



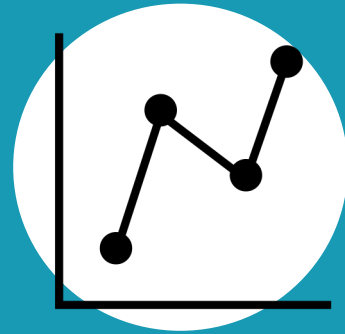
REIMAGING PUBLIC HEALTH FOR THE 21st CENTURY

A VISION FOR THE CHANGING LANDSCAPE

BY: KATELYN JETELINA, MPH PHD

JUNE 2024

March 2020



Data



Tests, PPE



Policies



Communicate

GEOGRAPHIC DISTRIBUTION

YLE READERS
LIVE IN
97 COUNTRIES

TOP 5

U.S.A.



CANADA



AUSTRALIA



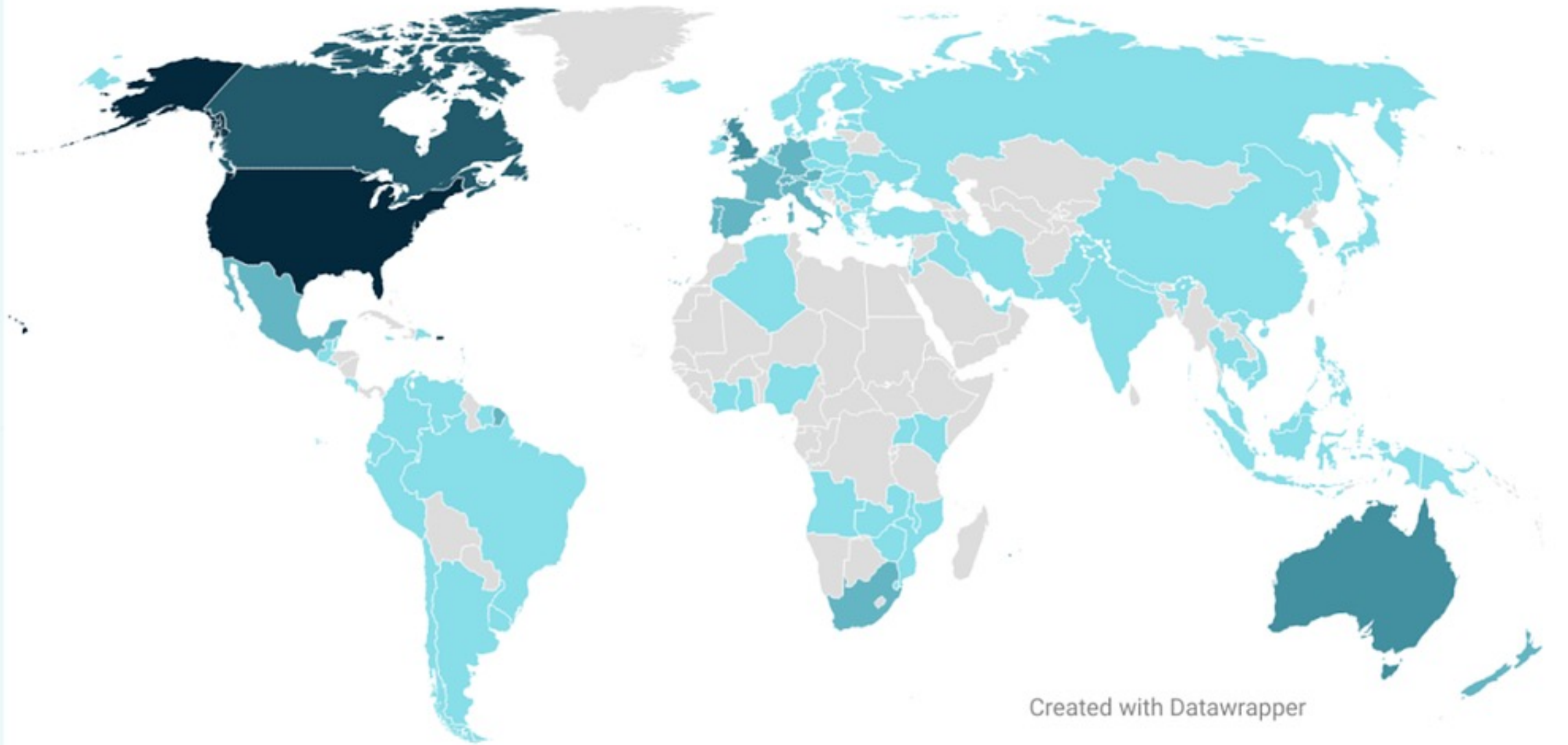
U.K.



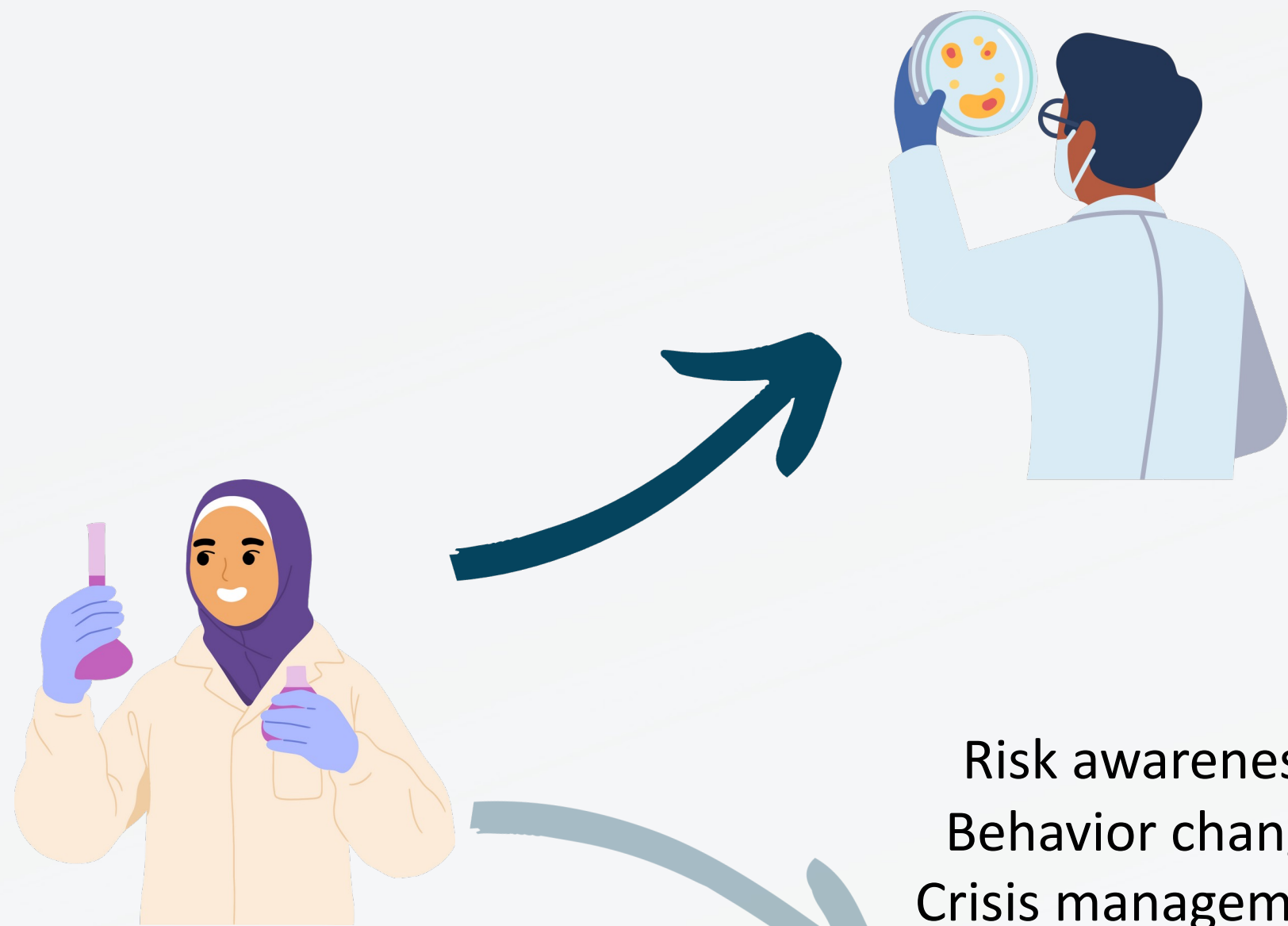
NEW
ZEALAND

OF RESPONSES

< 24	24-165	165-1309	1309-38496	≥ 38496
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Created with Datawrapper



Risk awareness
Behavior change
Crisis management
Health equity



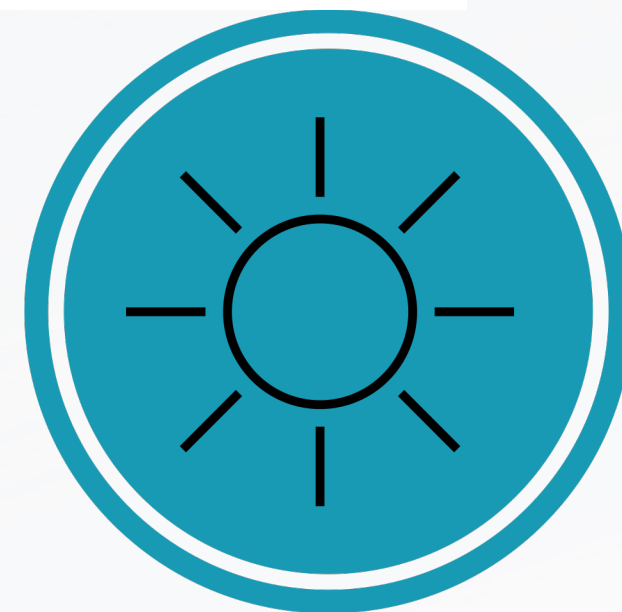
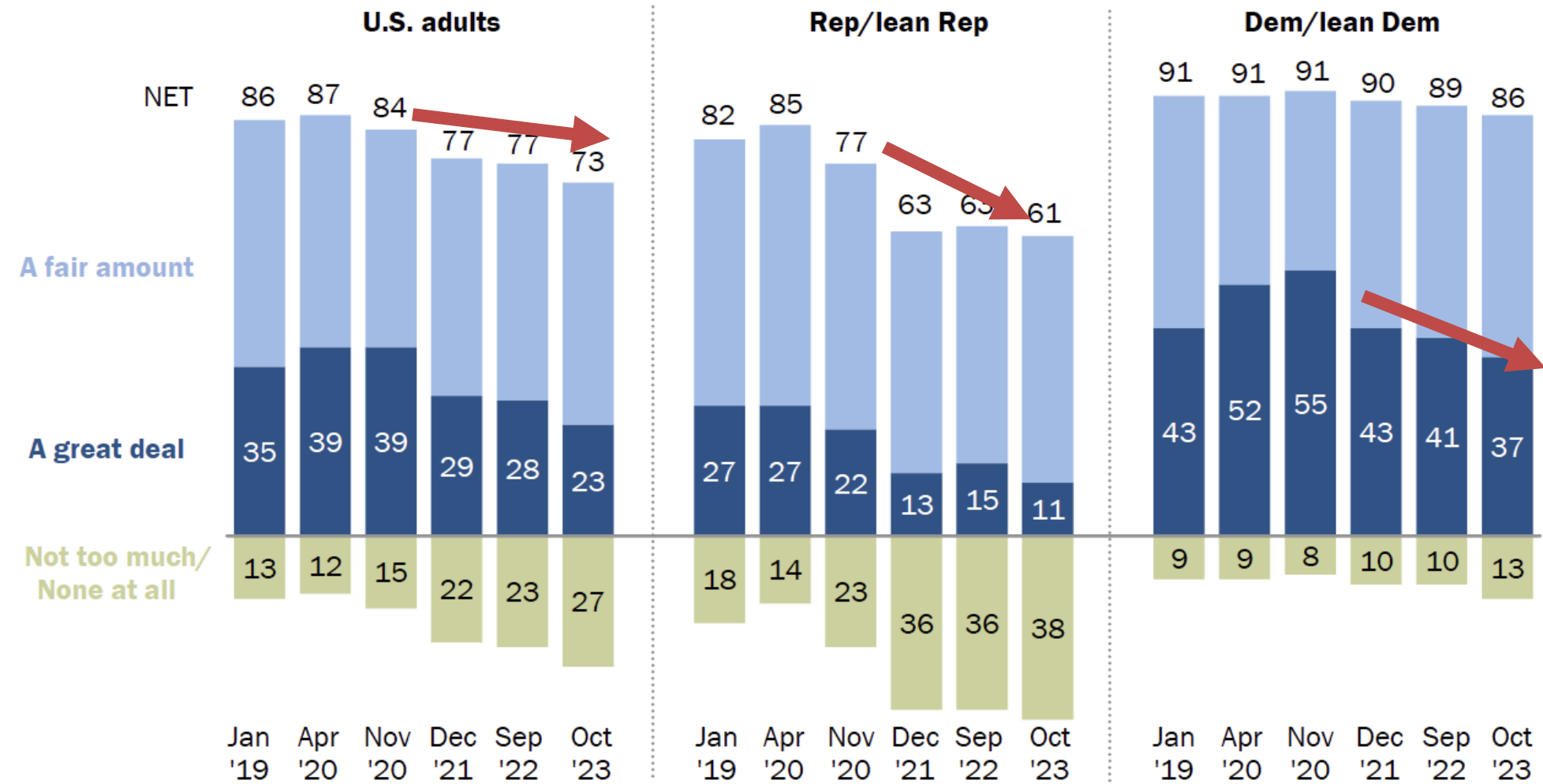
Propels scientific inquiry forward

Engendering societal dialogue, catalyzing transformative change

Decline in Trust

Declining levels of public trust in scientists

% of U.S. adults who have ___ of confidence in **scientists** to act in the best interests of the public



250,000 kindergarteners are *not* up-to-date on **routine** vaccinations

Routine vaccination rates, 2022

Connecticut West Virginia National Iowa Idaho

Herd
Immunity
Threshold

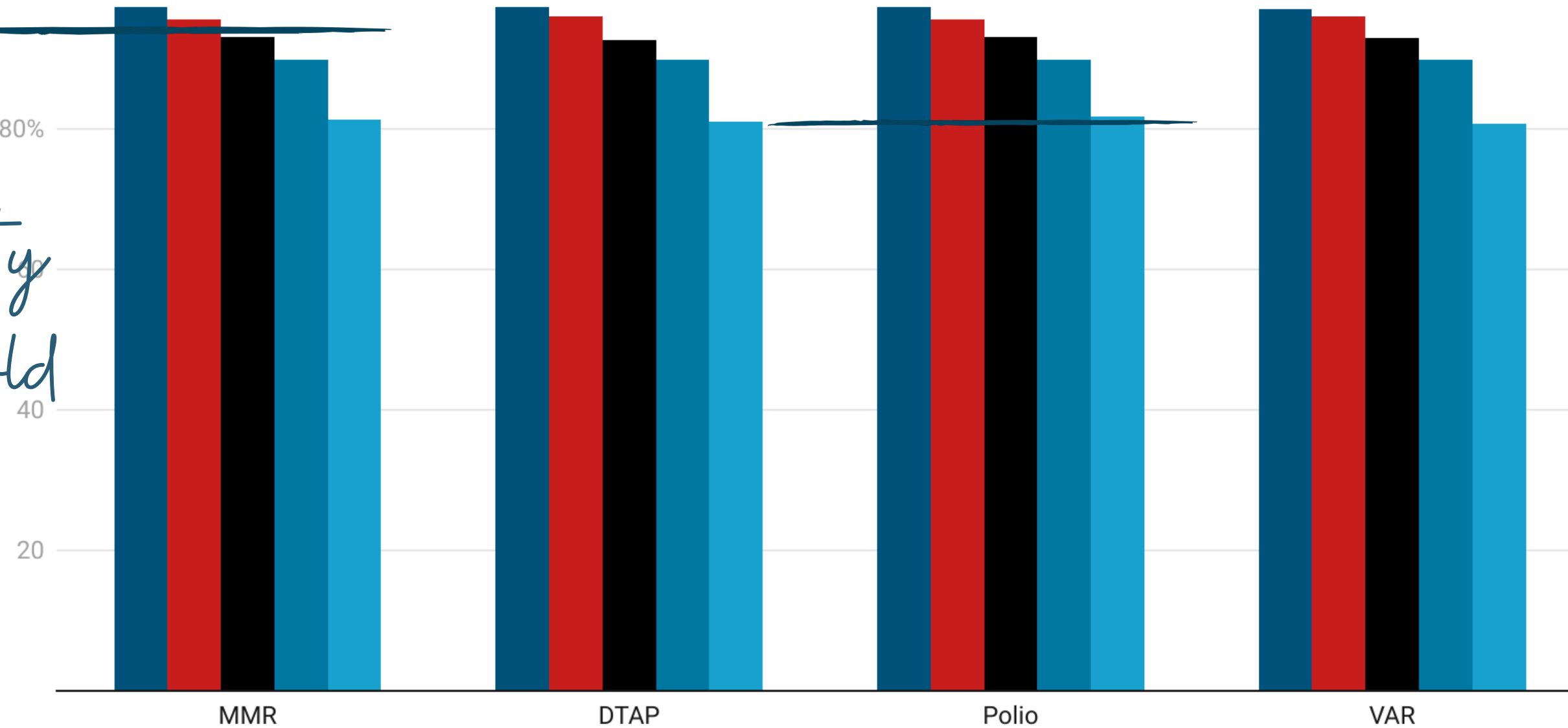
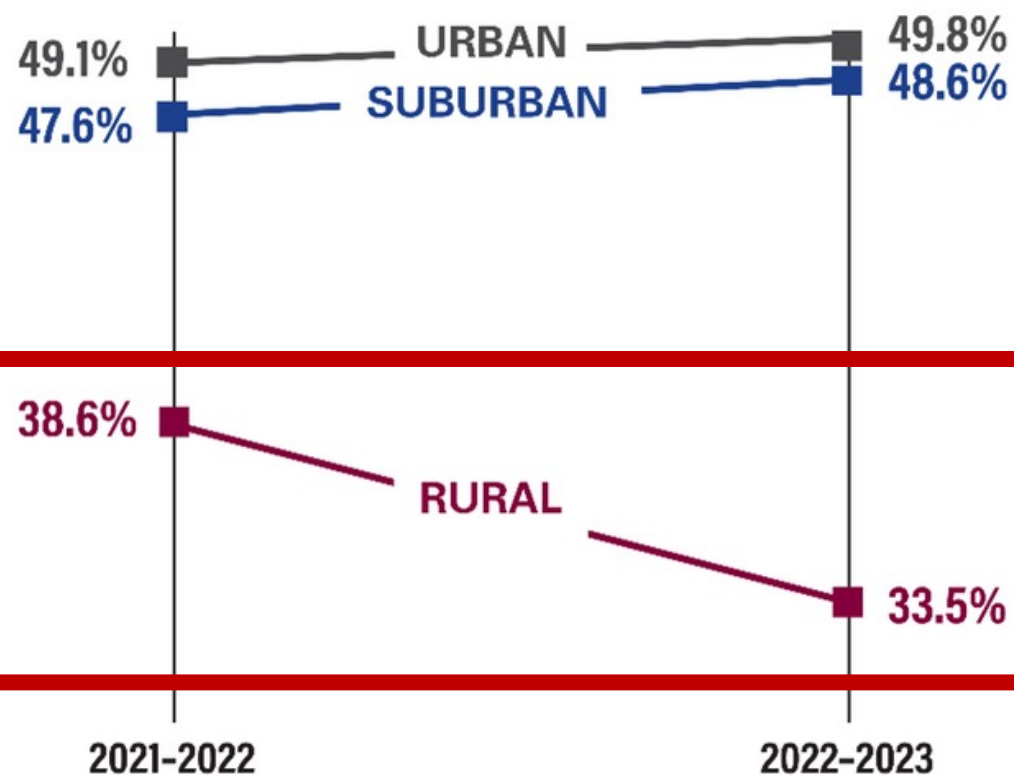


Chart: Katelyn Jetelina • Source: MMWR • Created with Datawrapper

Flu Vaccination Coverage in Children 6 Months to 17 Years



As of December 24, 2022, flu vaccination coverage among children living in rural areas has declined this season and remains lower compared to children living in suburban and urban areas.

Data source: CDC's National Immunization Survey-Flu.

% of kindergarteners with a vaccine exemption

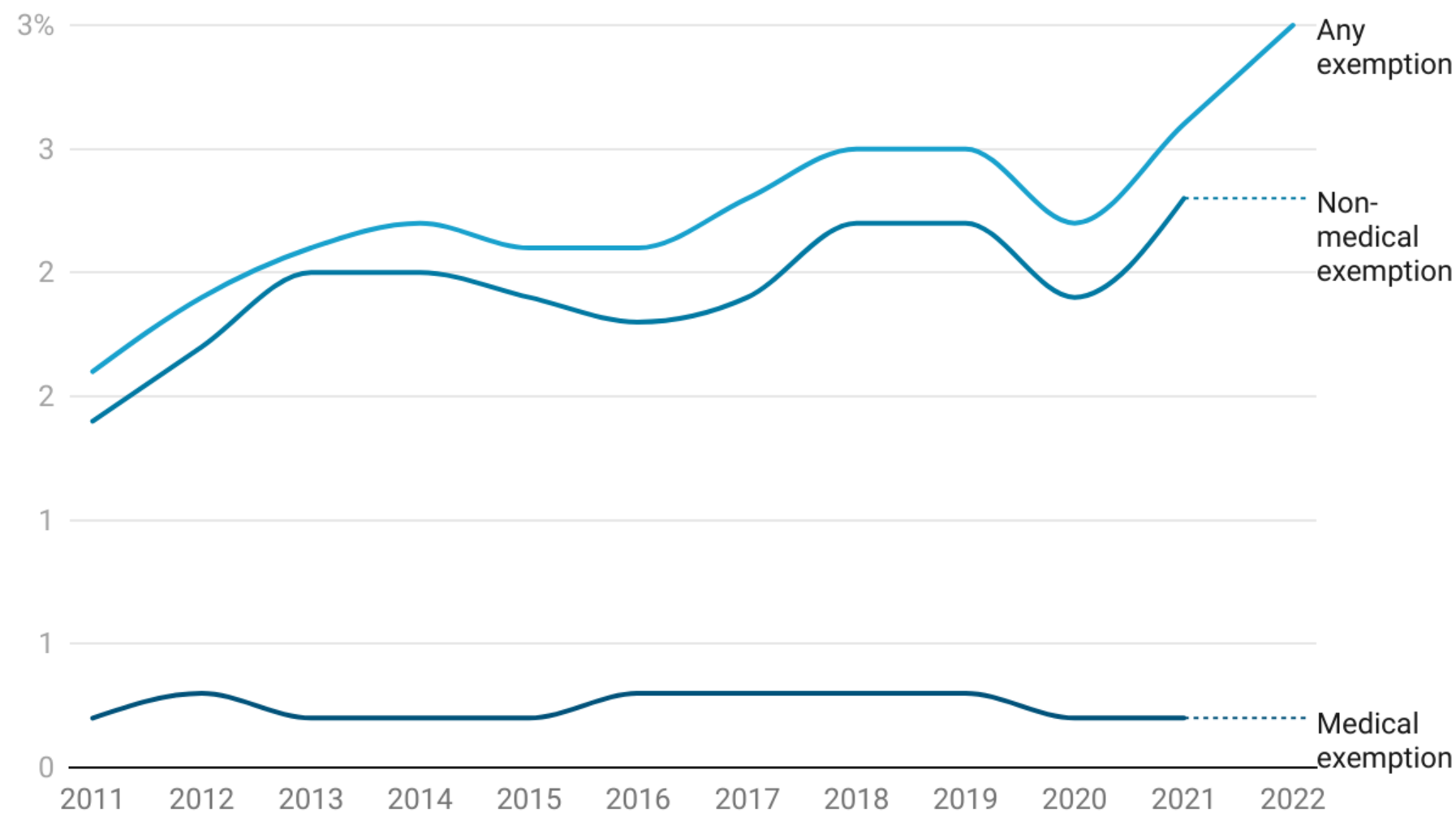


Chart: YLE/Katelyn Jetelina • Source: CDC • Created with Datawrapper

How polio came back to New York for the first time in decades, silently spread and left a patient paralyzed



Spencer Kimball
@SPENCEKIMBALL

Pertussis cases in the last 50 years

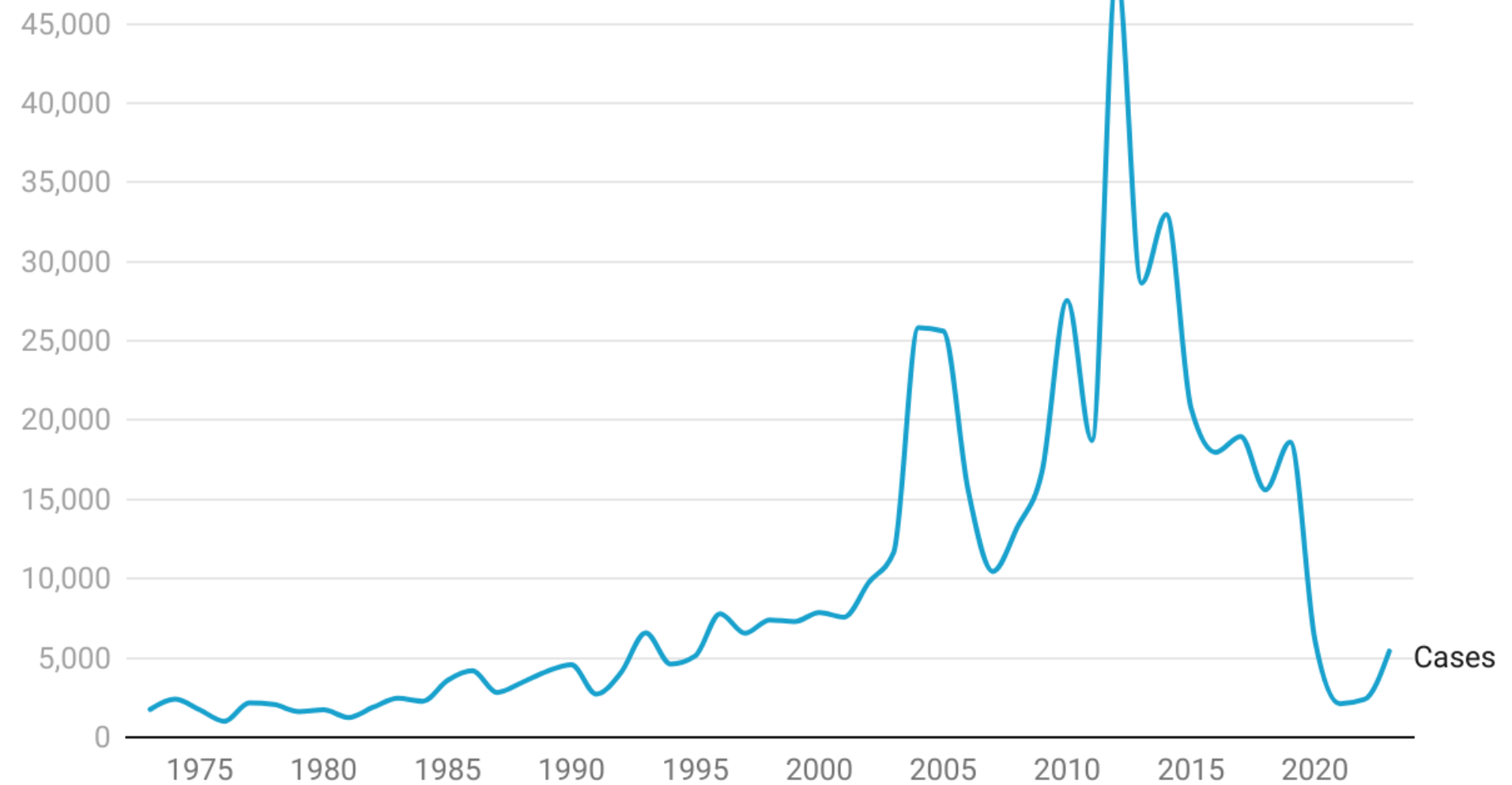
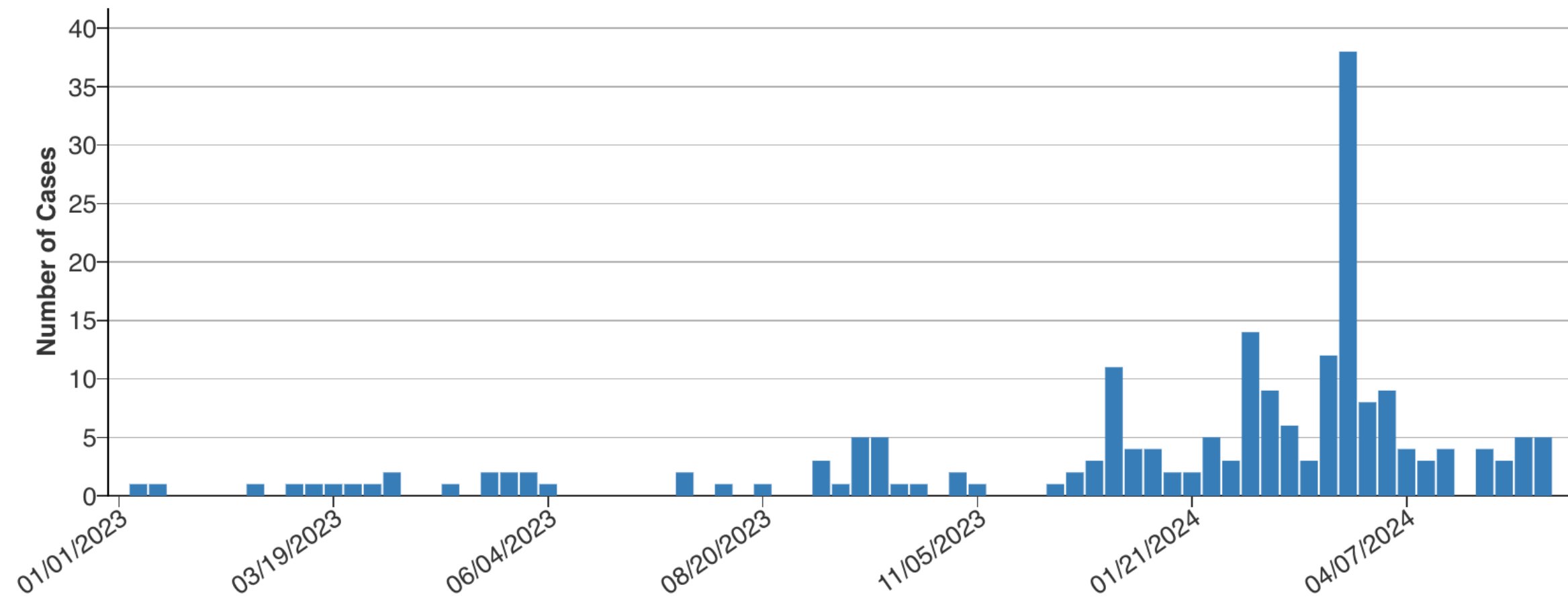


Chart: YLE • Source: CDC • Created with Datawrapper

Number of measles "sparks" increasing

2023–2024* (as of June 6, 2024)

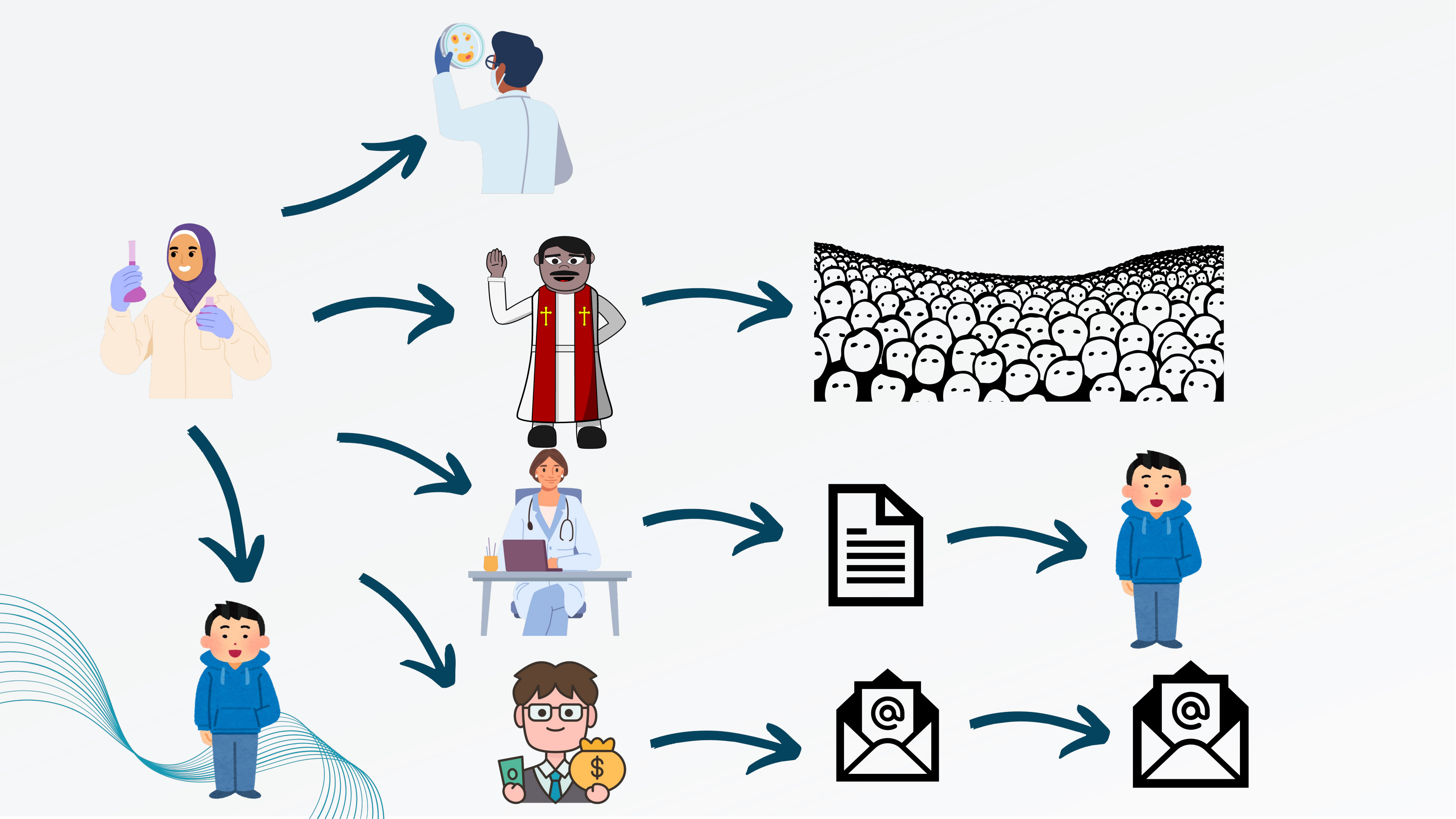


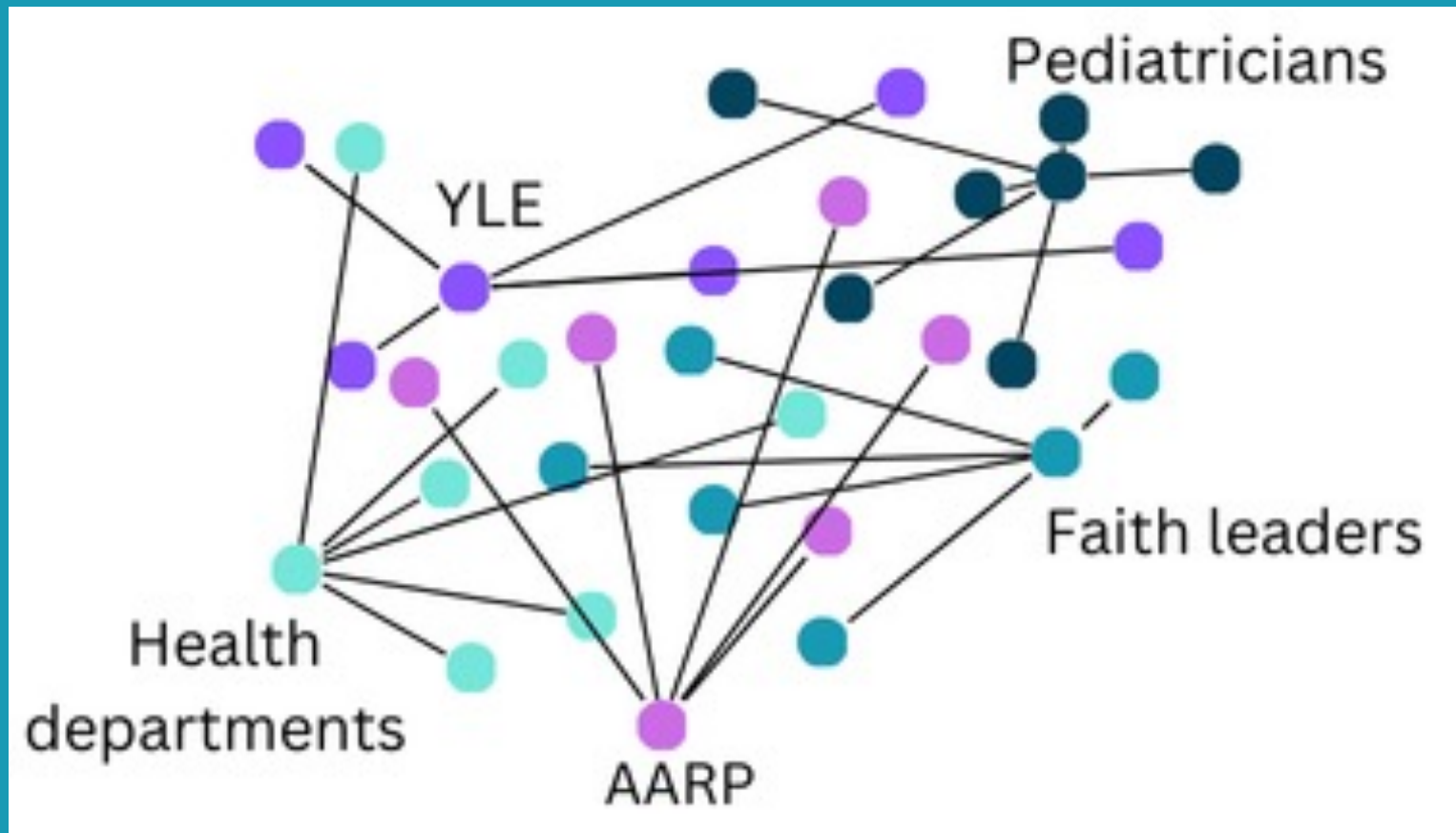
Last year

This year

WHAT DO WE DO?







Who are trusted messengers?

Trust score for institutions

■ U.S. ■ World

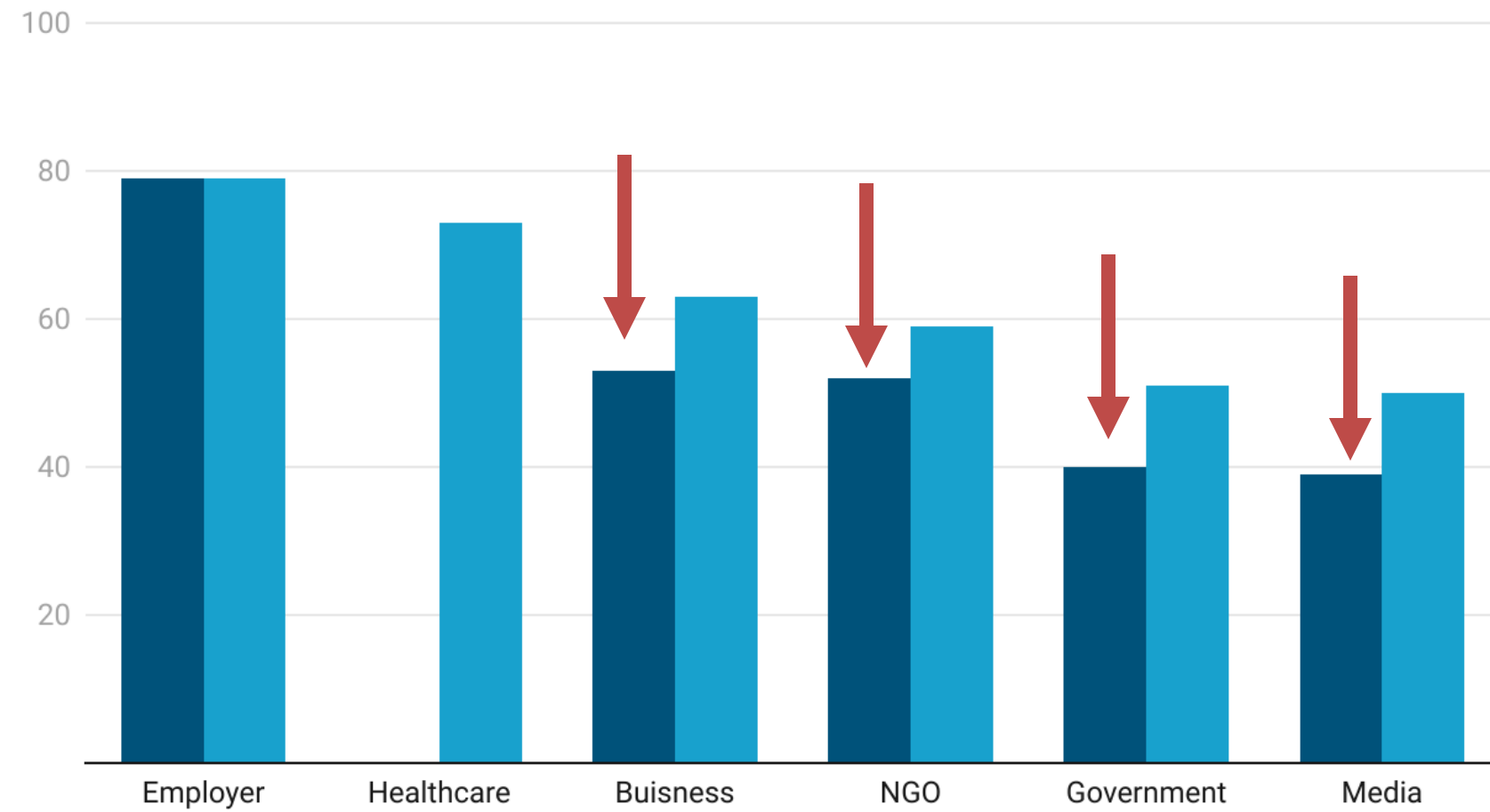


Chart: Katelyn Jetelina • Source: Edelman Trust Barometer • Created with Datawrapper

Who are trusted messengers?

Trust score for institutions

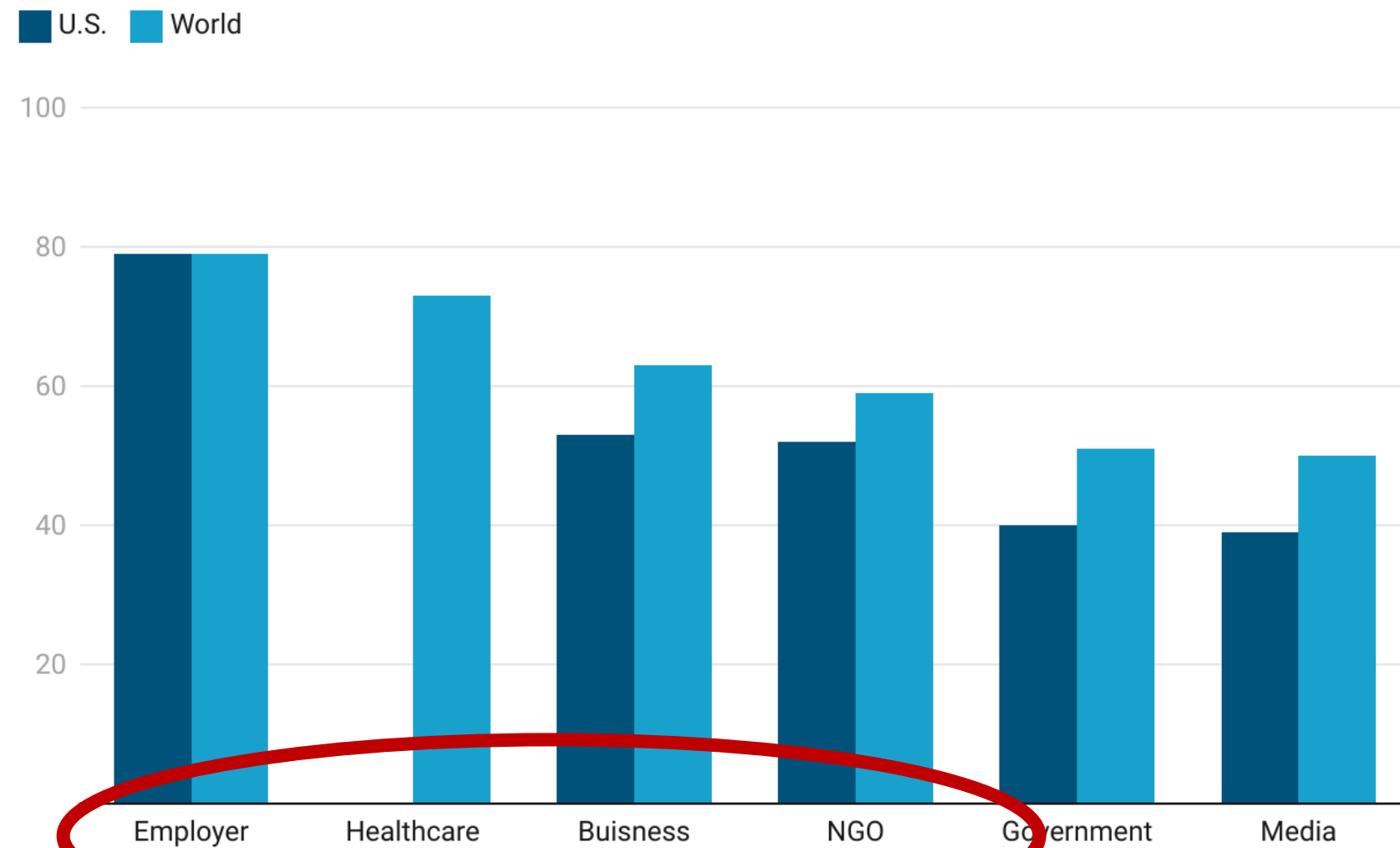
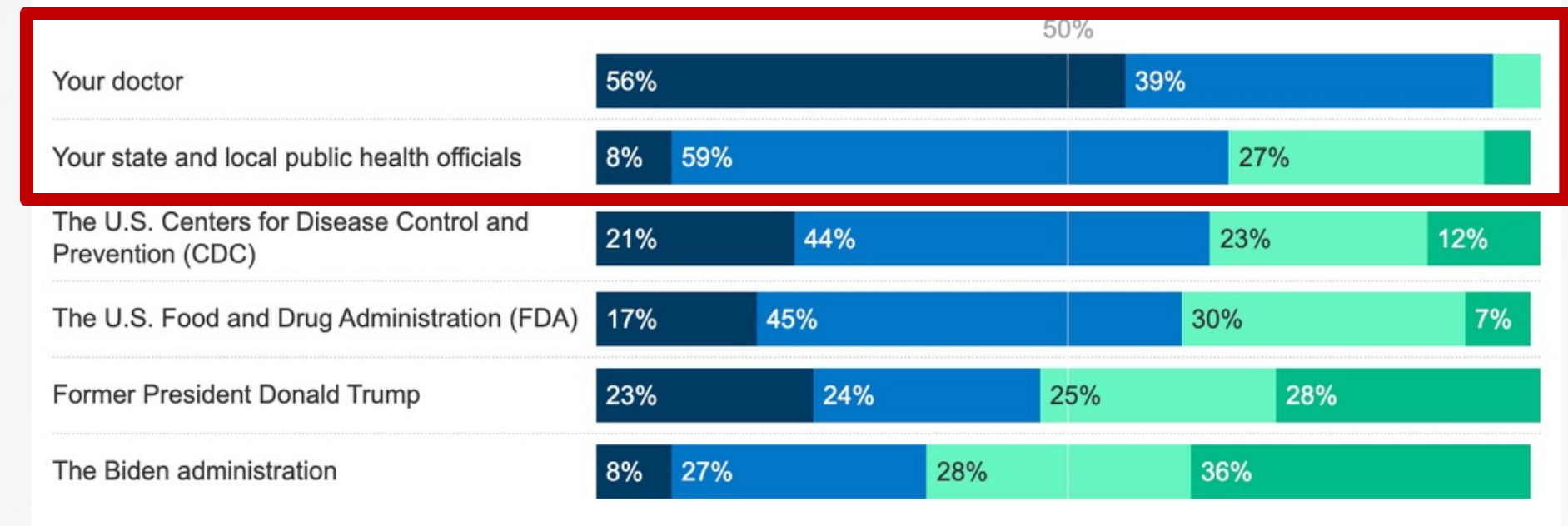


Chart: Katelyn Jeter. Source: Edelman Trust Barometer. Created with Datawrapper

Rural Americans

How much do you trust each of the following to make the right recommendations when it comes to health issues?

■ A great deal ■ A fair amount ■ Not much ■ Not at all



TIPS FOR TRUSTED MESSENGERS





Tips for trusted messengers

1. KNOW WHY YOU ARE TRUSTED

2.

3.

4.

- **RELATABLE**— Can hang. Background, skills, and experiences overlap with the target audience
- **BELIEVABLE** — Genuine, transparent, and motives are clear
- **CREDIBLE**— Bring useful knowledge and skills that others don't have

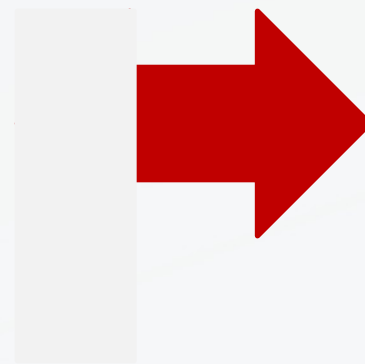


H5N1

- Highest risk
 - Agriculture workers
 - Undocumented workers
 - Health and wellness groups that drink raw milk
- Trusted messenger feedback
 - Not worried about pink eye
 - Mental health is top concern



“Open a two-way street”



Hearing

- Easy: accidental; automatic.
- Passive: involuntary; effortless.
- Physical Function: involves the ears.

Listening

- Hard: requires practice and being alert.
- Active: a conscious effort; requires focused involvement.
- Internal Behavior: involves mind and body.

- Legitimate concerns exist
- Look for questions. Open a tip line
- Know where people are talking

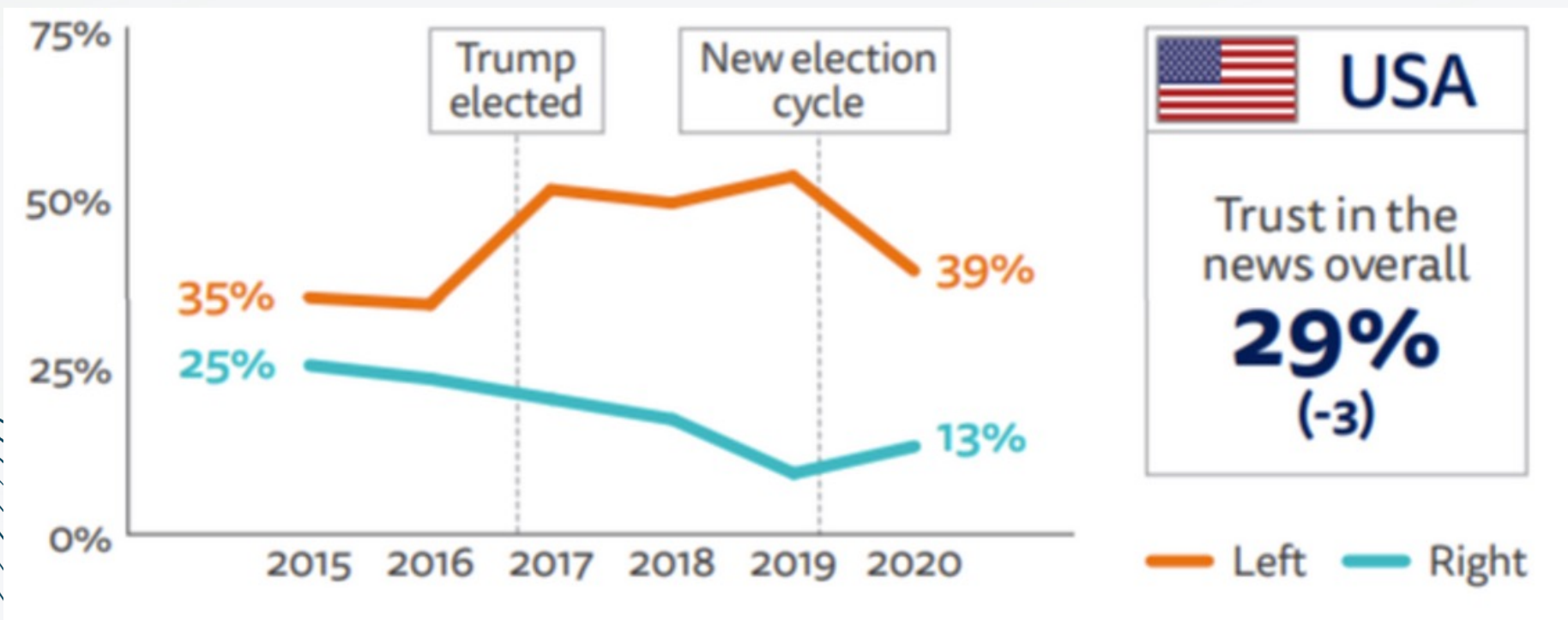


Show up during “peace” times

Tips for trusted messengers

- 1. KNOW WHY YOU ARE TRUSTED**
- 2. MEET PEOPLE WHERE THEY ARE AT**
- 3.**
- 4.**

Information landscape changing



PROPORTION THAT USED EACH AS A SOURCE OF NEWS IN THE LAST WEEK (APRIL 2020) – SELECTED COUNTRIES

	Online (incl. social media)	TV	Social media	Radio	Print (incl. mags)
UK	79%	71%	47%	35%	18%
USA	73%	60%	47%	21%	16%
Germany	69%	72%	39%	41%	26%
Spain	83%	71%	63%	24%	28%
South Korea	85%	65%	51%	14%	19%
Argentina	90%	77%	78%	24%	30%
Average change from January	+2	+5	+5	+2	-2

Our relationship to information is *emotional*



The image shows a screenshot of the SunSentinel website. At the top, there is a dark navigation bar with the text 'SECTIONS' on the left, the SunSentinel logo in the center, and 'LOG I' on the right. Below the navigation bar, there are two article teasers. The first one has a small image of a person and the text 'Rents are rising as homebuyers get priced out of the market'. The second one has a small image of a basketball player and the text 'ASK IRA: Would Lowry in place of Dragic be enough of a Heat upgrade?'. Below these teasers, there is a section header 'CORONAVIRUS' in a dark box. The main headline reads 'A 'healthy' doctor died two weeks after getting a COVID-19 vaccine'. At the bottom of the article preview, the date and time 'JAN 08, 2021 AT 11:22 AM' are displayed.

SECTIONS SOUTH FLORIDA SunSentinel LOG I

Rents are rising as homebuyers get priced out of the market

ASK IRA: Would Lowry in place of Dragic be enough of a Heat upgrade?

CORONAVIRUS

A 'healthy' doctor died two weeks after getting a COVID-19 vaccine

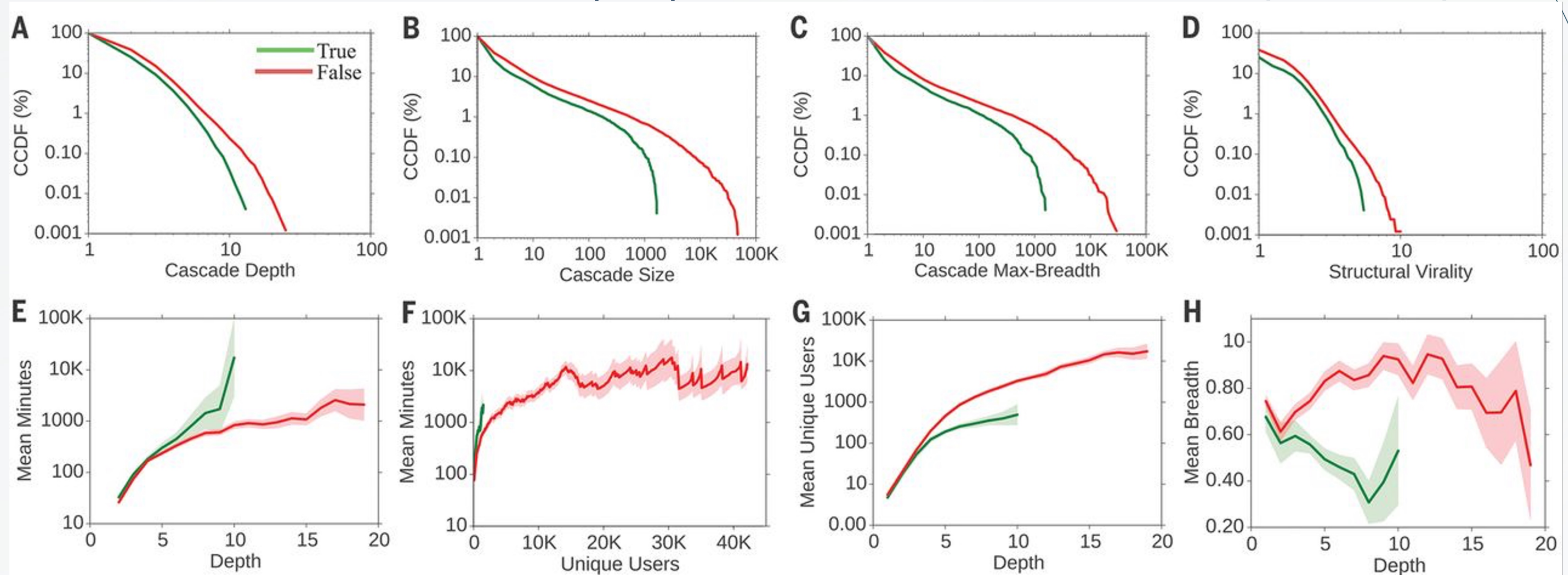
JAN 08, 2021 AT 11:22 AM

Misinformation goes farther, faster, deeper, and more broadly than the truth

reached far more people

more people retweeted

spread through peer-to-peer



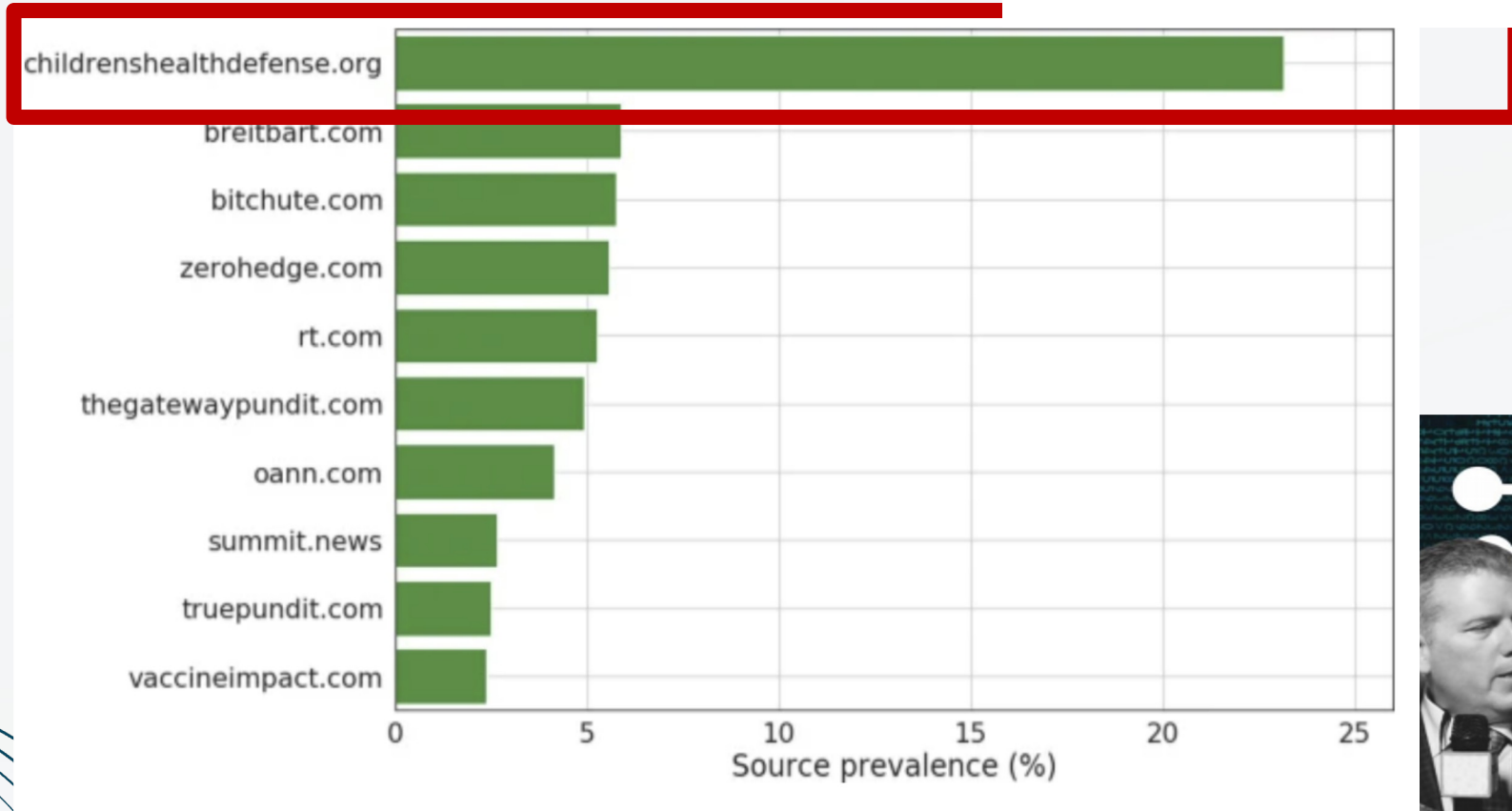
six times faster at spreading

retweeted by more unique users

diffused more broadly

Tax records reveal the lucrative world of covid misinformation

Tweets shared by users geolocated in the U.S. that li



A major funder of the anti-vaccine movement has made millions selling natural health products



PANDEMIC PROFITEERS
The business of anti-vaxx



on Post
Darkness

Growing acceptance of vaccine misinformation

2021 2023

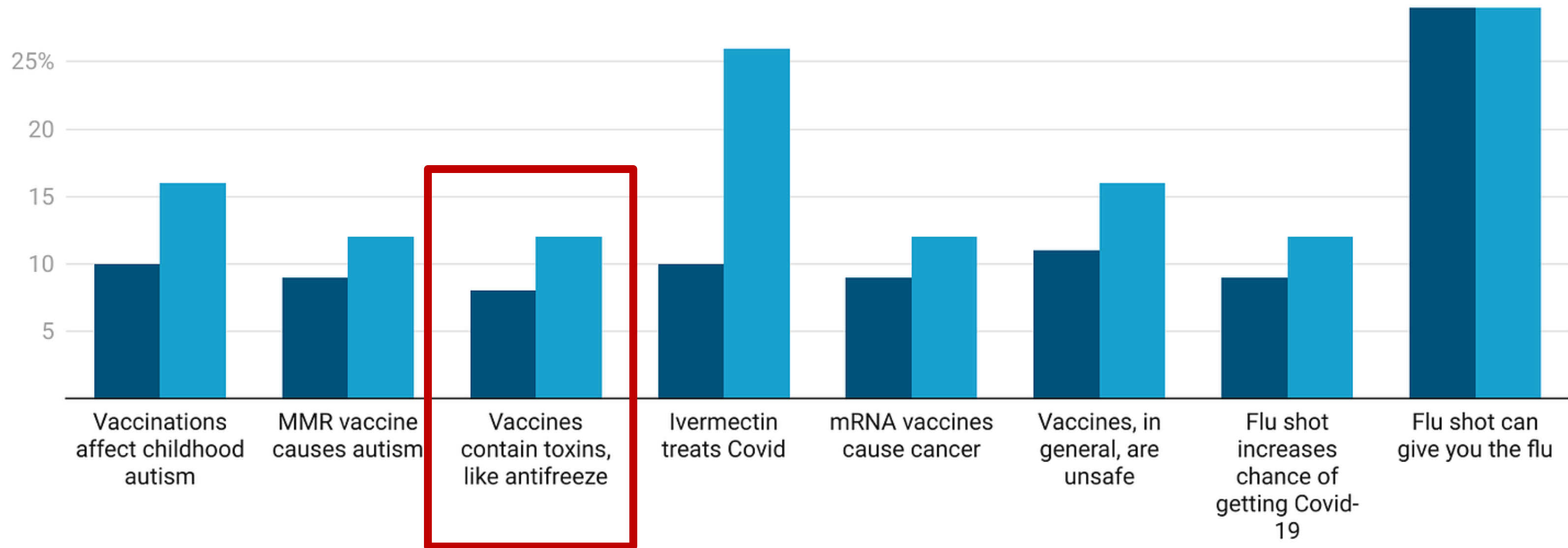


Chart: YLE/Katelyn Jetelina • Source: Annenberg Public Policy Center • Created with Datawrapper

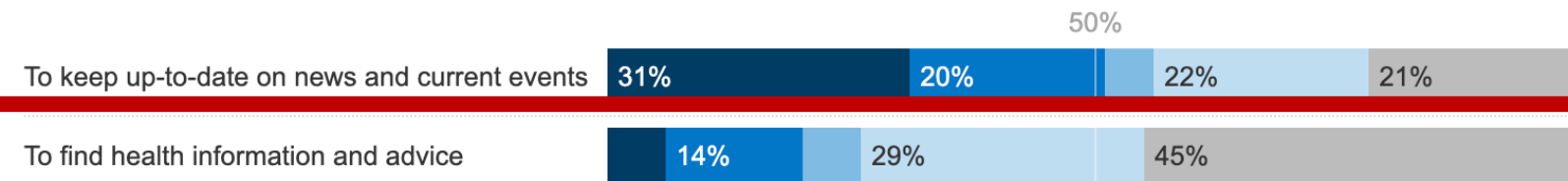
“Misinformation is not like a plumbing problem you fix. It is a **social condition**, like crime, that you must constantly monitor and adjust to.”

-TOM ROSENSTIEL

Tip: Meet people where they are at

Among rural adults: How often do you use social media such as Facebook, Twitter, Instagram, TikTok, YouTube, WhatsApp, or similar sites or apps for each of the following purposes?

■ Every day ■ At least once a week ■ At least once a month ■ Occasionally ■ Never

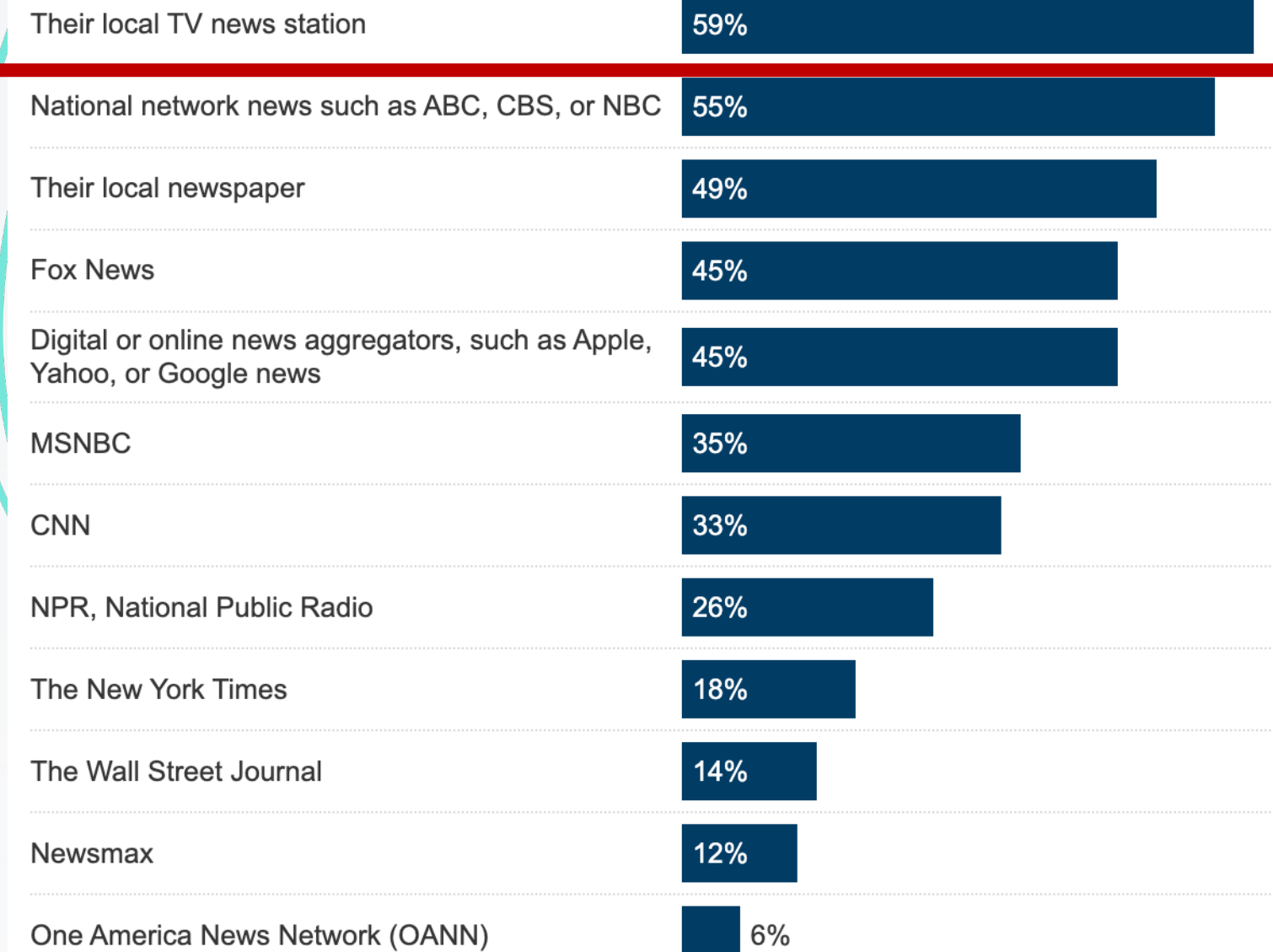


1 in 2

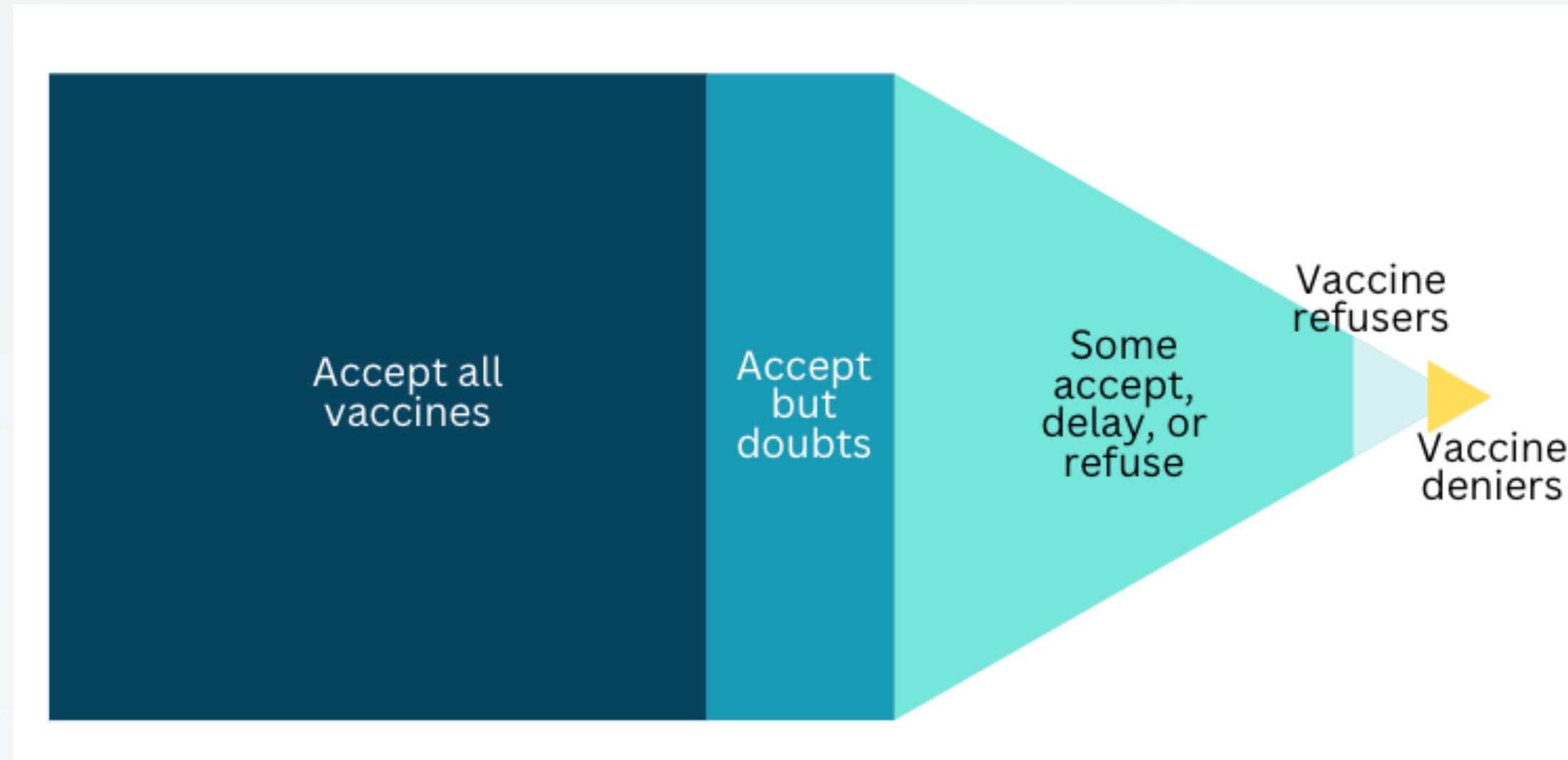
Traditional And Social Media Use Among Rural Adults

Traditional media Social media

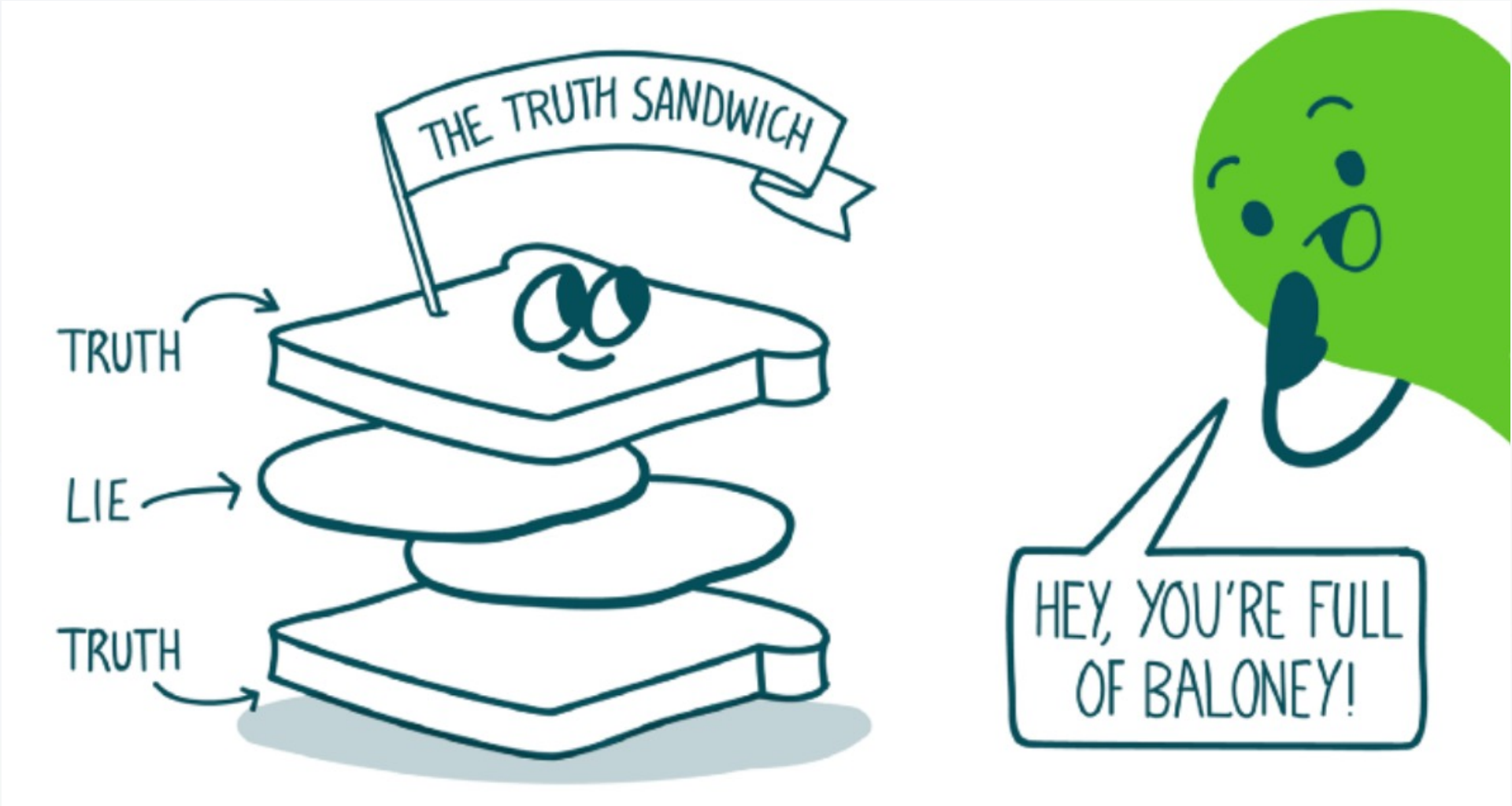
Percent of rural adults who say they regularly read, watch, or listen to each of the following:



Tip: Audience is everything



Tip: Truth sandwich



Far broader crisis

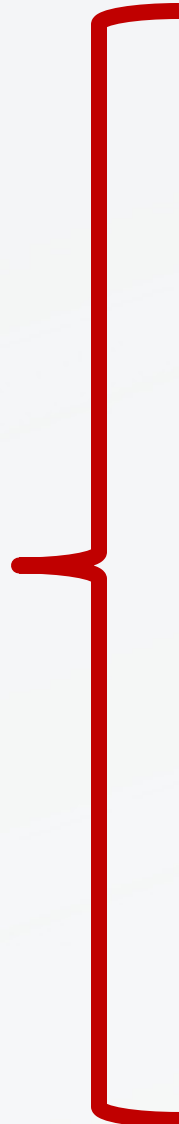
Misinformation



Information

Tip: Anticipate needs

9 months of preparation

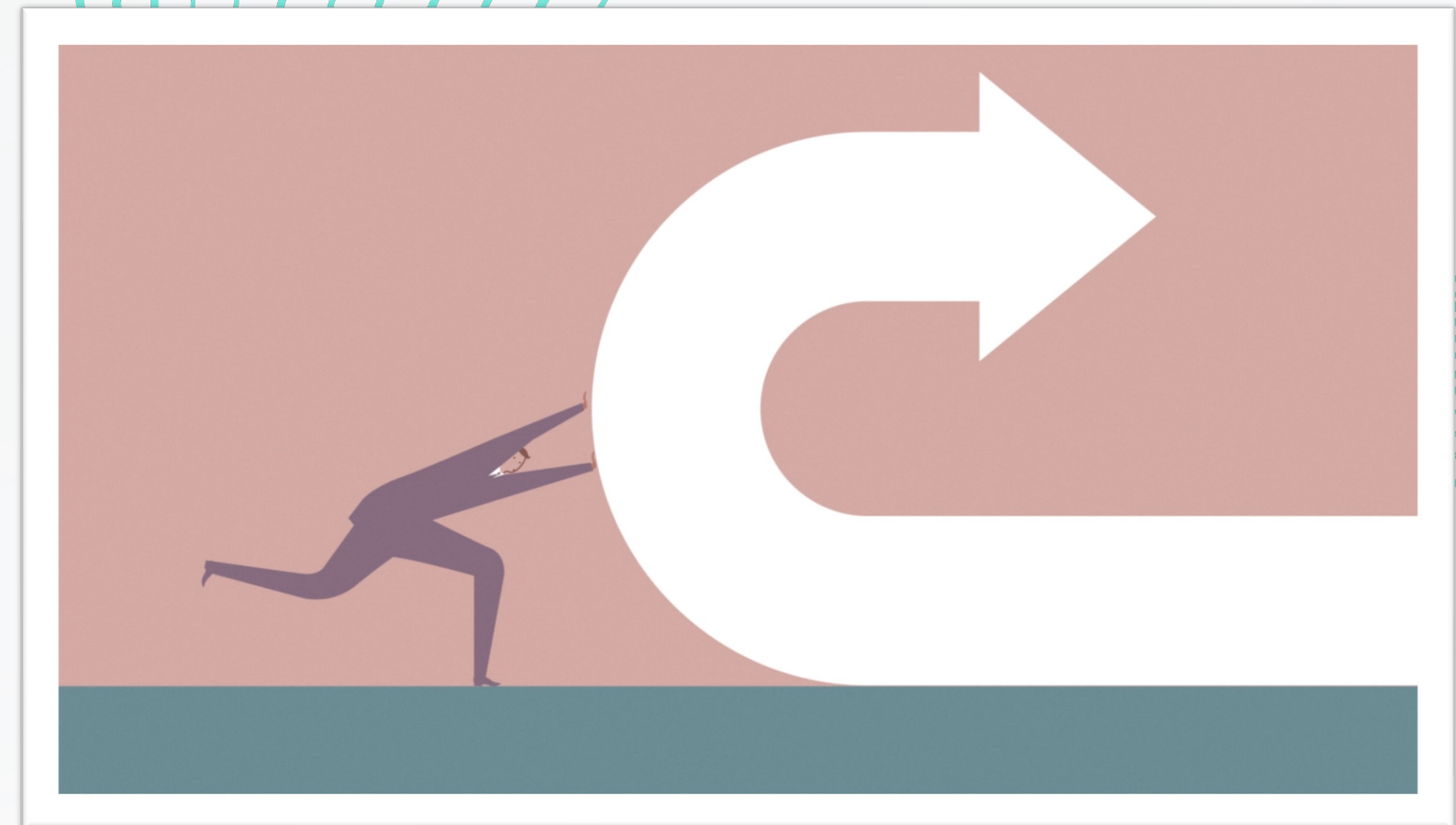


Date	Milestone
Dec 1	Covid-19 illness documented (unpublicized Nov 17 th)
Jan 10	SARS-CoV-2 virus sequenced
Jan 15	NIH designs mRNA vaccine in collaboration with Moderna
Mar 16	Moderna Phase 1/2 trial begins
May 2	Pfizer/BioNTech Phase 1/2 trial begins
July 14	Moderna Phase 1/2 trial published in NEJM
July 27, 28	Moderna and Pfizer/BioNTech Phase 3 trial begins
Aug 12	Pfizer/BioNTech Phase 1/2 published in Nature
October 22,27	Enrollment in both Phase 3 trials complete; >74,000 participants
Nov 9	Pfizer/BioNTech announces interim analysis efficacy > 90%
Nov 16	Moderna announces interim analysis efficacy 94.5%
Nov 18	Pfizer/BioNTech announces 95% efficacy as final result
Nov 20	1 st EUA submitted by Pfizer/BioNTech
Nov 27	Distribution of vaccine by UAL charter flights throughout US
Dec 10	FDA External review of Pfizer/BioNTech EUA
Dec 11	Phase 1a Vaccination begins for health care professionals*

*Provisional on positive external review

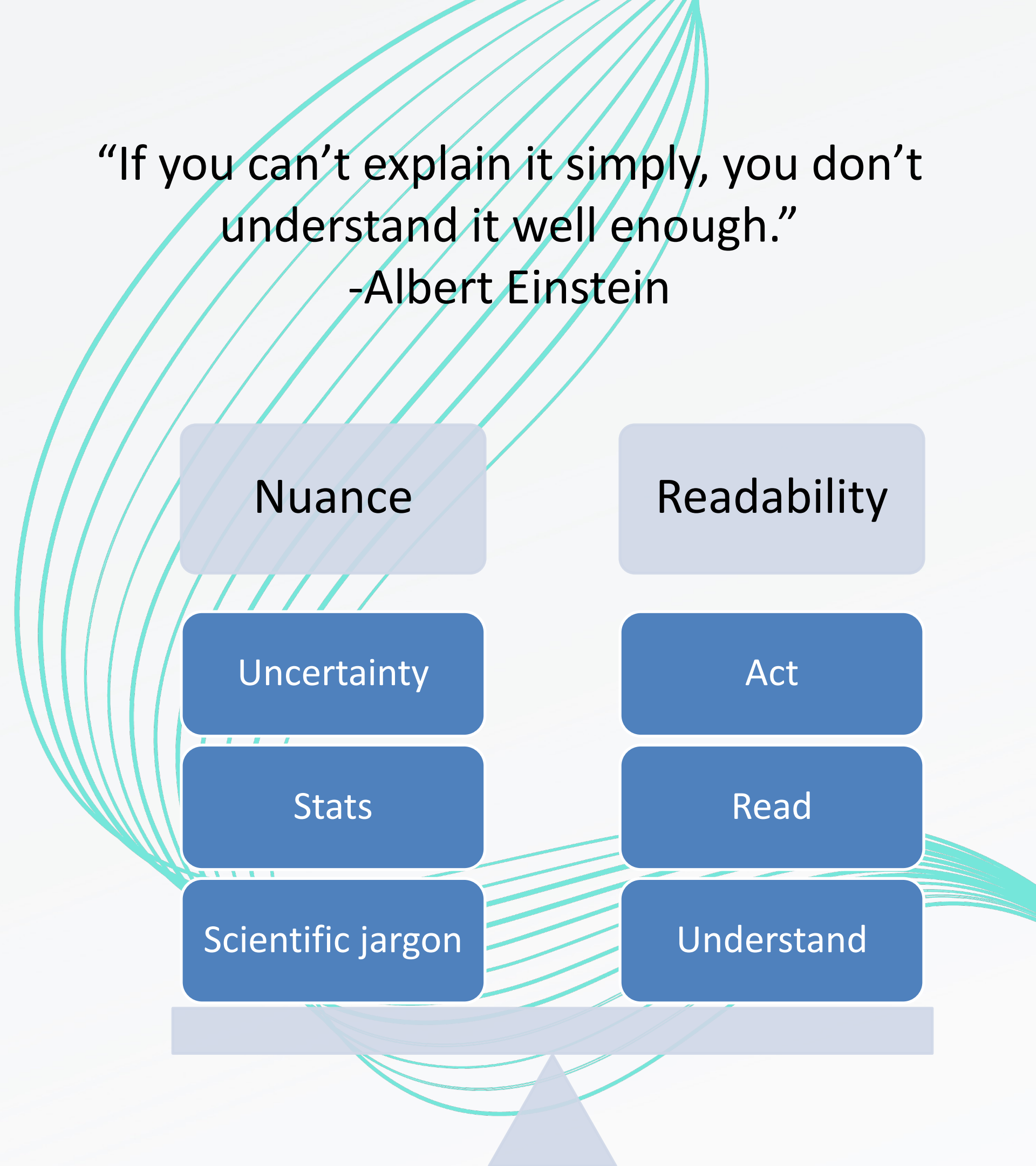
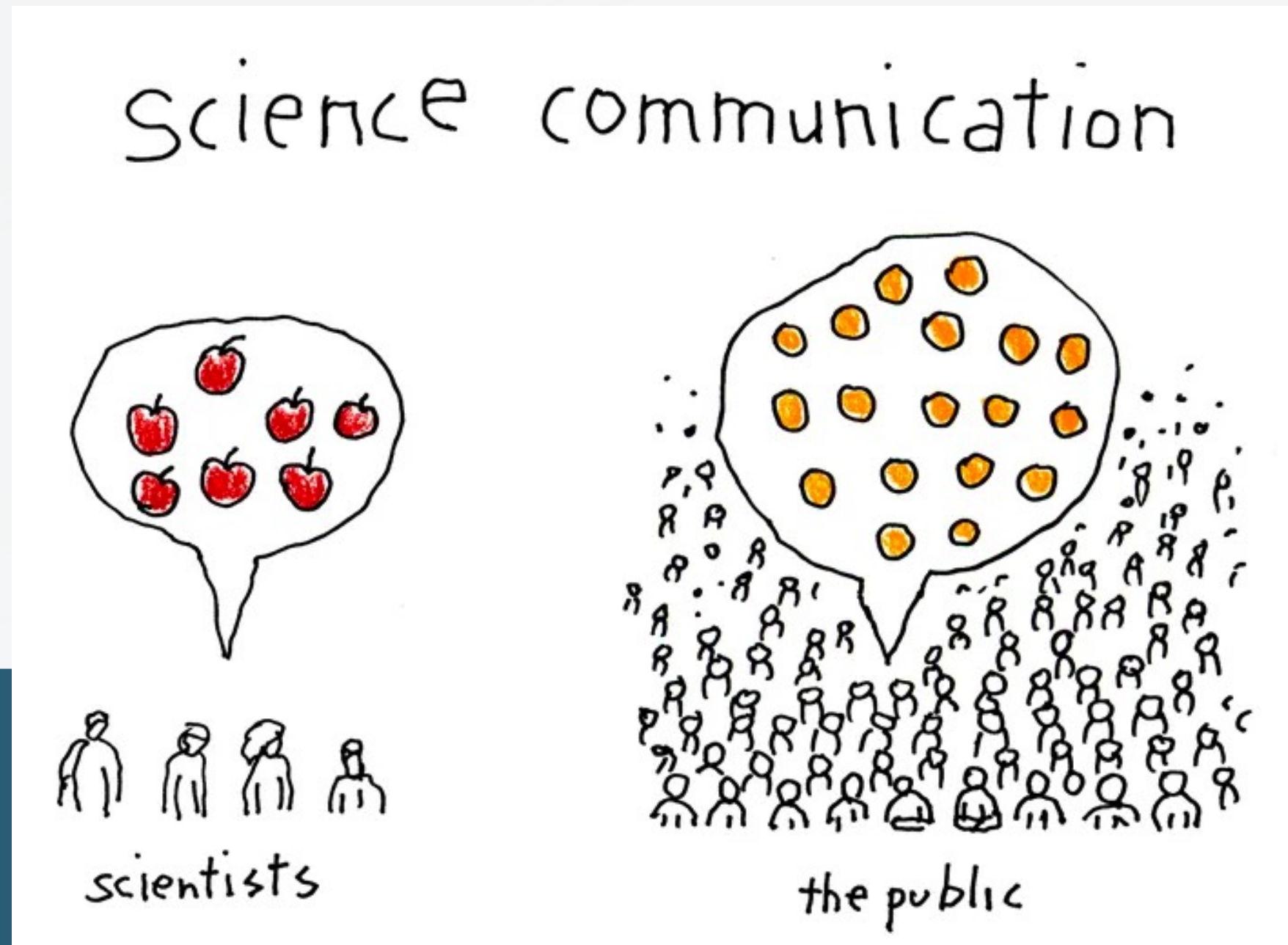
Tip: Engage with humility

- ☑ What do we know?
- ☑ What do we **not** know?
- ☑ How are we finding answers?



Tip: Translate

“If you can’t explain it simply, you don’t understand it well enough.”
-Albert Einstein



Tips for trusted messengers

- 1. KNOW WHY YOU ARE TRUSTED**
- 2. MEET PEOPLE WHERE THEY ARE AT**
- 3. IT'S NOT JUST WHAT, BUT HOW**
- 4.**

Less of this

More of this

Here's why Facebook, YouTube,
and more are removing that **dumb**
Plandemic video

Coronavirus : 9 réactions **absurdes des
humains face à l'épidémie**

**'Absolutely insane': Anti-vaxxers promote
coronavirus conspiracies**

**A bizarre conspiracy theory puts Bill Gates at the center of
the coronavirus crisis — and major conservative pundits are
circulating it**

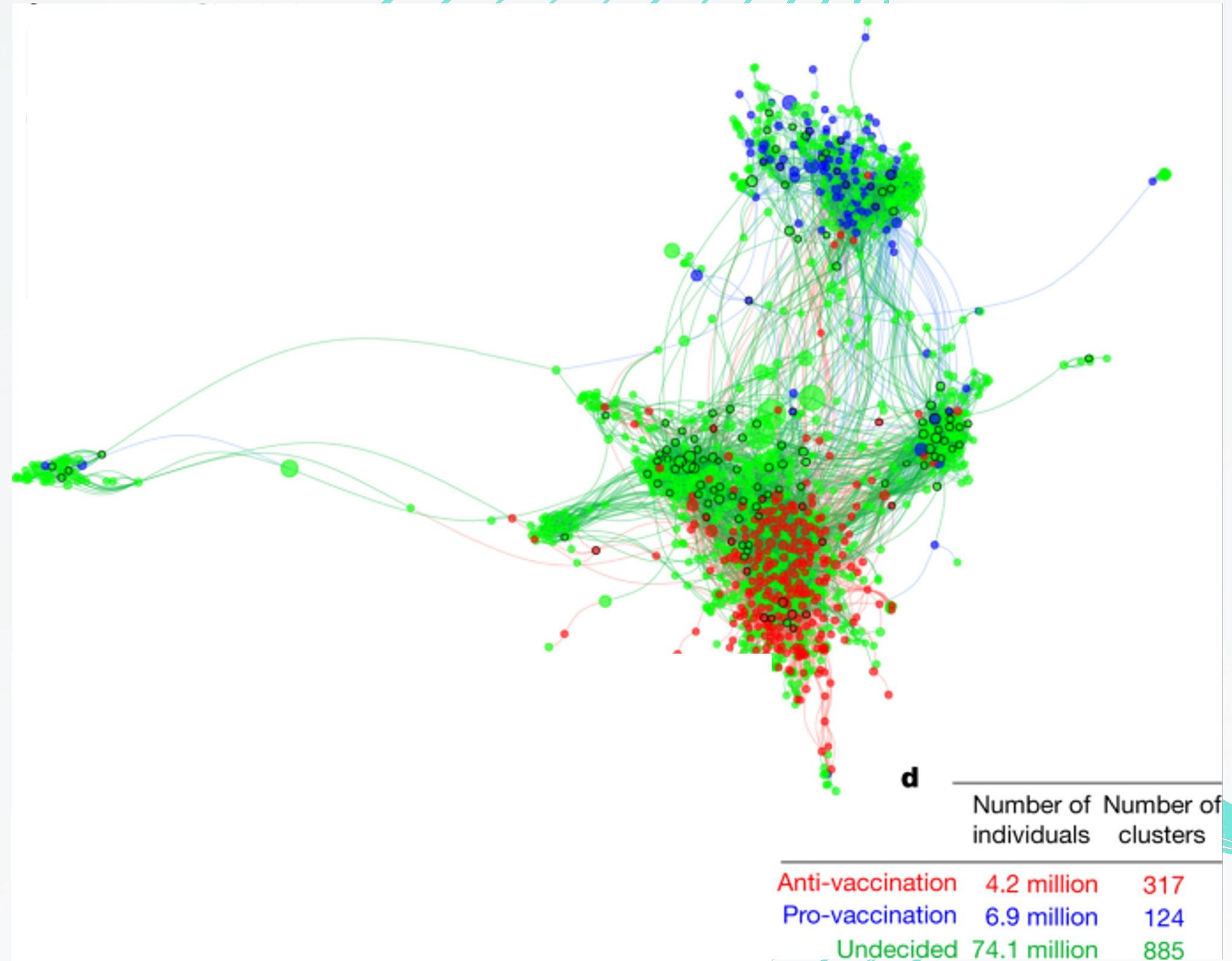
**Coronavirus y conspiración: historia de las
teorías absurdas durante las pandemias**

*Alors que l'épidémie continue de gagner du
terrain, **les théories fumeuses** sur l'origine du
coronavirus fleurissent sur internet. Petit
florilège.*

Drug companies... medical researchers

Mass vaccination site ... Community vaccine clinic

Be inclusive



- ☑ Actual person. A face. A warm body
- ☑ Consistent voice
- ☑ Credible voice

Show *human* side

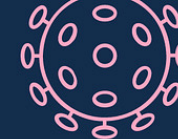


Tips for trusted messengers

- 1. KNOW WHY YOU ARE TRUSTED**
- 2. MEET PEOPLE WHERE THEY ARE AT**
- 3. IT'S NOT JUST WHAT, BUT HOW**
- 4. INNOVATION CAN HELP**

COVID-19 VACCINE

Top 6 concerns answered



The vaccine was not rushed

Speed does not mean rushed. It meant leveraging a whole lot of smart people, money, and decades of previous work to get us a vaccine in 9 months. This included:

1. Previous research (which started in 2003 thanks to SARS, COVID19's cousin);
2. Lots of money and resources for scientists around the world;
3. Production started before clinical trials were complete because the government financially supported the effort;
4. Although vaccines went through Phase I, II, and III, phases were overlapped to remove white space. This is standard practice;
5. High rates of disease in the community (unfortunately) meant we didn't have to wait for a minimum number of COVID19 cases during clinical trials;
6. Over 150,000 people flooded to participate in the U.S. trials. This couldn't have been done without each and every one of them

You will likely experience side effects

- Mostly mild-to-moderate side effects were reported in clinical trials: fever, fatigue, headaches, chills, diarrhea, muscle and joint pain
- Worse side effects with the second dose compared to the first
- Swollen lymph nodes were more common in the vaccine group compared to placebo. All cases resolved within 1 week
- There is a very small risk of mild heart inflammation (mRNA vaccines) or blood clots (JJ)
- There are anecdotal reports that women's menstrual cycles change after a COVID19 vaccine. The body is mounting an immune response and this is likely a side effect, like fever.

The vaccine is effective, even against Delta

- The vaccines have a 60-90% efficacy rate against Delta for any symptomatic disease
 - Vaccines are 92-96% effective against hospitalization and death
- We expect breakthrough cases because vaccines are not perfect. Breakthrough cases tend to be more mild
- Research shows the vaccines help avoid long COVID19 and, among those already with long COVID19, vaccines help alleviate symptoms for some.

It's biologically impossible for messenger RNA (mRNA) to alter DNA. In order for a mRNA to enter the nucleus, where DNA lives, mRNA does not have the "secret access signal" that would allow it to enter. mRNA vaccines

cannot enter the DNA. This would require a tool called "reverse transcriptase" that the vaccine doesn't have.

When approved by the FDA before. It's NOT because the past vaccines, and SARS) have been deemed unsafe. It's because mRNA is very effective. mRNA breaks down very quickly, so it doesn't stay in anything. Finding that something has been a challenge. For example, the fat bubbles for COVID19 worked great

side effects of mRNA COVID19 vaccines. However, based on our research, in the human body, we do not expect long term side effects:

They are removed from the body very quickly. mRNA is very fragile and breaks down after injection. The "fat bubbles" or lipids leave within days after injection. This means that they don't stay in the body. This is why serious adverse side effects have only popped up in the first few weeks after the vaccine had no complications from the vaccine

is high, but people still need the vaccine because: people who have already recovered from COVID-19, people who have a weak immune response (antibody and T-cell protection) against variants of concern and people who are exposed to the virus from natural infection. Its not as focused as vaccine

Bird flu
iHeard St. Louis

1 in 5 St. Louis adults heard about it

Bird flu spreading; one case in humans reported

Templates ▾ Search for campaigns, templates

Topics ▾ Styles ▾

Adrienne A

Set up your first campaign
Tell us about your goals.

Select all of the items of interest and we will curate your experience based on your region and topics of interest. Pick as many as you like.

My Location Asheville, NC

Languages English Spanish

Campaign Target Rural Suburban Urban Mix

Templates Social Media Print Video Talking Points

Topics Mental Health Substance Abuse Healthy Eating Vaccine Acceptance Environment Health

Target Audiences Gen Z 1990s-2010s Millennials 1980s-1990s Gen X 1965-1979 Baby Boomers 1948-1964

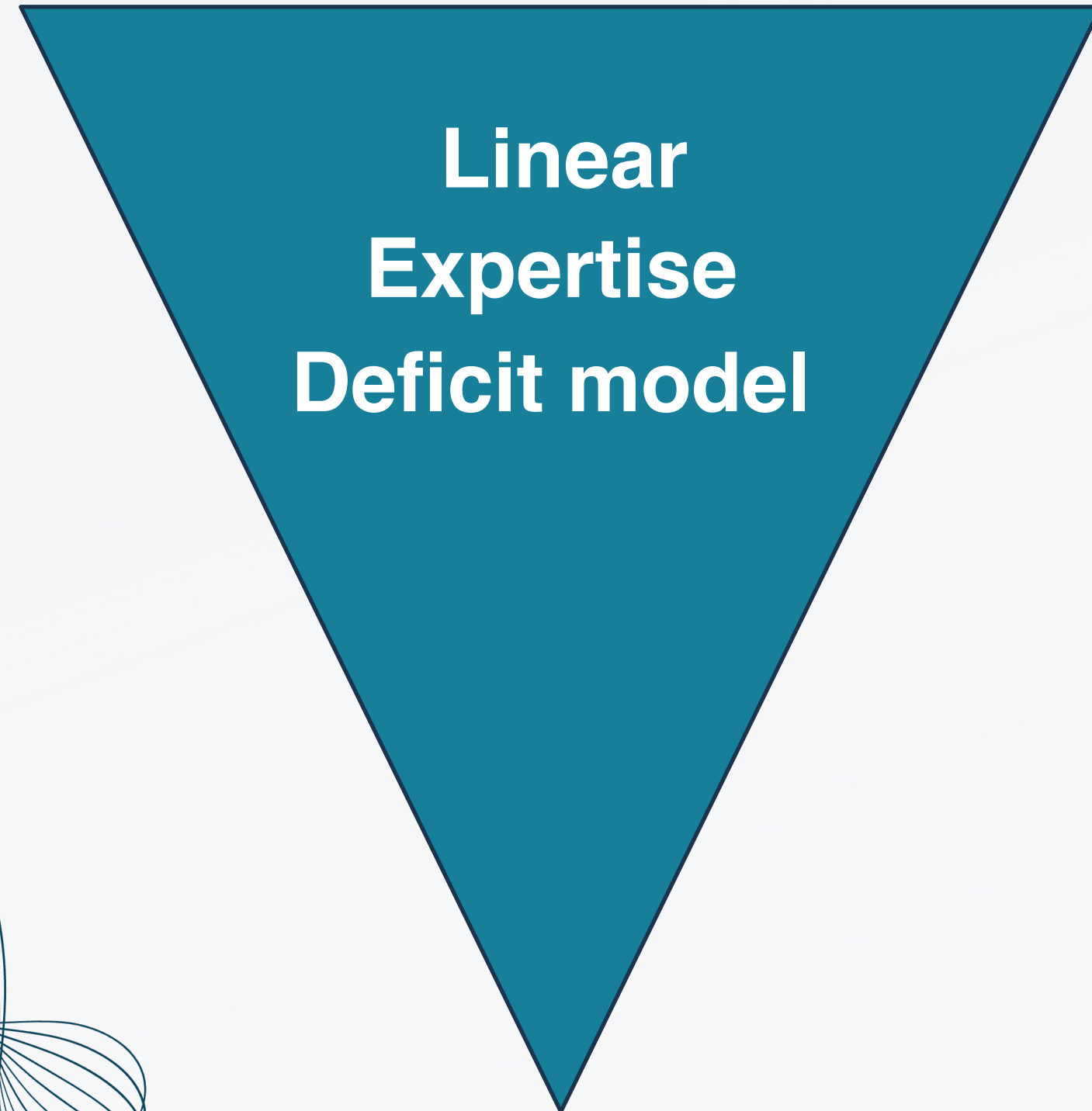
Choose a Template →

73% Reduction in teen drug use in teens under 18 participating in health activities and clubs

EVERLAST

Traditional: Top Down

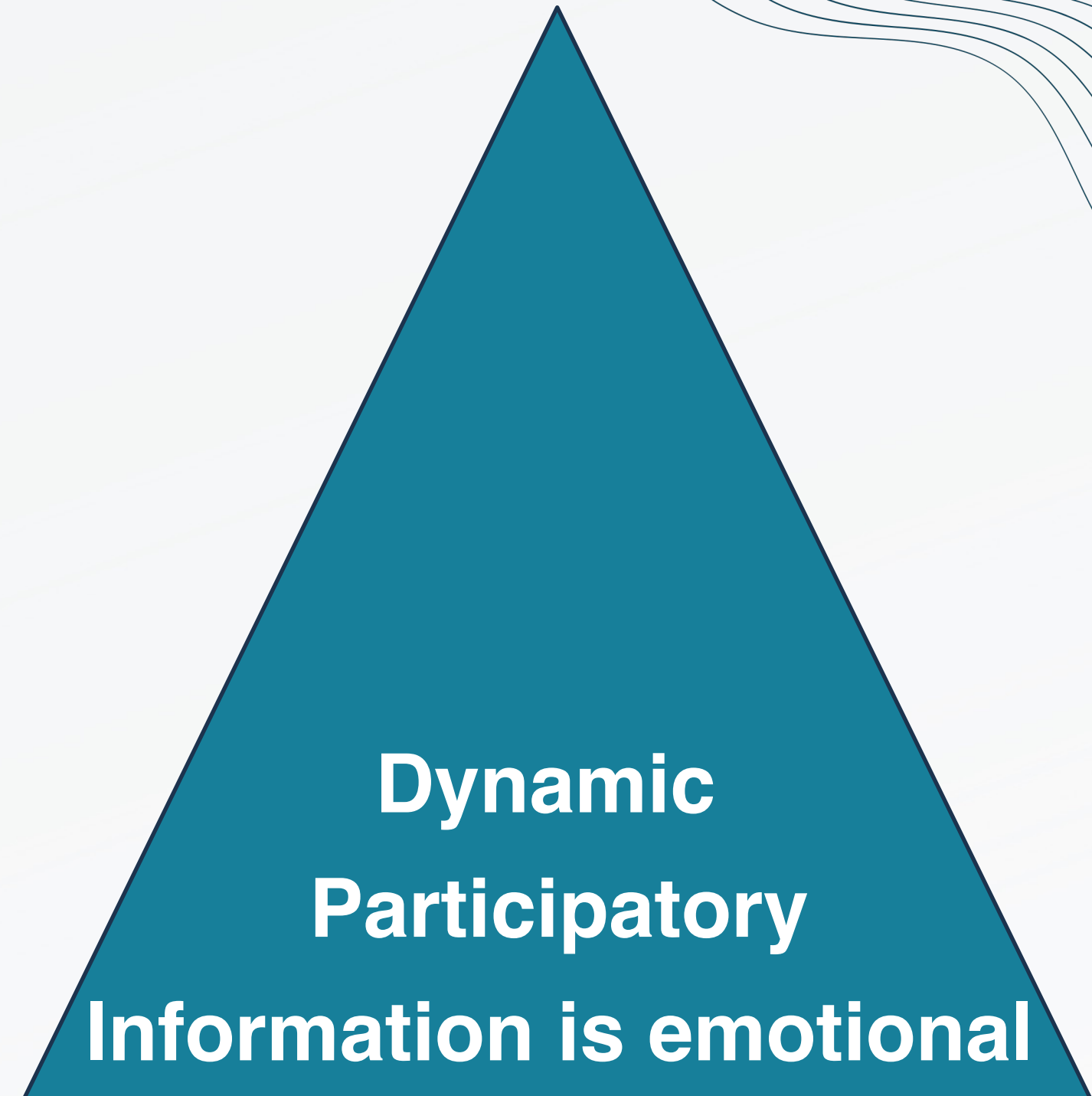
(Government, mass media, academia)



Organized, well-funded, low trust

Updated: Bottom up

(Doctors, scientists, community leaders)



High trust, unorganized, not funded

Tips for trusted messengers

1. KNOW WHY YOU ARE TRUSTED

Bi-directional relationship

Translating

Anticipating needs

2. MEET PEOPLE WHERE THEY ARE AT

Social media

3. IT'S NOT JUST WHAT, BUT HOW

Knowing audience

Truth sandwich

4. INNOVATION CAN HELP

Engaging with humility

Products

Words we use

Remember why you are here



Questions?

Love, Your Local Epidemiologist