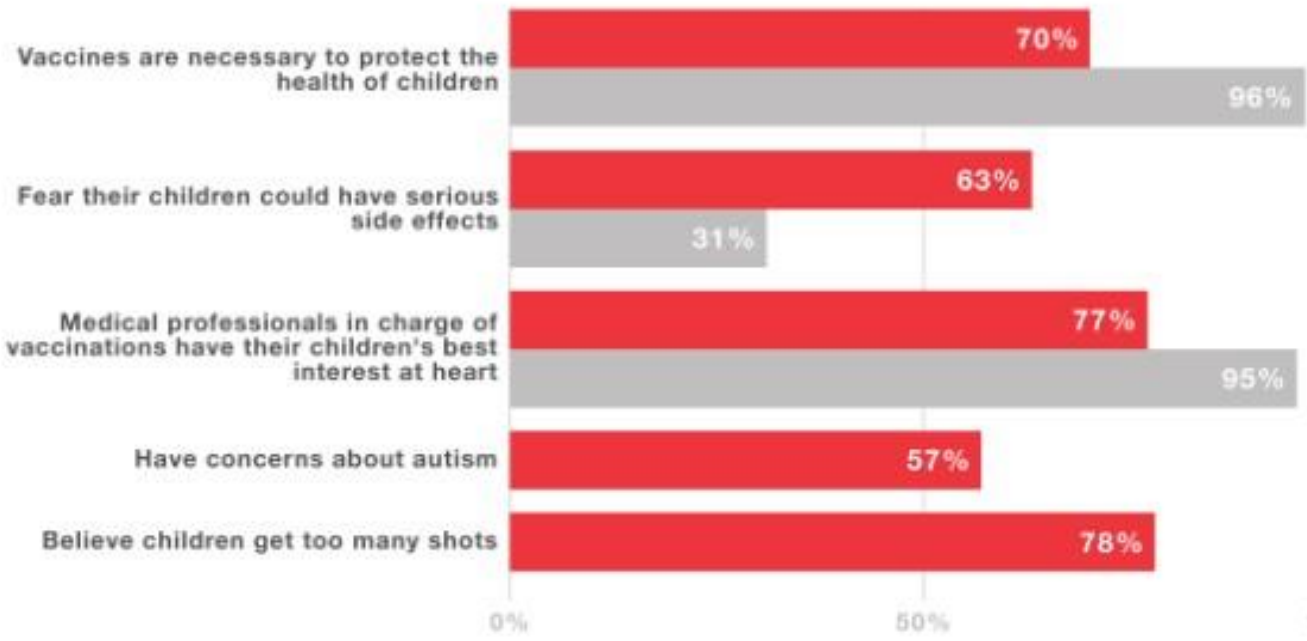
Parents want to do what is best for their child but face a conundrum What to believe?





WHO ARE THE FAMILIES THAT DELAY AND REFUSE VACCINATIONS?

PARENTS WHO DELAY AND REFUSE VACCINES vs.
PARENTS WHO DON'T DELAY OR REFUSE VACCINES



FAMILIES OF UNVACCINATED CHILDREN ARE MORE LIKELY TO BE:

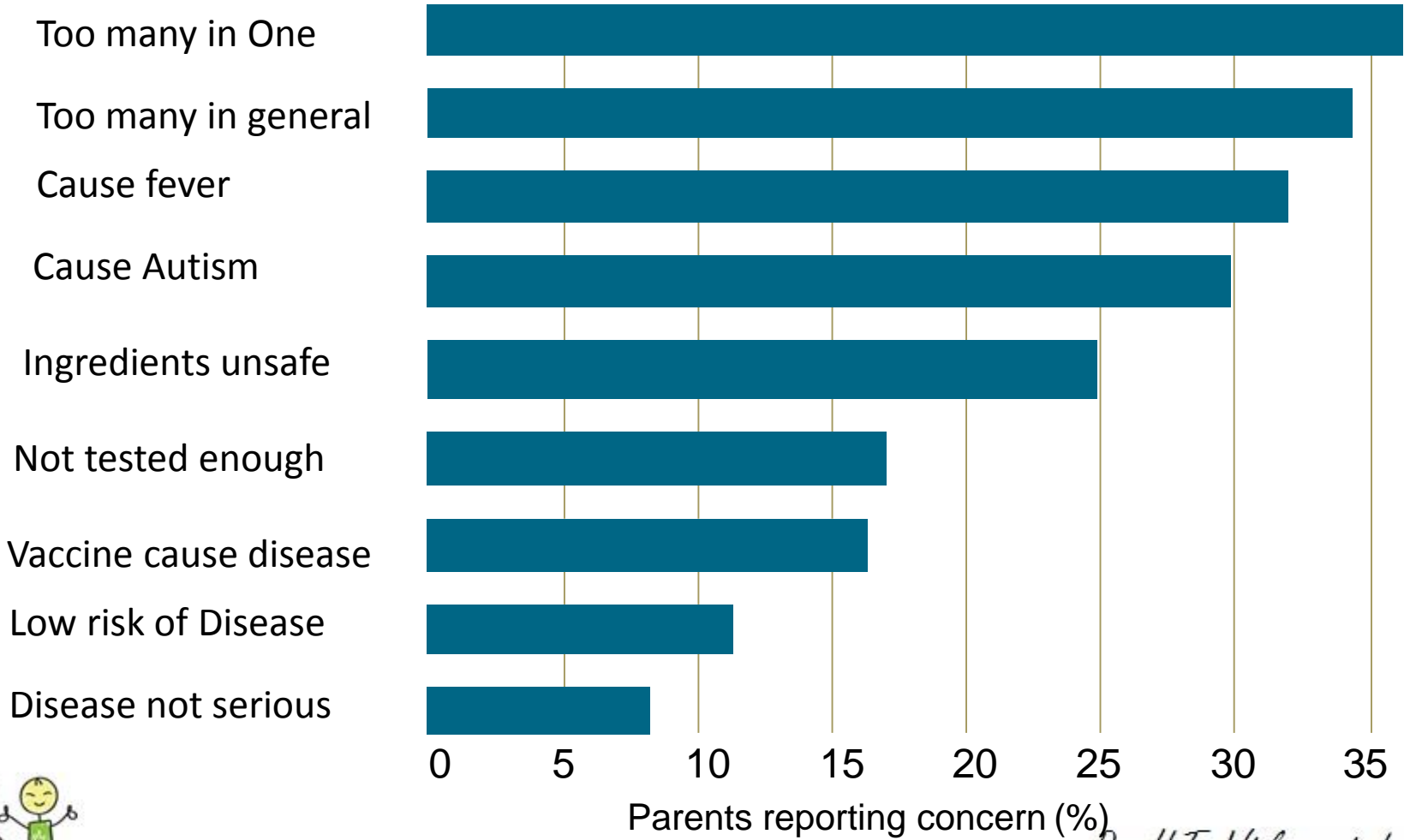
- Wealthier on average, with annual incomes more than four times the poverty level
- Non-Hispanic white
- Married couples in English-speaking households
- Educated, with college degrees
- Covered by private health insurance

SOURCE: Public Health Reports



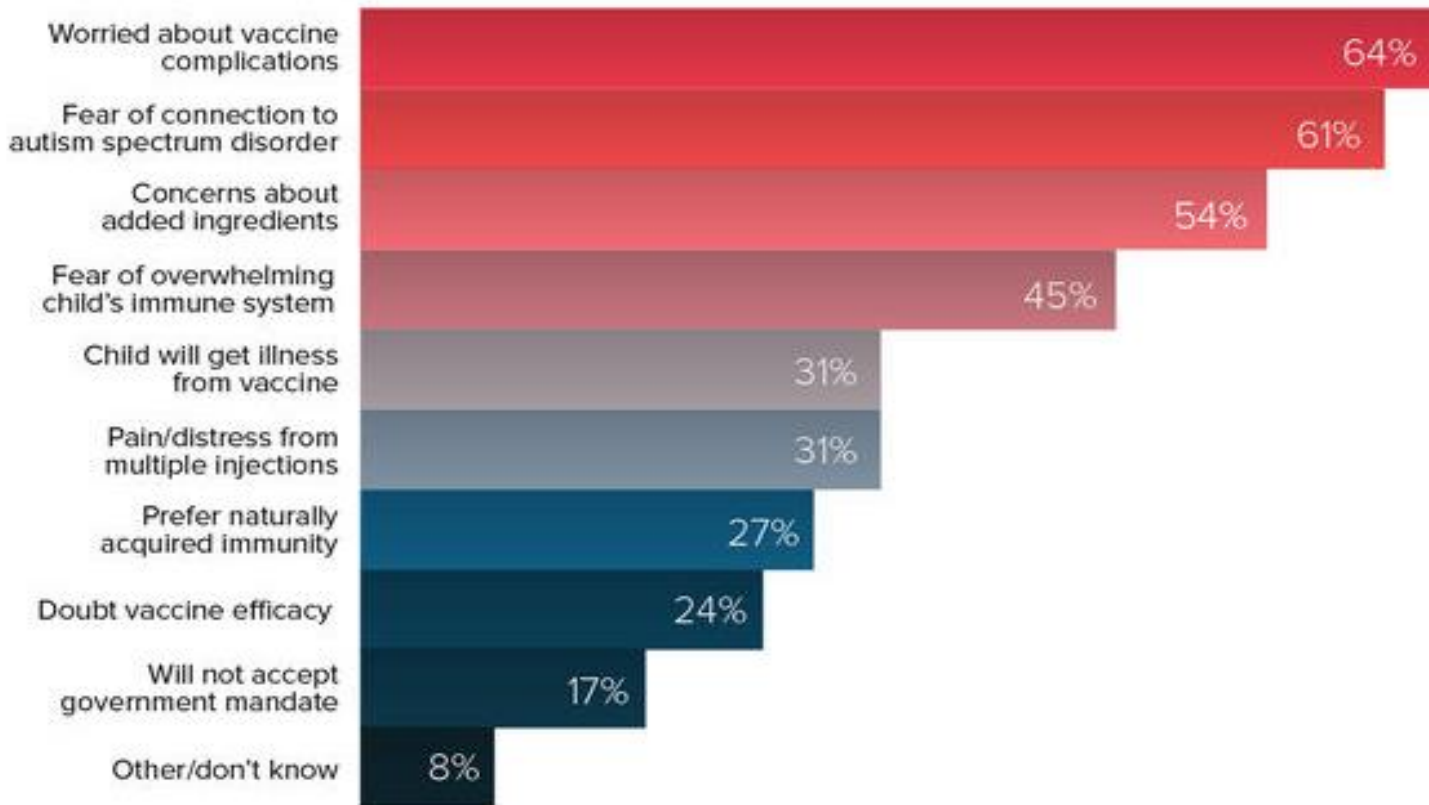
Dr. H.T. Wickramasinghe

Parents' Vaccine Concerns



Opinion of the health personnel

What reasons are given by families who continue to refuse vaccines or request alternate schedules for vaccines?



Dr. H.T. Wickramasinghe

Influence of Science, Media and internet

Science, Media, and the Internet

- Distortion of scientific process
 - Science: hypothesis → test → accept or reject → refine
 - Media: hypothesis “validated” by repetition
- Differing criteria for causality
 - Medical, legal, public opinion
- Challenge of risk communication
 - Science vs. freelance and feature writers; talk radio
- Access to media, Internet
 - Credibility of source, media concept of balance, utility to media of controversy



Adapted from Kane MA. *Vaccine* 1998;S73-S78

Dr. H.T. Wickramasinghe

Anti –vaccinists : 3 prong attack



Efficacy of
vaccination

Risk of Vaccination

Alternative
vaccines



What is the impact of anti-vaccine lobby?

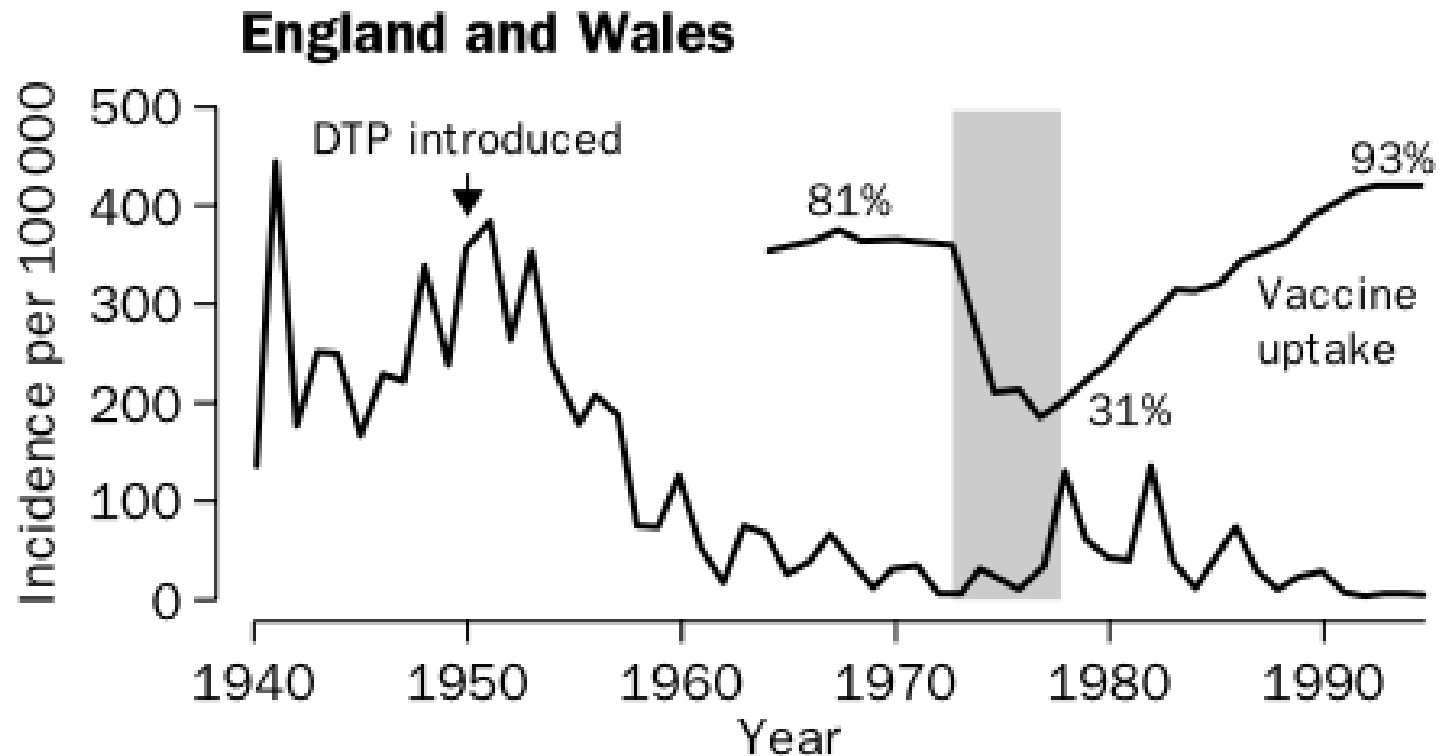


Figure 2: **Incidence of pertussis in countries affected by active anti-vaccine movements**

Note that scales vary.



Measles in England, Wales and US



In England and Wales, measles cases increased 36% in 2008.

Measles cases more than doubled from the year before during the first half of 2008 in the U S States. From December 2014 till June 2015 there were 110 cases of measles in California alone, most of them were not vaccinated



In Canada



The Recent UNICEF report, which used data provided by the countries themselves, said only 84 per cent of Canadian children had the appropriate number of doses of vaccine for measles, polio and DPT3 for children between the ages of 12 and 23 months.

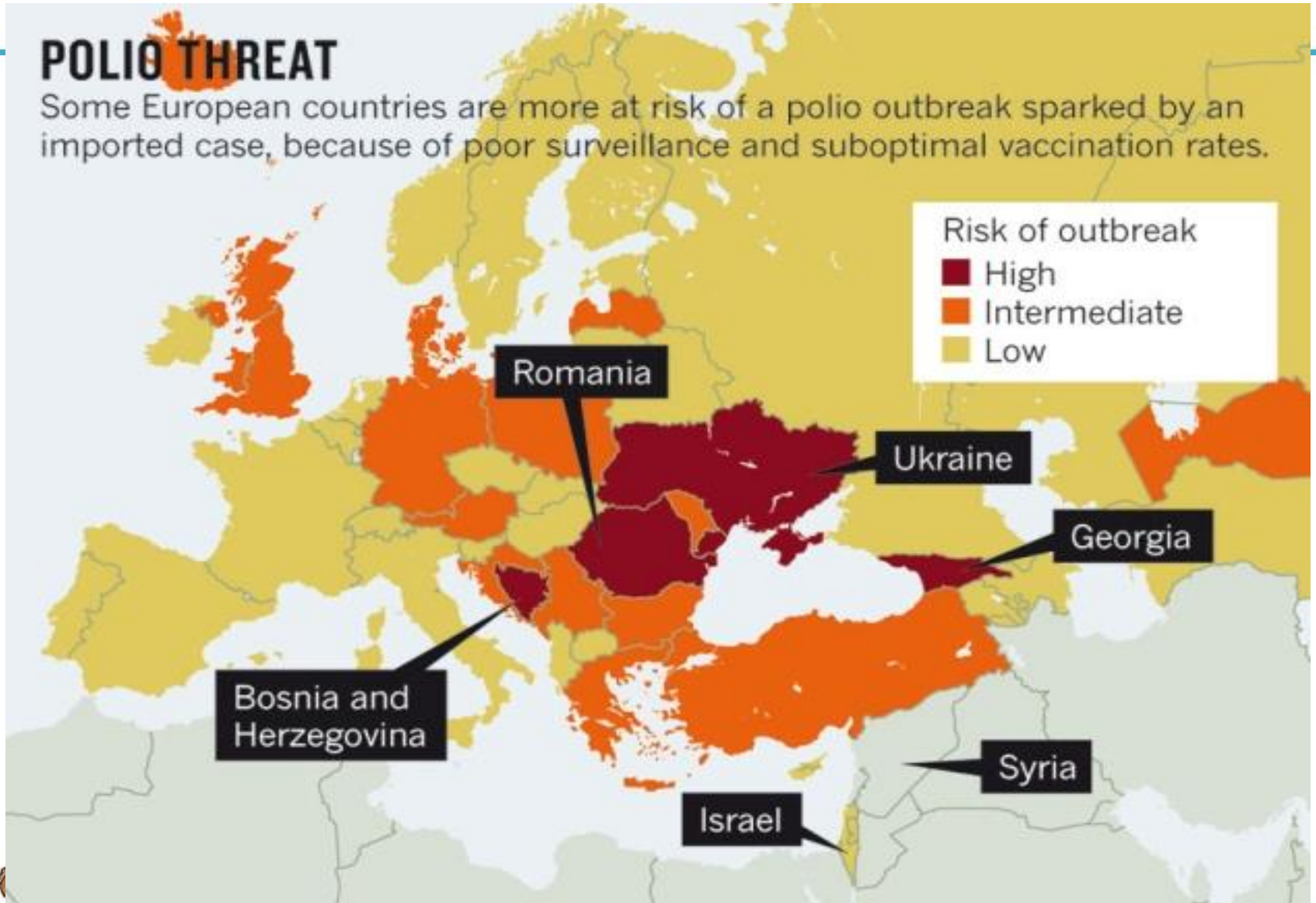
Canada's Public Health Agency estimates that only 62% of 2-year-olds are up to date with their vaccines.



Eastern Europe

POLIO THREAT

Some European countries are more at risk of a polio outbreak sparked by an imported case, because of poor surveillance and suboptimal vaccination rates.



Australia



Children at risk

Parts of Sydney have dangerously low immunisation rates.

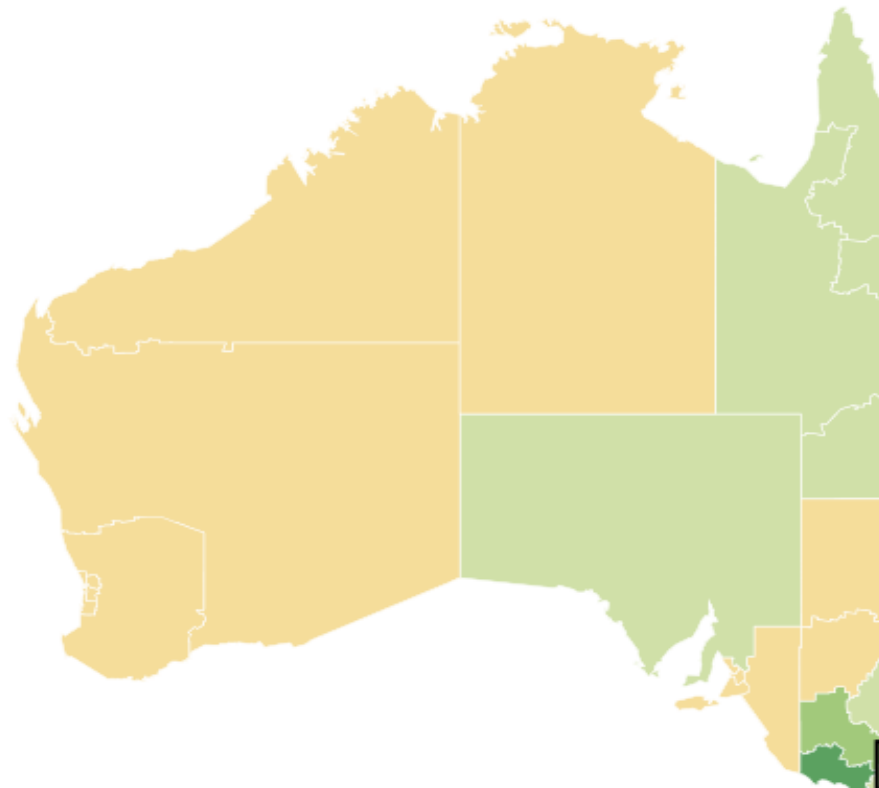
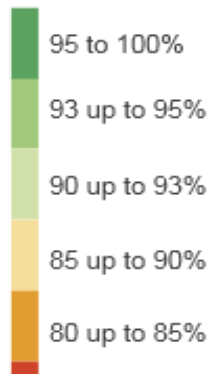
Australia

NSW - best and worst

Dis

Percentages of children aged 5 years fully immunised, by Medicare Local catchment, 2011 -12

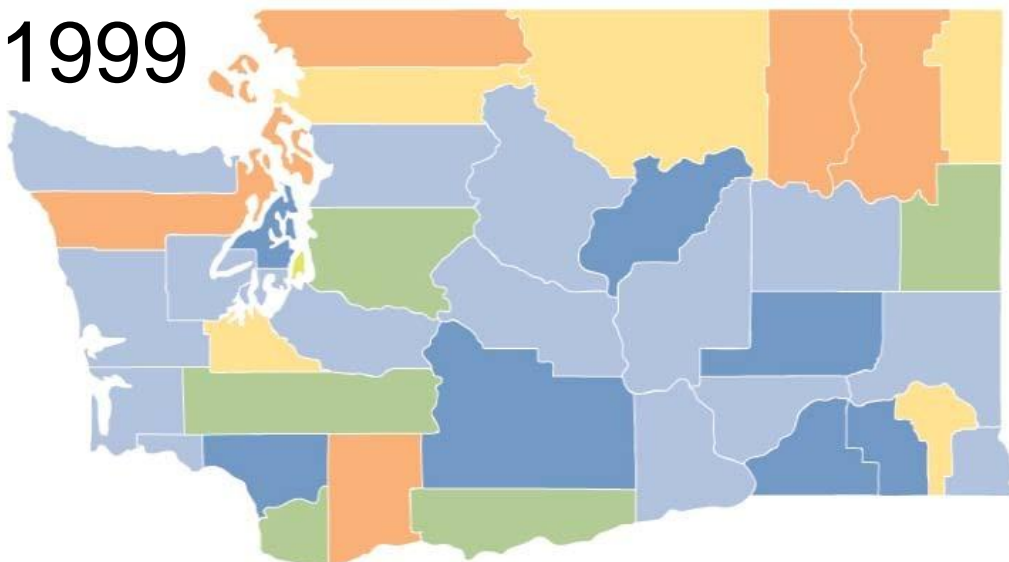
Highest group



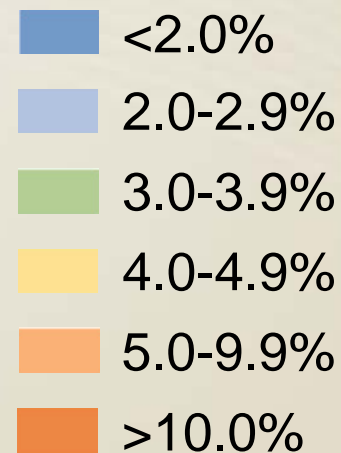
Dr. H.T. Wickramasinghe

School Immunizations Exemptions

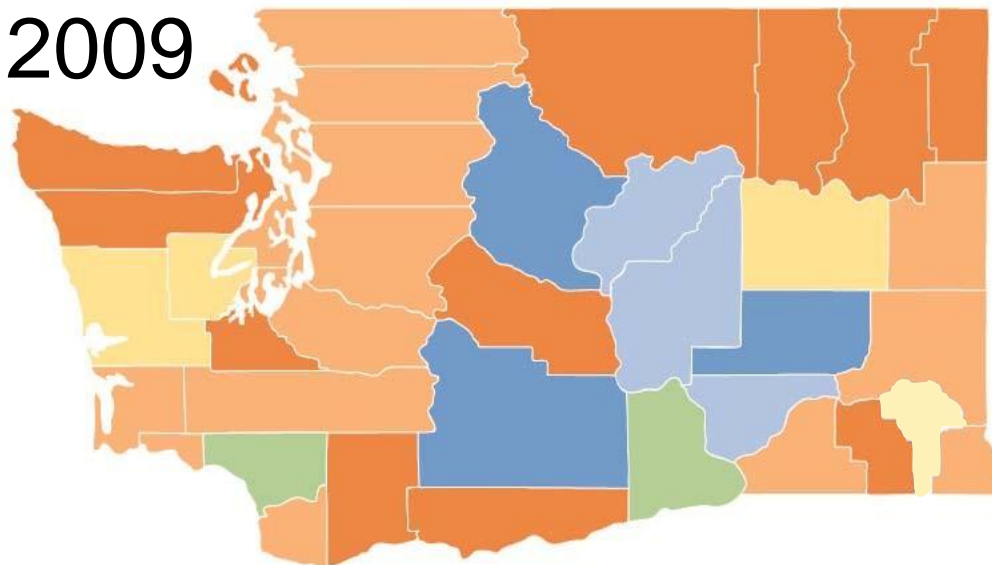
1999



Washington State
School Entry
Immunizations
Exemptions



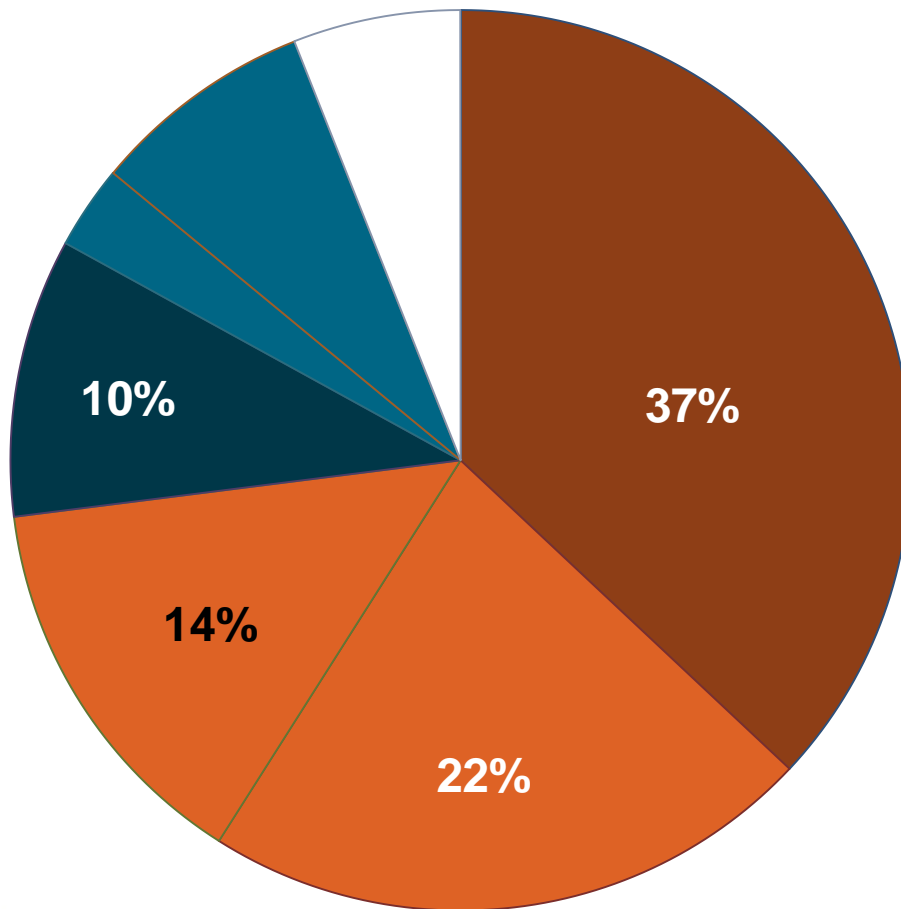
2009



Why Parents Change Their Minds



% of Parents



- Information or assurances from child's doctor
- Just thought more about it
- Info from some other source
- Doctor refused to treat/daycare wouldn't admit
- Discussion with spouse/relative
- Other
- Don't know

Adapted from D Opel, 2011; Gust et al, *Pediatrics*, 2008

Dr. H.T. Wickramasinghe



Strategies to tackle anti-vaccine parents

- Remain current about all vaccine issues.
- Review anti-vaccine media for information that is being shared with public.
- Proactively discuss the vaccine issues with parents.
- Be sure that parents understand the value of vaccines and convince that there is no link with Autism or neurodevelopmental problems etc.
- Be mindful not to exaggerate but accurately describe personalized experience or case reports.
- State your strong support and consider sharing your own choice of vaccinating your own children.



Countering Anti- vaccine Propaganda

Use the same battlefield - web and their forums, TV and mass media, independent forums and active web sites like womenthinking.org., immunise4life.my .

Make provaccine web sites to appear in antivaccine searches

Vaccine advocacy

Provaccine parent groups, especially parents with Autistic children

Ant-vaccine group surveillance and monitoring system and countering their propaganda

Celebrities to promote vaccines

Role of paediatric societies and professional bodies to pressurize the governments to have policy decision on vaccination with legal enforcement.





Thank you!



Dr. H.T. Wickramasinghe

Australian Medical association openly attacking antivaccinists



WARNING

This woman promotes misinformation about vaccination health. Ignore her. Vaccinate your children.



Meryl Dorey

ramasinghe



Vaccinate your children or declare why not, parents in Australia told ~ SMH

By [mrdsk](#) on May 29, 2013

by *Melissa Davey*



Sydney Morning Herald

‘Parents will be forced to either vaccinate their children or register for an exemption in order to enroll them in childcare, after changes to the Public Health Act passed through cabinet Monday night.

After the persistent pressure from the Australian Medical Association, cabinet made the decision



Dr. H.T. Wickramasinghe



hug
me
i'm vaccinated





Dr. H.T. Wickramasinghe



Dr. H.T. Wickramasinghe

