

# Vaccine Confidence: The 2022 EU report and global context

Prof. dr. Heidi Larson

10 February 2023

**Valentine** Vaccinatiesymposium

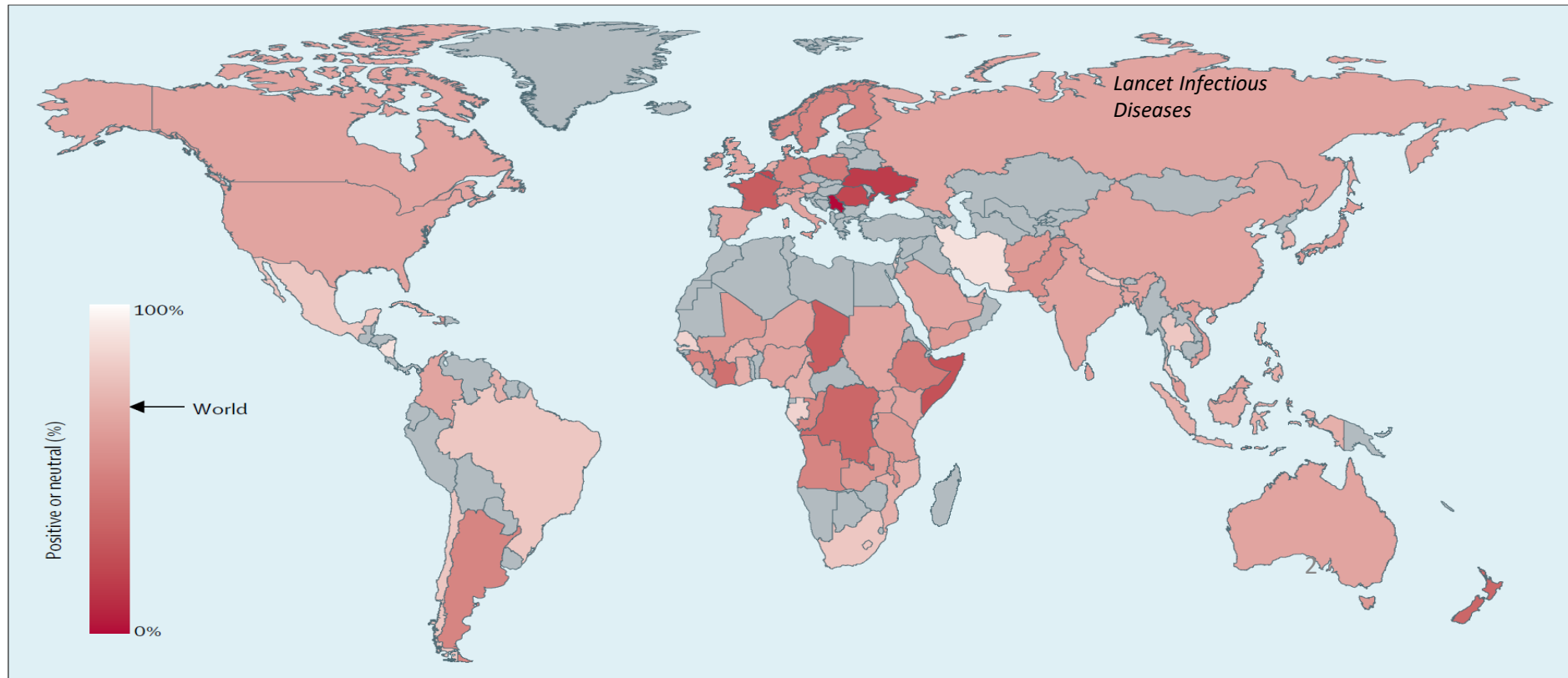
Universiteit Antwerpen



# Measuring vaccine confidence: analysis of data obtained by a media surveillance system used to analyse public concerns about vaccines

Heidi J Larson, David M D Smith, Pauline Paterson, Melissa Cumming, Elisabeth Eckersberger, Clark C Freifeld, Isaac Ghinai, Caitlin Jarrett, Louisa Paushter, John S Brownstein, Lawrence C Madoff

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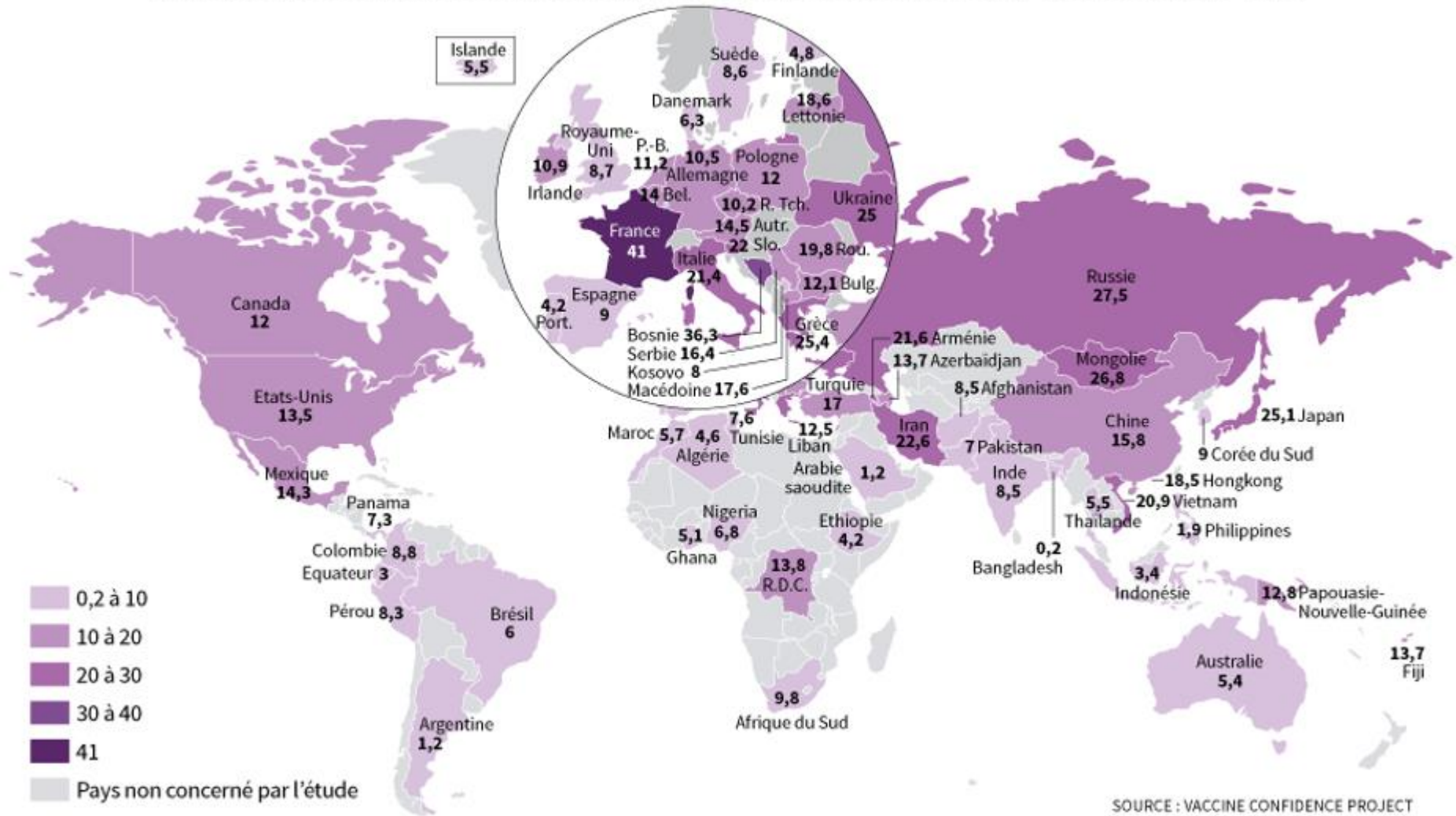


**Figure 2: Proportion of vaccine-related reports categorised as positive or neutral, by country**

Based on analysis of all 10 380 reports. Of the 9655 reports (93%) that mentioned a country or countries, 11 535 countries were mentioned. Countries about which there were fewer than ten vaccine-related reports are shaded grey. The world proportion (69%) is shown by the arrow on scale bar. Country border data are from the Global Administrative Areas database.<sup>24</sup>

# “Vaccines are safe?”

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



SOURCE : VACCINE CONFIDENCE PROJECT

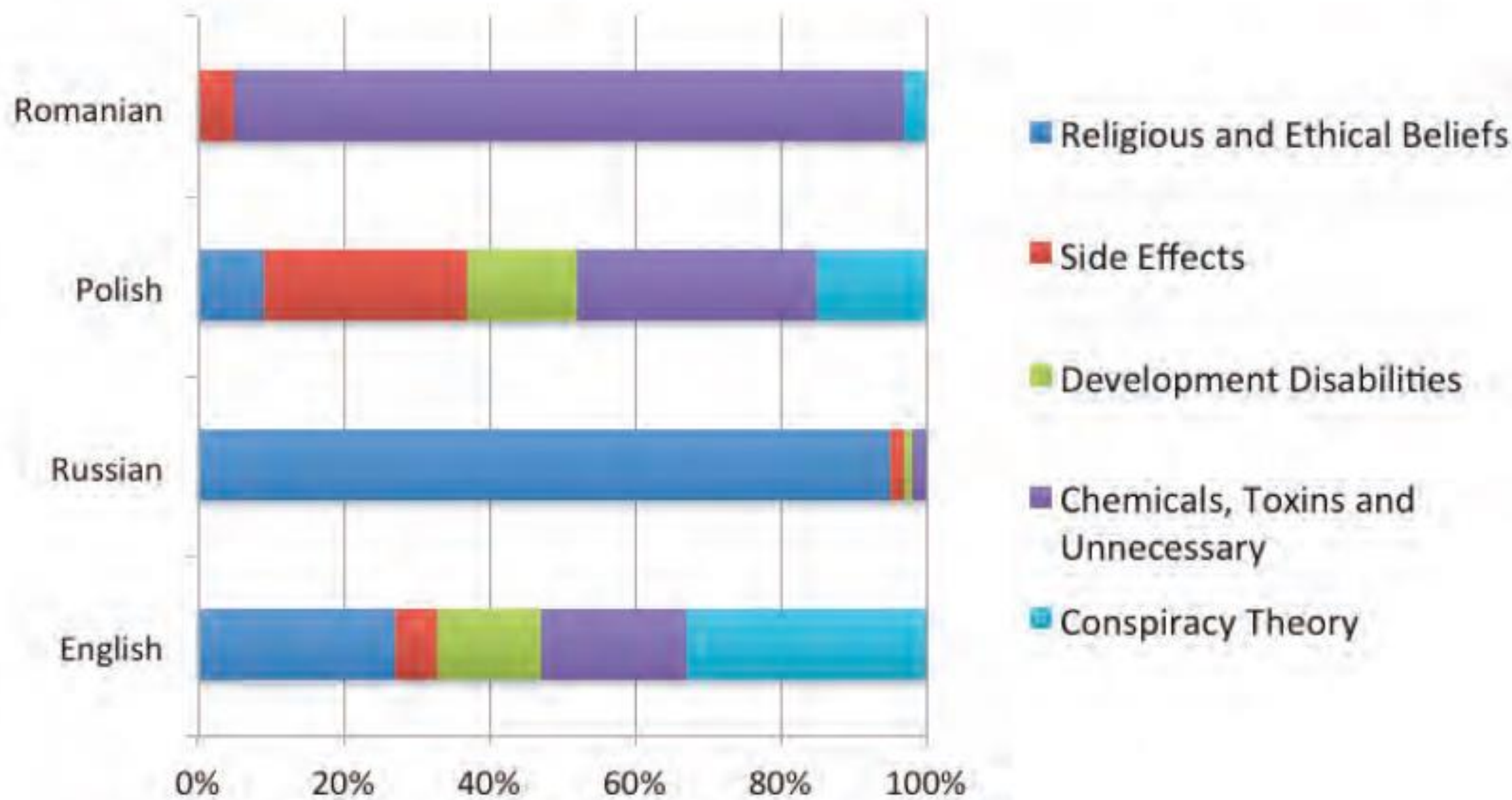
## State of Vaccine Confidence 2016

Larson et al. EBioMedicine 12 (2016) 295–301

**agree**

**Strongly disagree**

**MAP:** [http://www.lemonde.fr/sante/article/2016/09/09/plus-de-quatre-francais-sur-dix-estiment-que-les-vaccins-ne-sont-pas-surs\\_4994856\\_1651302.html](http://www.lemonde.fr/sante/article/2016/09/09/plus-de-quatre-francais-sur-dix-estiment-que-les-vaccins-ne-sont-pas-surs_4994856_1651302.html)





He was released as part of a prisoner exchange in 2011. The U.S. State Department added him in 2015 to a list of designated terrorists.

Mr. Sinwar will replace Ismail Haniyeh, a former prime

ministers and 70 Israeli soldiers and civilians were killed, according to the United Nations.

Palestinians widely expect Mr. Haniyeh to contest the

based on consensus in a secretive process.

The U.S. and Israel consider Hamas a terrorist group.

The appointment of Mr. Sinwar indicates that Hamas

timates Hamas isn't looking to start another war with Israel in the near term, but they concede that tit-for-tat exchanges could escalate into a wider conflict.

pects Greece's economy to strongly rebound in 2017 if the continuing program review is completed.

It forecast modest growth of 0.3% in 2016, a swing from

need to repay bondholders. A failure to get the money could result in Greece defaulting or being forced out of the euro currency, which almost happened in the summer of 2015.

# Italy's Low Vaccination Rates Fuel Government Concerns

By Pietro Lombrardi

ROME—Italy is the latest front in Europe's growing antivaccine trend, fueled in part by groups that oppose mandatory injections and raise doubts over their safety.

The share of Italian 1-year-olds immunized against measles has dropped by at least 5 percentage points since 2012, according to the World Health Organization, slipping below the comparable rate for India.

The country's 2015 immunization rates were the lowest in Western Europe, WHO figures show, roughly on par with those in Serbia and Romania.

coverage against measles, mumps, and rubella (MMR) among two-year-olds has dropped to below 80%.

The opposition has spilled over to the political arena. Italy's antiestablishment 5 Star Movement, which now holds the mayor's seat in Rome and is considered a contender to win possible national elections later this year, has said that while vaccines are safe, any attempt to make them mandatory would be unconstitutional. Antiestablishment parties surging in other parts of Europe haven't made an issue of vaccinations.

Italy's vaccination rate has dropped amid confusion and,

schedule is dangerous. The impression that diseases such as measles have been eliminated has also left some parents less likely to vaccinate their children, experts and campaigners say.

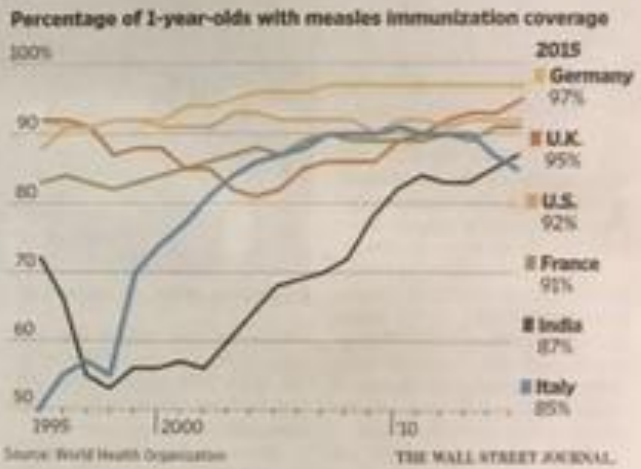
Authorities elsewhere in Europe face antivaccination sentiment but immunization rates haven't dropped as precipitously as in Italy. The country's health authorities say the national MMR vaccination rate for two-year-olds stands at 85%, well below the 95% threshold immunologists say has to be reached to confer "herd immunity" on a population as a whole. MMR coverage in the U.S. for one-year-



Health Minister Beatrice Lorenzin is fighting an antivaccine trend.

## Drop-off

Italy's vaccination rate has seen an especially steep fall in recent years in the face of antivaccine sentiment.



*The flare-up in Italy reflects a broader skepticism toward immunization in Europe.*

The flare-up in Italy reflects a broader skepticism toward vaccines in Europe that some surveys suggest surpasses that of the U.S.

Among 67 countries surveyed last year by the London School of Hygiene and Tropical Medicine, six of the 10 countries where skepticism about vaccine safety ran strongest were in Europe. In France, where vaccination rates are higher than in Italy, more than 40% of those ques-

tioned didn't agree that vaccines were safe, compared with 21% in Italy and 14% in the U.S.

Italy's political battle on the issue has become fierce. Legislators of the 5 Star Movement have proposed a bill, now stalled in parliament, to restrict mandatory vaccinations for public servants. Meanwhile, some regional authorities have recently passed laws requiring vaccinations in schools and

local medical authorities have launched disciplinary proceedings against doctors who oppose vaccinations.

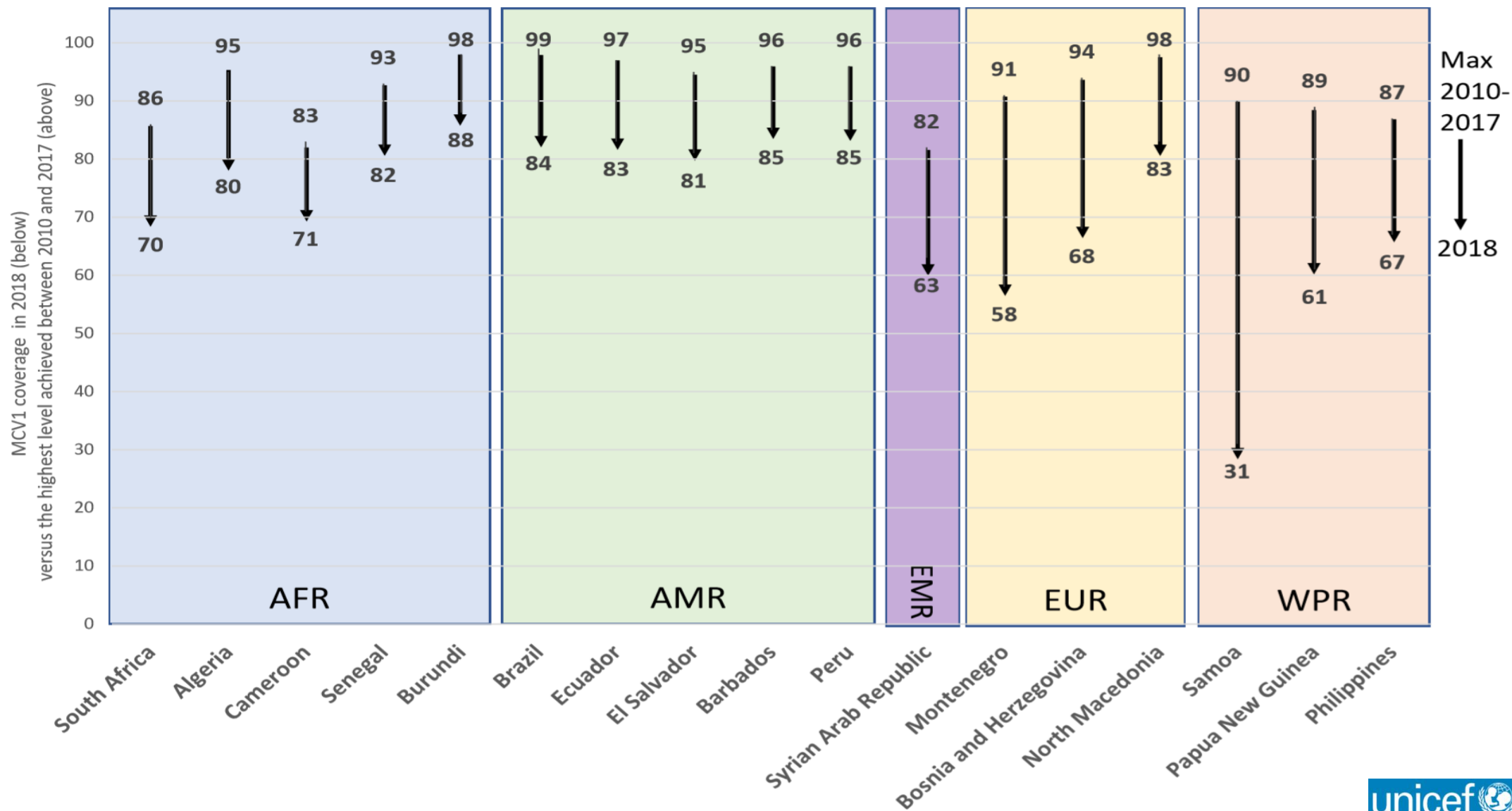
When Italian Health Minister Beatrice Lorenzin had her infant twins vaccinated last year, she made sure news cameras were on hand to broadcast it. "You can't put the results of decades by scientific research on the same plane as the opinion of any old blogger," she said recently.

COMILVA, Italy's leading anti-vaccination group, alleges the injections are linked to autism and other diseases. In the group's hometown, Rimini,

between vaccines and autism. But some parents don't vaccinate at all, while others delay the shots because they believe the recommended

compromised diseases such as diphtheria can be especially risky, since drugs to treat them often aren't immediately available and have to be imported.

## However, many countries that previously had attained high coverage levels backslided in the last few years



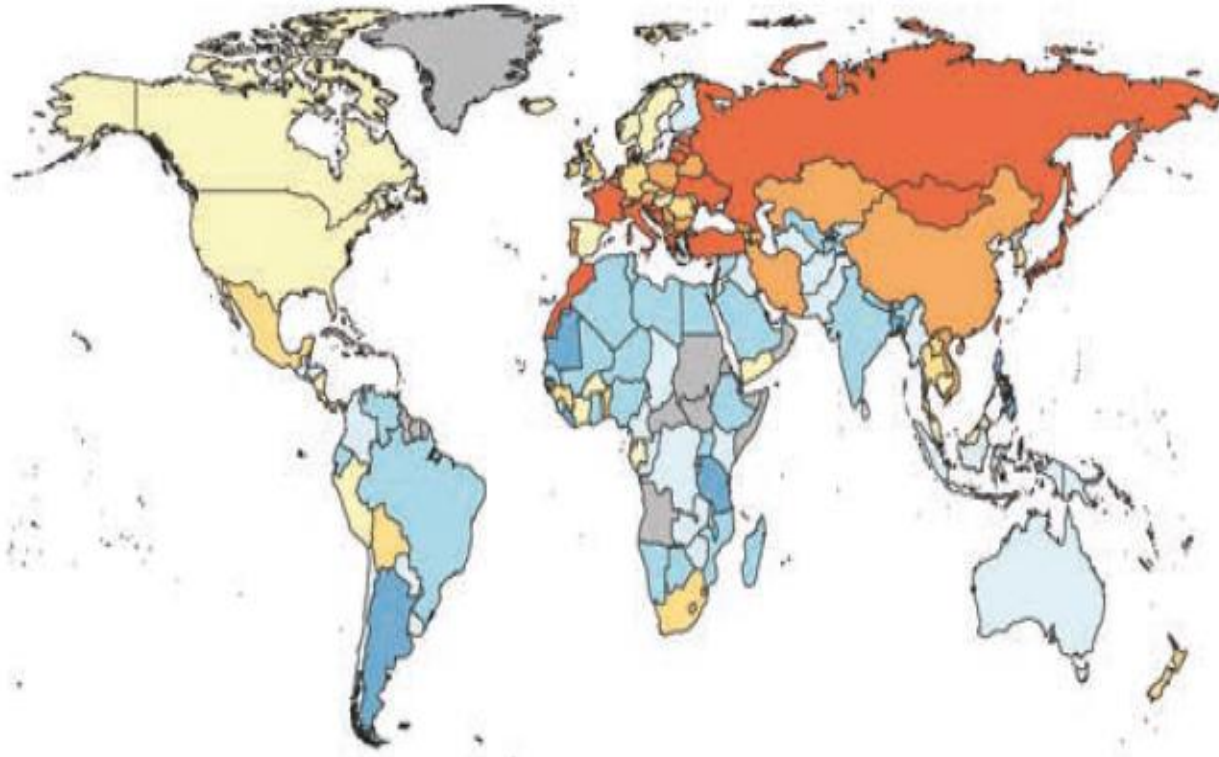
[https://www.who.int/immunization/monitoring\\_surveillance/who-immuniz.pdf?ua=1](https://www.who.int/immunization/monitoring_surveillance/who-immuniz.pdf?ua=1)

Respondents who strongly agree (%)

0-29.9 30-39.9 40-49.9 50-59.9 60-69.9 70-79.9 80-89.9 90-99.9

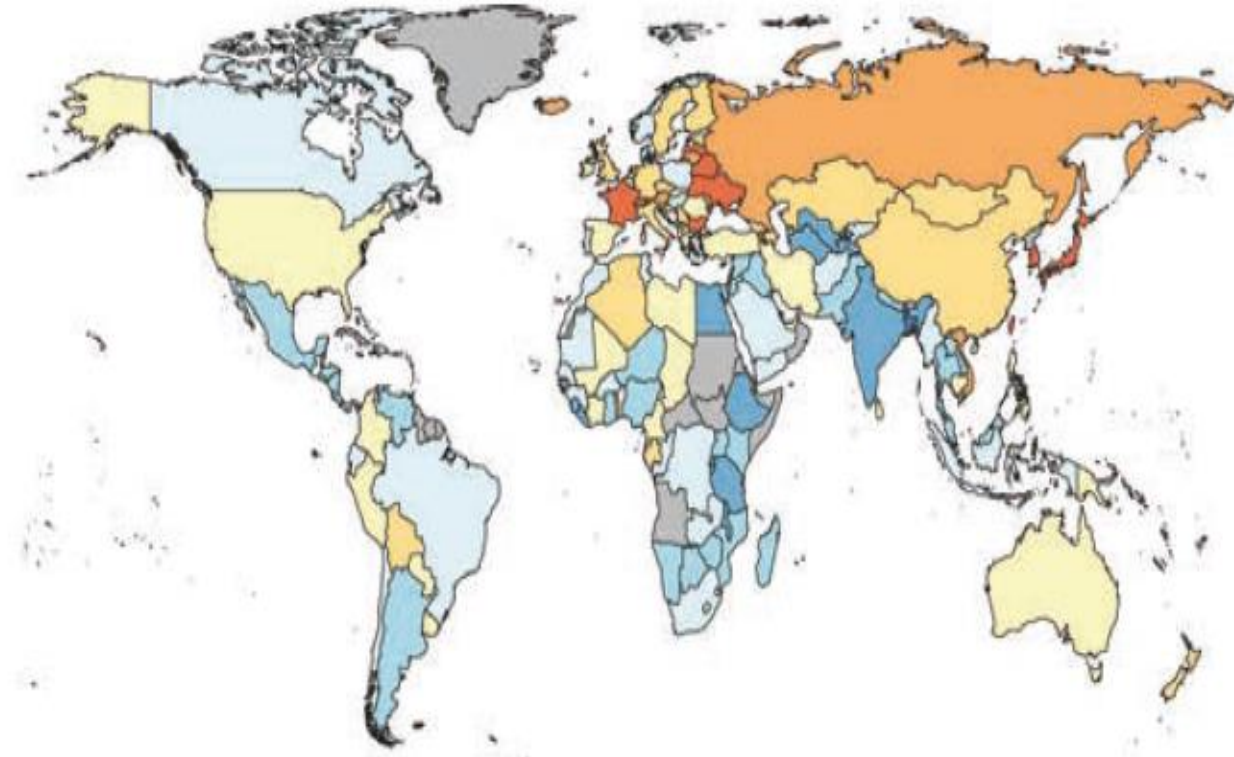
November, 2015

A Vaccines are safe



November, 2018

B Vaccines are safe



**Mapping global trends in vaccine confidence and investigating barriers to vaccine uptake: a large-scale retrospective temporal modelling study**

Alexandre de Figueiredo\*, Clarissa Simas\*, Emilie Karafillakis, Pauline Paterson, Heidi J Larson

*The Lancet* 2020, Vol 396(10255):67-934



# Volatility of vaccine confidence

**L**ast week, the European Medicines Agency declared the AstraZeneca COVID-19 vaccine safe and effective, after several European Union member states had suspended its use because of blood clot concerns. Will the public trust this message? This week's news could help—a U.S. phase 3 clinical trial of the vaccine shows promising efficacy in preventing symptomatic COVID-19. But sentiments toward vaccines are volatile and reflect external events—such as recent concern about AstraZeneca's efficacy data—as well as internal emotions.

Various polls on vaccine willingness made early predictions of low vaccine uptake owing to vaccine hesitancy. But with the ups and downs of virus surges, and more information—and misinformation—around the vaccines, confidence levels also had ups and downs. Vaccine willingness started to climb with news of an effective Pfizer vaccine, a second wave of infection, the emergence of new variants, and more lockdowns. Now, a reported safety risk and consequent anxieties have sent sentiments plummeting in some countries.

Author and physician Danielle Ofri called this undulation of sentiment “emotional epidemiology” as she reflected on the seeming eagerness, then hesitation or refusal, to receive the H1N1 influenza virus vaccine during the 2009 pandemic.

civil liberties, promoting conspiracy theories, and asserting that vaccines are immoral. Anti-vaccination advocates typically represent well-organized entities with explicit agendas, ranging from financial interests (such as selling alternative cures) to ideological or political commitments (such as opposing specific legislation). These organizations also frequently shift their goalposts, claiming that vaccines cause any number of maladies while supporting opposing political platforms. Unfortunately, these themes are widespread on social media—nearly 150 anti-vaxx organizations have over 10 million followers online.

The vaccine hesitant are a highly diverse group. Modalities of hesitancy range from delays over receiving a vaccine because of anxiety around safety concerns, to fears due to historic individual or community experiences, to

questions about COVID-19 vaccines. Those who refuse vaccines are not necessarily “anti-vaxx,” although vaccine-hesitant individuals may consume content from anti-vaxx organizations as they search for evidence to confirm or dispel their concerns. The vaccine hesitant are therefore vulnerable to manipulation by anti-vaccine activists. They also risk being judged or labeled “anti-vaxx” by the very people—health care professionals—who are best positioned to encourage healthy behaviors.

How can vaccine hesitancy be

**“But sentiments toward vaccines... reflect external events...as well as internal emotions.”**

**Heidi J. Larson** is director of The Vaccine Confidence Project and a professor of Anthropology, Risk and Decision Science at the London School of Hygiene & Tropical Medicine, London, UK, and a clinical professor of Health Metrics Sciences at the University of Washington, Seattle, WA, USA. [heidil@lshtm.ac.uk](mailto:heidil@lshtm.ac.uk)

**David A. Broniatowski** is an associate professor of Engineering Management and Systems Engineering and associate director of the Institute for Data Democracy

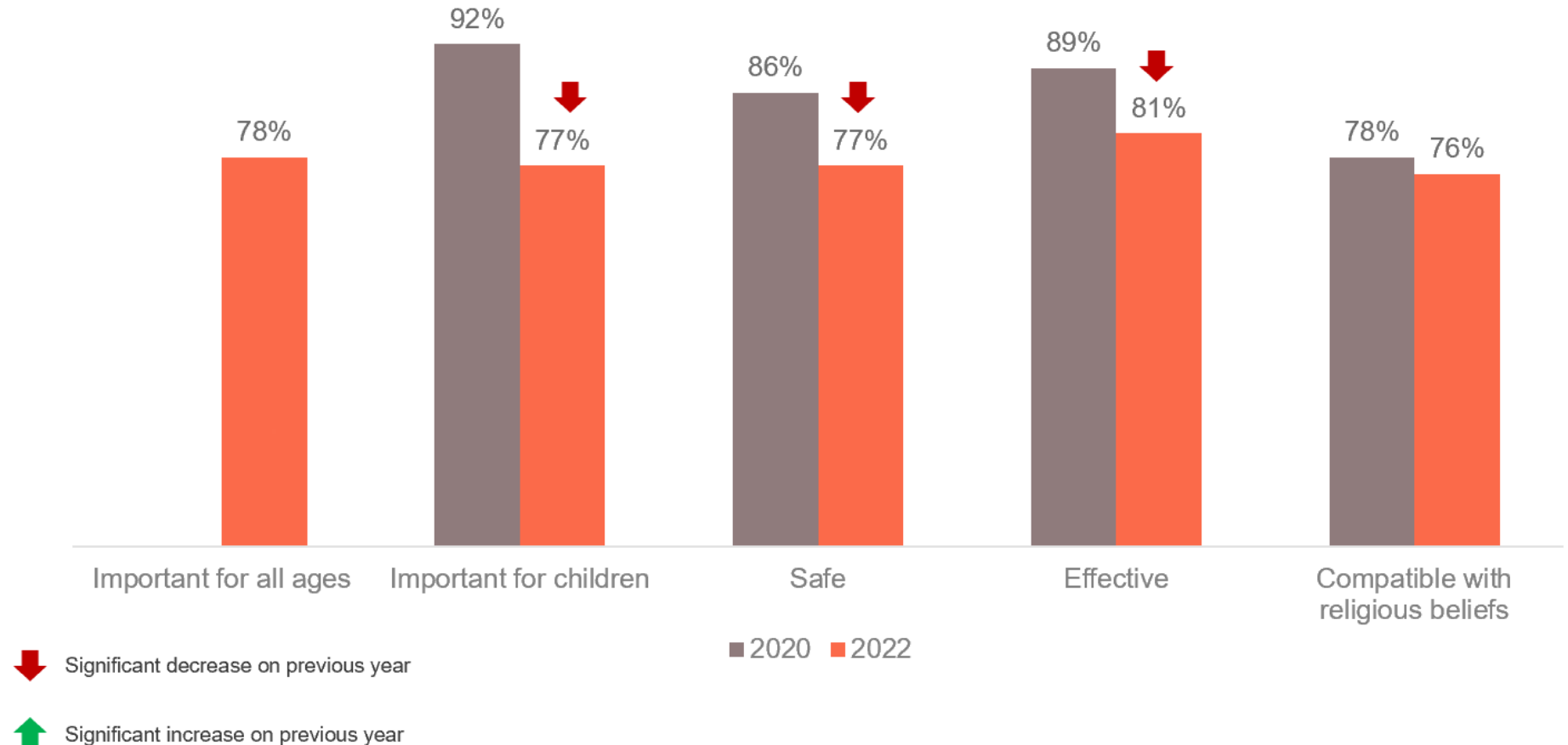
# IMPACT OF THE COVID-19 PANDEMIC ON CONFIDENCE IN VACCINES IN GENERAL IN THE EU

Between Mar-Apr 2020 and Mar-Apr 2022, **significant decrease** in those who NET agree across the VCI index on vaccines in general – except for perceptions around religious compatibility.

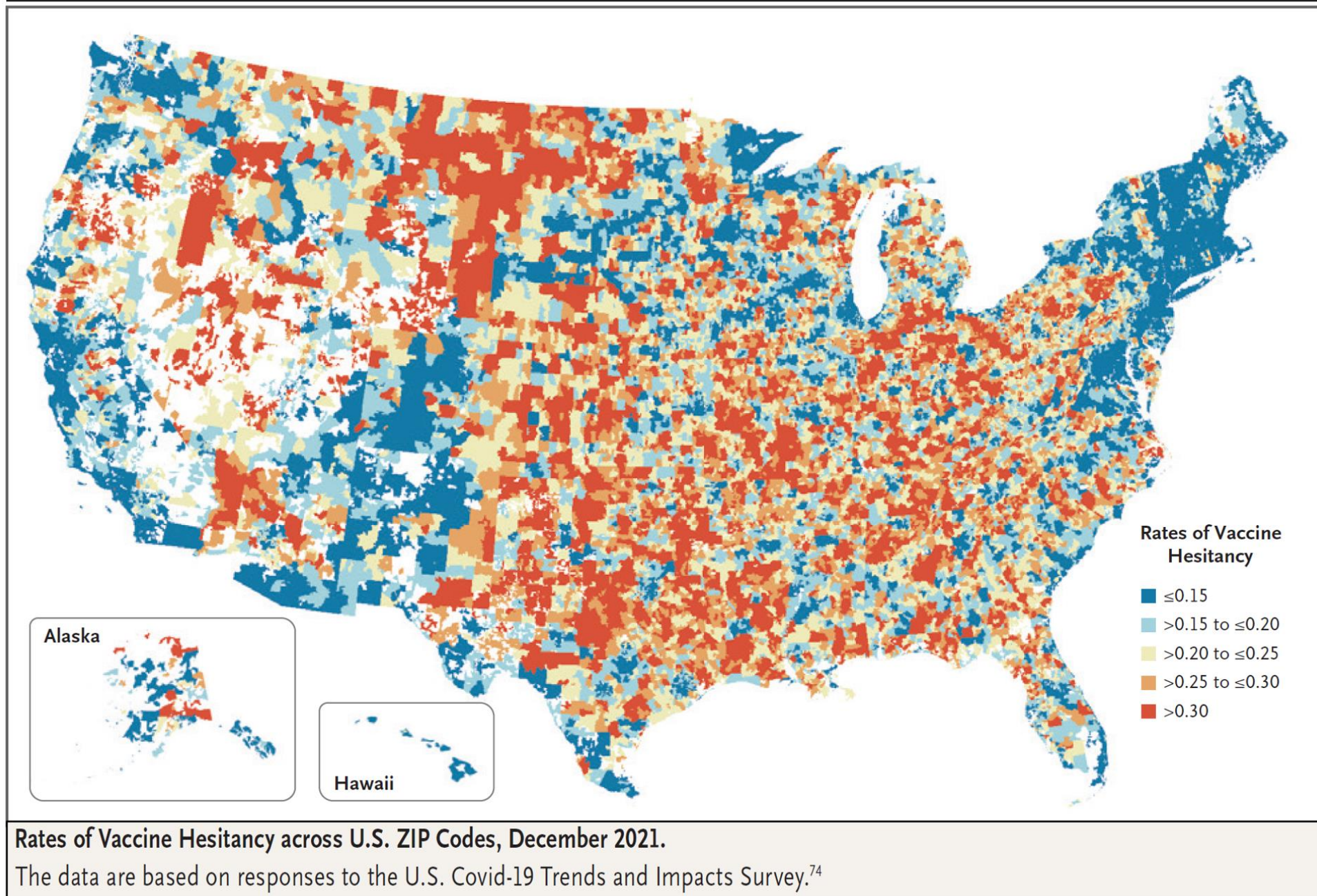
*The question on importance for all ages was not asked in 2020.*

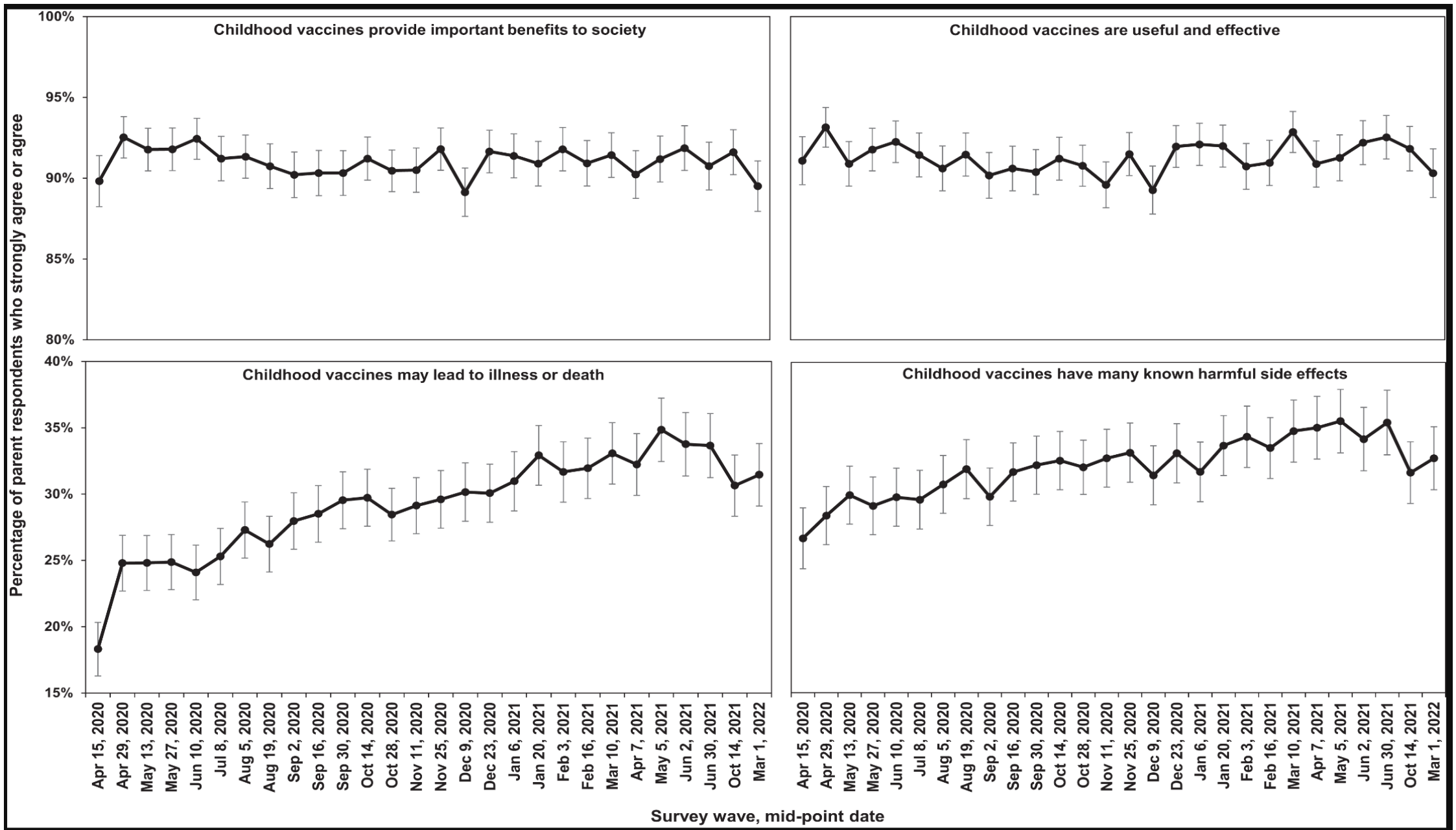
## Countries with most important changes in vaccine confidence since 2020 include:

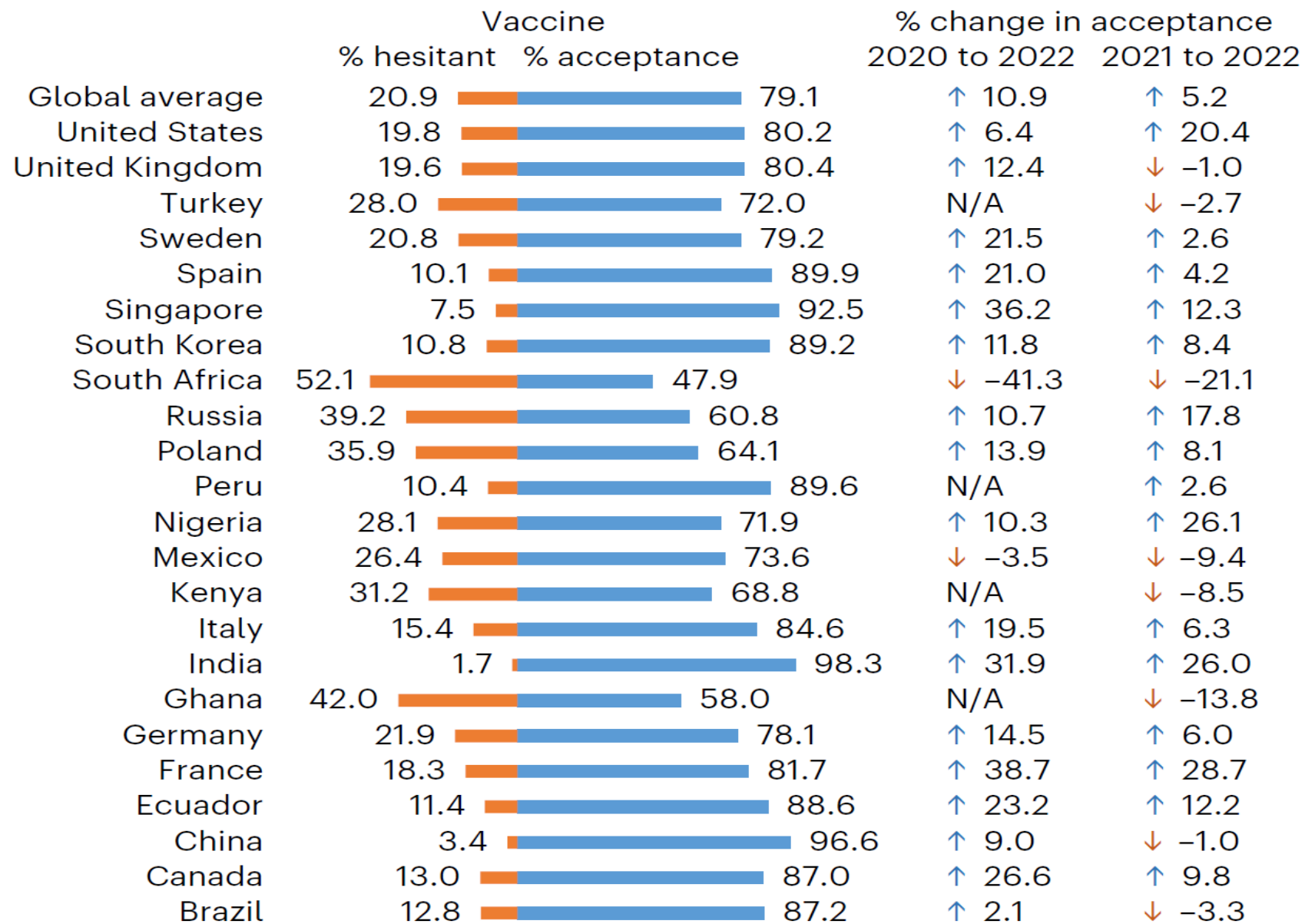
- Slovakia: -23% for safety, -21% for effectiveness, -31% for importance
- Slovenia: -15% for safety, -15% for effectiveness, -21% for importance
- Lithuania: -17% for safety, -13% for effectiveness, -23% for importance
- Latvia: -14% for safety, -13% for effectiveness, -30% for importance
- Bulgaria: -18% for safety, -20% for effectiveness, -27% for importance











**Fig. 1 | COVID-19 vaccine acceptance and hesitancy in June 2022, percent change from 2020 and 2021.** COVID-19 vaccine acceptance in June 2021 and June 2022 was defined as having received at least one dose of a COVID-19



# VACCINE CONFIDENCE INDEX

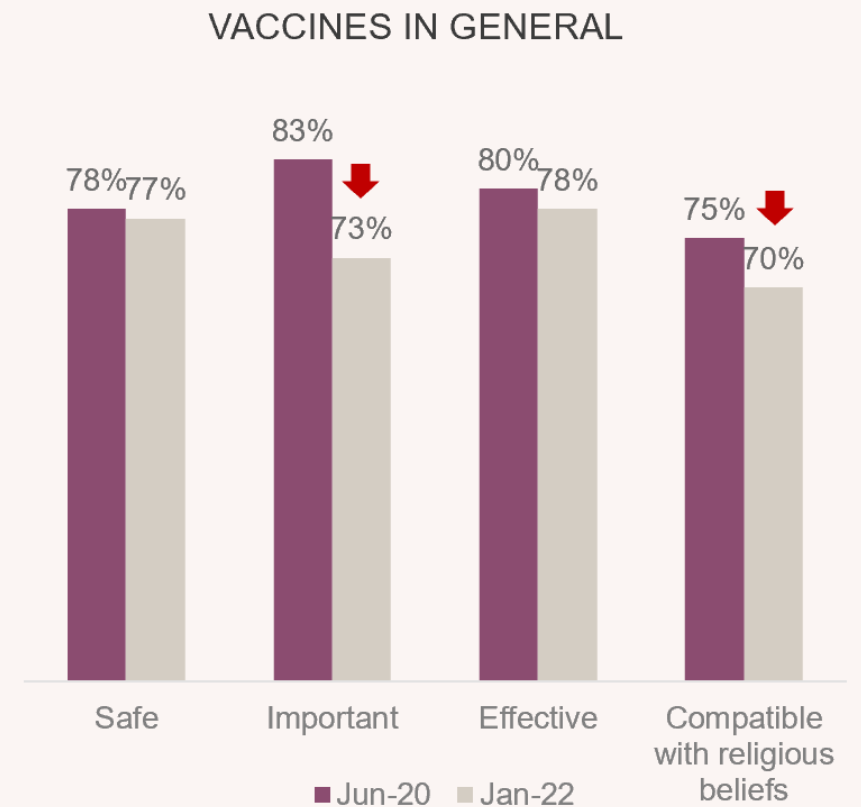
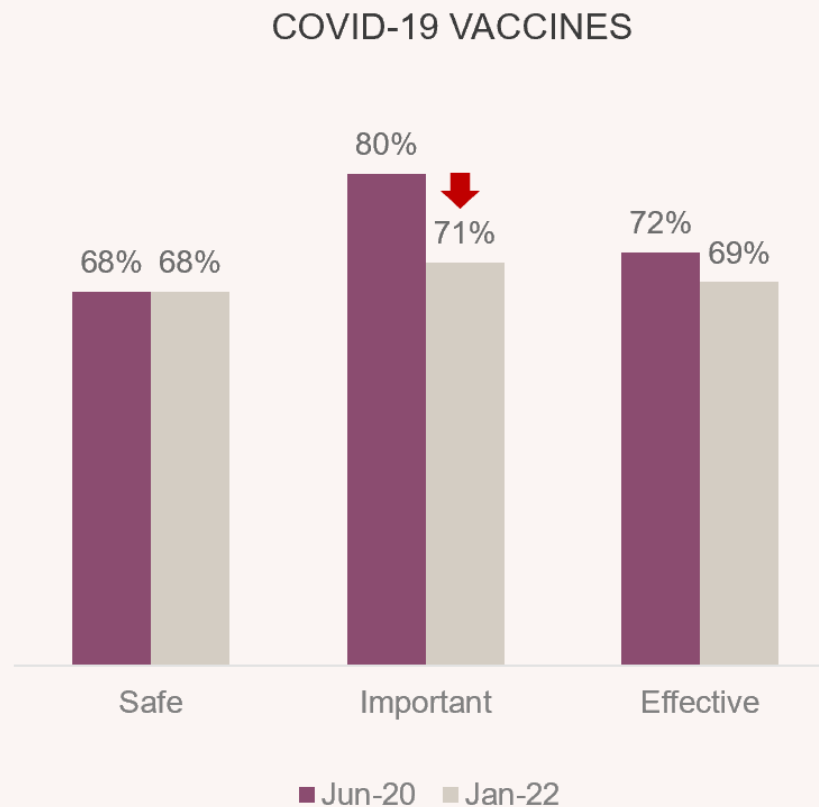
14

Between June 2020 and January 2022, **there has been a fall** in the percentage of participants who agree that vaccines (both COVID-19 and vaccines in general) are important.

Those who are less likely to agree with statements in the index are...

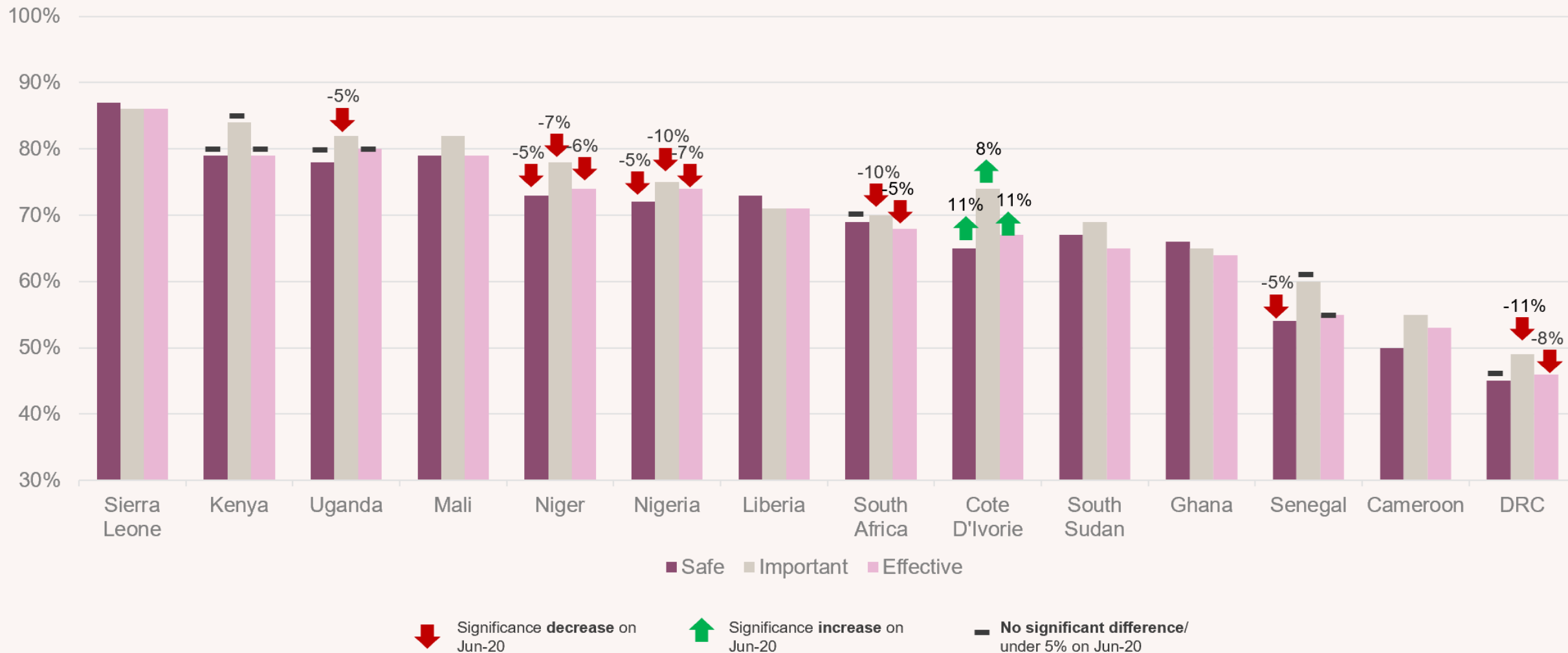
- Younger generations, particularly those under 24
- Those in urban settings
- **Students** and those with **secondary** or **university** educations
- Believe the **threat from COVID-19** is **generally exaggerated**

All interviews: n= 15,375



# VCI INDEX: BY COUNTRIES

VCI INDEX ON COVID-19 VACCINES: BY COUNTRIES SURVEYED – NOTE NOT ALL COUNTRIES WERE SURVEYED IN JUN-20



All interviews: n= 15,375



# COVID-19 eroding social cohesion and triggering rise in civil unrest

POSTED ON MARCH 11, 2021



Political polarization is impossible to ignore. It's on the rise, fueled by its oldest ally, inequality, working alongside one of its newer friends, social media. Many people, especially the young, feel frustrated by their political leaders.

30 percent of people think that others can be trusted—the lowest on record.







ANADOLU AGENCY



# **Anti-health protest: a fight for freedoms that ends in violence**

Great mobilization for the march against health measures and for freedom, this Sunday in Brussels. A march that relayed a whole series of protest messages and where different sensibilities rubbed shoulders.



The demonstration ended with clashes on the Avenue de Tervuren and at the Merode station. - Belga.





EPA  
NHS staff laid their uniforms in Trafalgar Square London

NHS workers who oppose the government's mandatory vaccination policy staged a protest in central London.

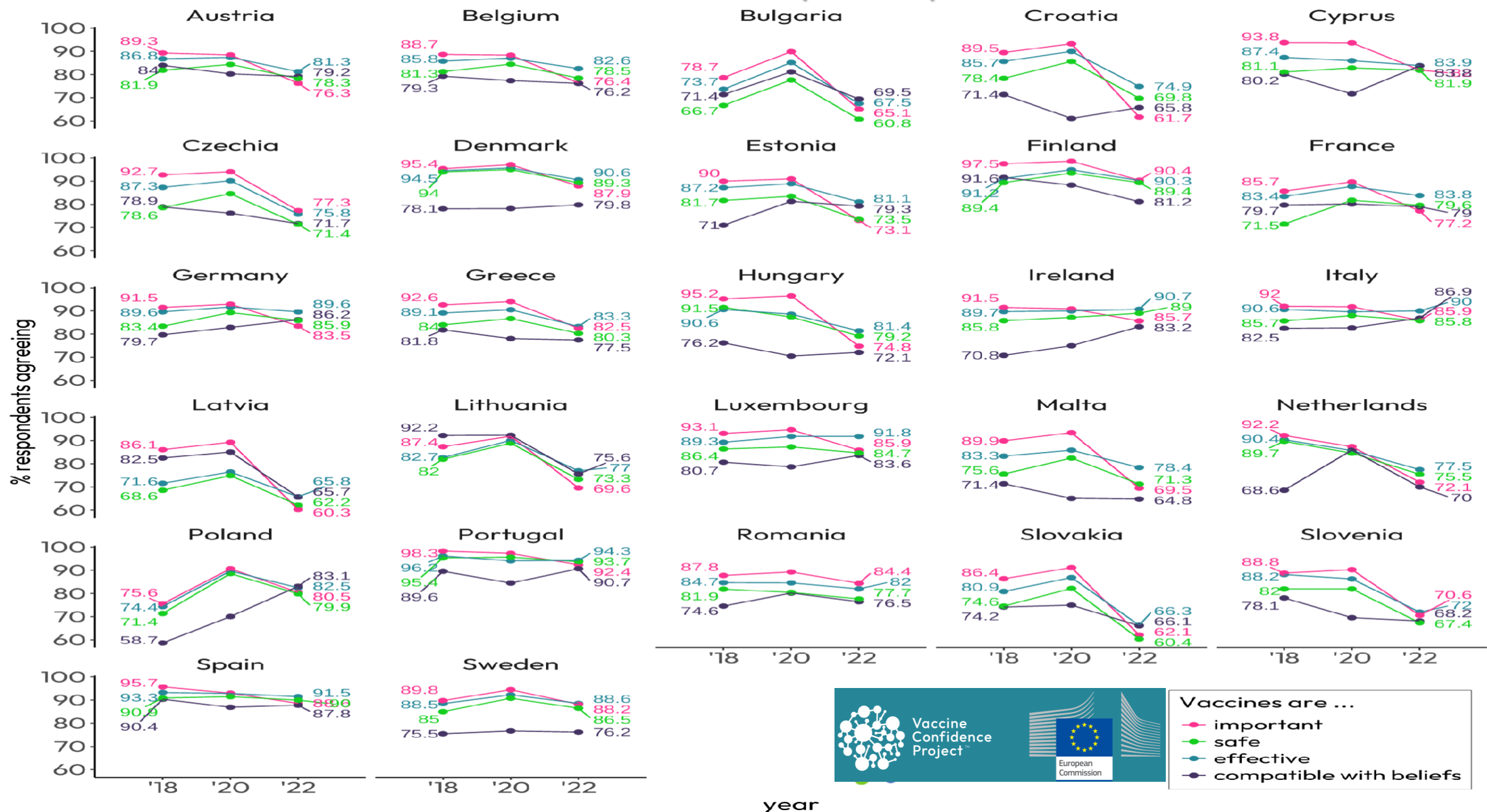
Demonstrations were also held in other cities across the UK



# 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 quickly over time, it is difficult to determine if findings from this study represent short-term fluctuations and reversible trends or more permanent shifts
- **Vaccine confidence among healthcare professionals remains high in 2022**
- Vaccine confidence varies between countries, and across different vaccine types
- The **age “gap” in confidence is widening** between younger and older age groups- with **vaccine confidence among young people declining**

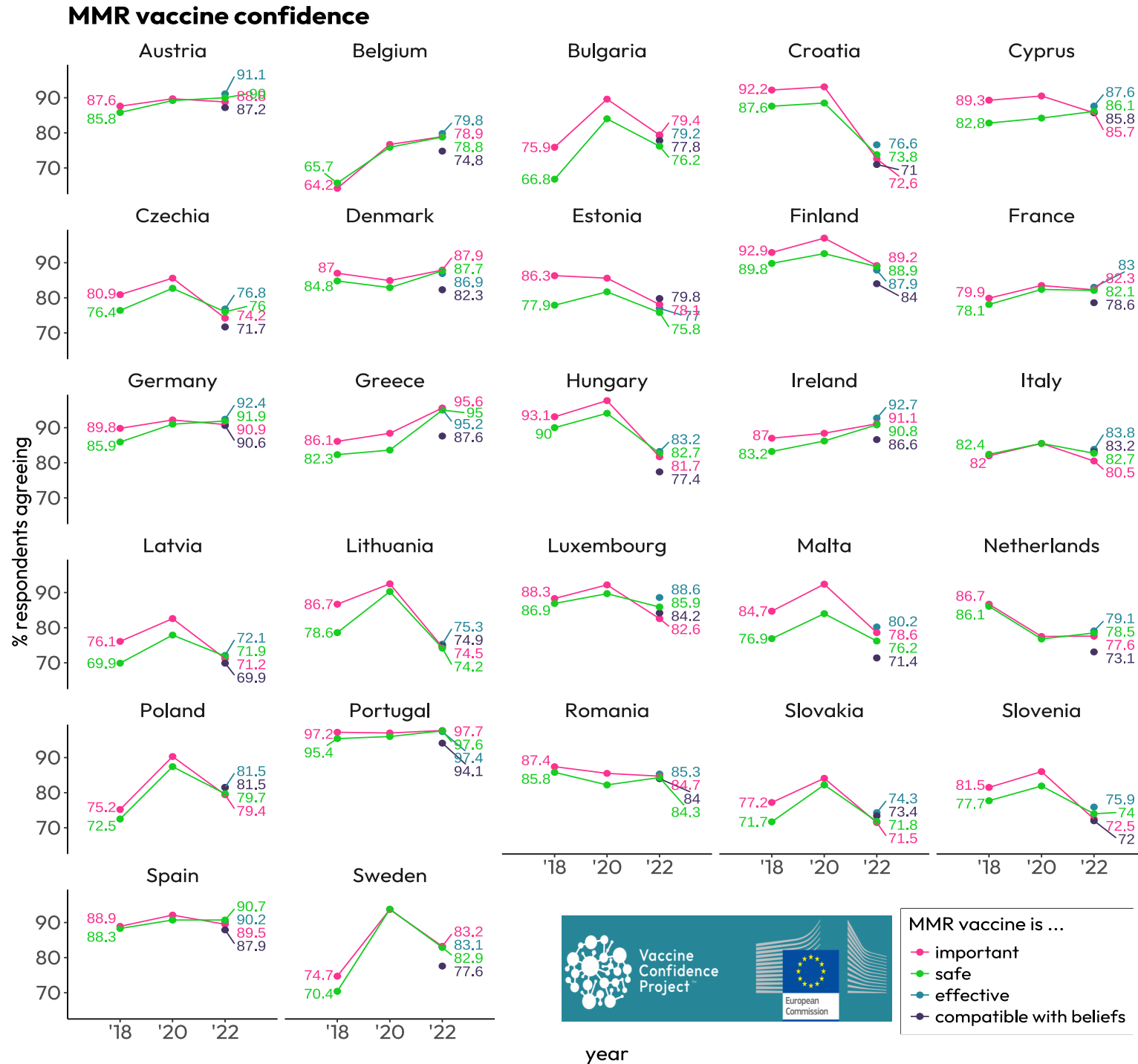
# General vaccine confidence Pre- and Post-Covid pandemic peak



# MMR Vaccine Confidence by Country

The percentage of respondents agreeing that the MMR vaccine is **important** in 2022 is **highest** in Portugal (97.7%), Greece (95.6%), and Ireland (91.1%), and **lowest** in Slovenia (71.5%), Slovakia (71.8%), and Latvia (71.2%).

The **highest levels** of agreement that the MMR vaccine is **safe** in 2022 are in Portugal (97.6%), Greece (95%), and Germany (91.9%) and **lowest** in Croatia (73.8%), Latvia (71.9%), and Slovakia (71.8%).

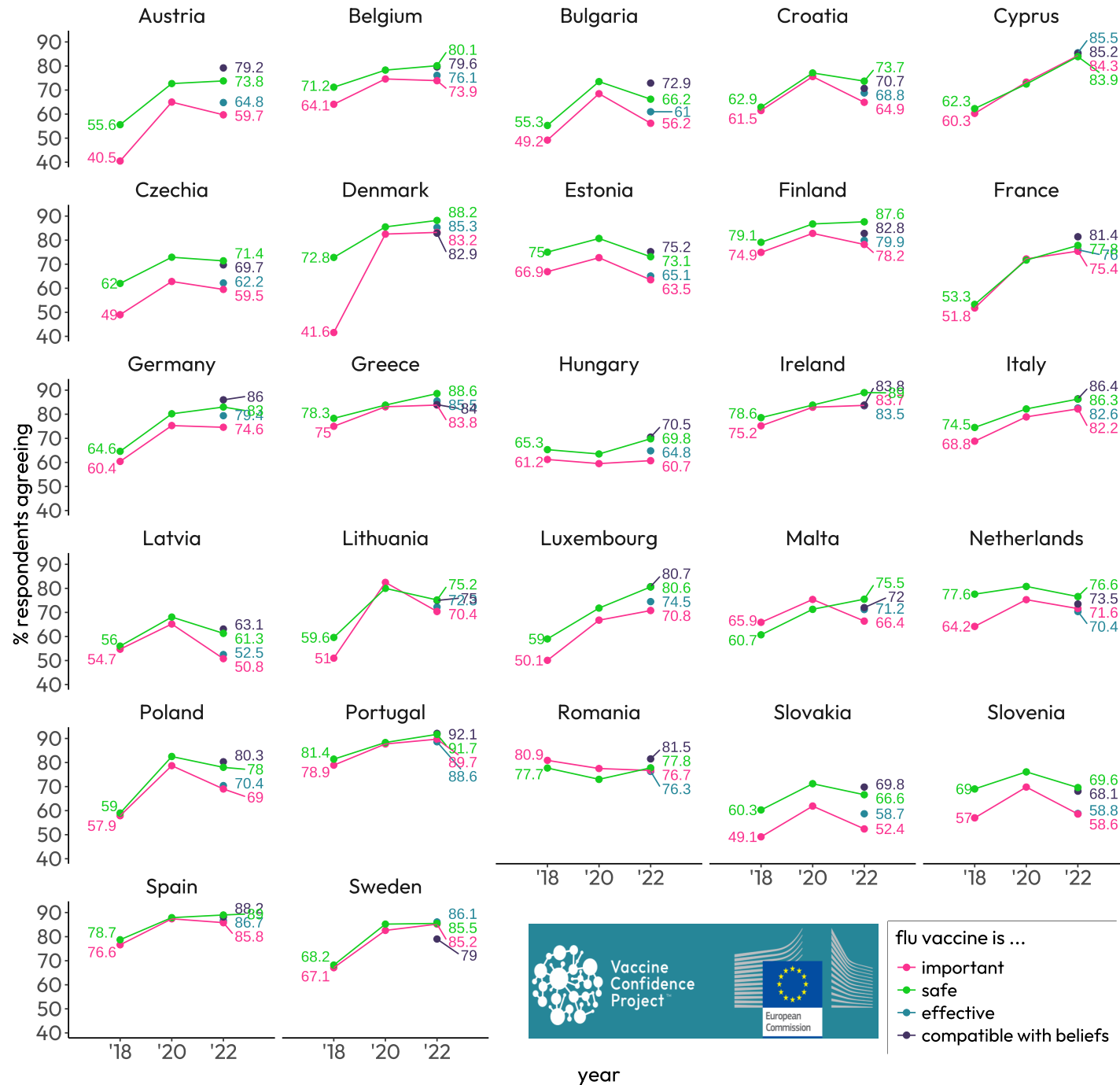


# Flu Vaccine Confidence by Country

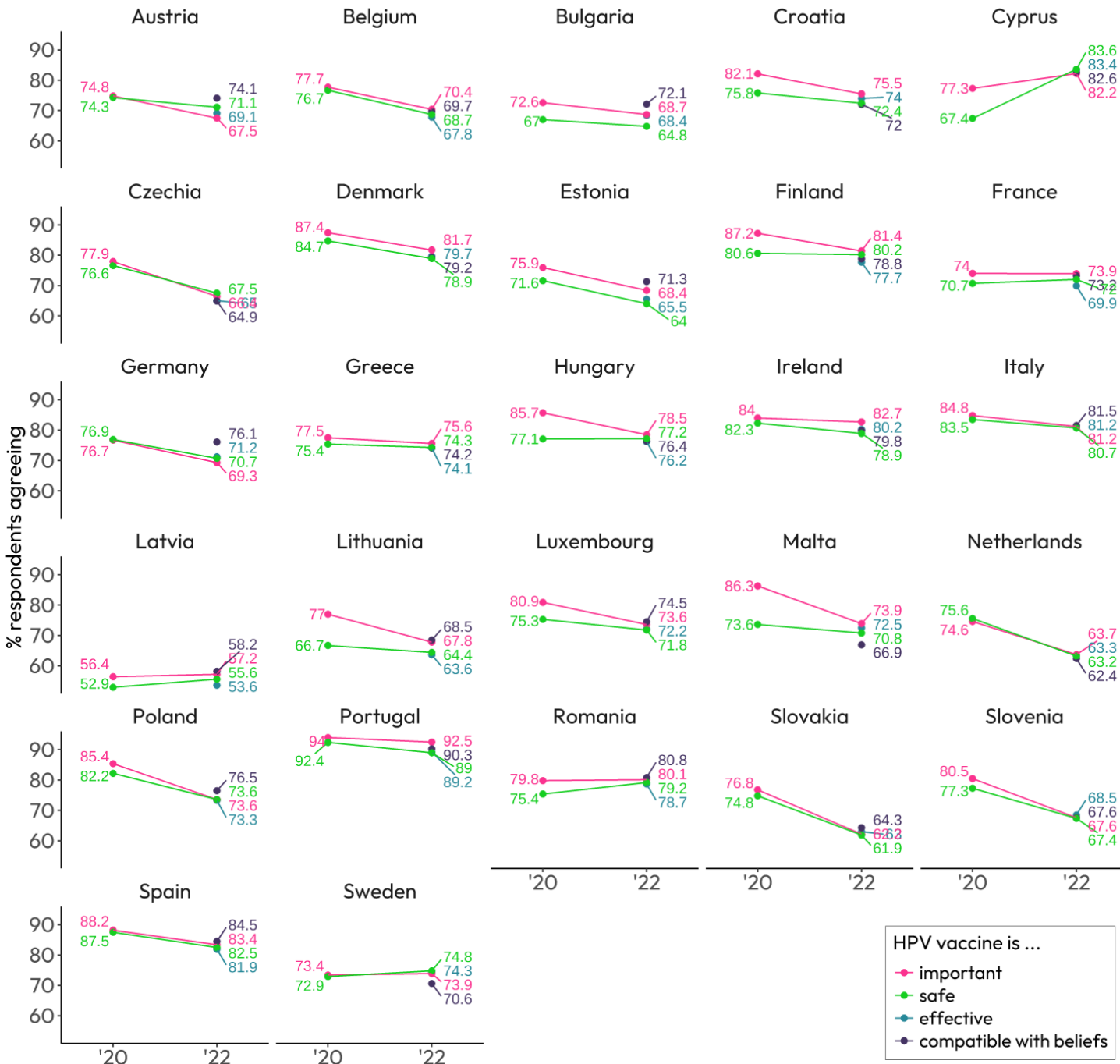
The percentage of respondents agreeing that the seasonal influenza vaccine is important in 2022 is highest in Portugal (89.7%), Spain (85.8%), and Sweden (85.2%), and lowest in Bulgaria (56.2%), Slovakia (52.4%), and Latvia (50.8%).

The highest levels of agreement that the seasonal influenza vaccine is safe in 2022 are in Portugal (91.7%), Ireland (89%), and Spain (89%) and lowest in Slovakia (66.6%), Bulgaria (66.2%), and Latvia (61.3%).

## Seasonal influenza vaccine confidence



## HPV vaccine confidence



Public confidence in the HPV vaccination is decreasing across the majority of the EU member states. Agreement that the HPV vaccine is important has decreased in 17 countries between 2020 and 2022 and increased in none.

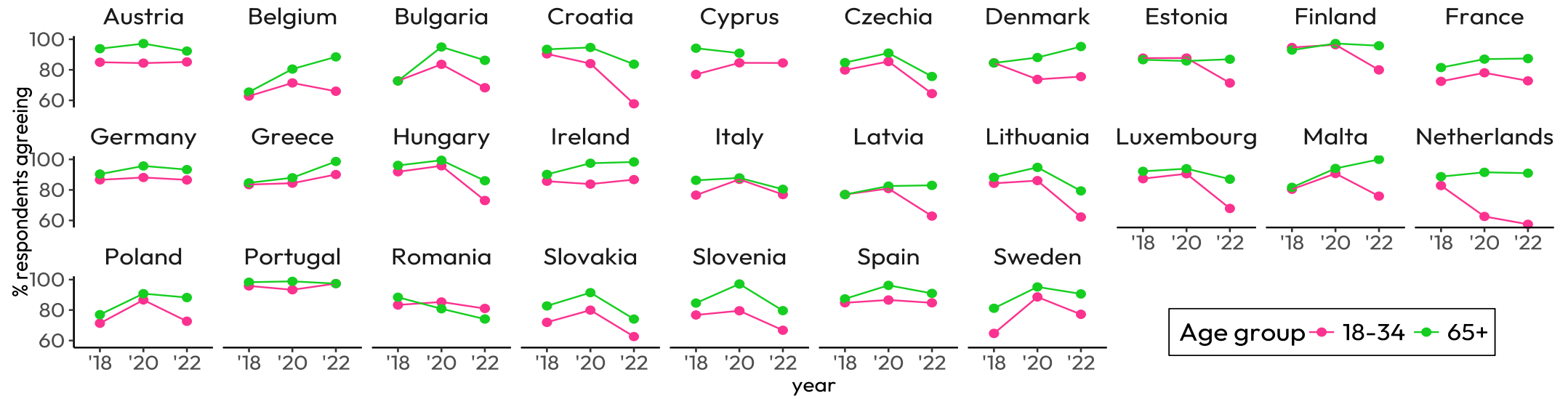


# The vaccine confidence age gap is widening

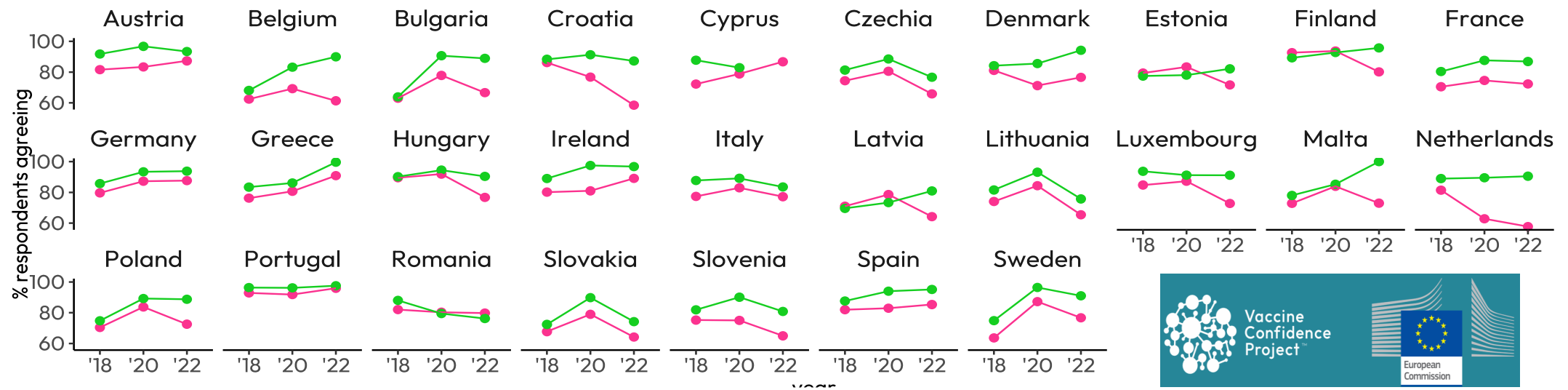
- The effect of age appears extremely strong: **over 45-year-olds in almost every country are more likely than 18-24-year-olds to agree the MMR vaccine is important, safe, effective, and compatible with beliefs**
- Surprisingly, **between older and younger groups the ‘gap’ in confidence is smaller for the seasonal influenza vaccine, and over 65s in only a handful of countries are more likely than 18-24-year-olds to agree that the seasonal influenza vaccine is important and safe**
- With regard to **COVID-19 vaccines**, over 65s are more likely than 18-24-year-olds to agree that the COVID-19 vaccine is important and safe

# The vaccine confidence age gap is pronounced for the MMR vaccine, a concerning trend for routine childhood immunizations

## MMR vaccine is important

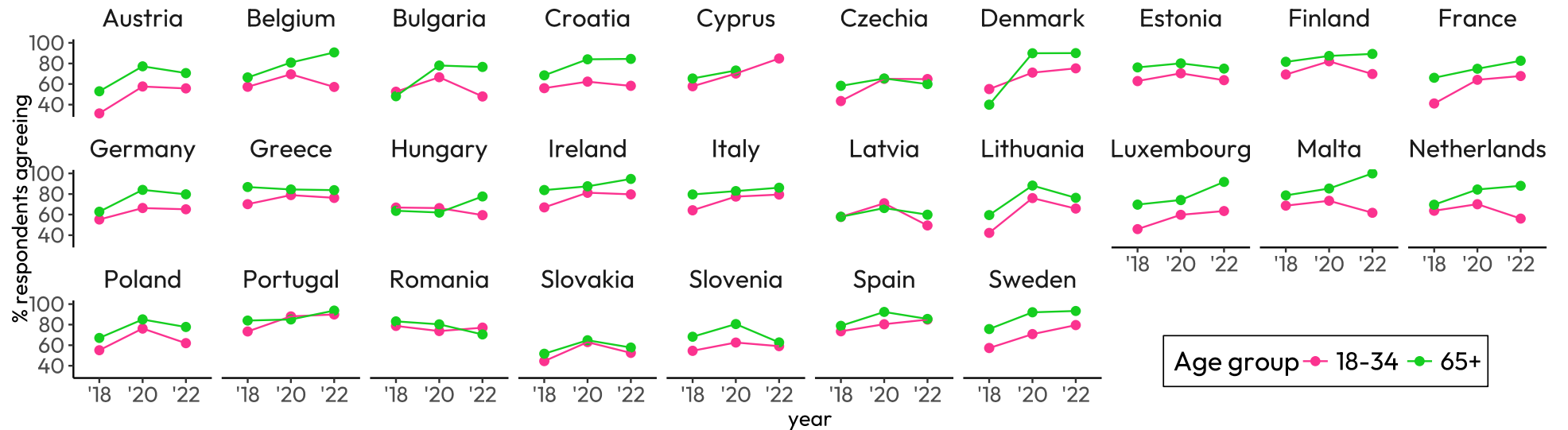


## MMR vaccine is safe

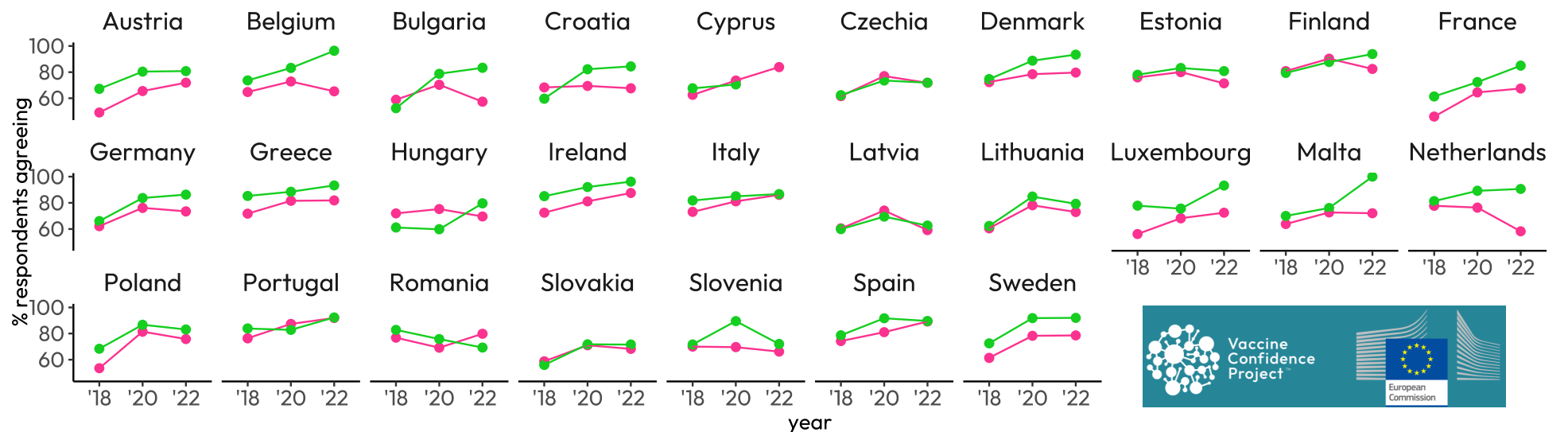


# An age gap remains for seasonal influenza, but is less pronounced than for MMR

## Flu vaccine is important

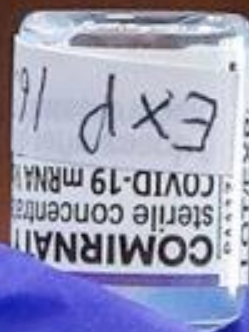


## Flu vaccine is safe





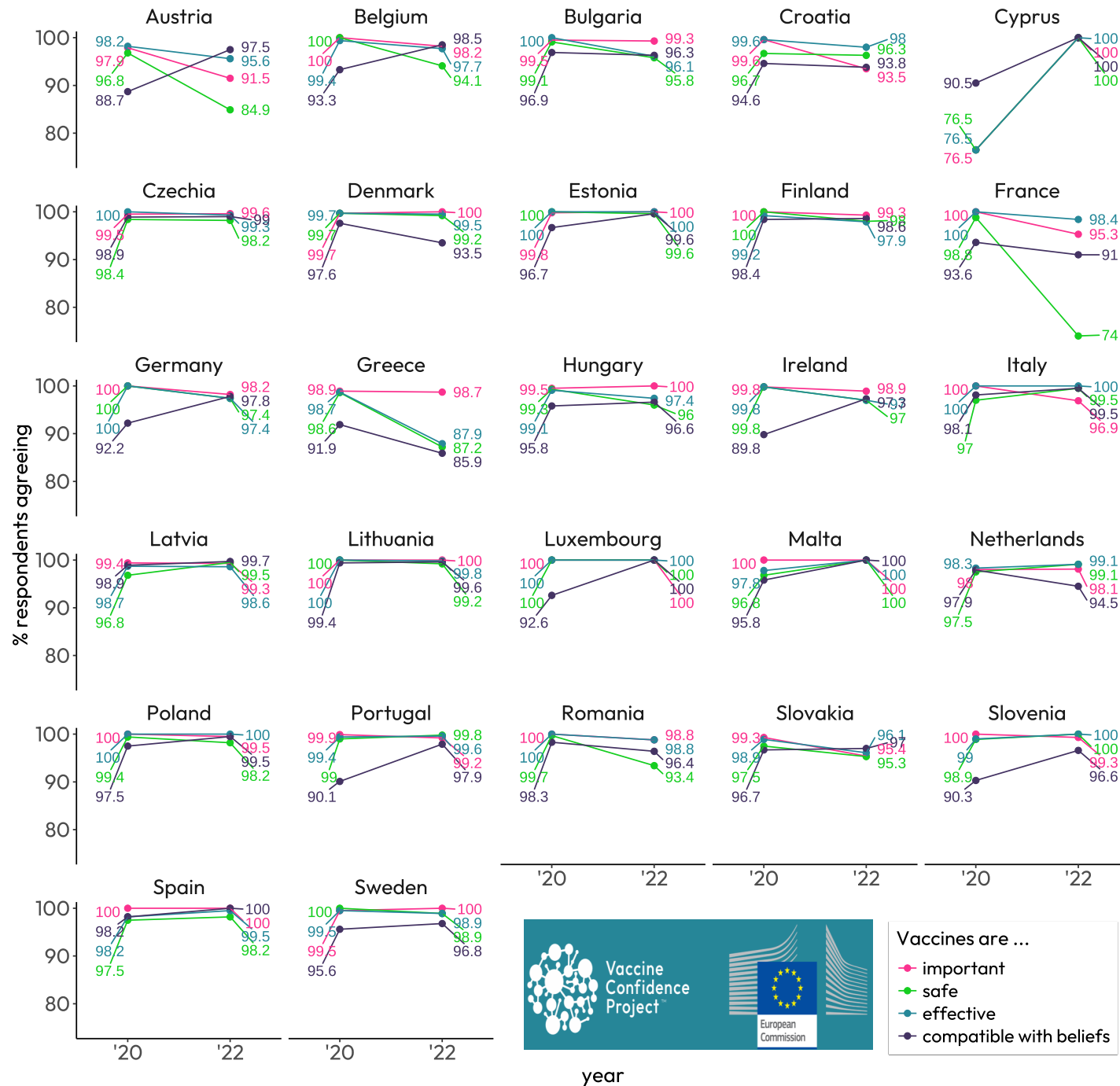
# Healthcare Professionals



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## General vaccine confidence

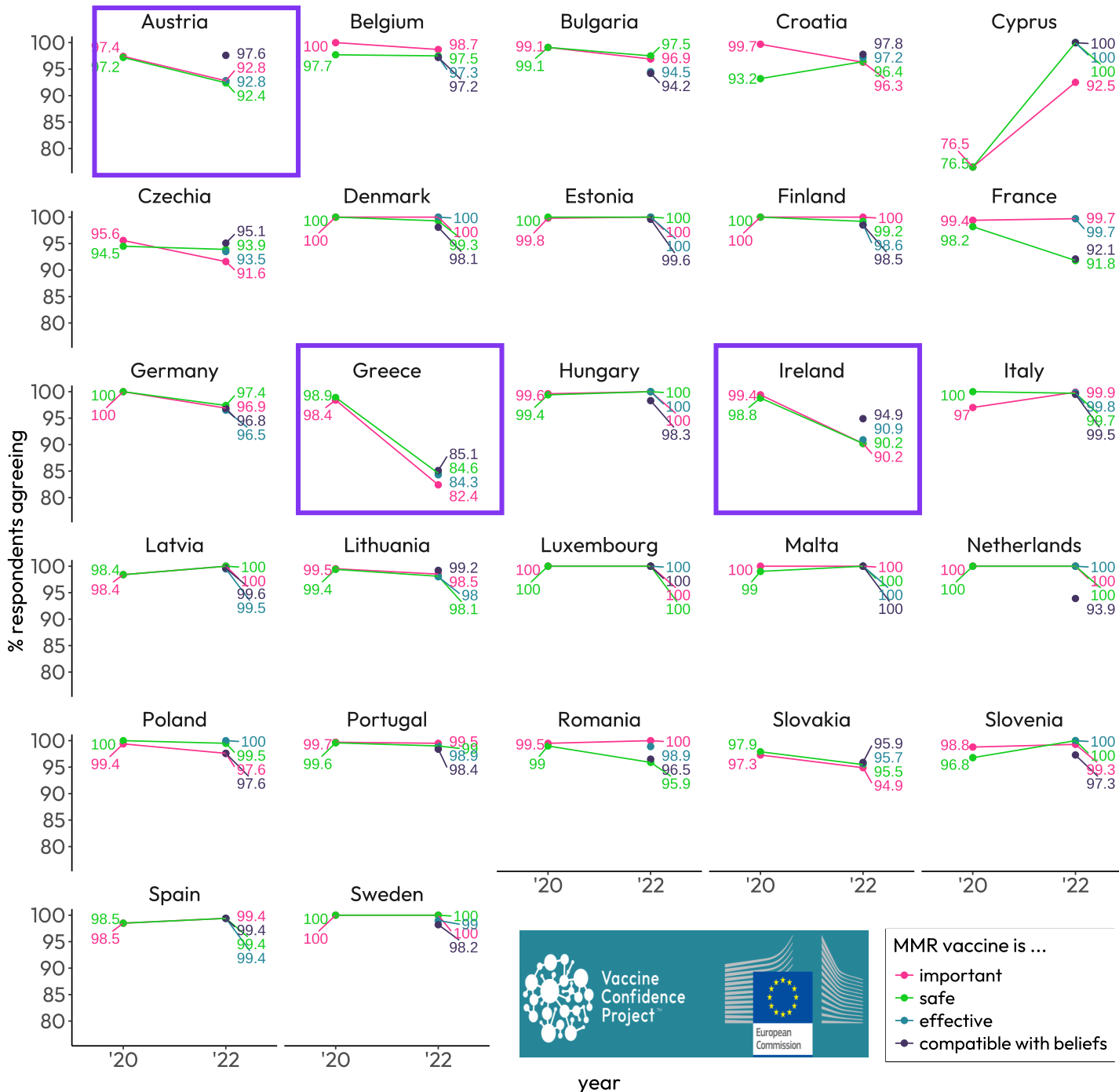


# Vaccine Confidence Among HCPs

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 France, Greece, and Slovakia.

## MMR vaccine confidence



# HCP perceptions MMR Vaccine

Above 90% of HCPs surveyed agree to all four statements (that the MMR vaccine is important, safe, effective, and belief-compatible) in every member state except Greece.

## In Greece fewer than 90% of HCPs

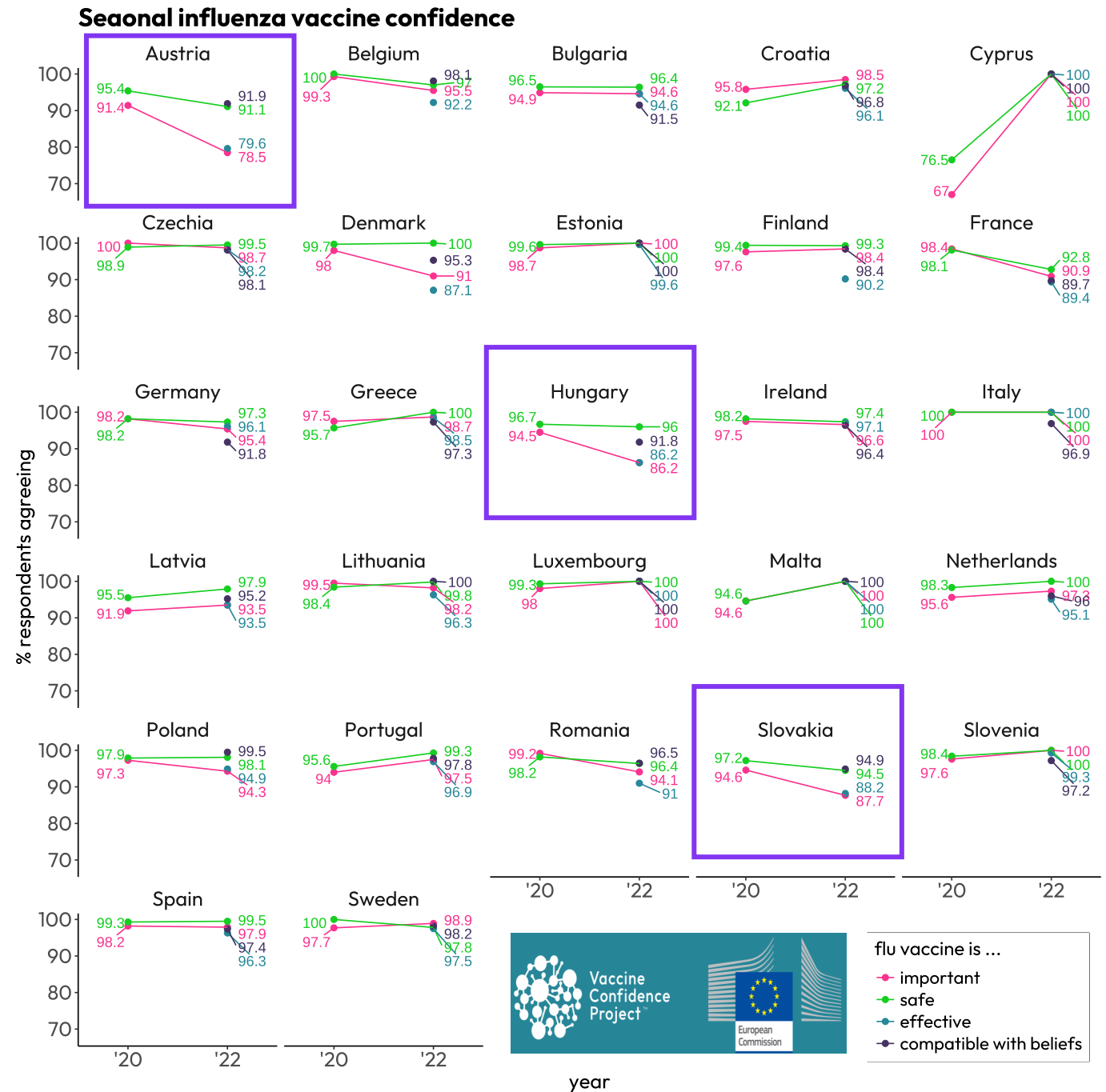
agree that the MMR vaccine is important (82.3%, n=188), safe (84.6%), effective (84.3%), and compatible with beliefs (85.1%). The largest falls in the level of agreement that the MMR vaccine is both important for children and safe are in Austria, Greece, and Ireland.



# HCPs and Influenza Vaccine

The percentage of HCPs agreeing that the influenza vaccine is important, safe, effective, and compatible with beliefs is universally high and stable across the EU. However, there are more countries reporting below 90% agreement to each of the four seasonal influenza confidence survey items.

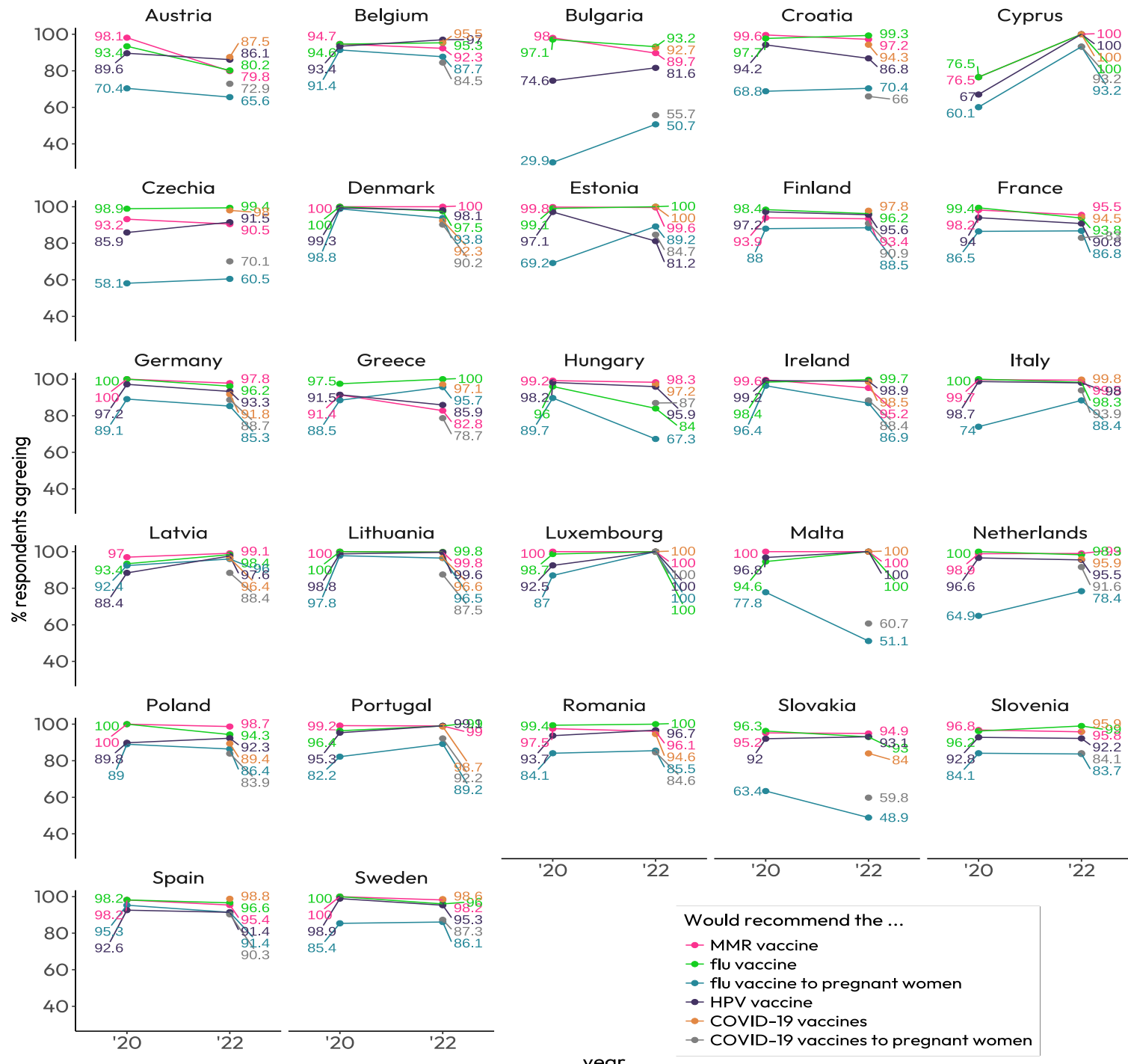
Fewer than 90% of HCPs agree that the seasonal influenza vaccine is important in Slovakia (87.7%, n=231), Hungary (86.2%, n=100), and Austria (78.5%, n=99).



# HCPs likelihood of recommending vaccines

Above 90% of HCPs would be likely to recommend the seasonal influenza vaccine *and* COVID-19 vaccines to patients in most member states.

There is a far higher number of countries, however, where less than 90% of HCP respondents who would recommend the seasonal influenza or COVID-19 vaccines to pregnant women.





Thousands of people protesting coronavirus vaccine mandates marched from the Washington Monument to the Lincoln Memorial on Jan. 23. (Reuters)



# Rising aggression towards scientists



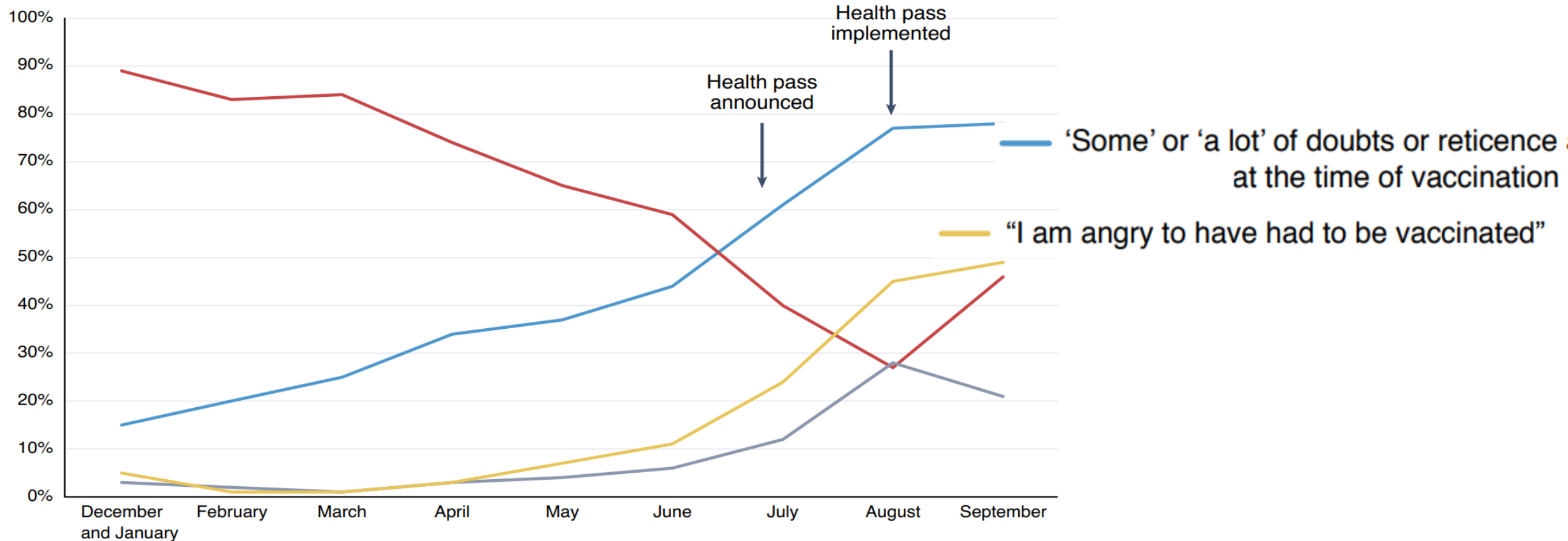
Credit: Suat Gursozlu / Alamy Stock Vector

**“I had to be with bodyguards with guns” —  
attacks on scientists during the pandemic**

Public-health researchers are more visible than ever before. But for some, this has led to abuse and attacks that threaten to silence them.

Anita Makri

# The French health pass holds lessons for mandatory COVID-19 vaccination



- 'Some' or 'a lot' of doubts or reticence at the time of vaccination
- Agreed with the statement: "I am relieved since I have been vaccinated"
- Agreed with the statement: "I regret having been vaccinated"
- Agreed with the statement "I am angry to have had to be vaccinated"

Ward et al. *Nature* 2022

But, research on the French health pass found it  
**“encouraged vaccination of many who were  
hesitant or reluctant, but it has not reduced  
hesitancy itself”,**



# To Overcome Vaccine Hesitancy, We Need a Better Patient Experience

by Neeti Sanyal and Shantanu Nundy

January 15, 2021



- Need to embed Covid vaccine messages in context of broader health issues post-Covid
- Covid vaccination for who? when? why?
- Refresher training for/engagement with HCPs on Covid strategies
- Need tailored strategies to build vaccine confidence among young people



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SEARCH 



# The Confidence Project

## Rooted in data, driven by humanity

Polarization, mistrust, and disinformation were growing long before the coronavirus pandemic emerged, but these societal dysfunctions have grown more prevalent and more prominent since the pandemic began in early 2020.

### Going Beyond Vaccines

The VCP has learned that a vast majority of the challenges around vaccine confidence have little to do with the vaccines themselves. Rather, the vaccine confidence challenge is a window into the broader issues of our polarized, mistrustful society.

Latest News →



We Have Reached a Breaking Point.' As Third Wave Hits Africa, Senegal Races to Build a Facility to Make COVID-19 Vaccines

Aug 20, 2021