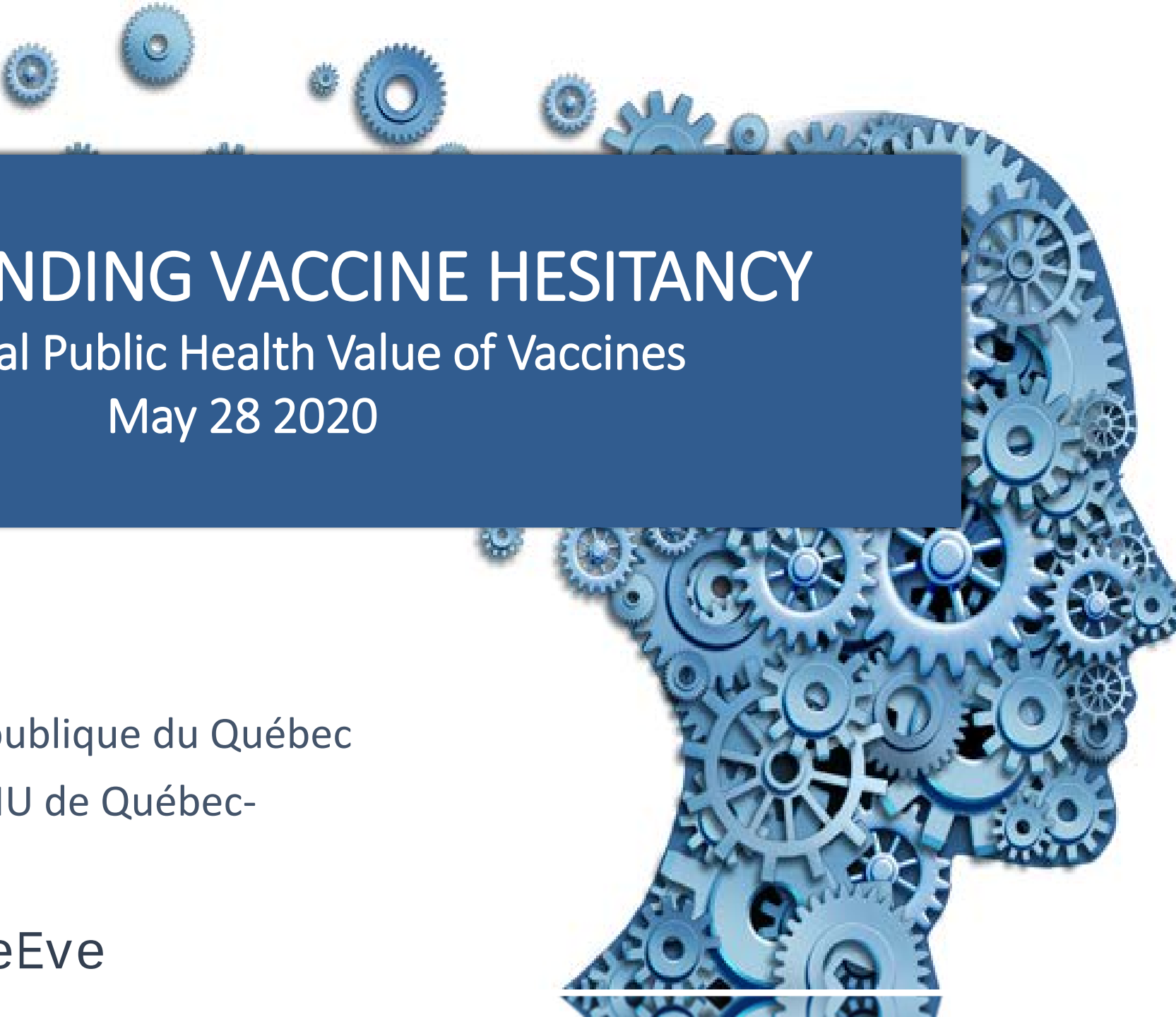




UNDERSTANDING VACCINE HESITANCY

The Critical Public Health Value of Vaccines

May 28 2020

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Disclosure



"I'm a social scientist, Michael. That means I can't explain electricity or anything like that, but if you ever want to know about people I'm your man."

Objectives

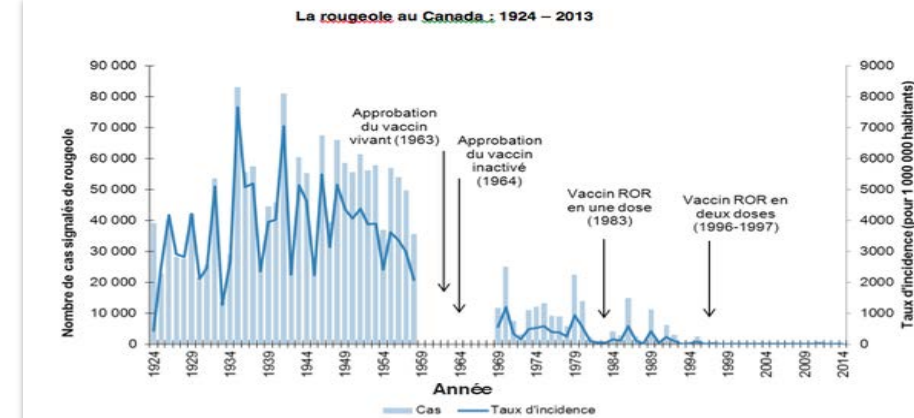
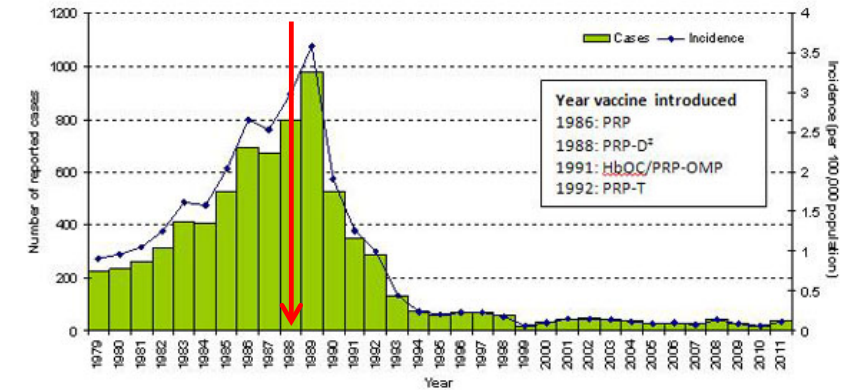
1. Define vaccine hesitancy and its scope
2. Offer a brief critical reflection on the key *cultural shifts* that have given rise to significant levels of doubt about vaccine programs
3. Discuss potential solutions to enhance vaccine acceptance

Context

Vaccination as
public health
success

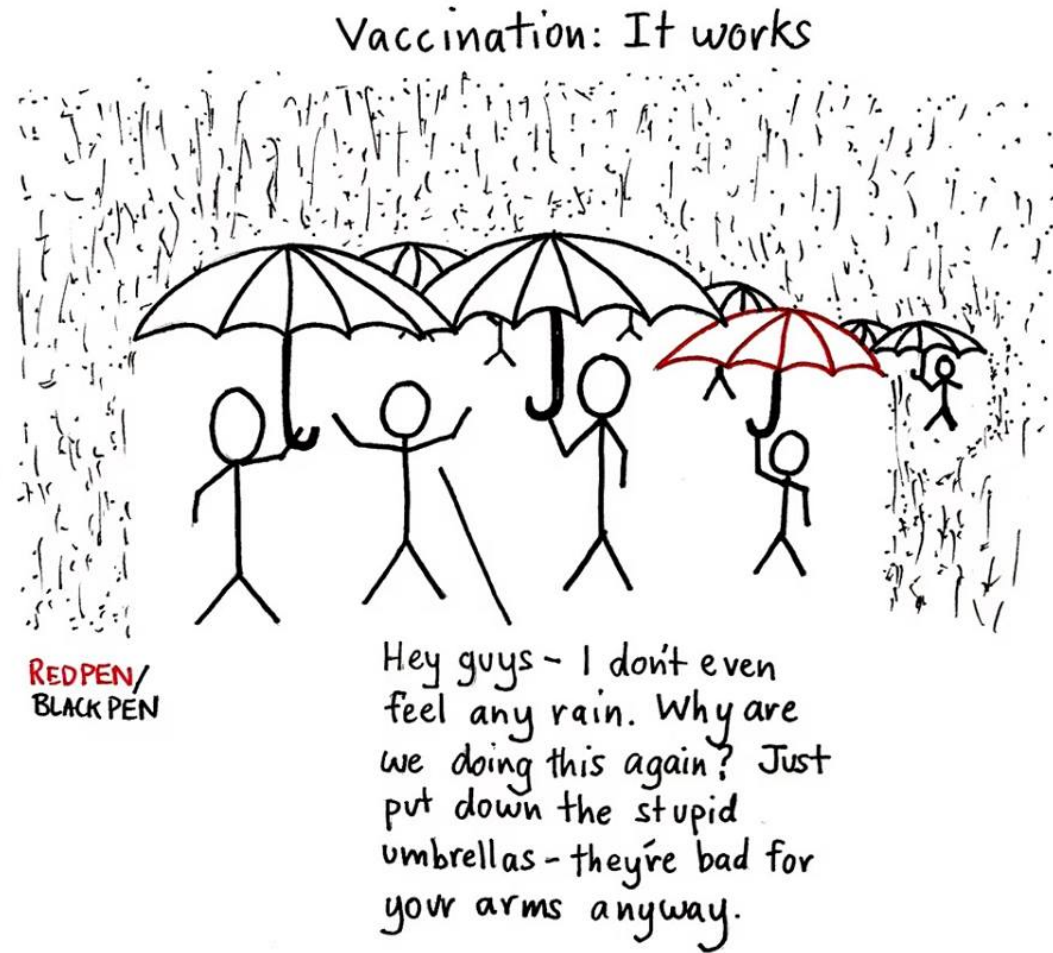
Vaccination currently
prevents an estimated
2–3 million
deaths each year

Vaccines save at least
5 lives
every minute



Source: Guide canadien d'immunisation
<http://www.phac-aspc.gc.ca/publicat/cig-gci/index-fra.php>

Context



Vaccination can protect the unvaccinated through **community immunity** (herd immunity)

High level of uptake is needed to reach community protection

<http://vaccine.fyi/herd-immunity/>

**WELCOME CUSTOMER WHAT
CAN I DO FOR YOU TODAY**

FIND A VACCINE FOR COVID-19



Ten threats to global health in 2019

Vaccine hesitancy

Trump's promise of 'Warp Speed' fuels anti-vaccine movement in fertile corners of the Web



The latest on Coronavirus (COVID-19)

Groups sow doubt about COVID vaccine before one even exists

by DAVID KLEPPER AND BEATRICE DUPUY, THE ASSOCIATED PRESS
Posted Apr 29, 2020 1:32 am EDT Last Updated Apr 29, 2020 at 1:46 am E

463 views | May 21, 2020, 09:30am EDT

What If Moderna's COVID-19 Vaccine Fails?



Trefis Team Contributor
Great Speculations Contributor Group ©
Markets

f Moderna stock is up by about 270% year-to-date, as it emerged a front runner in the race to develop a vaccine for the highly contagious

US was warned of threat from anti-vaxxers in event of pandemic

FBI-connected researchers suggested biggest threat in controlling outbreak was from 'those who categorically reject vaccination'



▲ Anti-vaccine protesters in California. The paper said opposition to vaccination would hobble the chances of vaccine development and distribution. Photograph: Maria Tereza/Catipix Images



Expert Market

5+ Company Employees?

Compare The Top 5 Telephone Systems And Find Out What The Best Price Is In 2020!



A quarter of Americans are hesitant about a coronavirus vaccine -Reuters/Ipsos poll

REUTERS

A quarter of Americans have little or no interest in taking a coronavirus



POLITICS

STAT

Amid conflict-of-interest criticisms, top FDA officials recuse themselves from Covid-19 vaccine approvals

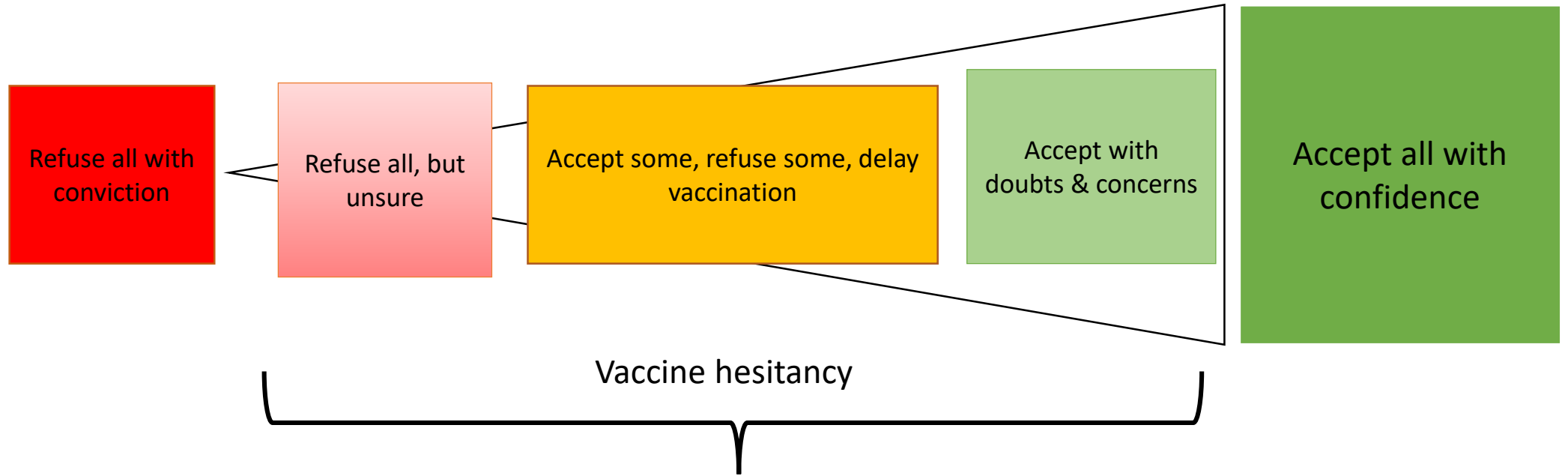
By NICHOLAS FLORKO @NicholasFlorko / MAY 19, 2020



PUBLIC HEALTH

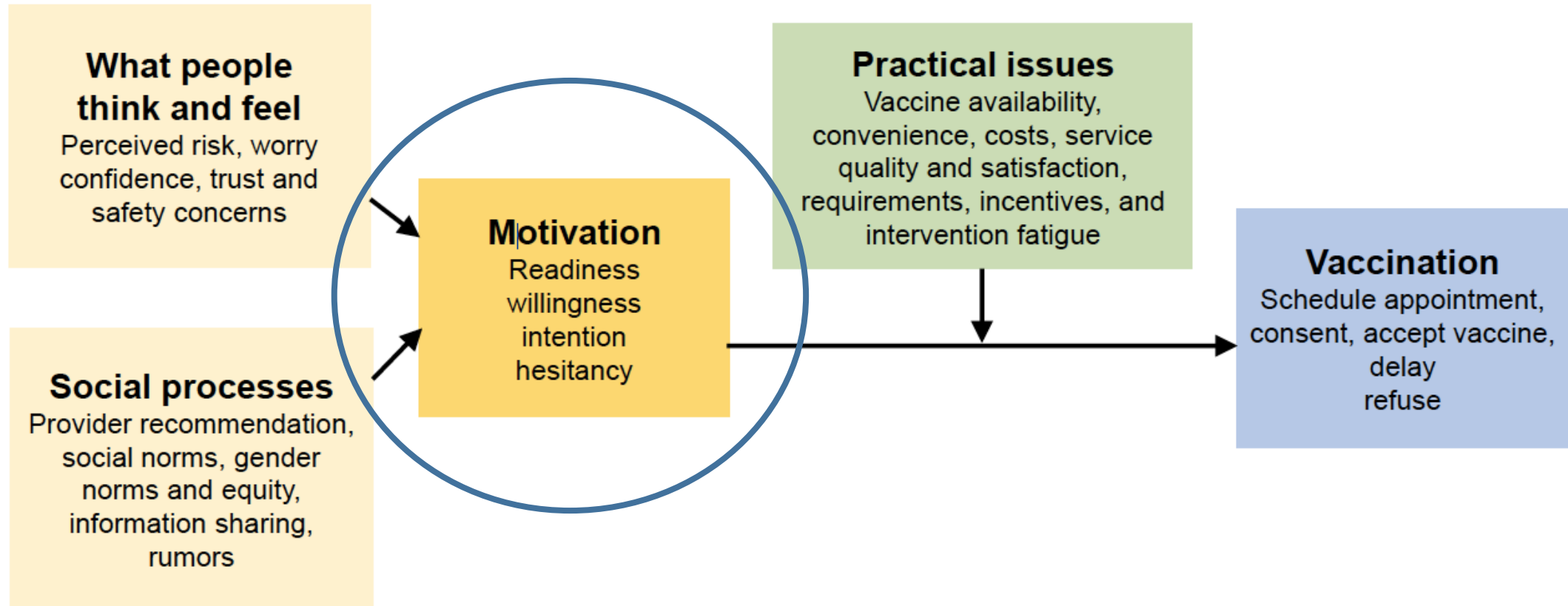
Anti-Vaccine Movement Could Prolong Coronavirus Pandemic, Researchers Warn

Studies of social networks show that opposition to vaccines is small but far-reaching, and



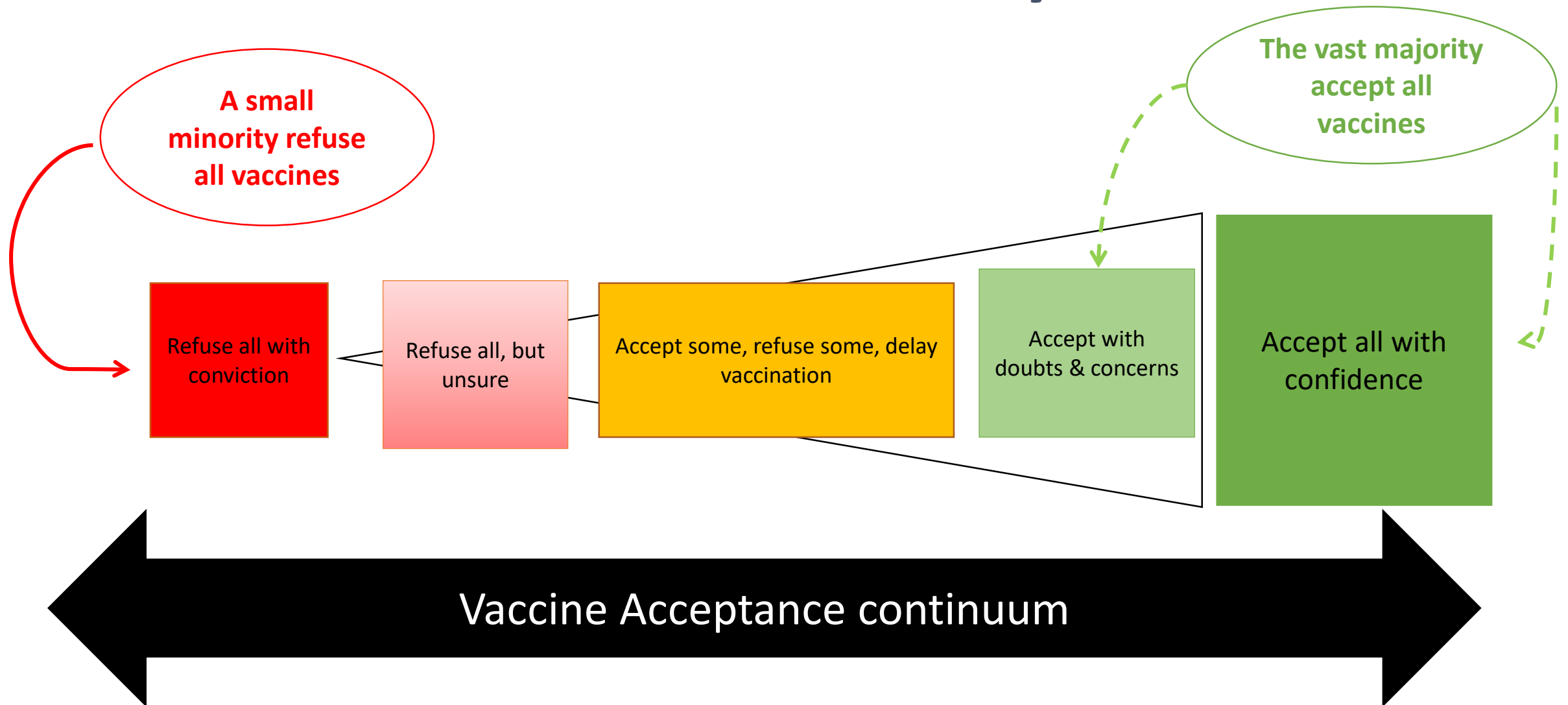
Delay in acceptance or refusal of vaccines despite availability of vaccination services

Increasing Vaccination Model



Source: The BeSD expert working group. Based on: Brewer NT, Chapman GB, Rothman AJ, Leask J, and Kempe A (2017). Increasing vaccination: Putting psychological science into action. *Psychological Science for the Public Interest*. 18(3): 149-207

Vaccine hesitancy



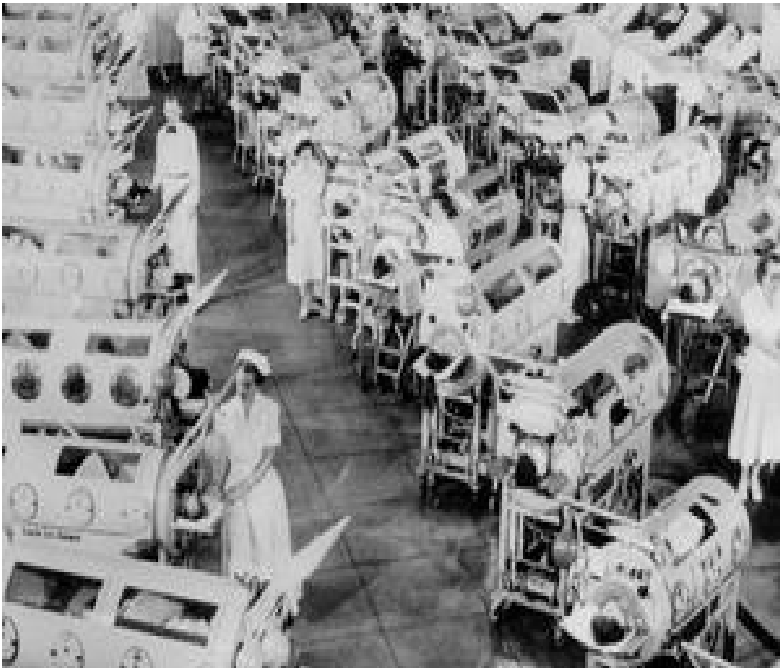
Sources:

Brewer NT, Chapman GB, Rothman AJ, et al., Increasing Vaccination: Putting Psychological Science Into Action. Psychological Science in the Public Interest. 2017;18(3):149-20

MacDonald NE. Sage working group on vaccine hesitancy, vaccine hesitancy: definition, scope and determinants. Vaccine. 2015;33 (34):4161–4164.

Determinants of vaccine hesitancy

Vaccines are victims of their own success



Iron lungs in an hospital, California 1952

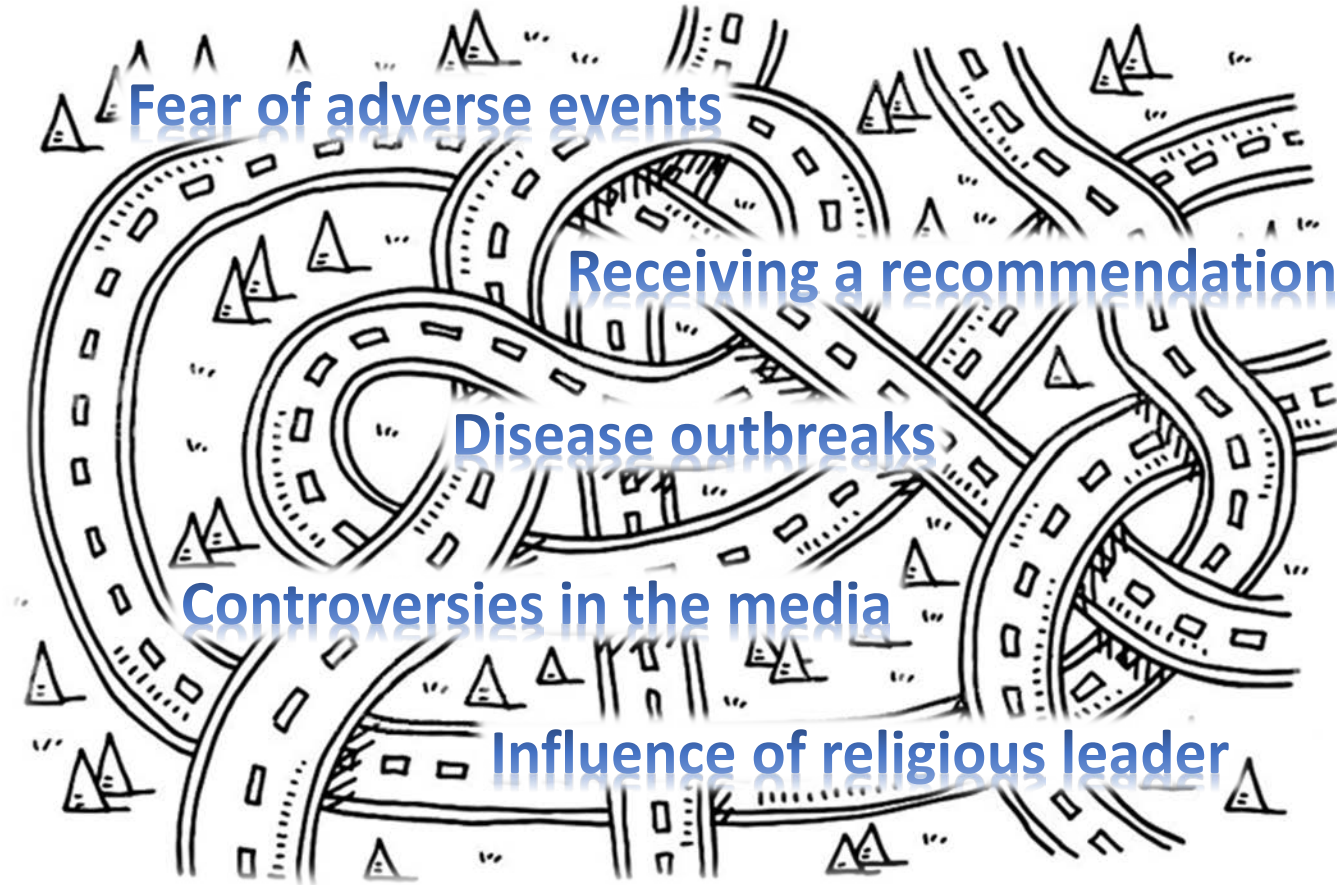
Safety concerns:

- ✓ Fear of adverse events
- ✓ “Too many, too soon” and immune system overload
- ✓ Concerns regarding vaccine components

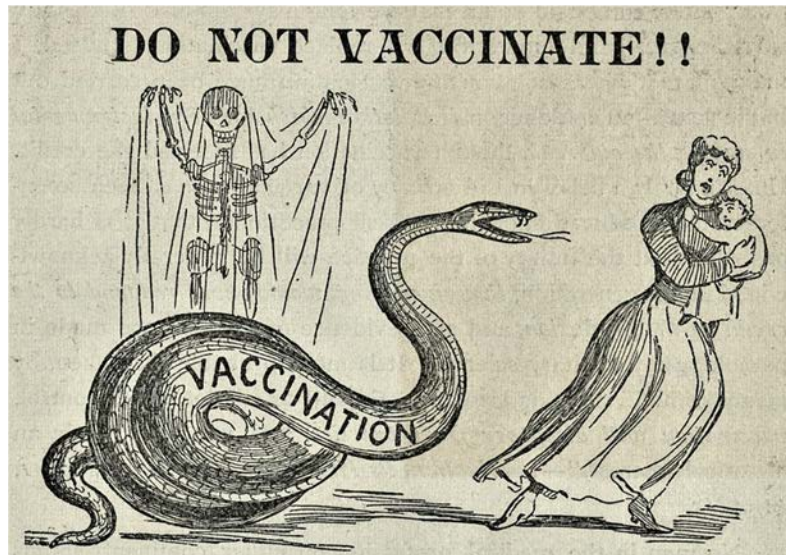
Doubts about need for vaccines:

- ✓ Belief that VPD are not serious or frequent
- ✓ Preference for natural immunity
- ✓ Belief that the body is able to deal with disease without vaccine
- ✓ Doubts regarding the effectiveness of vaccines

Determinants of vaccine hesitancy



Not new ...



but trigger by broad cultural shifts

Crisis of trust

“The days when health officials could issue advice, based on the very best medical and scientific data, and expect populations to comply, may be fading.”

Margaret Chan, WHO Director-General
Report to the 126th Executive Board, 2010



Crisis of truth

Crisis of trust

Trust in distant expert systems



Crisis of truth

Growing distrust in norms and institutions



"I'm sorry, Jeannie, your answer was correct, but Kevin shouted his incorrect answer over yours, so he gets the points."

With Internet and social media, everybody can become an expert

Anecdotal evidence reliable? One man says "yes".

A STUDY CONDUCTED YESTERDAY by a man on himself concluded that self-reported anecdotal evidence is, in fact, both reliable and relevant.

The landmark study, conducted by Mark Mattingly of Virginia Beach in his apartment, concluded with 100% accuracy that data collected from personal experience can disprove other data conducted by reputable scientific institutions, thereby proving once and for all that "statistics can't be trusted".

In a press release Mr. Mattingly took aim at his detractors saying that "...this study shows what I've been telling people on the internet for years: all your fancy evidence and statistics don't mean nothing in the real world."

A frequenter of internet forums, comment sections, and social media, Mr. Mattingly recounts that he was inspired to undertake the study when someone reportedly kept insisting that he provide evidence for his claims. "I think everyone's entitled to an opinion, and that my opinion is worth just as much as anyone else's" Mr. Mattingly said.

Academic types have criticised the study, and papers who are publishing it, saying that it lacks everything and makes no sense. When shown the study, Emeritus Professor James Albrecht of Carnegie Mellon University looked all confused and hopeless before making pining, guttural sounds.



Mr. Mattingly in his apartment looking all smug.

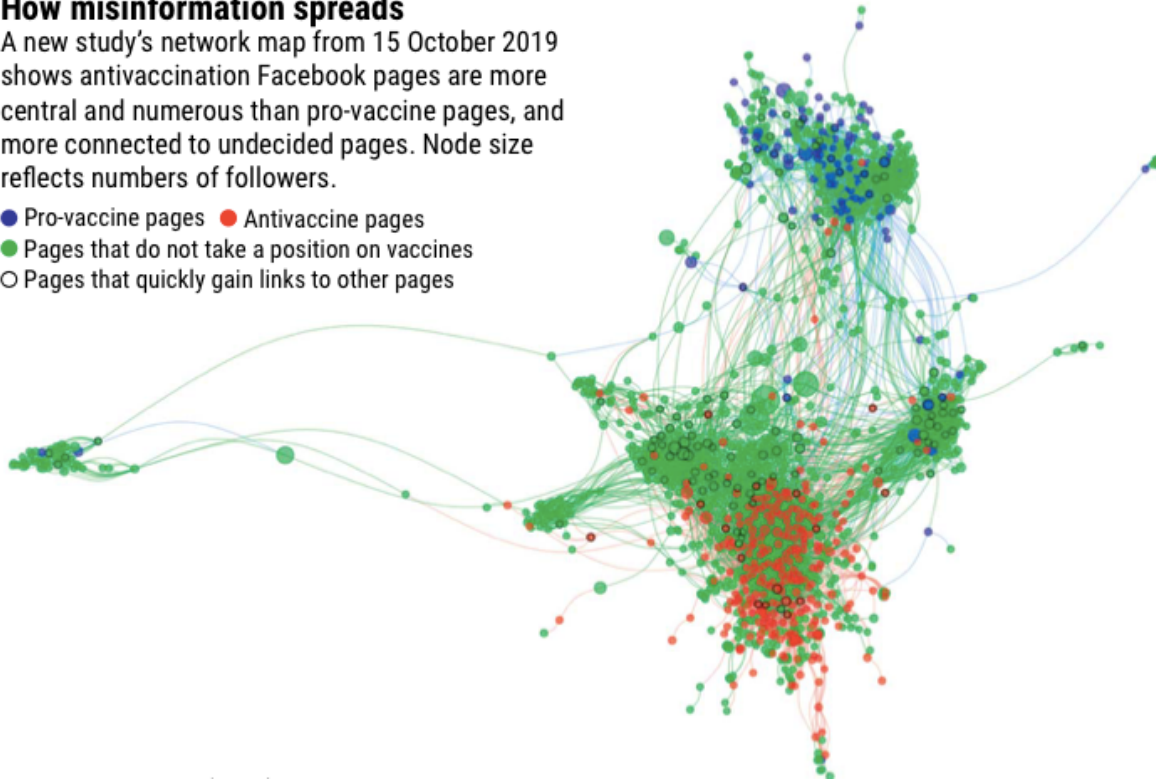
Mr. Mattingly has responded saying that this is just the first of many studies he intends to conduct, and that a meta-analysis of people who have opinions and anecdotal experiences independent of controls, methodological rigor, blinding and peer review are soon to be published, adding further weight to his initial findings.

Increased polarization

How misinformation spreads

A new study's network map from 15 October 2019 shows antivaccination Facebook pages are more central and numerous than pro-vaccine pages, and more connected to undecided pages. Node size reflects numbers of followers.

- Pro-vaccine pages ● Antivaccine pages
- Pages that do not take a position on vaccines
- Pages that quickly gain links to other pages



Vaccine critical discourses have more reach than positive messages

Being exposed to vaccine critical discourses is associated with increase vaccine refusals

(Betsch et al. 2013)

Crisis of truth

- Decline in the medical authority – the scientific and medical consensus on the importance of vaccination is not convincing enough
- Influence of ‘non-authoritative’ sources on decisions – **social networks**



All has begun with one of my friend who told me that she was delaying all vaccines until her child was 2. She was not giving the MMR shot either. We have taken our decision after that conversation. That conversation was the most influential in our decision. Then we looked for information to support our view (28 years-old mother of an unvaccinated child)

What can be done to address Vaccine Hesitancy?



Addressing Vaccine Hesitancy

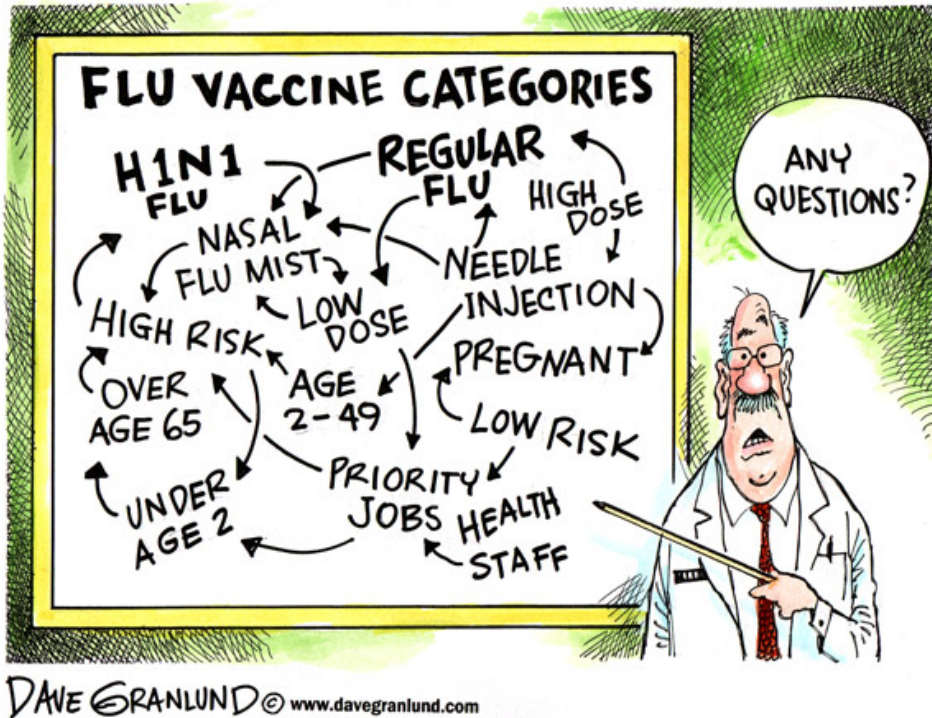
Traditional public health approaches

- Give more facts about vaccines
- Give more facts about vaccine-preventable diseases
- Use prescriptive language
- Use fear-based tactics

Ineffective to address
vaccine hesitancy



Addressing Vaccine Hesitancy



Emotions play a role in how people make decisions



Emotions play a role in how people interpret numerical information



Emotions are influential, even if people correctly understand the fact

Vaccine hesitancy does not equal ignorance

- Telling people they are wrong is not an effective way to change their minds

How to Talk to an Anti-vax Relative

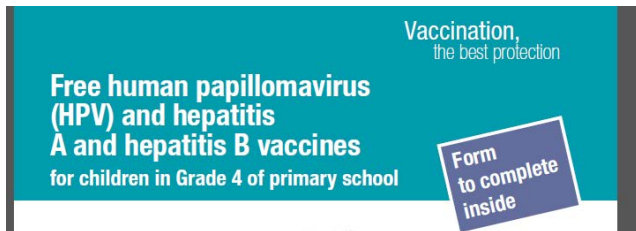
The question of whether vaccinations should be a duty or a choice is dividing families.

ASHLEY FETTERS APRIL 22, 2019



Addressing Vaccine Hesitancy

- The power of stories
 - Stories are powerful because they are **authentic**, contain a **narrative**, and are from someone with whom parents **can identify**



Vaccination

Why should children get vaccinated in Grade 4 of primary school?

The HPV and hepatitis A and hepatitis B vaccines are offered in Grade 4 for the following reasons :

- The immune system responds best to these 2 vaccines between the ages of 9 and 11, when children are in Grade 4 ;
- It is preferable for children to have the HPV and the hepatitis A and hepatitis B vaccines before they are exposed to these infections ;
- As a parent, school vaccination saves you the trouble of getting to a vaccination center.

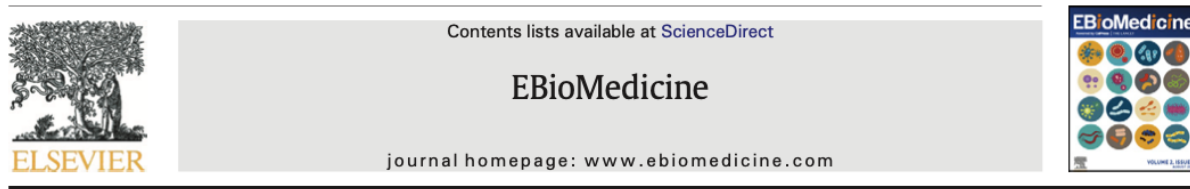
My child will be given two vaccines at the same time. Is this risky ?

No. Your child's immune system is already exposed to hundreds of germs every day. The immune system is able to recognize hundreds of thousands of different germs and respond to them.



Front-line healthcare providers have a crucial role to play in maintaining the public confidence in vaccines

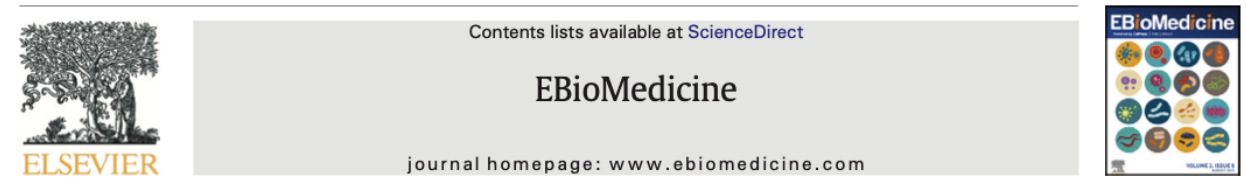
But they can be vaccine-hesitant themselves



Original Article

Vaccine Hesitancy Among General Practitioners and Its Determinants During Controversies: A National Cross-sectional Survey in France

Pierre Verger^{a,b,c,d,*}, Lisa Fressard^{a,b,c}, Fanny Collange^{a,b,c}, Arnaud Gautier^e, Christine Jestin^e, Odile Launay^{d,f}, Jocelyn Raude^g, Céline Pulcini^{h,i}, Patrick Peretti-Watel^{a,b,c}



Commentary

Unpacking Vaccine Hesitancy Among Healthcare Providers

Noni E. MacDonald^{a,*}, Eve Dubé^b



^a Dalhousie University and Canadian Centre for Vaccinology, IWK Health Center, Halifax, NS, Canada

^b Institut national de santé publique du Québec and Centre de recherche du CHU de Québec – Université Laval, Québec, QC, Canada

Context matters: Not all hesitancy is the same

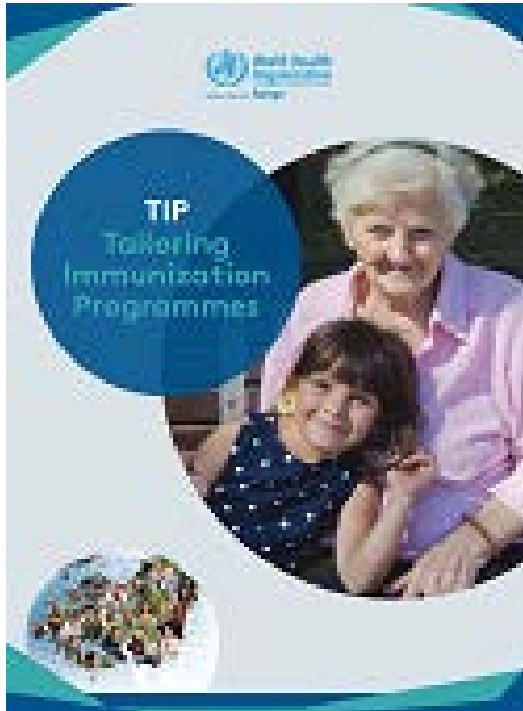


Quebec



Bulgaria

Addressing Vaccine Hesitancy



- Identify areas with low vaccination coverage
- Investigate reasons of low coverage
- Address underlying issues (not always individual-based!)

Concluding Remarks

- Vaccine hesitancy is an important public health challenge much more than vaccine refusal or the anti-vaccine movement
- Information and education are important, but not enough to address this issue
- Health care providers' role is crucial and they need to be supported

All parents want the best for their children, we need to better understand why this means refusing vaccines for some of them

Thanks for your attention!

