

Current state of HPV vaccine confidence in Europe

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CONFIVAX

Centre for evaluation of vaccination



University Antwerp, Belgium



<https://www.vaccineconfidence.org>

www.vaccineconfidence.org



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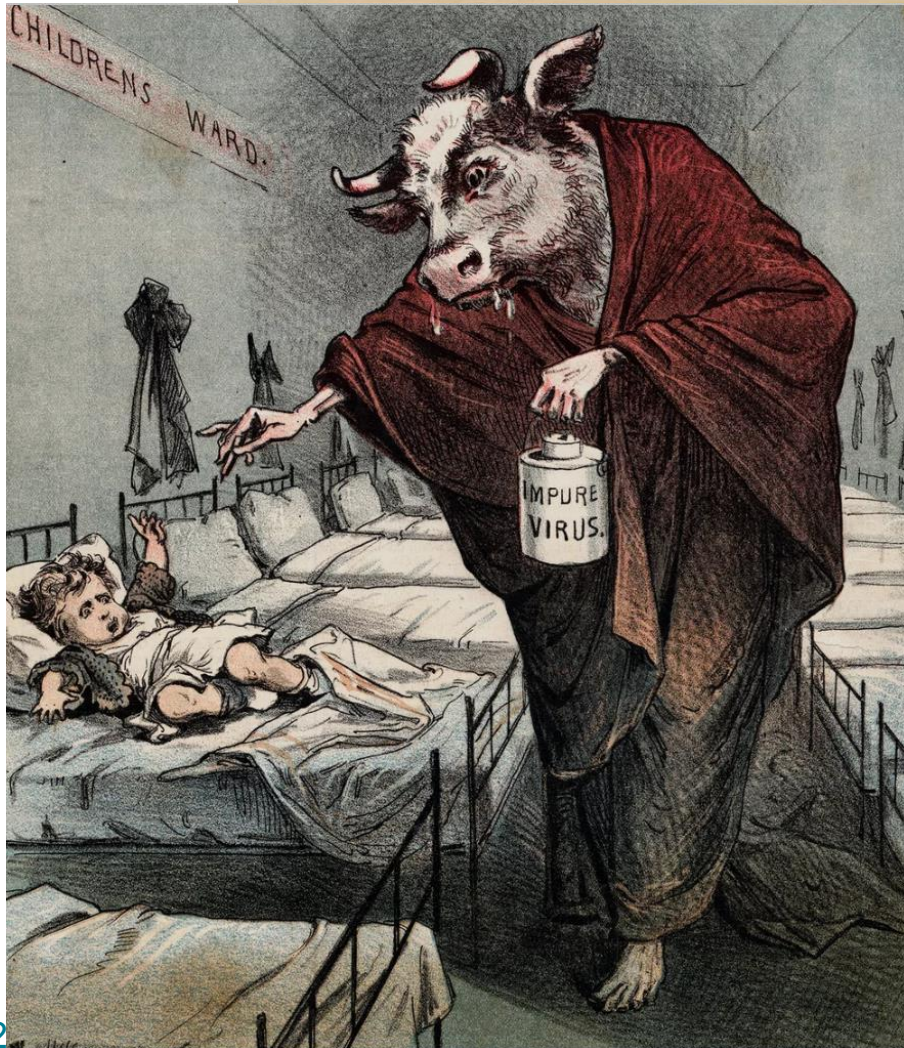
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Rooted in data, driven
by humanity.



European hub of Vaccine Confidence Project is embedded in the University of Antwerp

Nothing new . . .



Definition (2012 WHO SAGE)

*“Vaccine hesitancy refers to **delay in acceptance or refusal** of vaccination despite availability of vaccination services.*

*Vaccine hesitancy is **complex and context specific, varying across time, place and vaccines.**”*



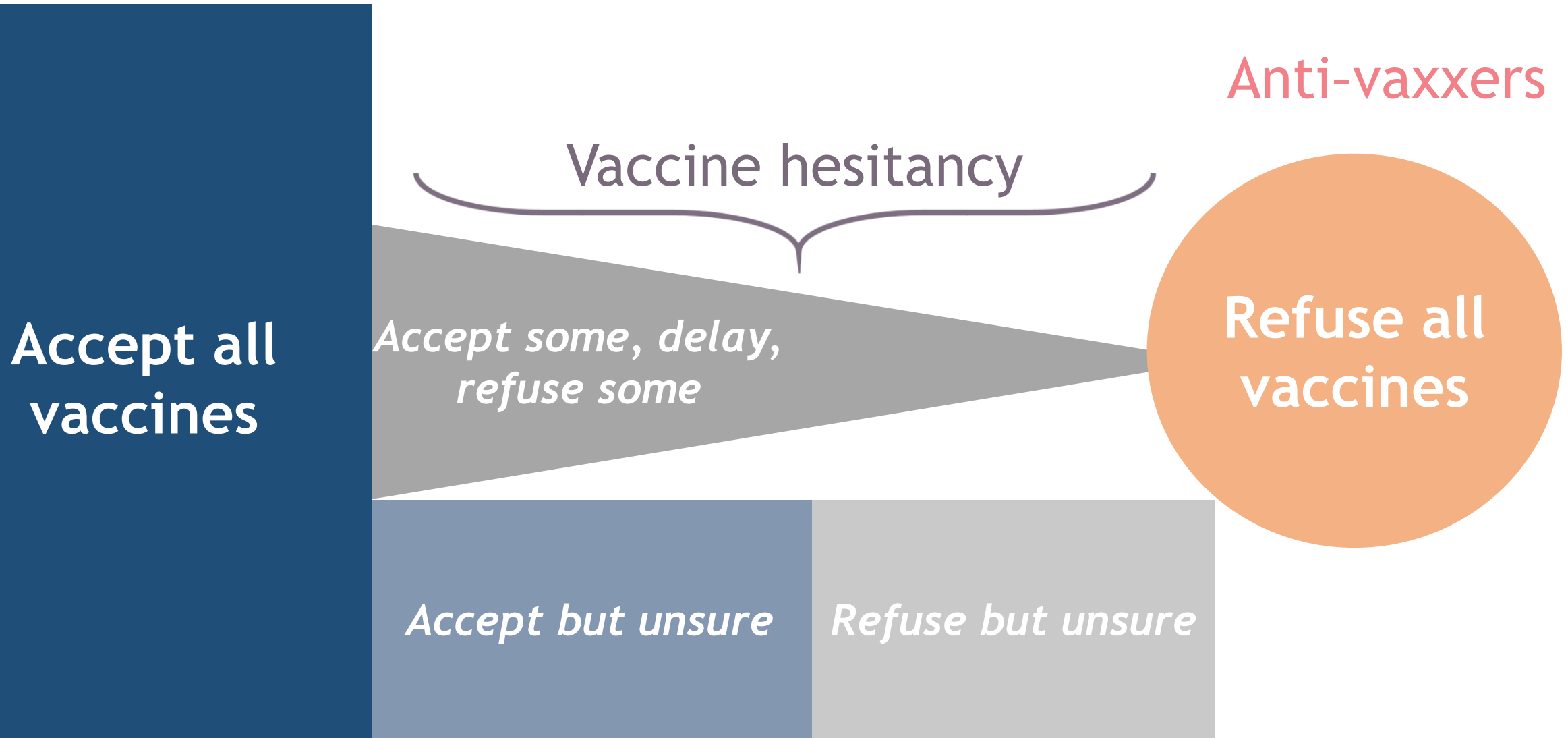
vaccine hesitancy

Acceptance
Vaccines



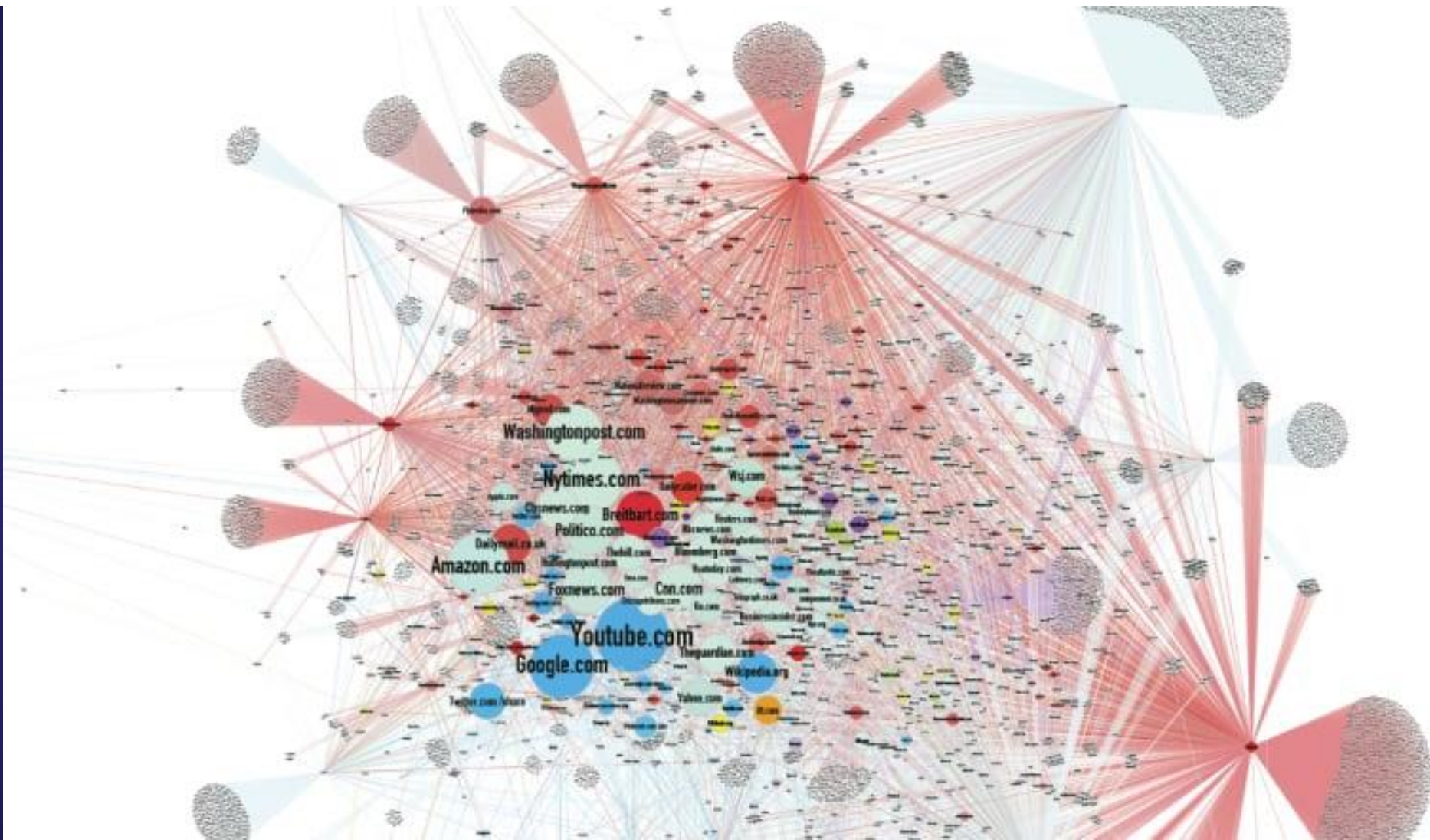
Refusal
vaccines

The vaccine hesitancy continuum



The vaccine hesitancy continuum

Accept all
vaccines



Confidence in vaccination

Influencing Factors

Determinants of vaccine hesitancy (WHO SAGE, 2014)



Vaccine & vaccination specific issues

- Scientific risk/benefit
- Vaccination schedule
- Mode administration or delivery
- Introduction new vaccine
- Vaccine supply
- Healthcare professionals
- Costs
- Tailoring vaccines



Individual & social group influences

- Perceived risk/benefit
- Social norm, individual need
- Beliefs, attitudes and motivations about health
- Knowledge, awareness
- Trust in health system or provider
- Experience with past vaccination

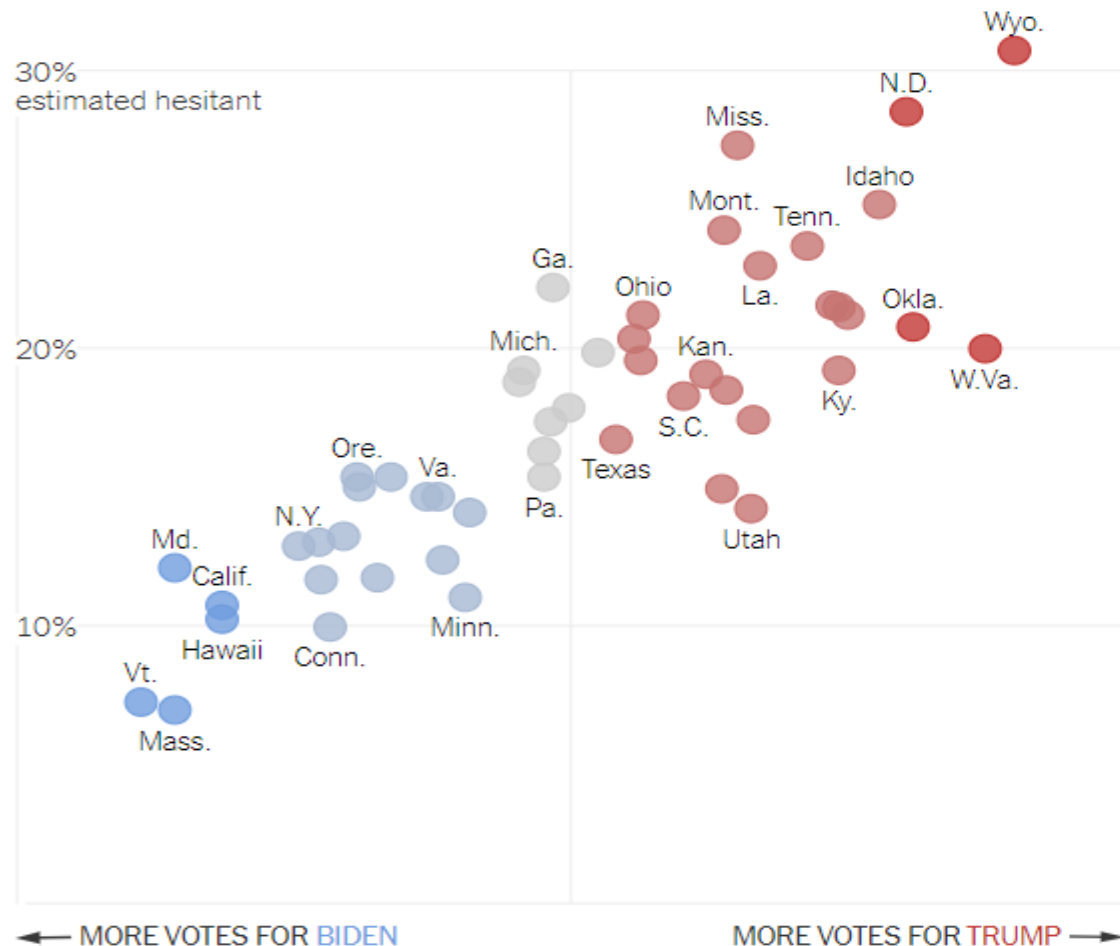


Contextual influences

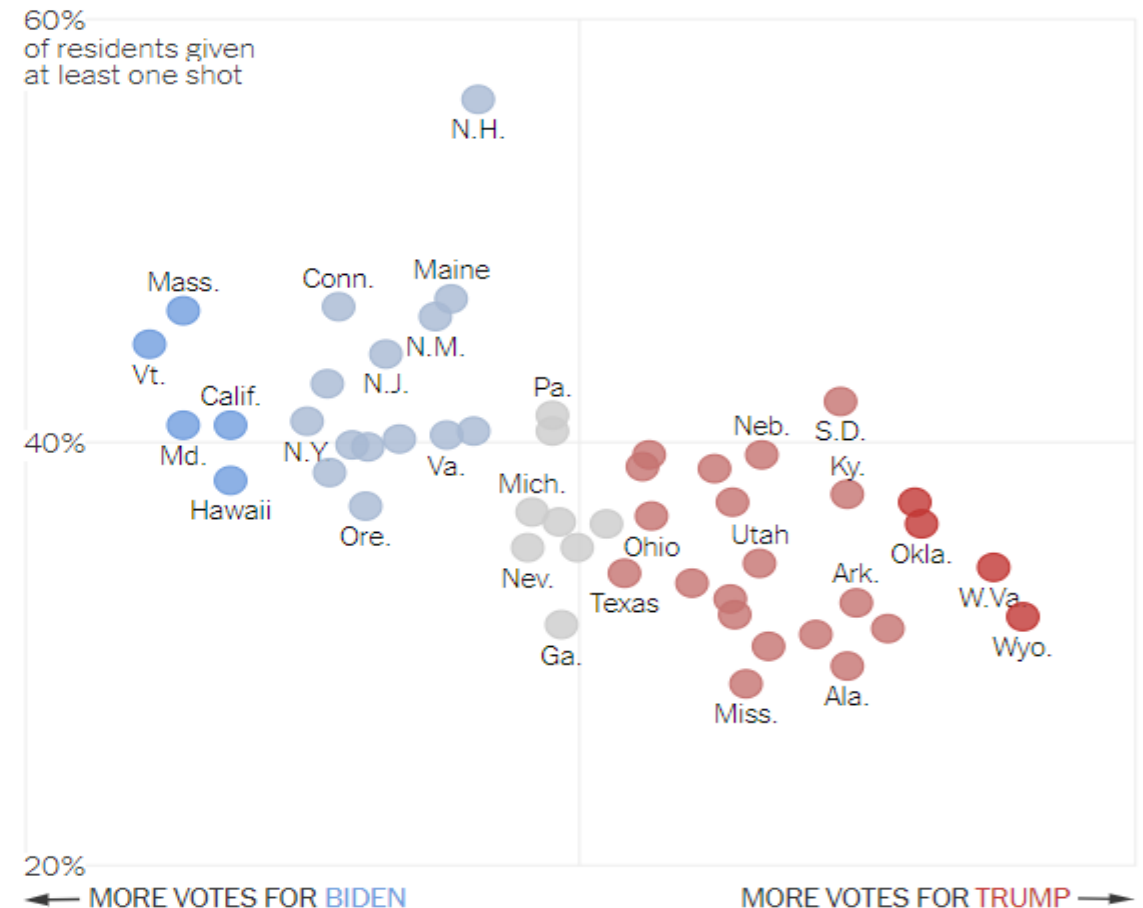
- Influential individuals or leaders
- Politics, policies (mandates)
- Religion, culture
- Socio-economics
- Communication and media
- Pharmaceutical industry
- Historical influences
- Geographic barriers

Influence on vaccine coverage

States with larger Trump vote shares are likely to have more adults who are vaccine hesitant ...

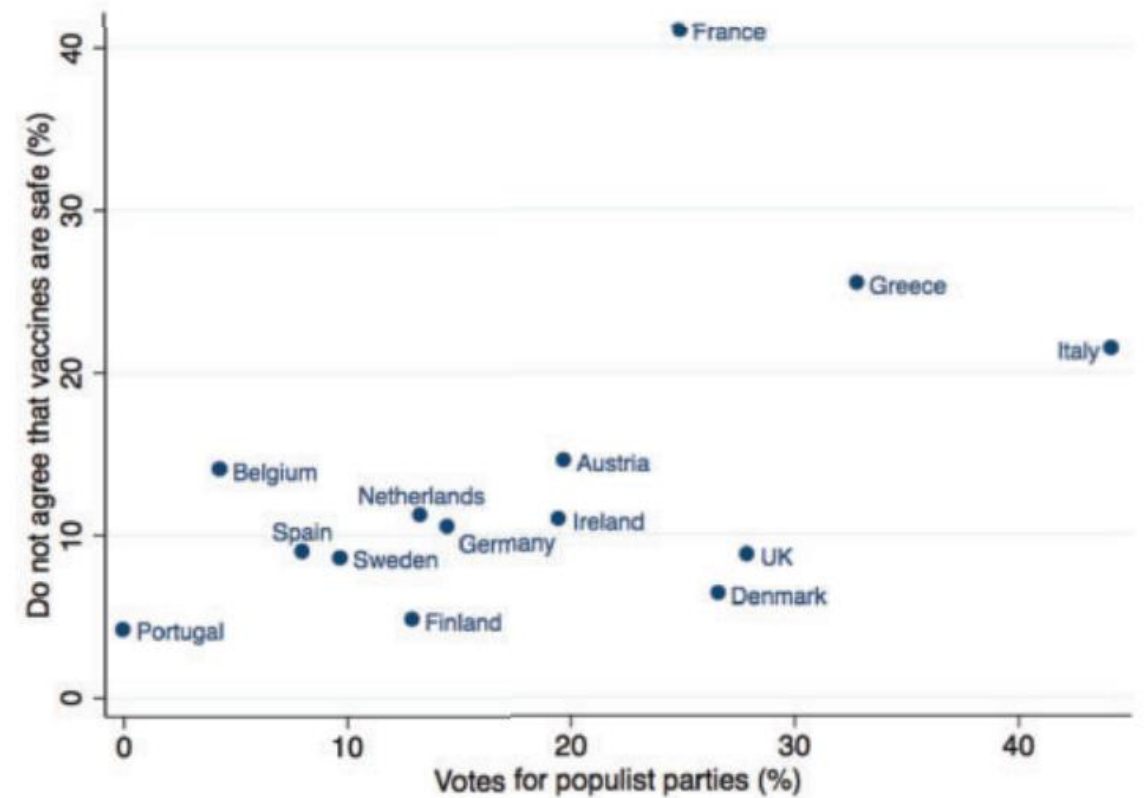
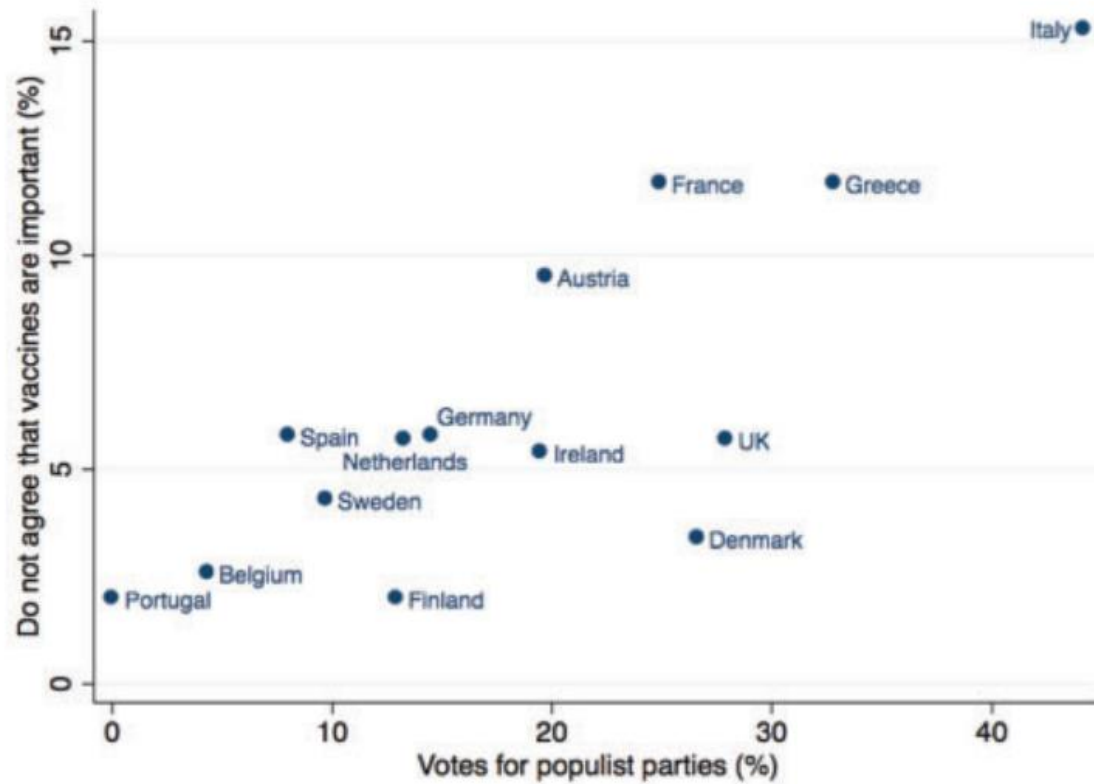


... and have a smaller share of residents already vaccinated than states with larger Biden vote shares.

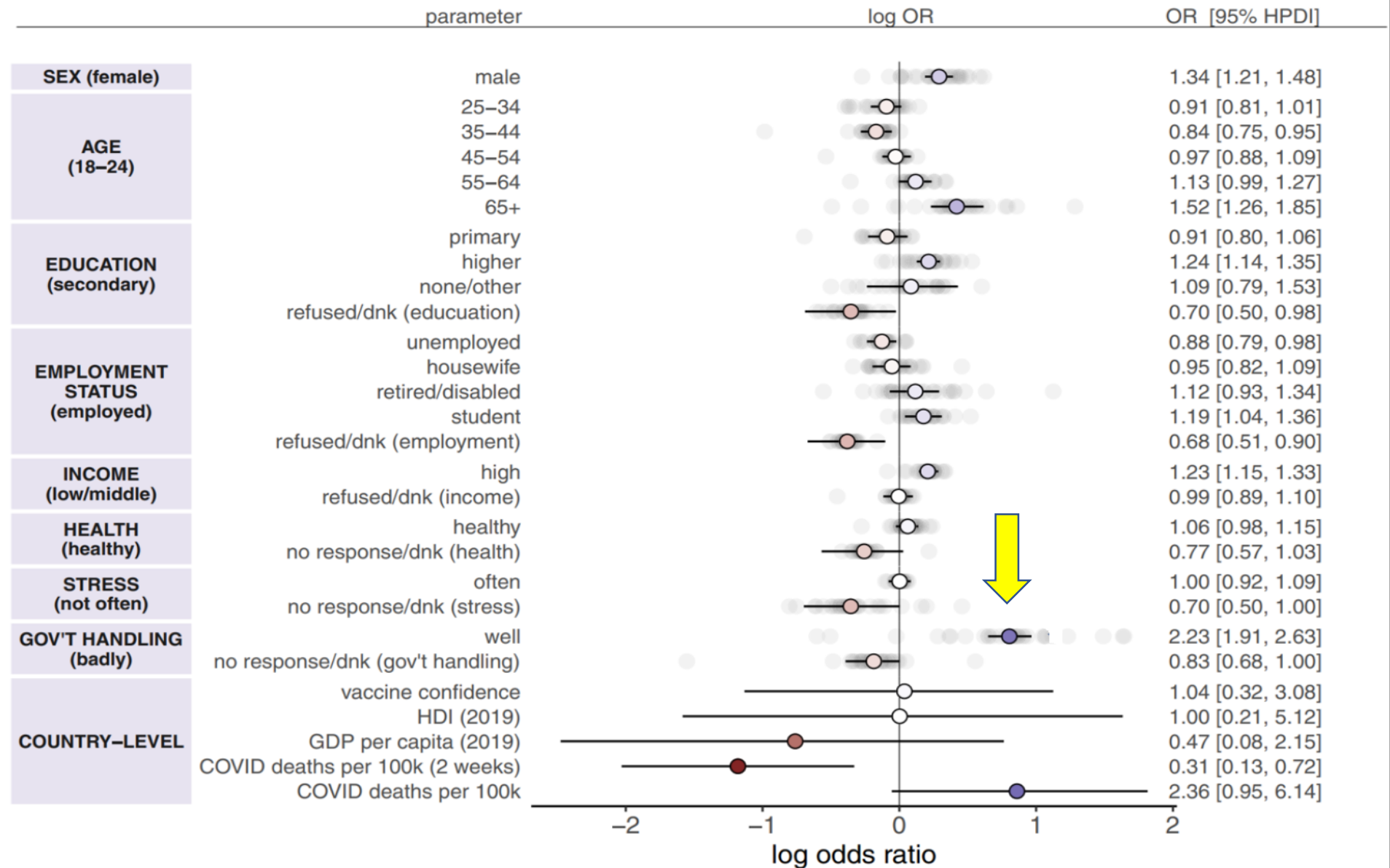


The influence of politics and populism

Comparing confidence in vaccination with votes for populist parties



determinants of intent to accept a COVID-19 vaccine (fixed-effects)

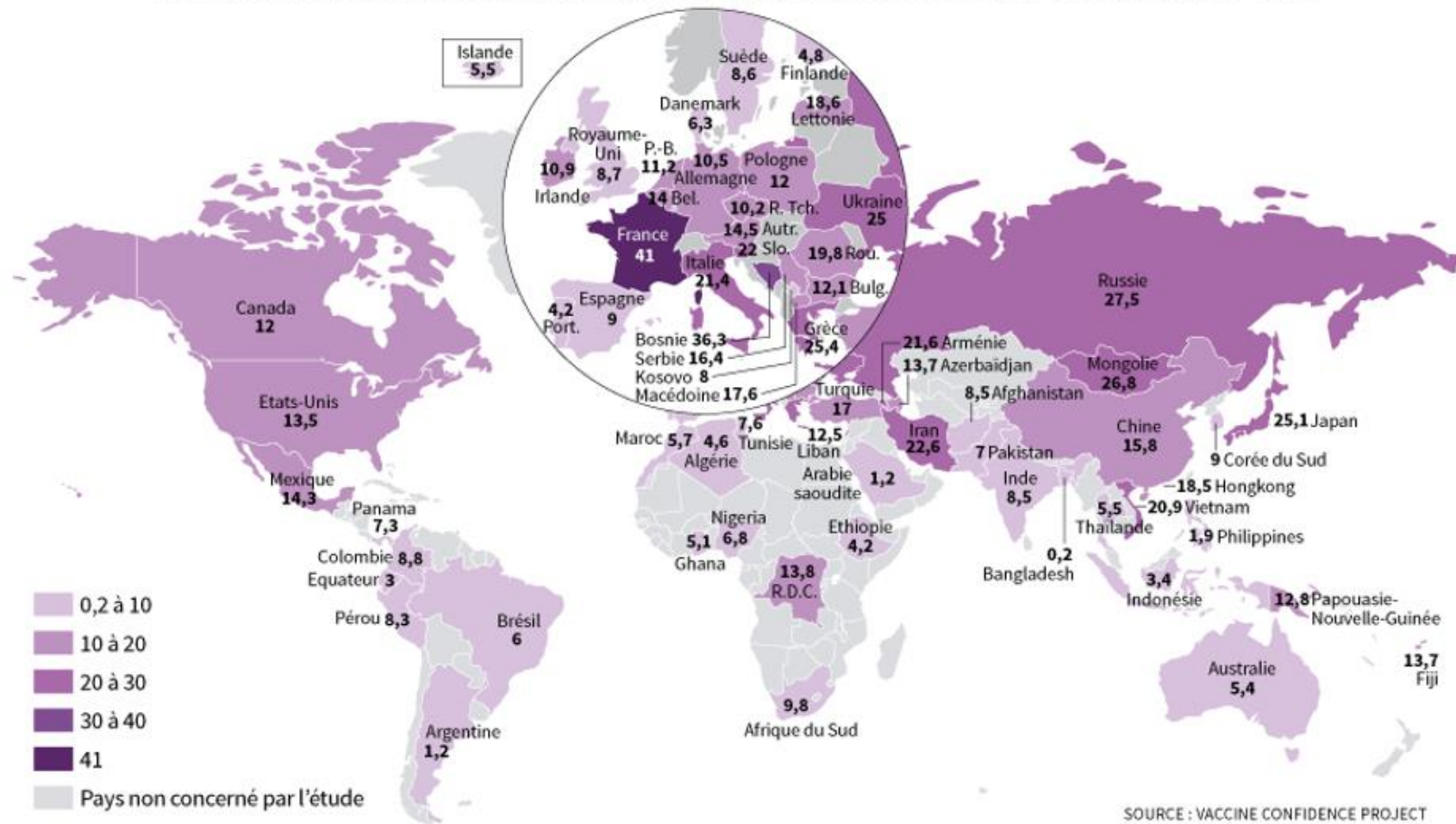


PUBLIC TRUST in
Government handling
of COVID Response
STRONGEST predictor
of vaccine acceptance



The state of vaccine confidence in the world

PART DE RÉPONDANTS EN DÉSACCORD AVEC L’AFFIRMATION « JE PENSE QUE LES VACCINS SONT GLOBALEMENT SÛRS », EN %



SOURCE : VACCINE CONFIDENCE PROJECT

Changes over time

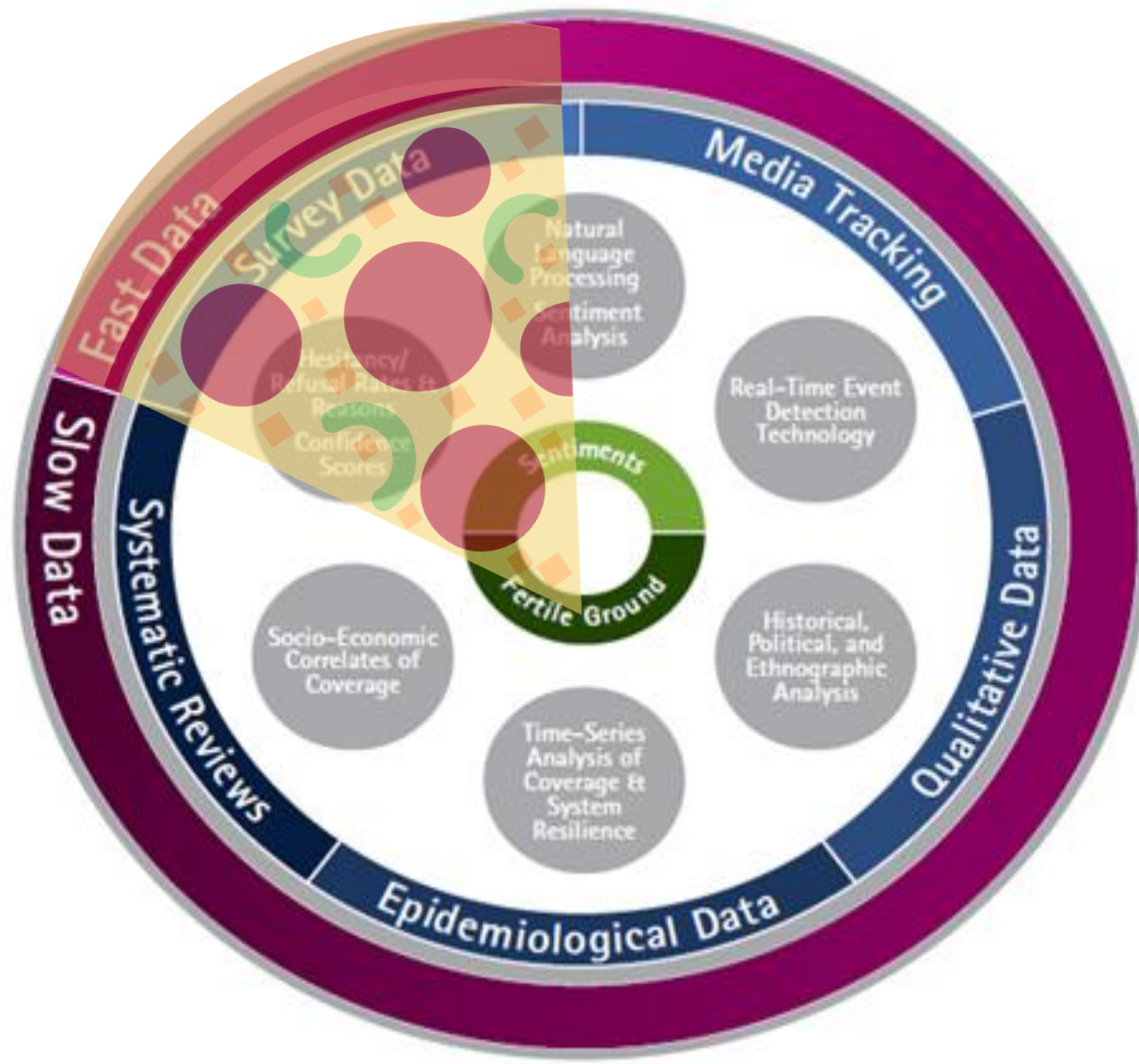
Between 2015-2019, confidence in the importance, safety, and effectiveness of vaccines fell in Afghanistan, Indonesia, Pakistan, the Philippines, and South Korea

Europe

Europe remains one of the regions with the lowest confidence in vaccines, with signs that confidence is increasing

Impact on uptake

Confidence in the importance of vaccines (rather than safety or effectiveness) had the strongest association with vaccine uptake



Listening to
the public:
no single
metric tells
the story



State of Vaccine Confidence in the European Union

2022



STATE OF VACCINE CONFIDENCE IN THE EUROPEAN UNION 2022



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E. Karafillakis, P. van Damme & H.J. Larson
August 2022



This report was produced under the support expenditure of the Third Health Programme in the frame of a specific contract with the European Commission, Directorate General for Health and Food Safety acting under the mandate of the European Commission (SANTE/2021/C/067)

State of Vaccine Confidence in the European Union



Established in 2010 and led by **Professor Heidi J. Larson**, the **Vaccine Confidence Project™** conducts cross-disciplinary research on a range of vaccines worldwide; **measuring and monitoring public confidence in immunisation programmes by horizon scanning for early signals of public distrust and questioning.** The Vaccine Confidence Project™

2018



The State of Vaccine Confidence in the EU: 2018

2020



State of Vaccine Confidence in the EU and the UK (2020)

2022

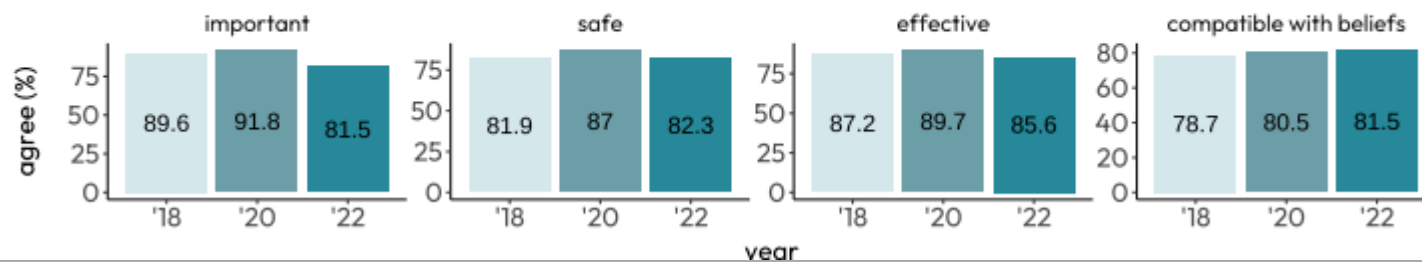


State of Vaccine Confidence in the EU (2022)

Percentage of respondents agreeing that vaccines are important, safe, effective, and compatible with their beliefs.

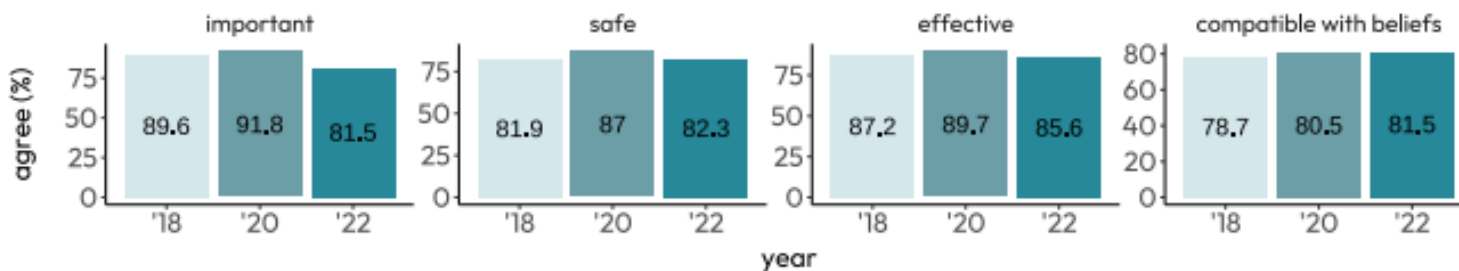


Vaccines are ...

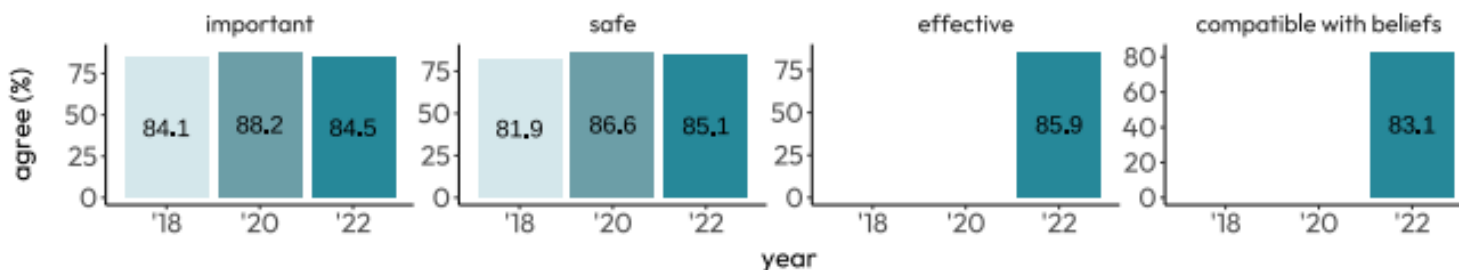




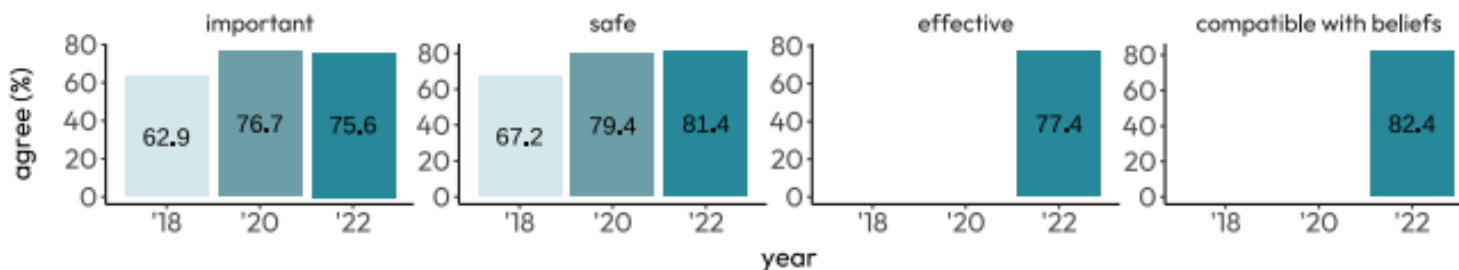
Vaccines are ...



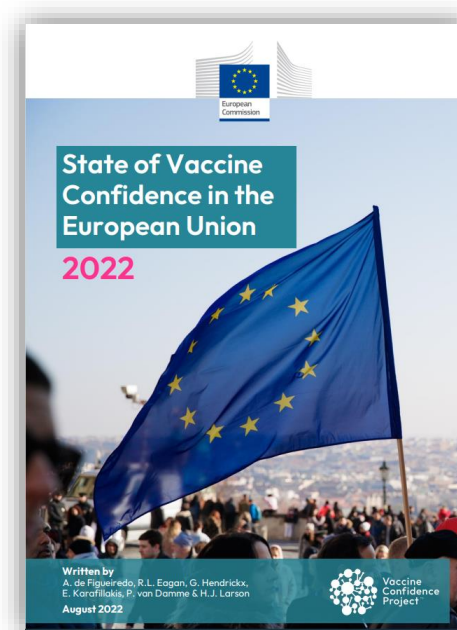
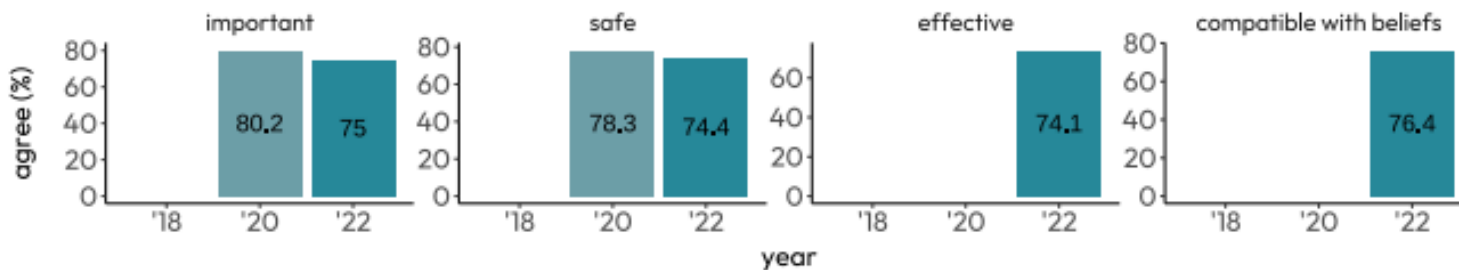
MMR vaccine is ...



Flu vaccine is ...



HPV vaccine is ...



https://health.ec.europa.eu/publications/state-vaccine-confidence-eu-2022_en



Public confidence



Poland

Vaccine confidence factsheet, 2022

Importance and safety confidence
and change* since 2020

Vaccines are safe: 79.9% (-8.6pp change)

Vaccines are important: 80.5% (-10.2pp change)

MMR vaccine is safe: 79.7% (-7.7pp change)

MMR vaccine is important: 79.4% (-10.9pp change)

Flu vaccine is safe: 78% (-4.5pp change)

Flu vaccine is important: 69% (-9.7pp change)

HPV vaccine is safe: 73.6% (-8.6pp change)

HPV vaccine is important: 73.6% (-11.8pp change)

COVID-19 vaccine is safe: 67.8% (no 2020 data)

COVID-19 vaccine is important: 70.4% (no 2020 data)

11/23/2023



University
of Antwerp

Poland

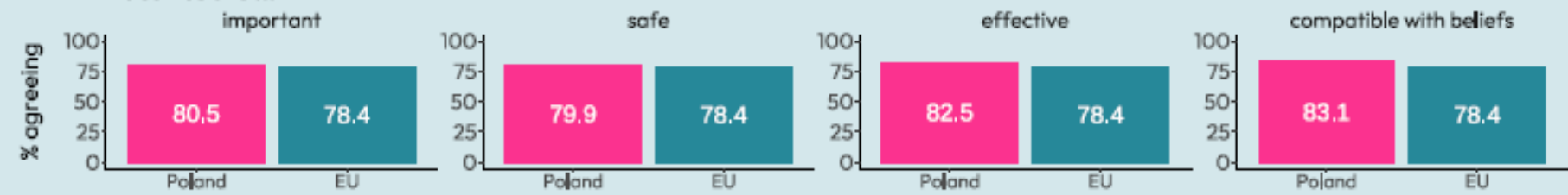
Vaccine confidence factsheet, 2022

V

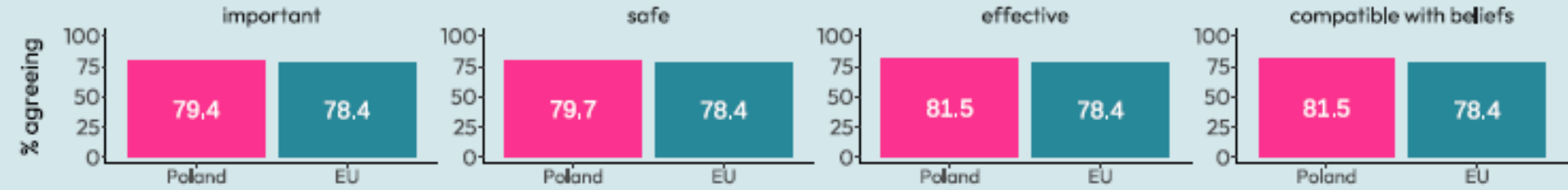
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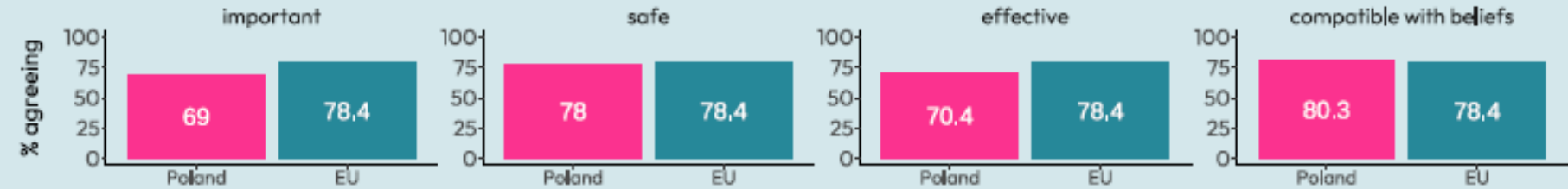
Vaccines are ...



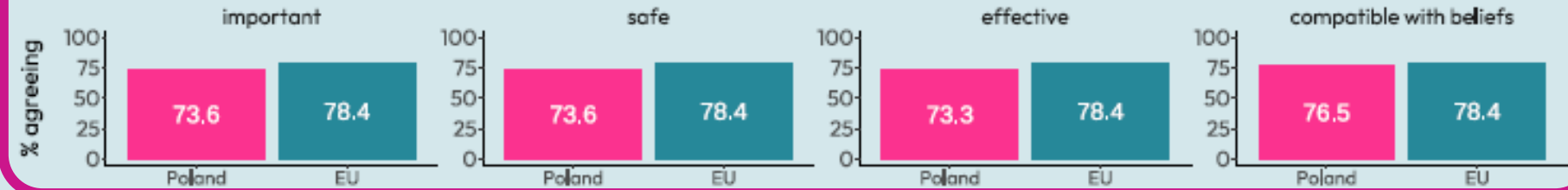
MMR vaccine is ...



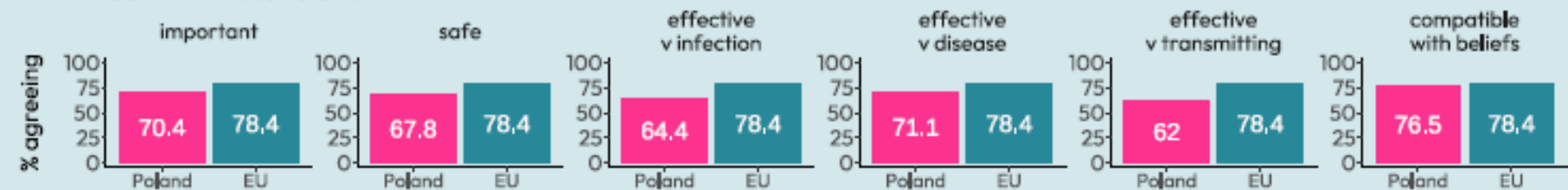
Flu vaccine is ...



HPV vaccine is ...



COVID-19 vaccine is ...

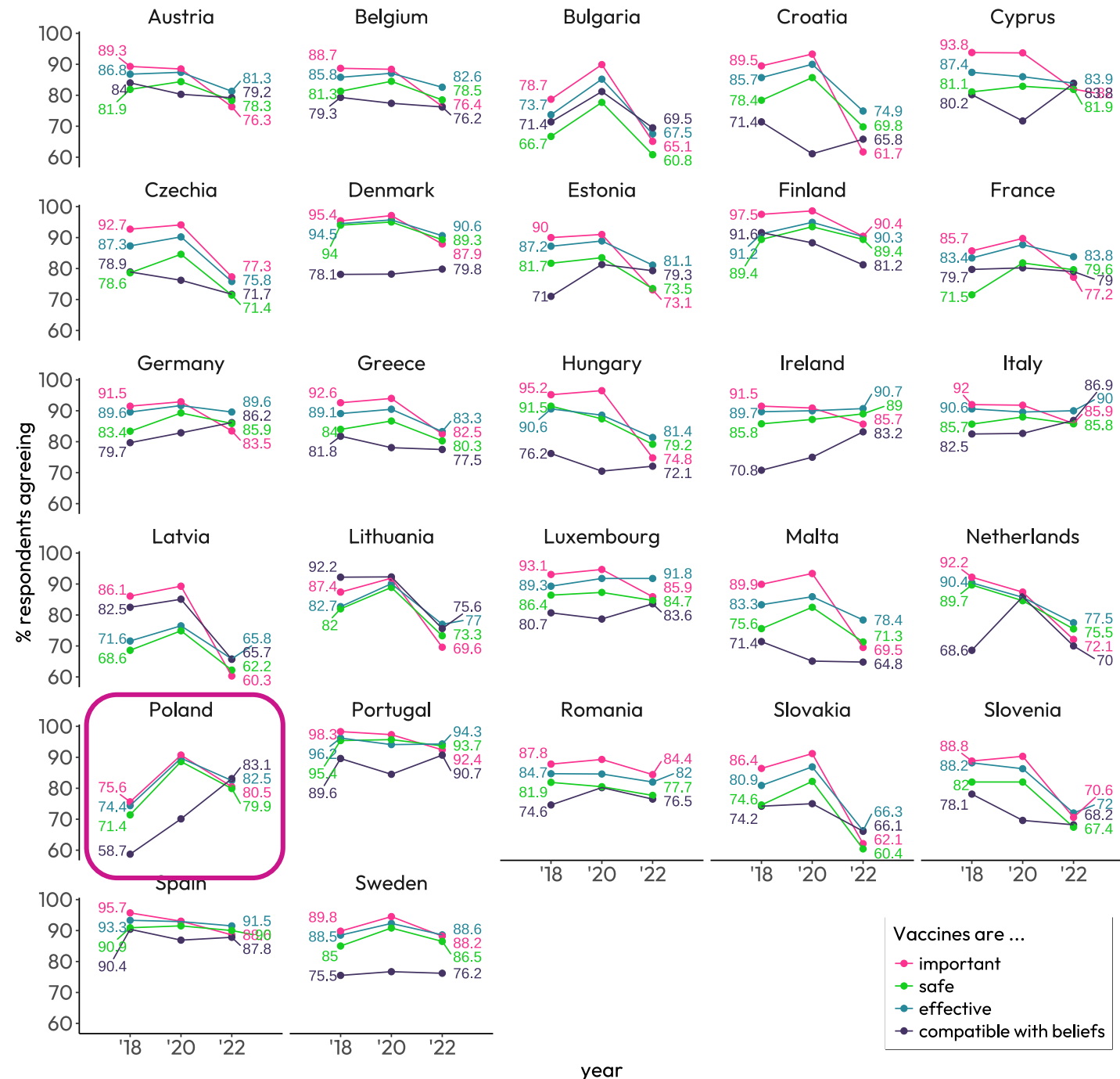


Vaccine Confidence changes over time

In Europe, agreement that vaccines are **important**, **safe**, **effective**, and **compatible with beliefs** has fallen in 2022 compared to 2020 values. Agreement that vaccines are important and effective are also below 2018 levels, but agreement that vaccines are safe and compatible with beliefs are higher than 2018 levels.

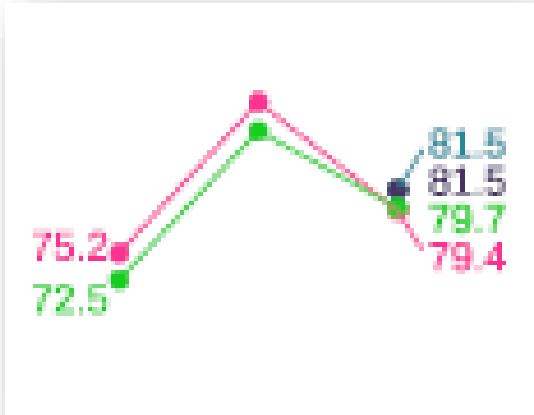
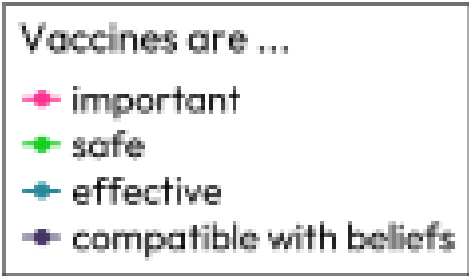
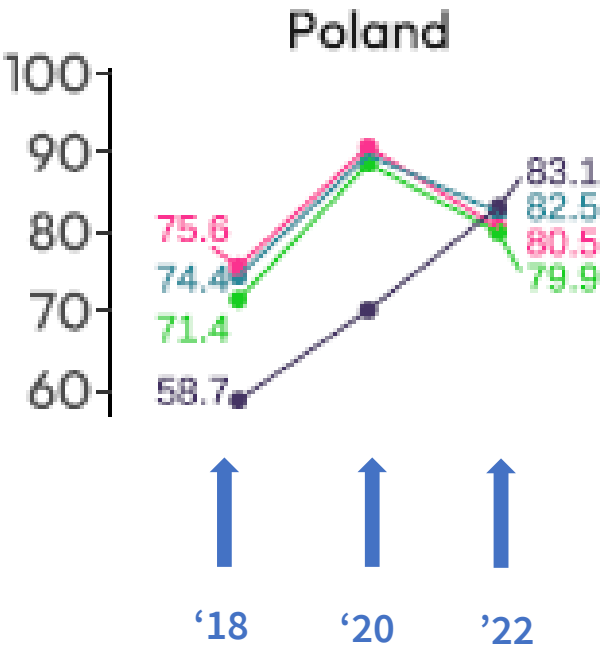
https://health.ec.europa.eu/publications/state-vaccine-confidence-eu-2022_en

General vaccine confidence

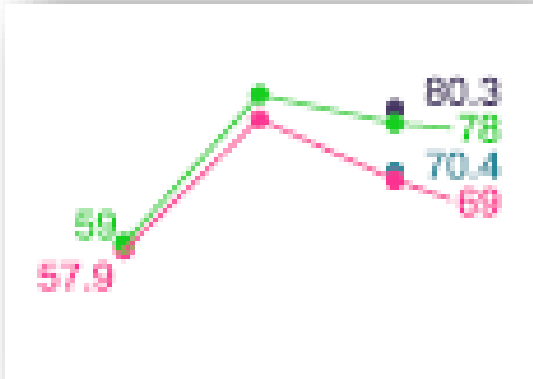


Poland

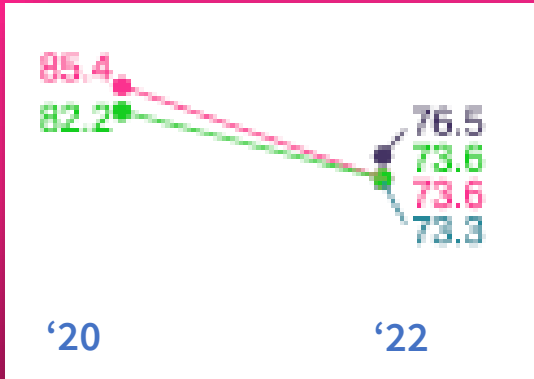
Vaccine confidence factsheet, 2022



MMR



Influenza



HPV

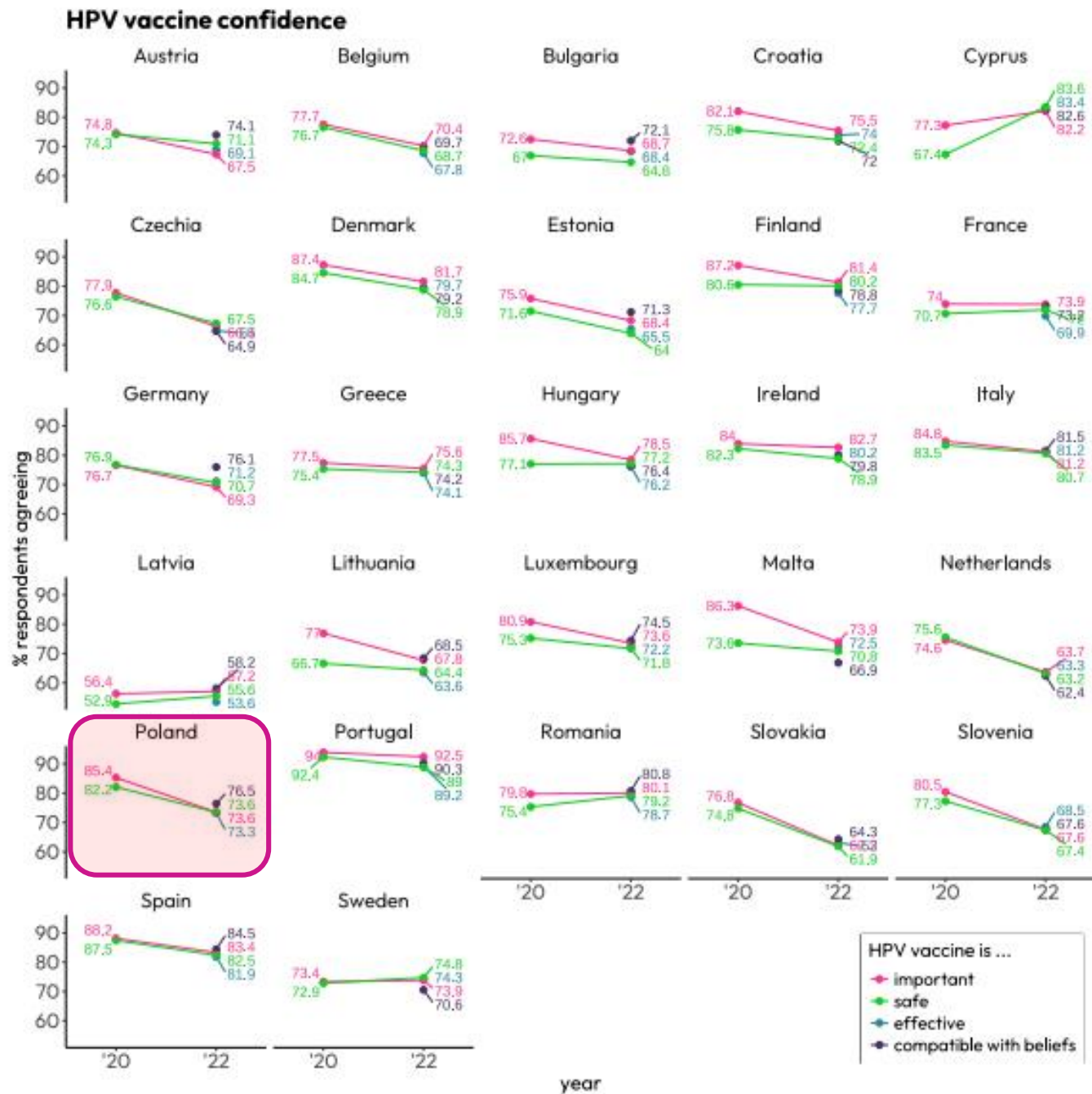
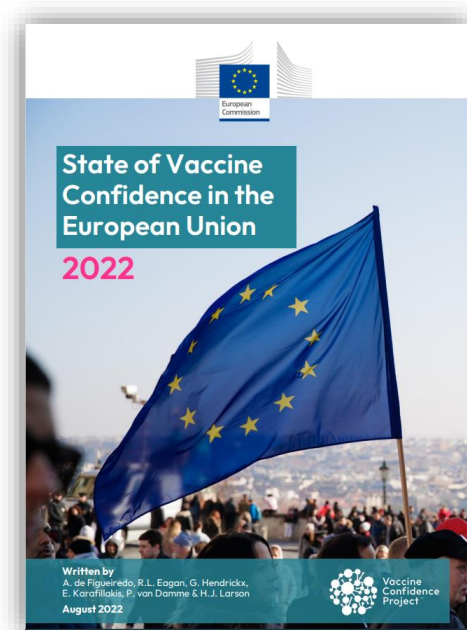


Figure 8 Trends in confidence in the HPV vaccine between 2018 and 2022 for each EU member state

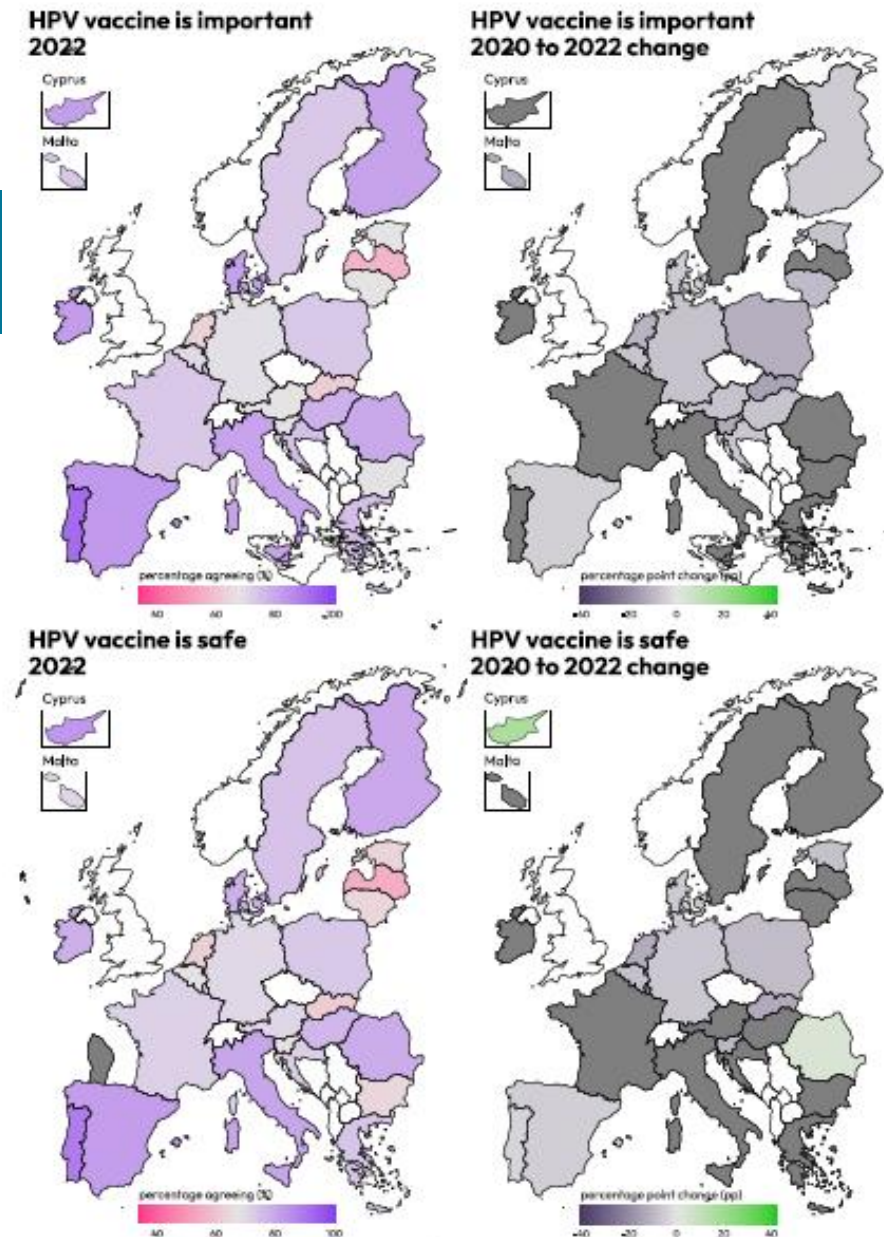


HPV



HPV Important – Safe

Agreement that the HPV vaccine is **important** has **decreased in 17 countries** between 2020 and 2022 and increased in none. The largest decreases are in Slovakia and Slovenia (-14.6pp and -13pp falls, respectively). Agreement that the HPV vaccine is **safe** has increased in Cyprus (+16.2pp) and Romania (+3.8pp) but **decreased across 11 countries**, with the largest falls in Netherlands (-12.4pp) and Slovakia (-12.9pp).



IMPORTANT

SAFE

Figure 9 Confidence in 2022 (left column) in the importance and safety of the HPV vaccine. Changes in confidence between 2020 and 2022 (right column) are also shown. Countries with no significant change detected are coloured dark grey.

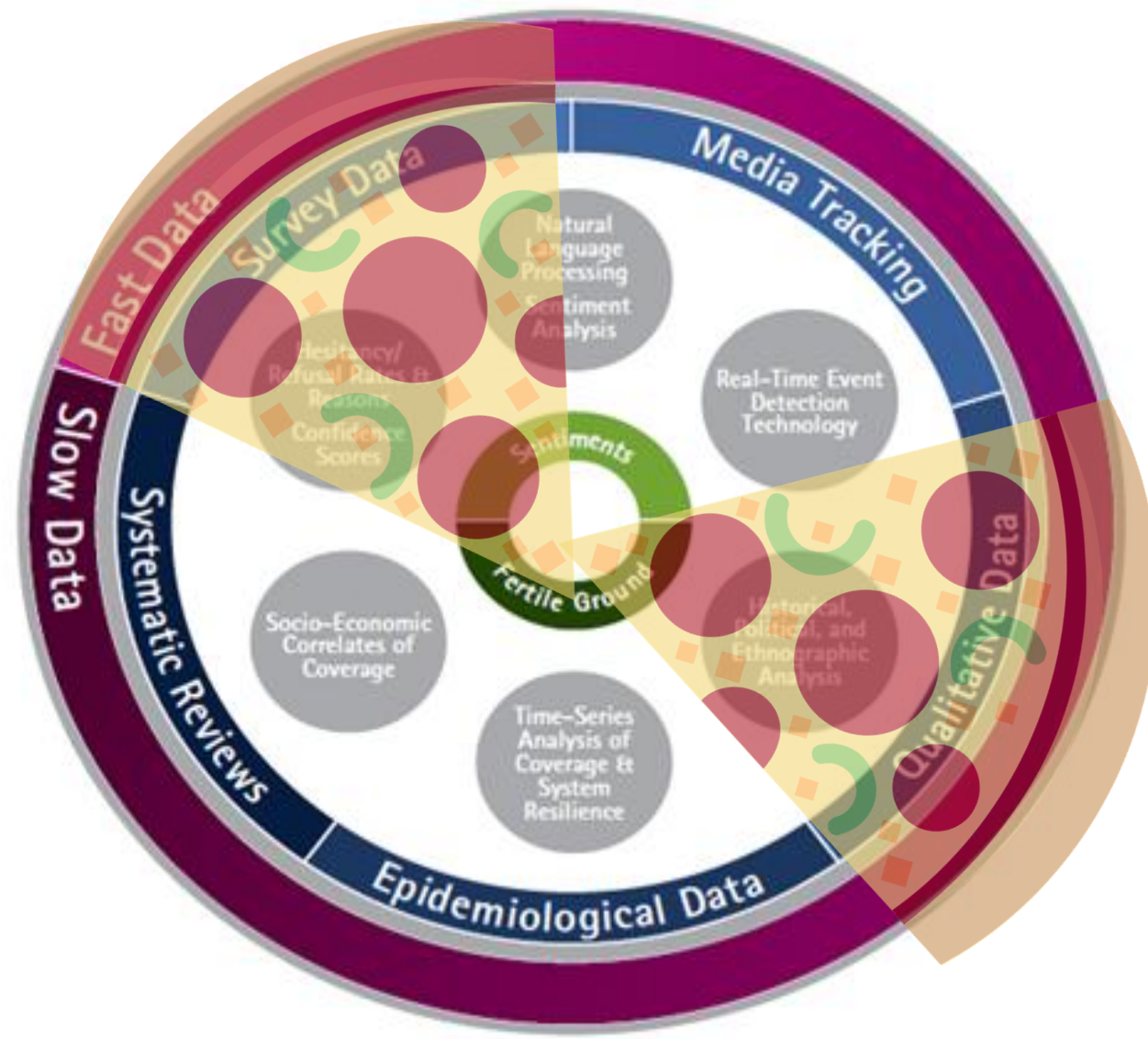
Key Findings in 2022

Across the EU, overall **vaccine confidence has declined** among the general public since 2020 but remains roughly the same as 2018

- Because vaccine confidence is influenced by many external factors and can change in light of developments over time, it is difficult to determine if findings from this study represent short-term fluctuations and reversible trends or more permanent shifts

Variability in vaccine confidence **exists between countries, among vaccine types**

The age “gap” in confidence is widening between younger and older age groups



Listening to
the public:
no single
metric tells
the story

Polish research on HPV vaccine confidence in GP

The study results indicate a strong correlation between parental education and parental knowledge and attitudes about HPV and the HPV vaccine. **Parents of boys were significantly more likely - than parents of girls - to declare that they would not vaccinate their sons against HPV**

Sobierajski, T., I. et al. (2023). "Feminized vaccine? Parents' attitudes toward HPV vaccination of adolescents in Poland: A representative study." *Hum Vaccin Immunother*

.....motivating factor for vaccination against HPV was **the parent's awareness that the virus HP is the cause of cancer.** *The most inhibiting factor was respondent's compliance with* **the opinion that HPV vaccines can affect the child's sexual activity***..... information campaigns are needed.....*

Zastawna, B., et al.(2023). "Analysis of Parents' Attitudes and Knowledge toward Immunization and How These Factors Influence Their Decisions to Vaccinate Their Children against Human Papilloma Virus (HPV)." *Medicina (Kaunas)* 59(10).

The study showed that parents' knowledge of HPV and HPV vaccination in Poland is low (49.4% of correct answers). **Parents' attitudes were only influenced by knowledge and education and not by other parameters such as age, gender, place of residence, and the number of children.....**

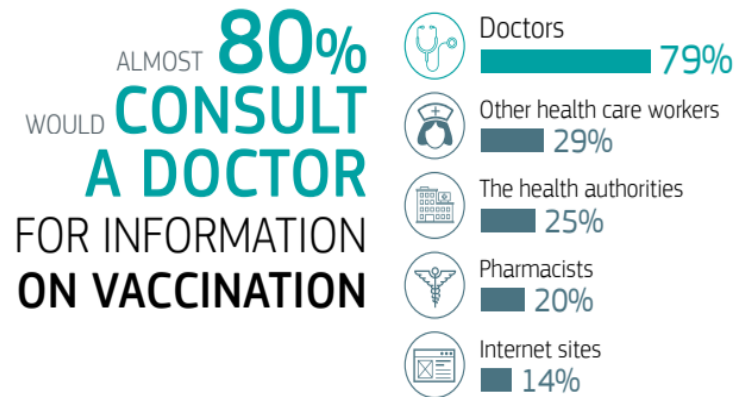
Smolarczyk, K., A. Duszewska, S. Drozd and S. Majewski (2022). "Parents' Knowledge and Attitude towards HPV and HPV Vaccination in Poland." *Vaccines (Basel)* 10(2).

Healthcare Professionals



The role of the healthcare provider

Before the pandemic

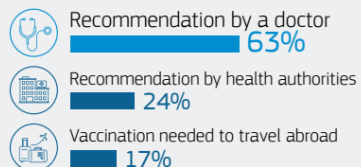


FOR INFORMATION ON VACCINATION



Nearly **two thirds** of those **who had** a vaccination in the last 5 years **did so because it was recommended by a doctor**

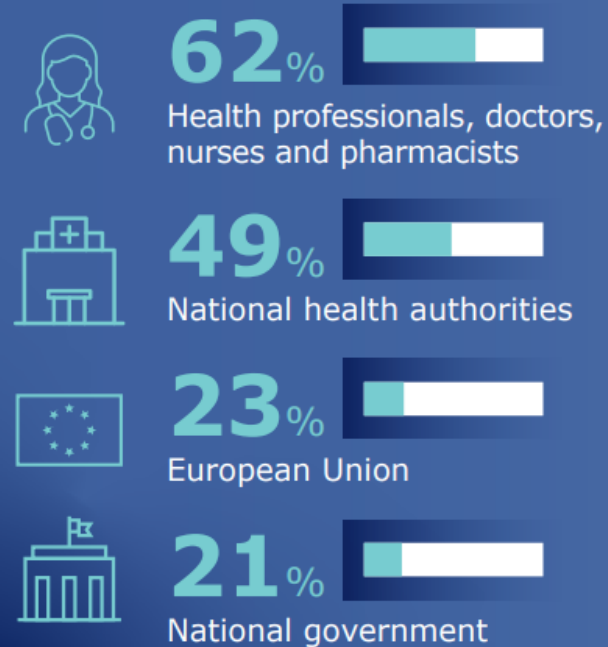
TOP 3 REASONS



During the pandemic

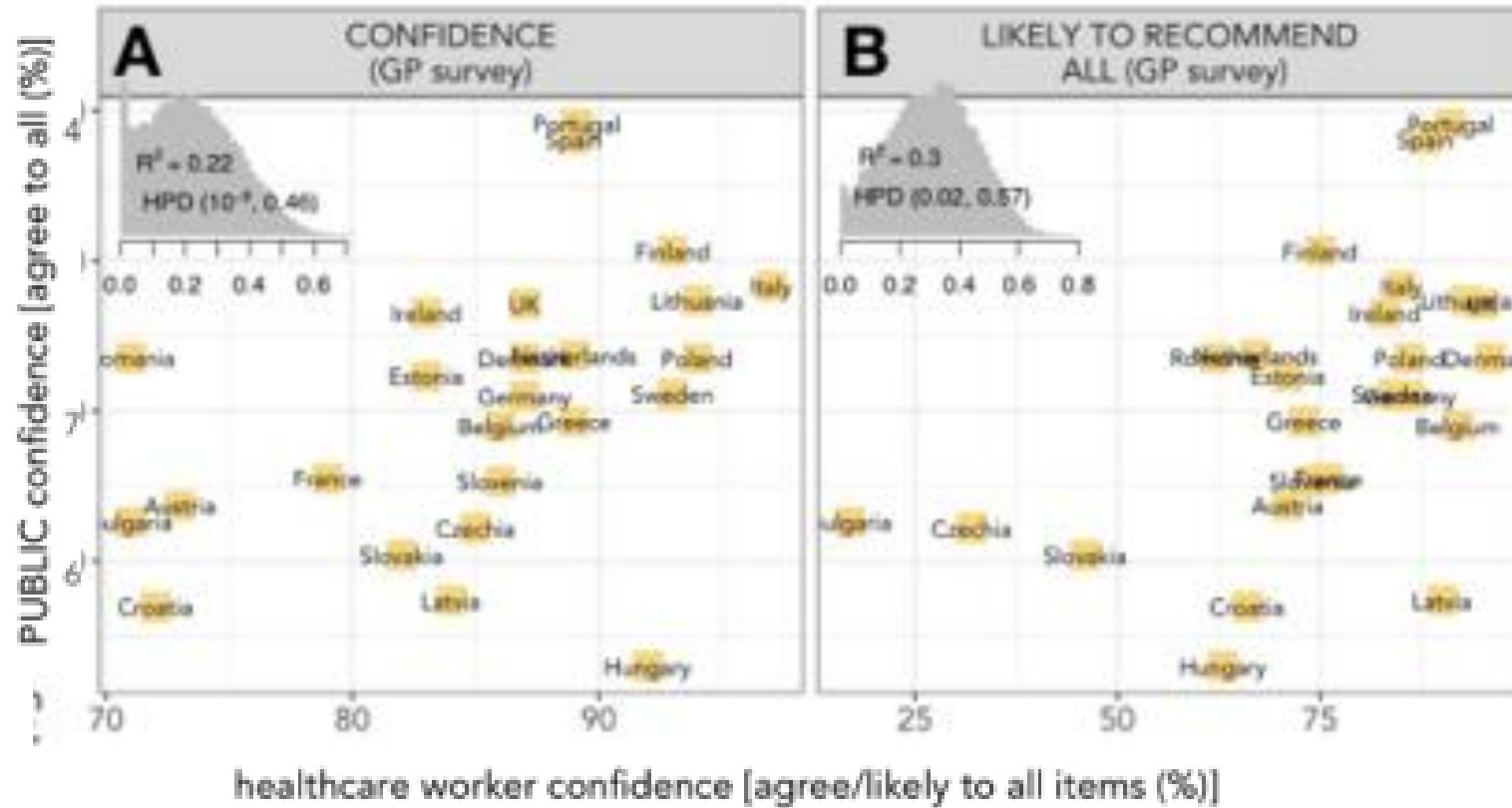
Information on COVID-19

Most trusted sources for reliable information on COVID-19 vaccines...

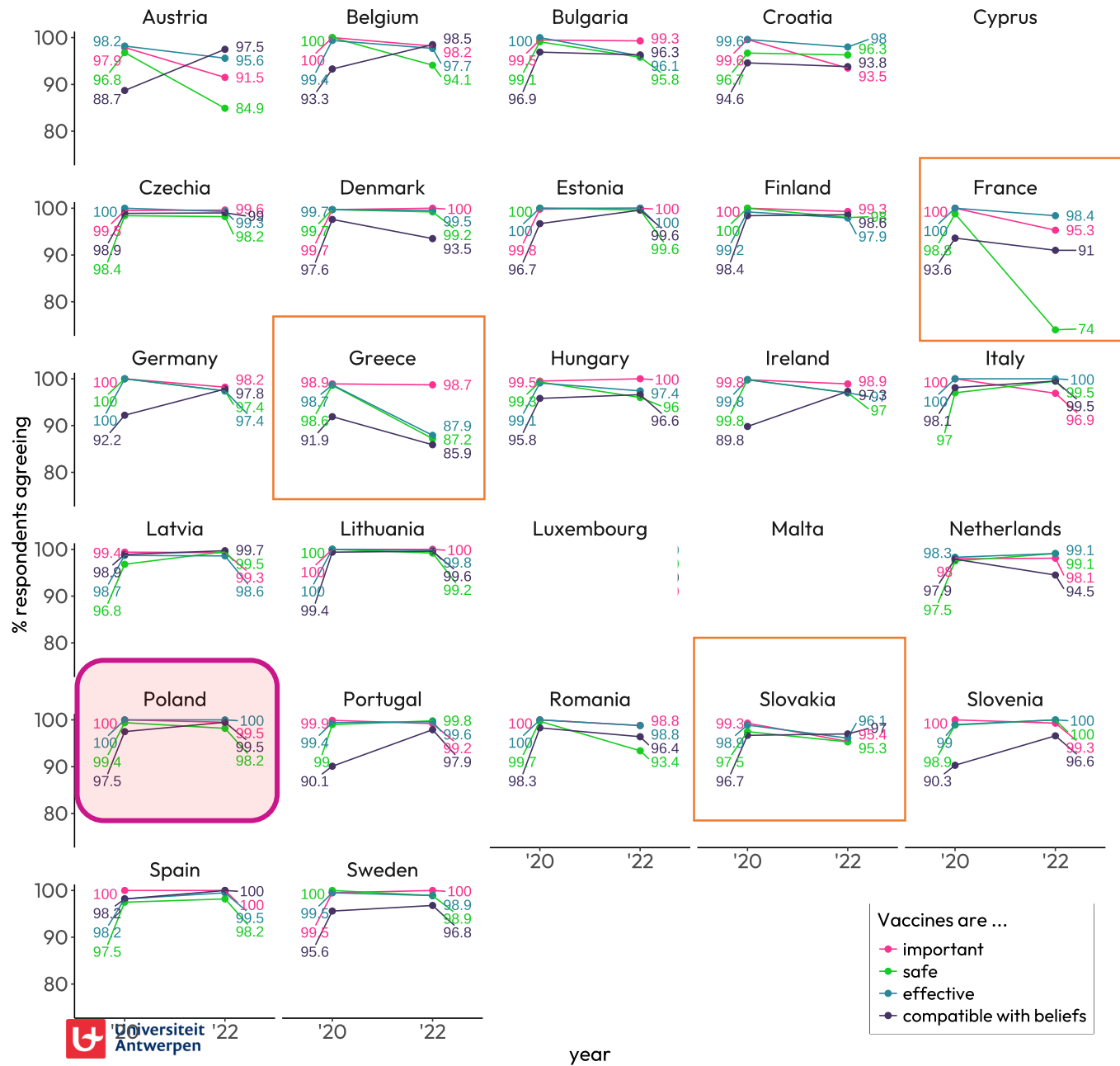


Association between healthcare professional and public vaccine confidence

Source: 2020 Vaccine Confidence project, State of Vaccine Confidence in the EU+UK



General vaccine confidence

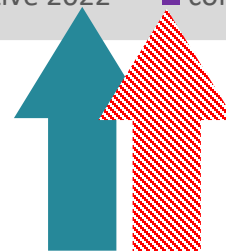
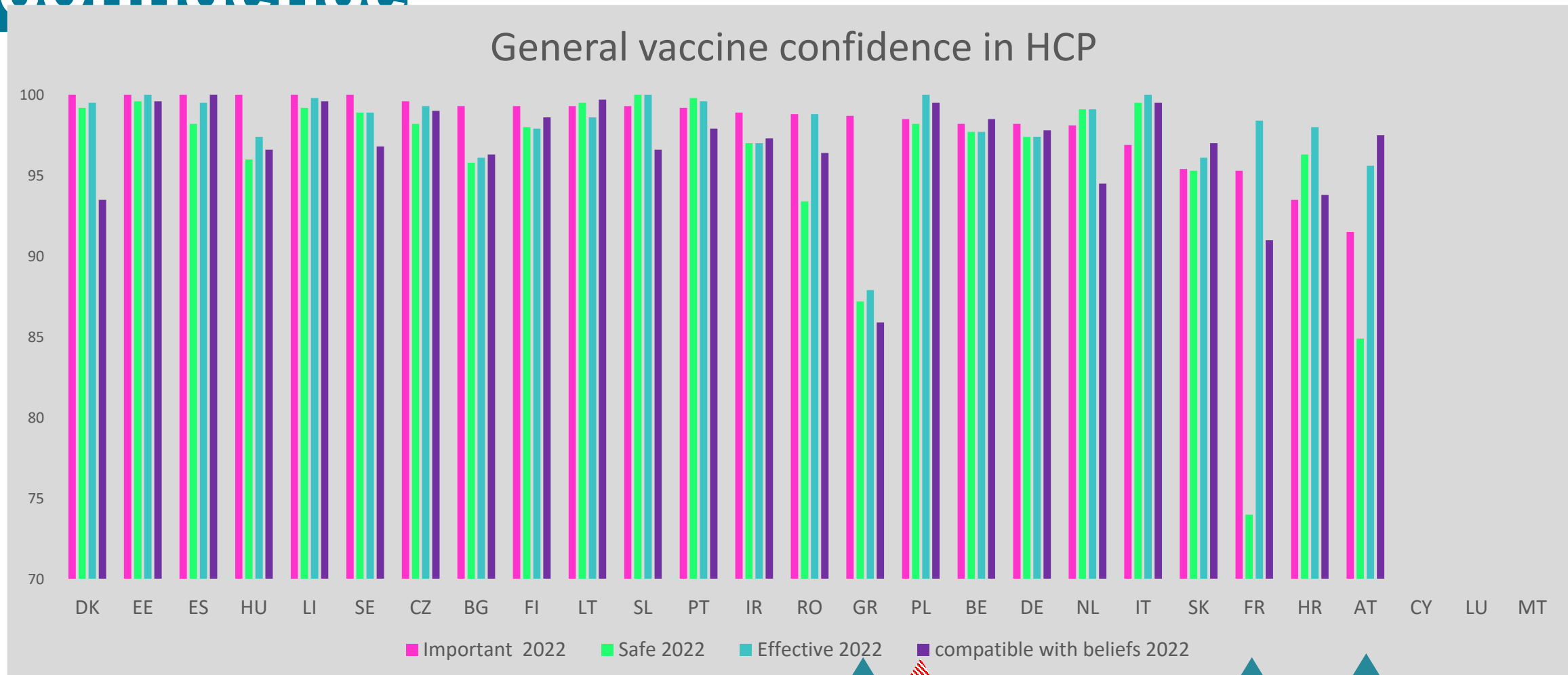


Vaccine Confidence by Country

Agreement that vaccines are **important**, **safe**, **effective**, and **compatible with beliefs** remain high and stable among HCPs. Above 90% of HCPs surveyed in all EU member states agree that vaccines are **important**. Above 90% of HCPs surveyed in most EU member states agree that vaccines are **safe**.

While vaccine confidence among HCPs appears to be extremely stable over time in the majority of member states, there are signs of decreasing vaccine confidence among HCPs in

Results 2022 – General Vaccine confidence



Poland

Vaccine confidence factsheet, 2022

V

^





HCP confidence

Summary of likelihood to
recommend vaccines 2022

98.7% would recommend MMR vaccine to patients

94.3% would recommend flu vaccine to patients

86.4% would recommend flu vaccine to pregnant women

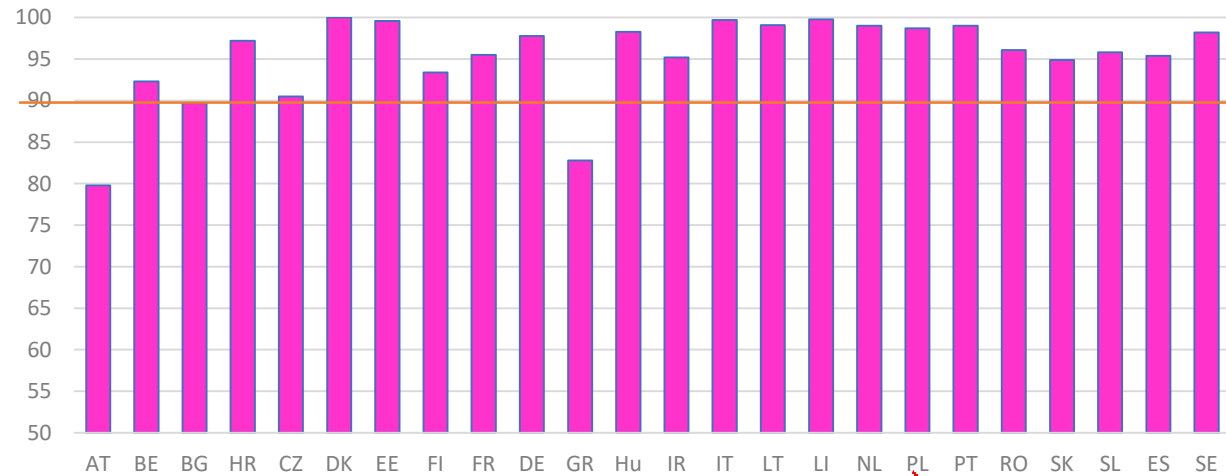
92.3% would recommend HPV vaccine to patients

89.4% would recommend COVID-19 vaccine to patients

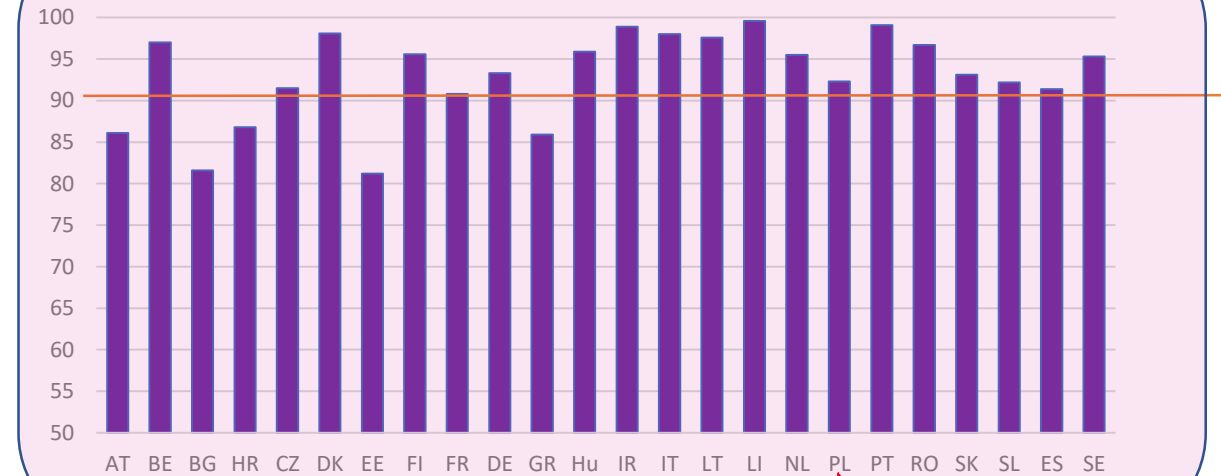
83.9% would recommend COVID-19 vaccine to pregnant women

HCP Likelihood to recommend vaccines

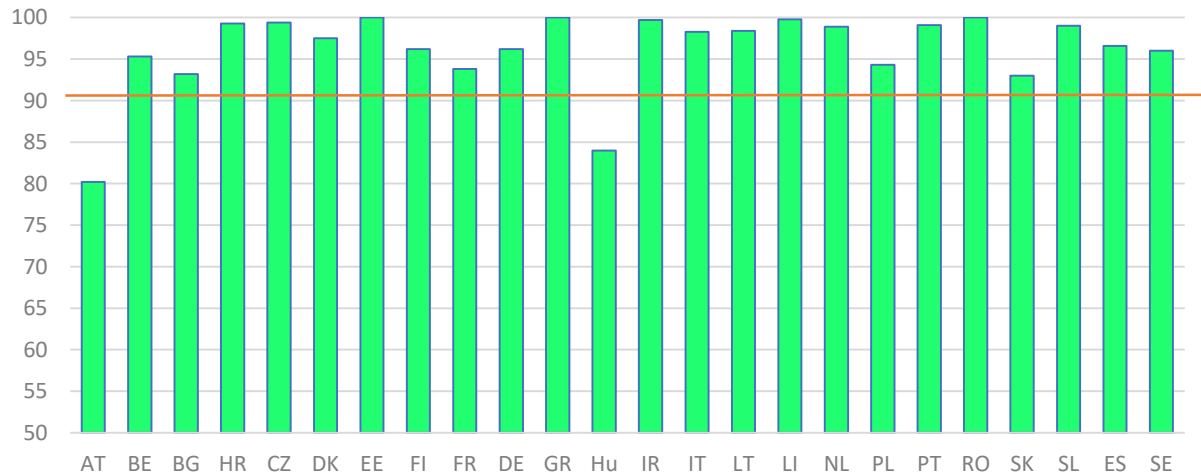
MMR vaccine



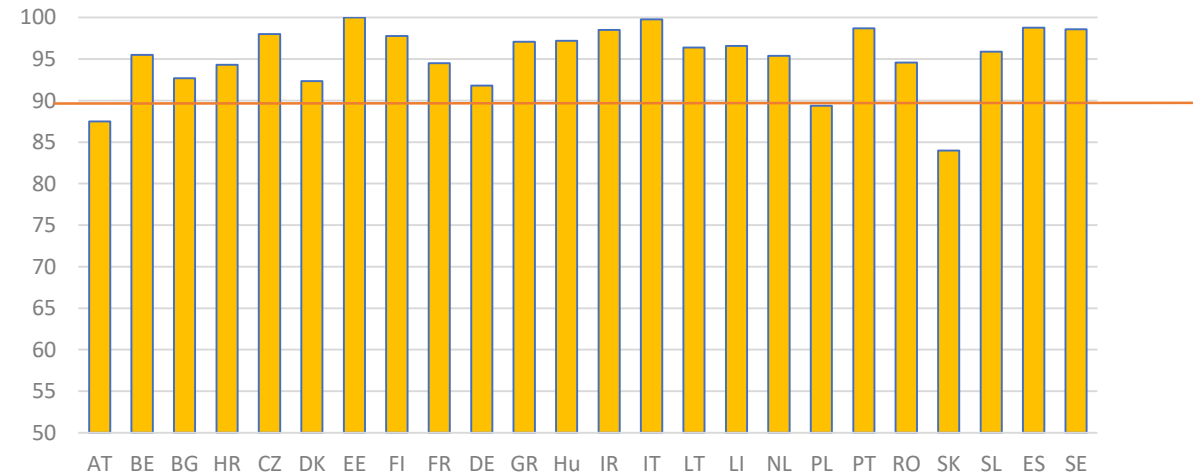
HPV



Flu Vaccine



Covid-19vaccine



The role of the healthcare provider

- HCPs most trusted source of information concerning vaccination
- HCPs have impact on the vaccination attitudes and behaviors



Polish research also reinforces the role of the HCP

89.2% parents reported **trusting their child's physician** regarding vaccine recommendations and vaccinated their child with all or most of the vaccines recommended by a national vaccination guideline (94.7%) Parental willingness to vaccinate their child against HPV was highly differentiated by the level of trust in the child's physician

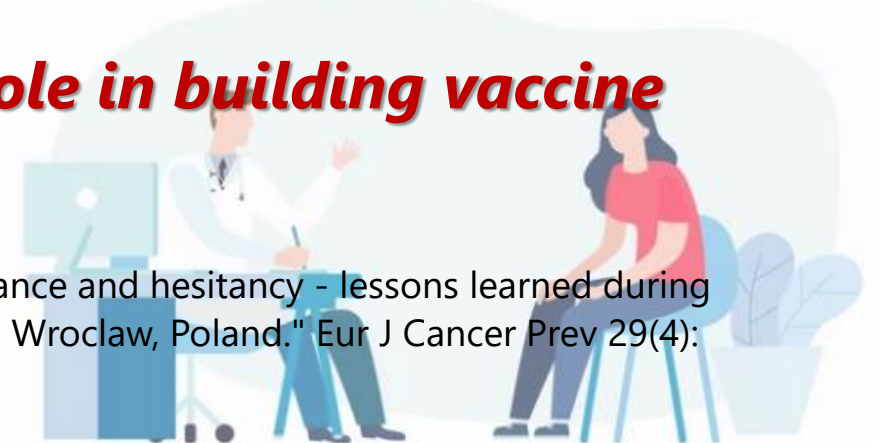
Sobierajski, T et.al (2023). "Trust in Physicians in the Context of HPV Vaccination of Children from the Perspective of Social Exchange Theory: A Representative Study of Polish Parents." Vaccines

.....doctors' knowledge about HPV and the **HPV vaccine influences the attitude** to HPV vaccination.....

Smolarczyk, K., et al.(2021). "Assessment of the State of Knowledge about HPV Infection and HPV Vaccination among Polish Resident Doctors." Int J Environ Res Public Health **18**(2).

.....interventions to **raise the nurses' awareness of their role in building vaccine acceptance** should be improved.....

Ludwikowska et al. (2020). "HPV vaccine acceptance and hesitancy - lessons learned during 8 years of regional HPV prophylaxis program in Wroclaw, Poland." Eur J Cancer Prev 29(4): 346-349.



How confident are
HCP to answer
questions of patients





Vaccine training barometer

Aim/outcome:

1. to assess the **need** for vaccine **training** in HCP
2. to **monitor the confidence** of the HCP to communicate about vaccines
3. to **collect questions HCP** could not answer


Available in Dutch, English, Spanish (and many more languages)

Pilot test:

- Flanders (Belgium) in Feb '20/Jan '21 - Spain Jan '21 (respondents: BE 821 - ES 298)

Results of pilot testing of Vaccine Training Barometer

Results Vaccine Training Barometer

	Flemish sample Nov 2020 – Jan 2021 833 HCPs	Spanish sample Nov 2020 – Jan 2021 291 HCPs	Coalition For Vaccination Jun 2021 3298 European HCPs
<small>Ph:Pharmacists, MD: Medical doctors, N:Nurses, Midw: Midwives, Oth: Others</small>	<small>Ph 22%-MD 17%-N45%-Oth:16%</small>	<small>Ph 25%-MD 14%-N 10%-Midw 51%</small>	<small>Ph 23%-MD 44%-N 24%-Midw 1%-Oth 8%</small>
Feels confident to answer questions about vaccination	31.5%	21.6%	53.9%
Received questions in the last 3 months that they could not answer	52.4%	41.5%	53%
Gained sufficient knowledge through their standard education	11.4%	11.3%	20.6%
Is willing to follow extra training	95.4%	96.6%	89.6%

Student survey

WP4 Task 4.3.1 Part 2 Assess the need of pre-service training for medical and para-medical students

- Vaccination status of Students
- Students' knowledge
- **Attention given to vaccination in their curriculum**
- Students' attitude towards vaccines and vaccination
- **Students' vaccine confidence**



3515 responses

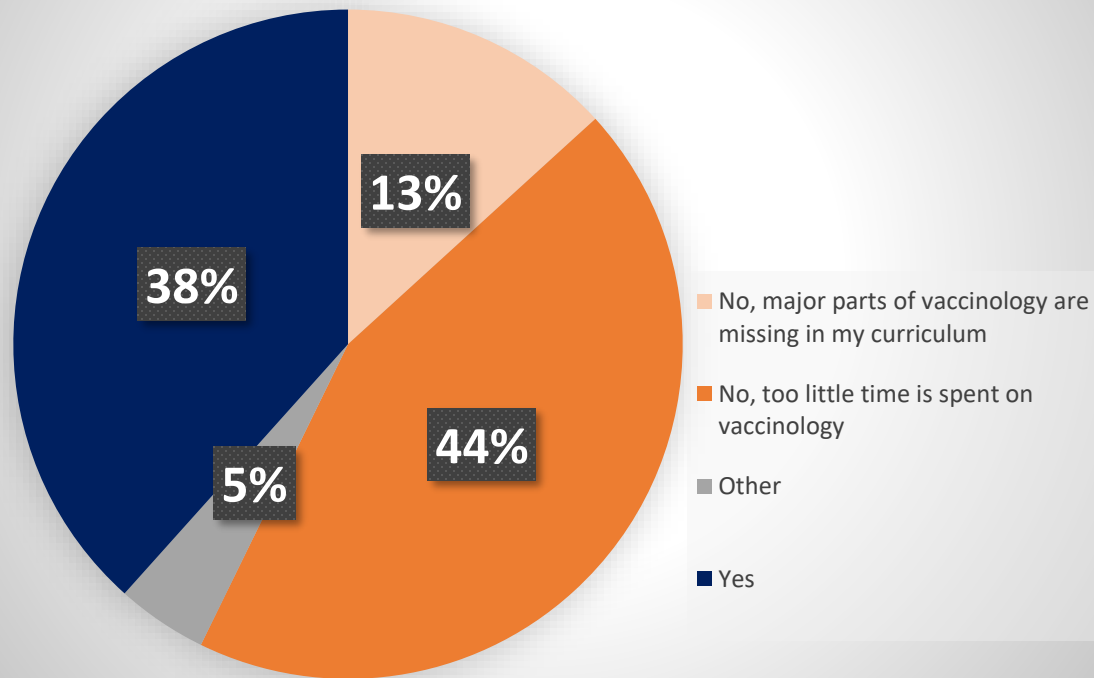


European Medical
Students' Association

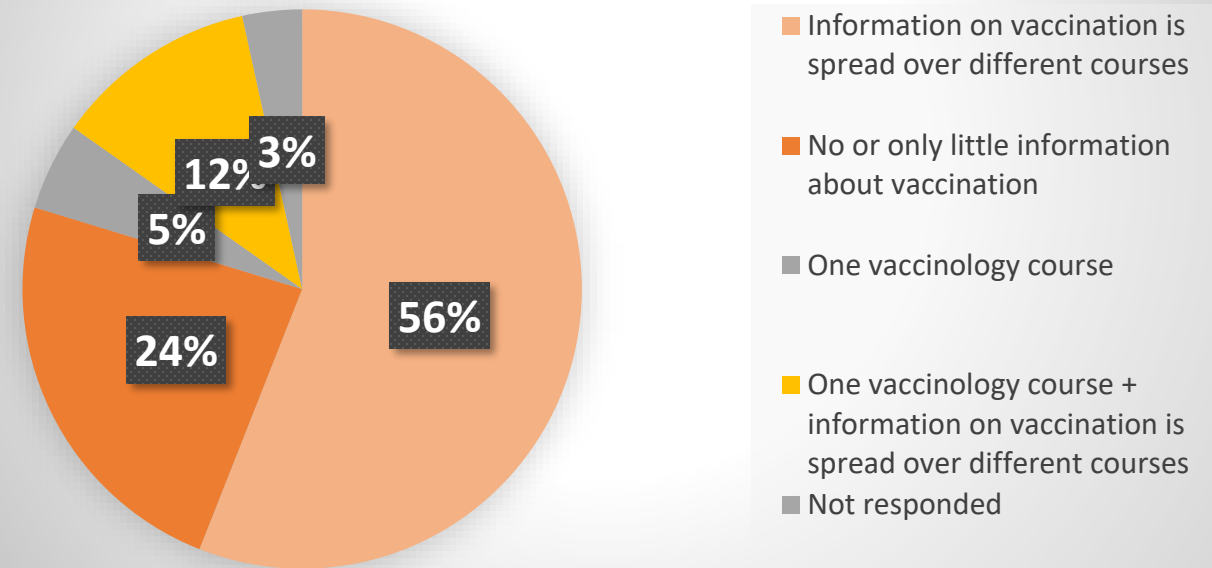
ENSA European Nursing
Students' association

Attention given to vaccination in their curriculum

Do you feel enough attention has been paid to vaccinology in your curriculum?



How are courses in vaccination or in vaccinology organized in your curriculum?



Would you recommend the following vaccine

MMR

68.4% strongly agreed that they would recommend **MMR vaccine** to patients,

Influenza

42.8% strongly agreed to recommend **seasonal flu vaccine** to patients,
only **38.6%** strongly agreed to recommend flu vaccine to **pregnant**,

HPV

63.8% strongly agreed to recommend **HPV vaccine** to girls and boys.

COVID

51.9% strongly agreed that they would recommend a **Covid-19 vaccine** to patients

What is needed to gain more confidence to answer vaccine related queries

an extended module on
vaccination in their education
curriculum

- 52.1% medicine students,
- 40.4% nursing students and
- 61% pharmacy students

trustworthy websites on
diseases, vaccine
recommendation and schemes

- 52,7% medicine students,
- 40% nursing students and
- 53,2% pharmacy students

More than
1/5 of the
students
report
missing in
their
curriculum

Practical skills (47,1%)

Understanding, active listening and
communication about vaccines (32,1%)

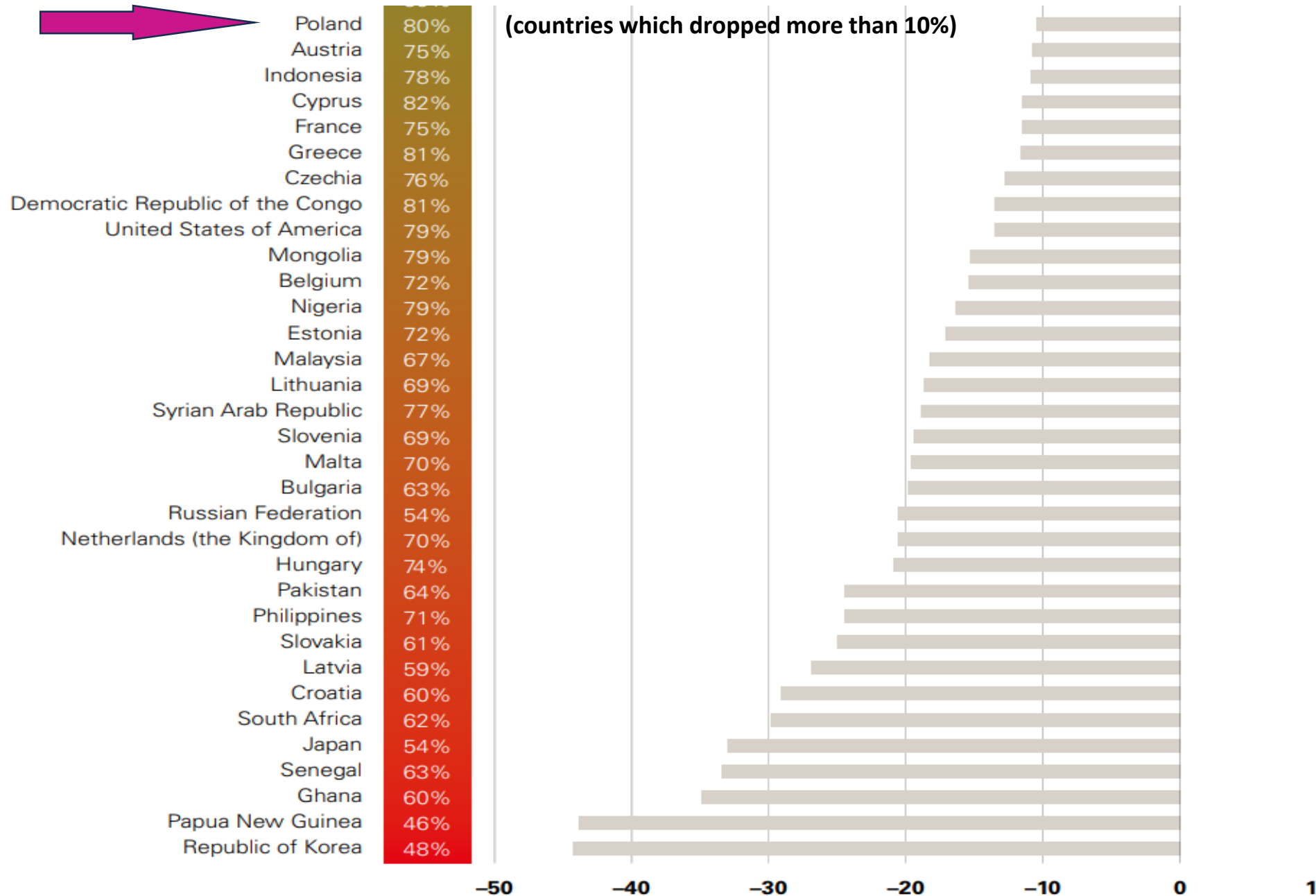
Recent and future developments in the field of
vaccinology (recent vaccines, new methods, new
target diseases) (27,3%)

Immunization policies and schedules (20,2%)

Take home message

- Vaccine confidence is **multi factorial**, and can be influenced by different actors – factors
- **Declining trend (?)** in vaccine confidence of general population (for most vaccines but especially for HPV)
- Most trustworthy source are **HCP** and are important influencers but they themselves can lack of confidence
- **Understanding the specific barriers** to vaccine acceptance among younger age groups and frontline healthcare professionals is very important
- Extra **“tailor made” training and information materials** for general population as well as for HCP is needed
- Communication training
- **(Local) Social scientist** can help to make effective campaigns

Confidence that vaccines are important for children dropped after the start of the pandemic





Thanks! Dziękuję!

CONFIVAX team

My colleagues

- Sara Valckx
- Jade Pattyn
- Emilie Karafilliakis
- Aurélie De Waele
- Toni Claessen
- Pierre Van Damme

London School of Hygiene and Tropical Medicine

- Rachel Eagan
- Alex De Figueiredo
- Heidi Larson





HPV

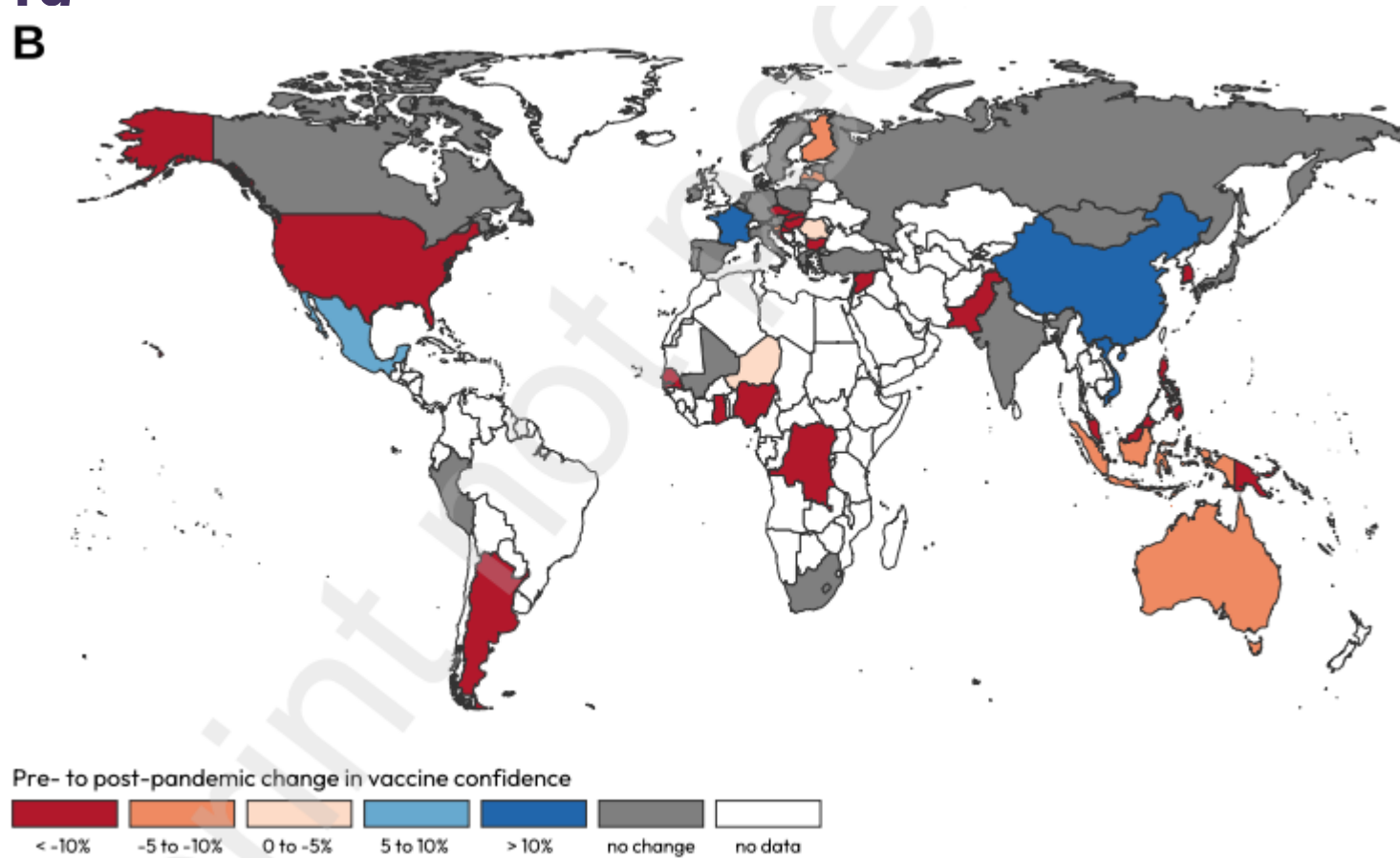
**Szczepienie jest
BEZPŁATNE**

Zapisz swoje dziecko w wieku
12-13 lat na szczepienie HPV.
Bezpieczni teraz - bezpieczni
w przyszłości!

Global changes in vaccine confidence since COVID-

1a

B



Vaccine safety

- Increased in 4 countries: France (11.9pp), China (11.9pp), Vietnam (10.3pp), and Mexico (7.6pp)
- Decreased in 24 countries: South Korea (-34.9pp), Papua New Guinea (-33.0pp), and Ghana (-25.2pp), Syria (-22.9pp), Pakistan (-21.0pp), DRC (-18.8pp)

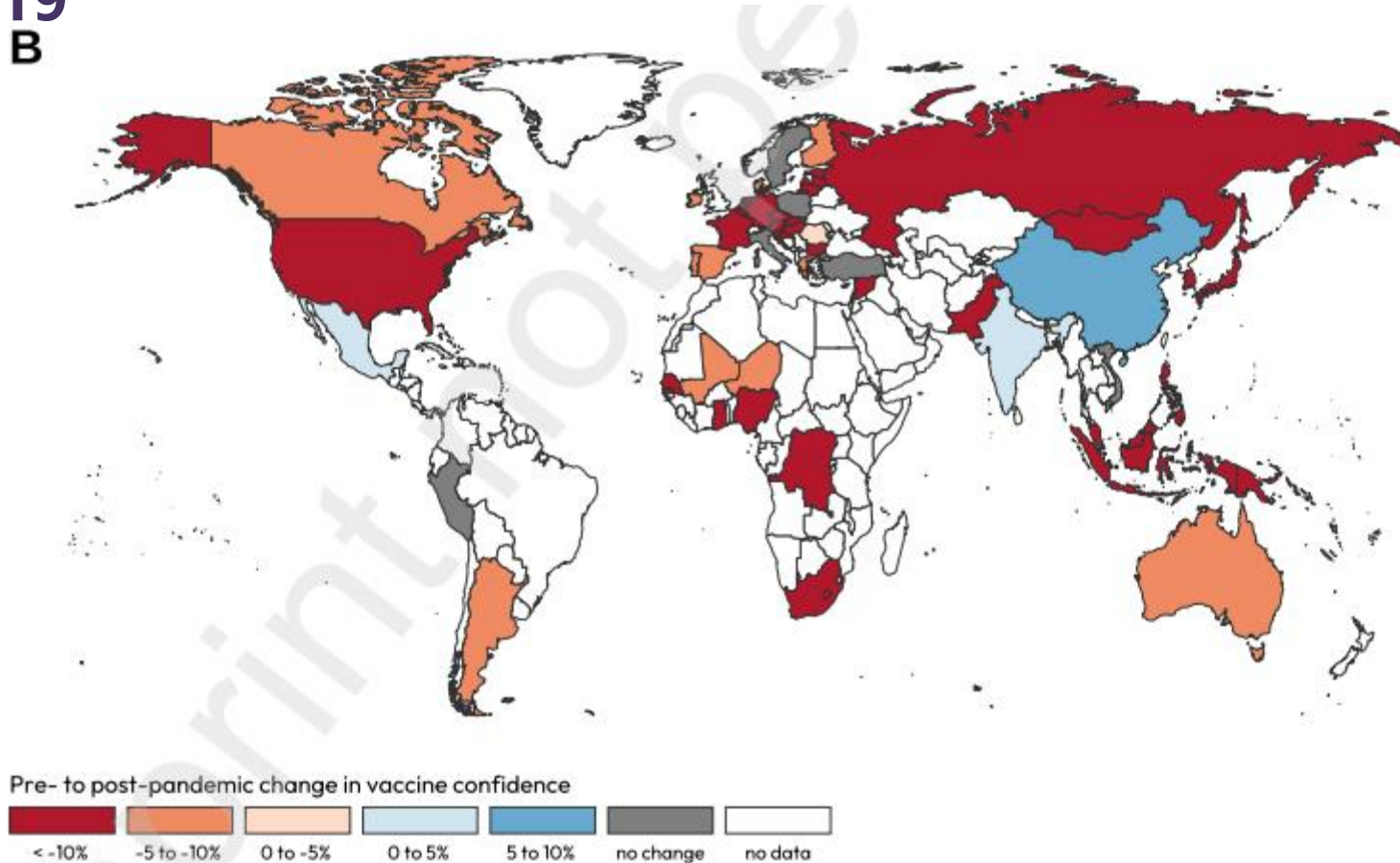
Confidence in the safety of vaccines

Percentage point change in the percentage of respondents agreeing that vaccines are safe from pre- to post- pandemic cohorts.



Global changes in vaccine confidence since COVID-19

B



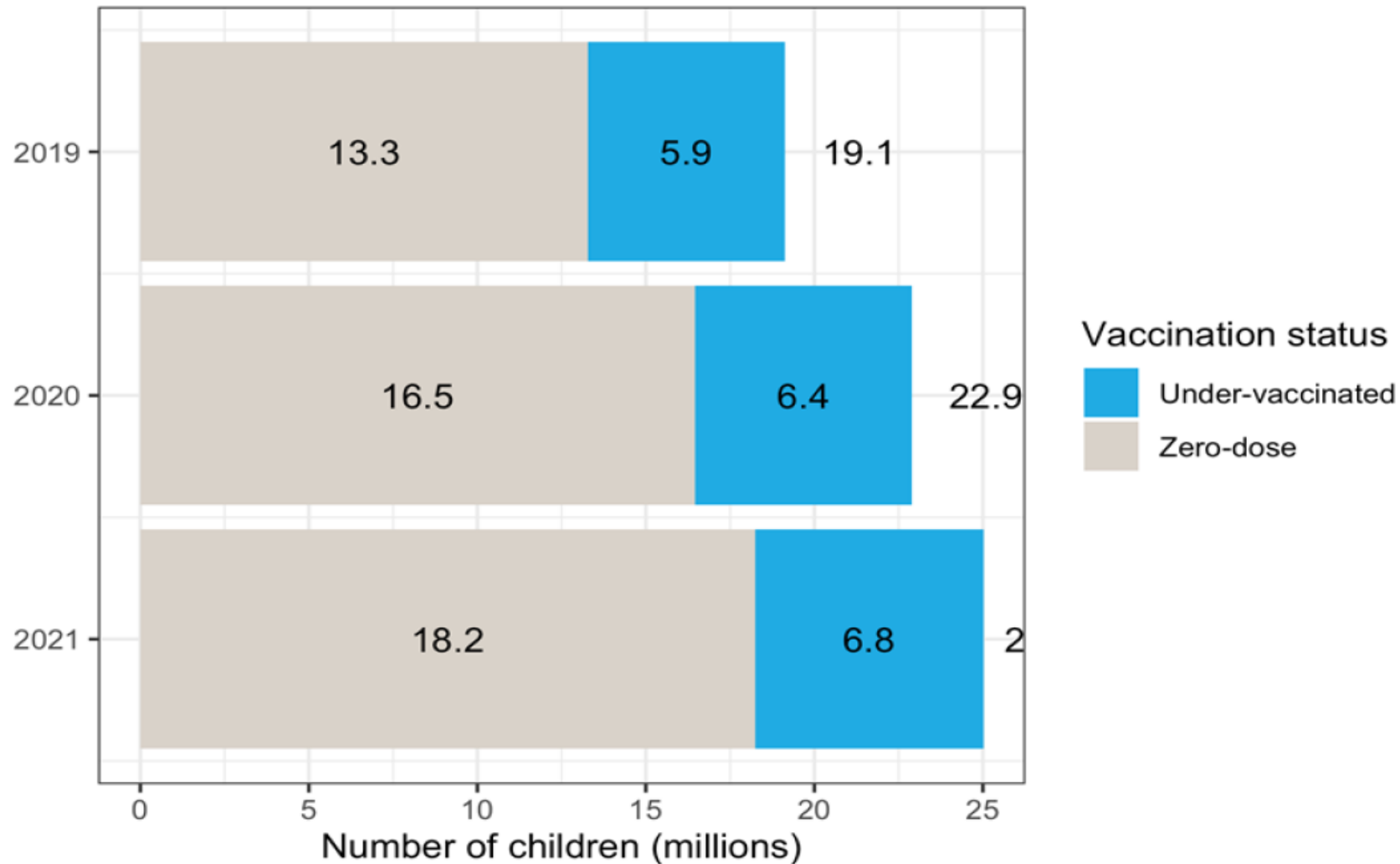
Vaccine importance

- Increased in 3 countries: India (+3.9pp), Mexico (+4.7pp), and China (+8.9pp)
- Decreased in 46 countries: South Korea (-45.6pp), Papua New Guinea (45.6pp), Ghana (36.4pp), Japan (-30.9pp), Senegal (-29.7pp), Croatia (-28.8pp), Philippines (-26.7pp), South Africa (-26.7pp), Latvia (-26.5pp), and Russia (-26.4pp)

Confidence in the importance of vaccines for children

Percentage point change in the percentage of respondents agreeing that vaccines are important for children from pre- to post- pandemic cohorts.

The number of children who missed vaccination rose during the COVID-19 pandemic



Source: World Health Organization and United Nations Children's Fund, 'Estimates of National Immunization Coverage (WUENIC), 2021 revision', July 2022.