



Adult vaccination services in Europe – a health systems perspective

Bernd Rechel

Antwerp

7 November 2022



- What does immunization involve?



Supply side

A health system with sufficient vaccines that is able to provide them to patients

Demand side

A population that is keen and willing to get vaccinated



Key aspects of vaccination systems

- Who to vaccinate?
- Who should provide the vaccinations?
- Where?
- How to organize supply?
- How to govern the system?
- What is the legislative base?
- Who to fund?
- How to make sure that vaccinations are evidence-based?
- How to monitor uptake?
- How to monitor outcomes?
- How to monitor public attitudes
- Who to communicate with public?

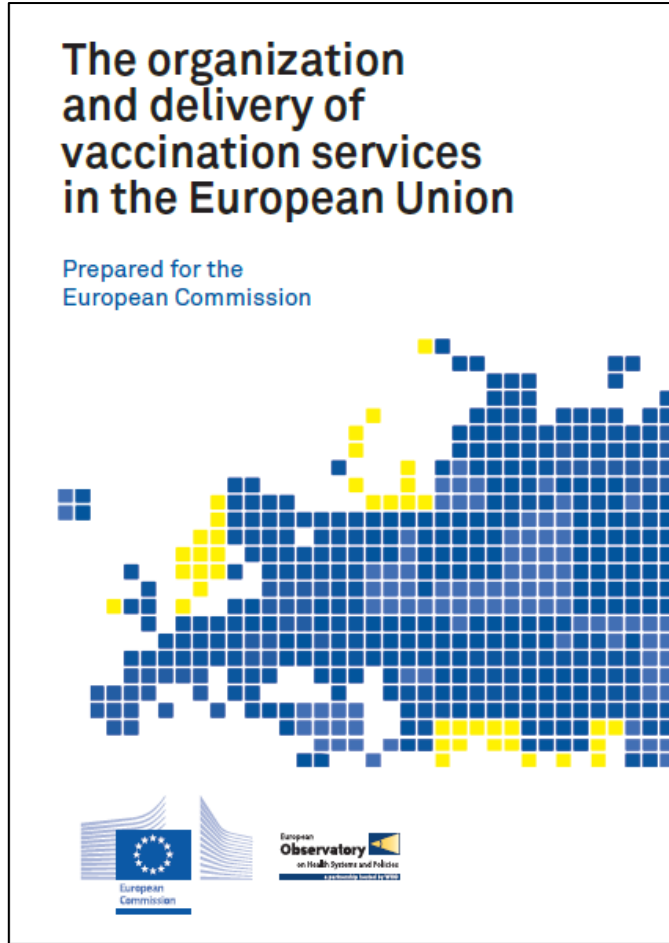




Key aspects of vaccination systems

- **Who to vaccinate?**
 - Is there a population register?
 - Who is included or excluded?
 - How often is it updated?
 - How can vaccinators access it?
- **Who should provide the vaccinations?**
 - Who can prescribe vaccines?
 - Who can administer them?
- etc.
- etc.

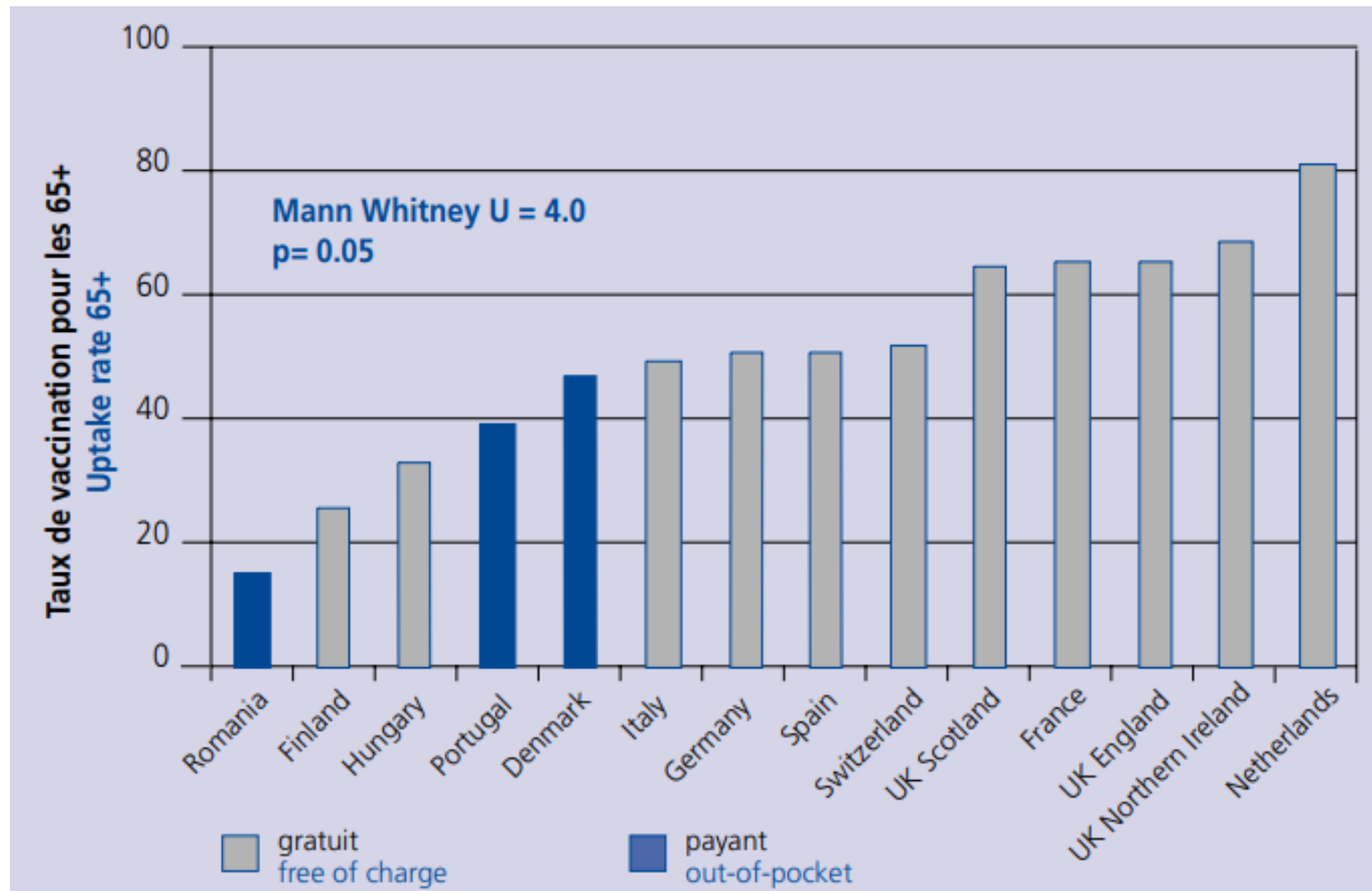




- **2018 report**
- **Focus on:**
 - one common childhood vaccination (**against measles**)
 - one common adult vaccination (**against influenza**)
- **Exploring:**
 - Governance
 - Provision
 - Financing
 - Barriers and facilitators



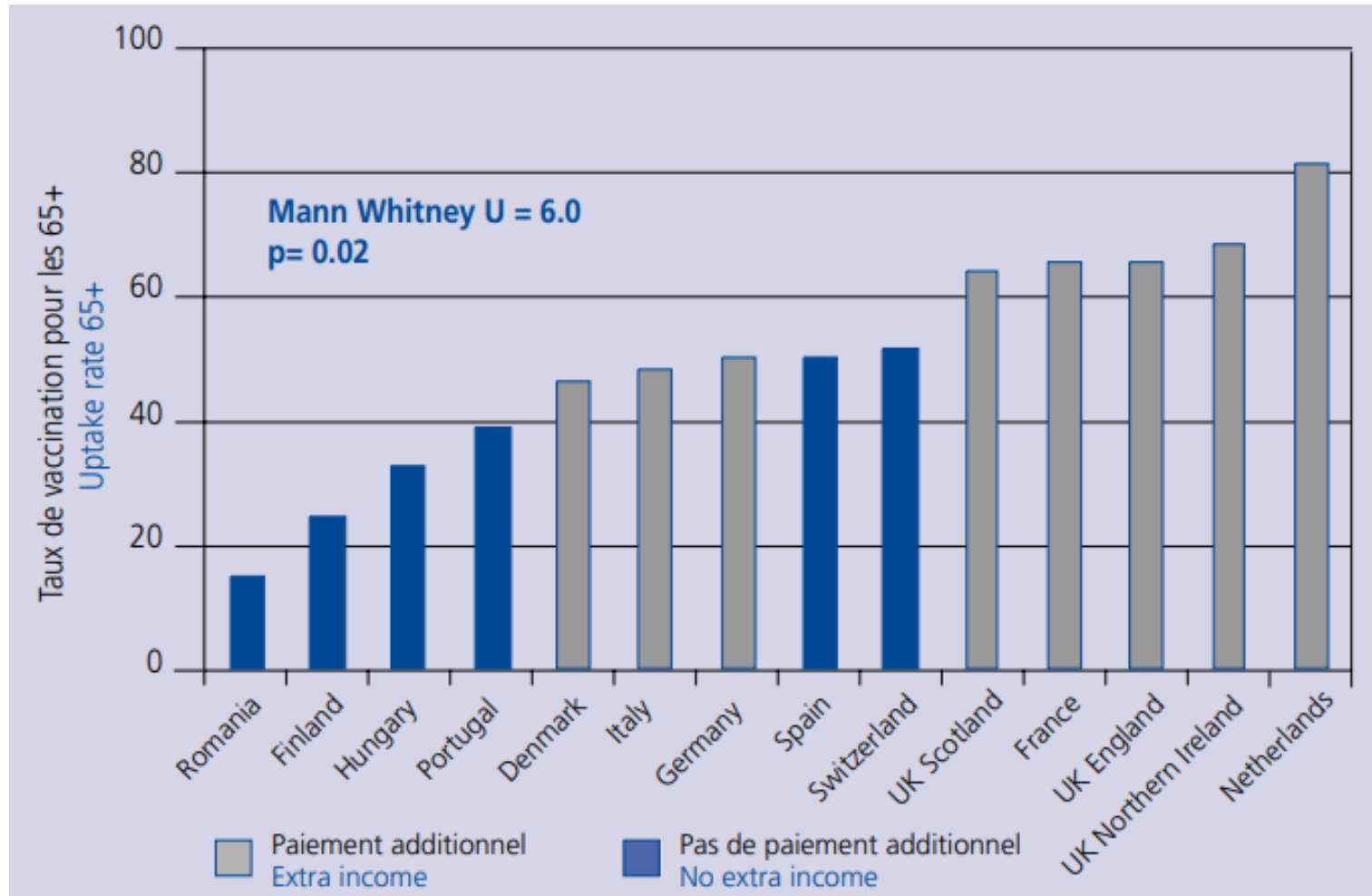
Patient co-payments



Source: Kroneman et al. (2003) Influenza vaccination in Europe: an inventory of strategies to reach target populations and optimise vaccination uptake



Additional payments to physicians



Source: Kroneman et al. (2003) Influenza vaccination in Europe: an inventory of strategies to reach target populations and optimise vaccination uptake



Country fiches in our 2018 report





Cross-country analysis – governance

- Dedicated agency
- National level
- **Influenza:**
 - voluntary in all 28 countries, except Slovakia
- Only 12 report to use **population register**
- Wide differences in how coverage is calculated



Findings – provision

- **Influenza:**
 - mostly **primary care physicians or nurses**
 - In some countries public health or occupational health services
 - In six countries (Ireland, Latvia, Malta, Portugal, Sweden, and the United Kingdom) in (some) **pharmacies**, with pilots in Estonia and France.



Findings – financing

- **Influenza:**
 - in **21 EU Member States free of charge** at the point of delivery for those groups of the population targeted (e.g. people aged 65 years and above)
 - In **7 countries** (Austria, Belgium, Bulgaria, Estonia, Latvia, Poland and Slovenia) targeted **patients need to pay at least part of the costs**



Countries with co-payments



Influenza vaccination rates in EU/EEA countries in the 2007–08 to 2014–15 influenza seasons



Findings – barriers and facilitators

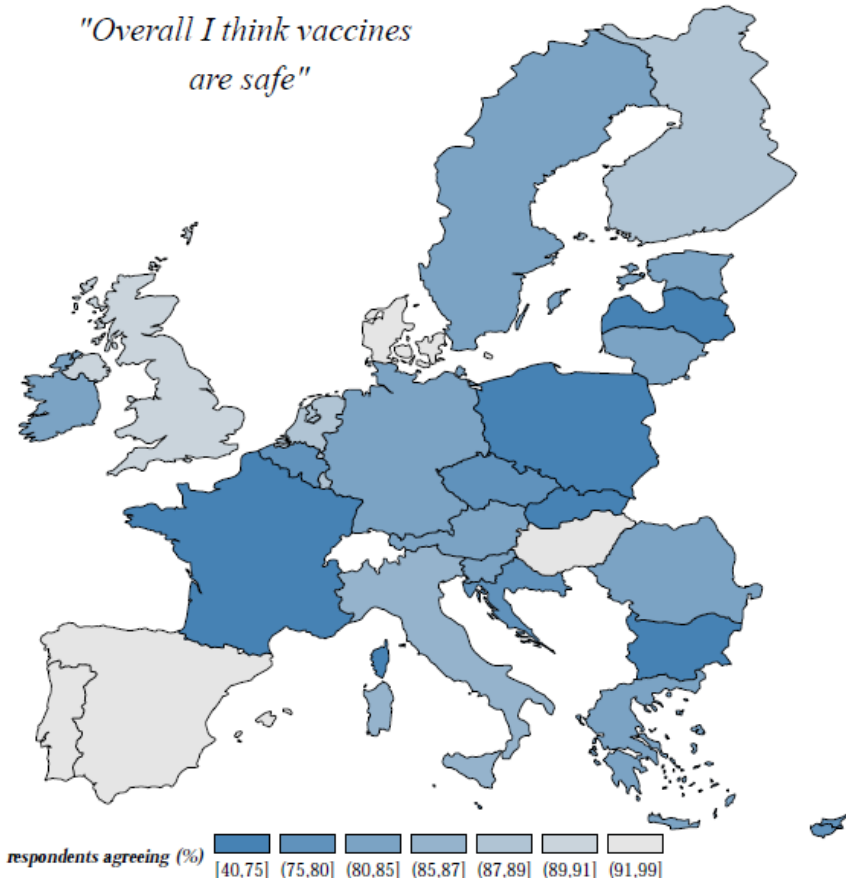
- **Influenza - barriers**
 - Eight countries not reporting any major barriers
 - 15 countries mentioned **lack of awareness** among the general population
 - 11 countries mentioned **vaccine hesitancy**
- **Influenza – facilitators**
 - Only identified by 12 countries
 - Mentioned: **media campaigns** for population and health workers, involvement of **employers and professional societies**



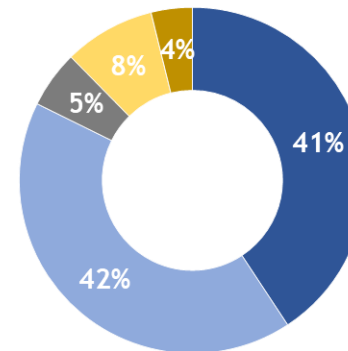
Vaccine Confidence Project 2018 report

Perceived vaccine safety in general

"Overall I think vaccines are safe"

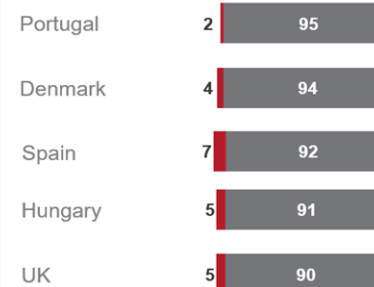


EU-wide average

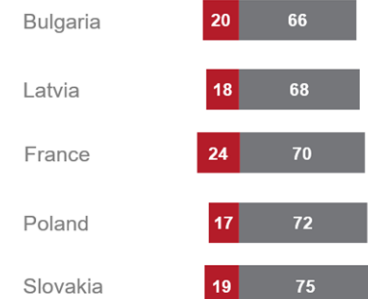


- Strongly agree
- Tend to agree
- Do not know / no response
- Tend to disagree
- Strongly disagree

Top 5:



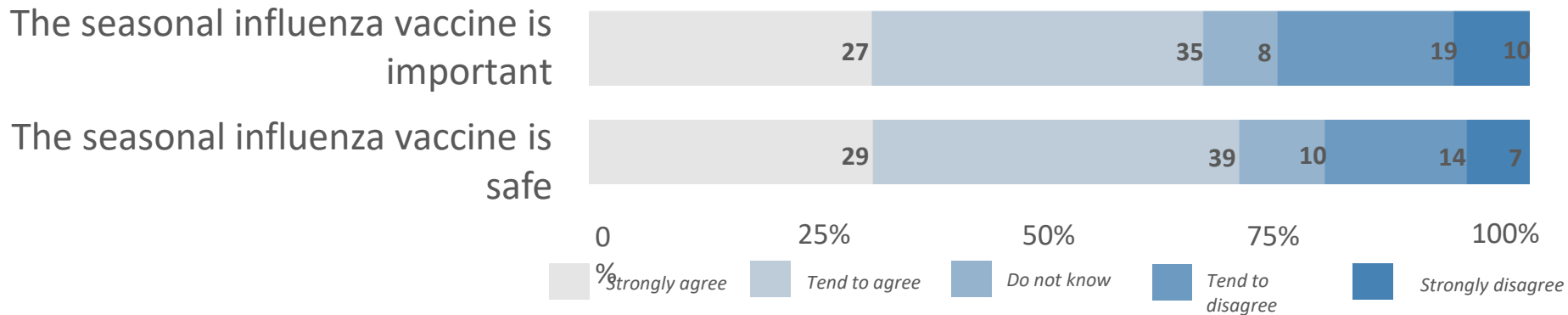
Low 5:





Vaccine Confidence Project 2018 report

Seasonal influenza vaccine confidence in the EU



Most confident countries

Importance: Romania (81%), the UK (81%), Portugal (78%)

Safety: The UK (85%), Spain (80%), Portugal (79%)

Least confident countries

Importance: Austria (40%), Denmark (43%), the Czech Republic (49%)

Safety: France (52%), Latvia (55%), Austria (56%)





Conclusions of the 2018 report

- **Vaccine hesitancy** one of the major barriers
- Improvements possible in organization and provision of vaccination services
 - **Governance**
 - Use of population registers, awareness campaigns, targeted measures, making vaccinations mandatory
 - **Provision**
 - Use of a broader range of providers
 - **Financing**
 - Expansion of public financing and removal of administrative barriers



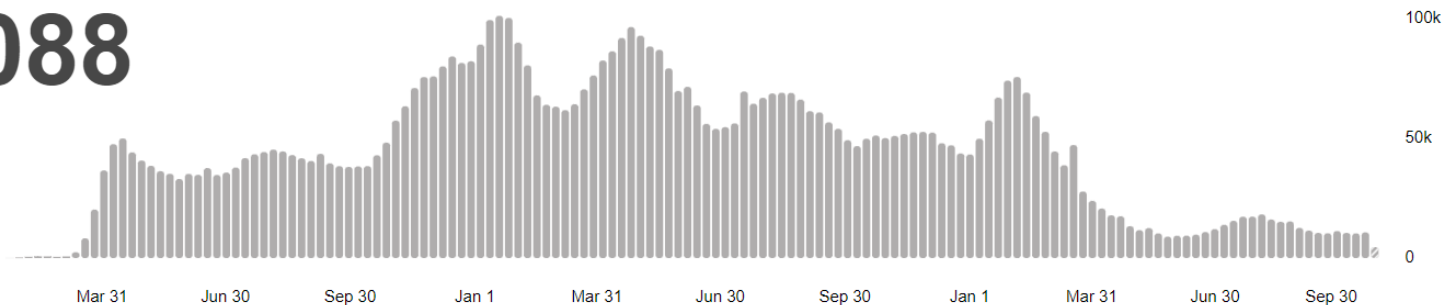
COVID-19 pandemic



6,576,088
deaths

Source: World Health Organization

▨ Data may be incomplete for the current day or week.





COVID vaccinations

Daily COVID-19 vaccine doses administered

7-day rolling average. All doses, including boosters, are counted individually.

Our World
in Data

LINEAR

LOG





HSRM monitor

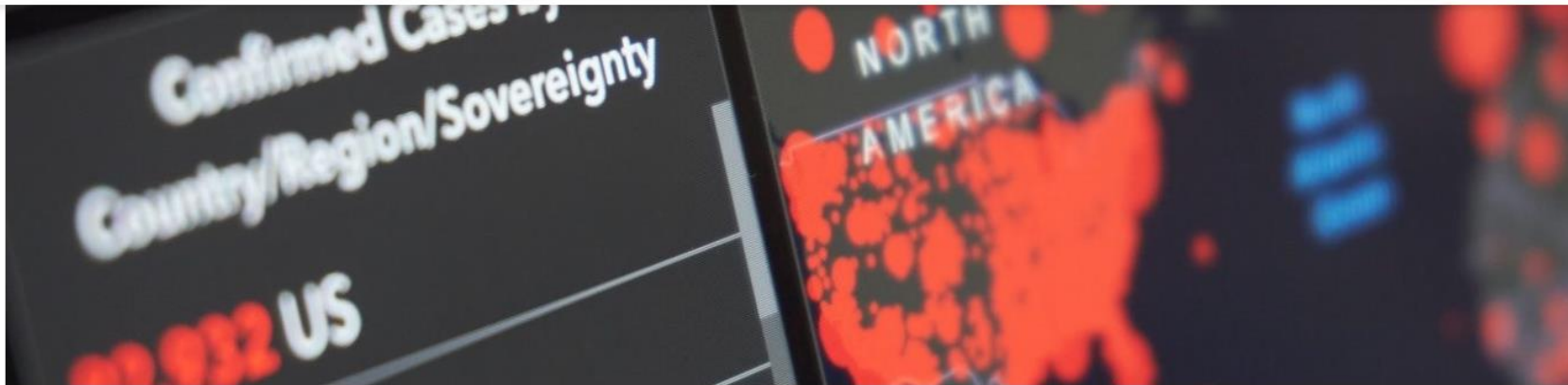
COVID-19 Health System Response Monitor (HSRM)

The COVID-19 Health Systems Response Monitor (HSRM) contains information on how countries' health systems responded to the pandemic between 2020 and early 2022. The Archive of individual country evidence is complemented by cross-country comparative Analyses which synthesise policy responses to key challenges presented by the crisis and point the way to building better-prepared and more resilient health systems.

[Overview](#)[Analyses](#)[Responses archive](#)[HSRM Countries](#)[Compare](#)[COVID-19 Resources](#)[Contributors](#)[COVID-19 Webinars](#)



HSRM cross-country analyses



Cross country analyses

Filter and search all COVID-19 cross country analysis

Policy responses



Search for country



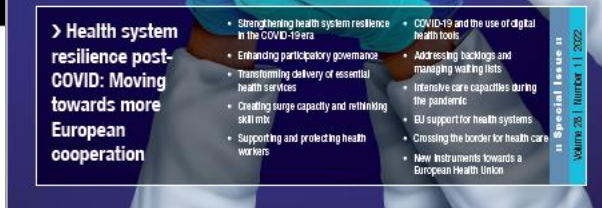
Sort by



Search by keyword(s)



Observatory publications





ECDC work on COVID vaccination uptake

Reducing COVID-19 transmission by strengthening vaccine uptake among migrant populations in the EU/EEA

3 June 2021

Key messages

- This report presents evidence on the impact of COVID-19 on countries; risk factors for increased COVID-19 exposure in migrant populations; and the role of vaccine uptake in reducing transmission.
- While migrant populations across the EU/EEA are extremely diverse, some migrant groups are disproportionately represented in COVID-19 deaths.
- Among migrant groups that are disproportionately represented in COVID-19 deaths, factors that increase their risk of occupational risk, overcrowded accommodation, and lower access to services, including public health messaging.
- There is emerging evidence of low COVID-19 vaccination rates in some migrant groups in the EU/EEA.
- Strategies to reduce transmission and ensure equitable vaccine uptake include culturally and linguistically tailored and targeted public health messaging, translated into key migrant languages.
- Several COVID-19 outbreaks have been documented in migrant settings. Consideration should be given to means of evacuating residents where physical distancing and risk control measures are not possible, and to finding alternatives to quarantine.
- Consideration needs to be given to ensuring equitable access to COVID-19 vaccines, particularly in migrant settings and health systems. There is an urgent need to share models of good practice across the Region.
- For migrants who face barriers and exclusion from mainstream healthcare services, asylum seekers/refugees, and those with undocumented status, vaccination is a key mechanism to ensure they are in a position to reduce transmission.
- Consideration should be given to migrants in camps, reception centres, and other high-risk congregate settings when deciding vaccination. In the community, migrants should be better connected to vaccination, which will require a range of specific communication strategies, including risk communication, and strengthen uptake.
- Improved data collection and surveillance on COVID-19 outcomes among migrant populations, with data sharing across the region, is a key strategy to reduce transmission and improve vaccine uptake.

Suggested citation: European Centre for Disease Prevention and Control. Reducing vaccine uptake among migrant populations in the EU/EEA – 3 June 2021. ECDC, 2021.

Facilitating COVID-19 vaccine acceptance and uptake among migrant populations in the EU/EEA

15 October 2021

Key messages

- A successful COVID-19 vaccination programme requires a response to individuals' and communities' beliefs about the disease. The '5Cs' model – Confidence, Community, Convenience, Cost, and Credibility – can be used as a framework for facilitating COVID-19 vaccine acceptance and uptake.
- Taking the 5Cs model as a basis, the drivers of vaccine acceptance and uptake, the barriers to vaccine uptake, and the role of community health workers have a key role to play in the operational data – quantitative and/or qualitative community-based vaccine beliefs, concerns and attitudes.
- Vaccination efforts in many countries are currently focused on older age groups and those in social care settings, leaving younger age groups (including children) and those in the workforce, including those in the informal economy, with lower vaccine uptake, access, and, for health, properly understood and addressed.
- The document presents examples of some of the ways in which vaccine acceptance and uptake, depending on the context, can be adapted at sub-national or local level – the change over time, which means that diagnoses and interventions need to be adapted to the local context.
- Many of the interventions reviewed for this report were implemented with accompanying risk communication and community engagement strategies. Fewer strategies have been implemented with incentives and sanctions. Fewer strategies have been implemented with incentives and sanctions. Fewer strategies have been implemented with incentives and sanctions.
- Establishing the effectiveness of an intervention methodologically challenging. Good evaluations require quantitative and qualitative data, although the latter is often more difficult to obtain than quantitative data.

Suggested citation: Facilitating COVID-19 vaccine acceptance and uptake among migrant populations in the EU/EEA – 15 October 2021. ECDC, 2021.

Overview of the implementation of vaccination strategies and deployment in the EU/EEA

8 September 2022

Key messages

This report provides an updated overview of the progress with national COVID-19 vaccine deployment in European Union/European Economic Area (EU/EEA) countries.

- overall vaccine uptake and uptake by target group;
- vaccination strategies and policies.

Vaccine COVID-19 roll-out overview

- As of 21 August 2022 (week 33, 2022), over 916 million doses of COVID-19 vaccine have been administered in the EU/EEA, with around 130 million people having received a second booster dose (25 countries reporting).
- Since the start of COVID-19 vaccine deployment in December 2020 and cumulative uptake of the primary vaccination course against COVID-19 has reached 72.8% (range: 29.9–86.5%), 53.6% (range: 9.2–71.9%), 61.1% for the second booster dose (range: <0.1–18.3%).
- Among adults (aged 18 years and above) the cumulative vaccine uptake 35.7–94.6% for the complete primary course and 64.7% (range: 11.2–94.6%) for the second booster dose, with two countries still reporting population having completed the primary vaccination course (Bulgaria and The uptake of the first booster dose is still showing a very modest increase in young adults aged 18–24 years (average absolute weekly increase 0.1–20.7%). 14.7% in those aged 60+ (range: <0.1–61.7%) and 21.7% (range: <0.1–81.2%). The cumulative uptake of the second booster dose 7.5% (range: <0.1–20.7%), 14.7% in those aged 60+ (range: <0.1–81.2%) and 21.7% (range: <0.1–81.2%). The uptake among those aged 60+ is seven countries exceeded 25% of those aged 60+ as of week 33, 2022 (the Netherlands 51.2% in Ireland, 41.6% in Malta, 34.1% in Luxembourg 26.7% in Iceland).

Suggested citation: European Centre for Disease Prevention and Control. Overview of the vaccination strategies and deployment plans in the EU/EEA. 8 September 2022. Stockholm, September 2022.

Rollout of COVID-19 vaccines in the EU/EEA: challenges and good practice

29 March 2021

Key findings

This document outlines the key challenges that countries are facing with the COVID-19 vaccination rollout and lessons learned to mitigate these challenges.

- The majority of responding countries (26/28, 93%) reported challenges related to the limited supply of COVID-19 vaccines, as well as frequent changes in timing of deliveries from vaccine producers, which can be unpredictable and can significantly affect the planning and efficiency of the rollout.
- The logistics to rollout vaccines with different characteristics around storage, transport and administration (e.g. timing of the second dose, indicated age groups, contraindications) is complex and half of the countries (n=12) reported challenges with effective strategies to limit discarding of unused vaccines (e.g. open vial wastage). Some countries avoid the wastage of vaccines by administering remaining doses to healthcare workers at the end of each vaccination session, or set up reserve lists of people willing to be vaccinated.
- Staffing shortages to administer vaccines was a challenge reported by six countries. Hiring and training more medical and even non-medical staff seems essential to progress in the mass vaccination campaign.
- Ten countries (36%) reported challenges around a shortage of equipment needed for vaccination, specifically with a lack of dead-space syringes and needles to extract more doses from vaccine vials. Stockpiling, when necessary equipment is available, and central distribution may help to overcome these challenges.
- Seven countries (25%) reported challenges around reaching certain populations, especially those individuals who have difficulties leaving their homes. Some countries try to address this challenge by running vaccination centres with multidisciplinary teams and by vaccinating immobile patients at home by their general practitioners.
- Six countries (21%) reported communication challenges related to misinformation and disinformation around COVID-19 vaccines, which may affect vaccine acceptance. Countries also reported challenges with communicating about prioritising certain groups and the rationale behind this, and communicating about the efficacy and safety of different vaccine products and decisions taken regarding the protocols for their administration at national level. The extent and issues of vaccine acceptance and hesitancy vary across countries with specific local social and cultural patterns.

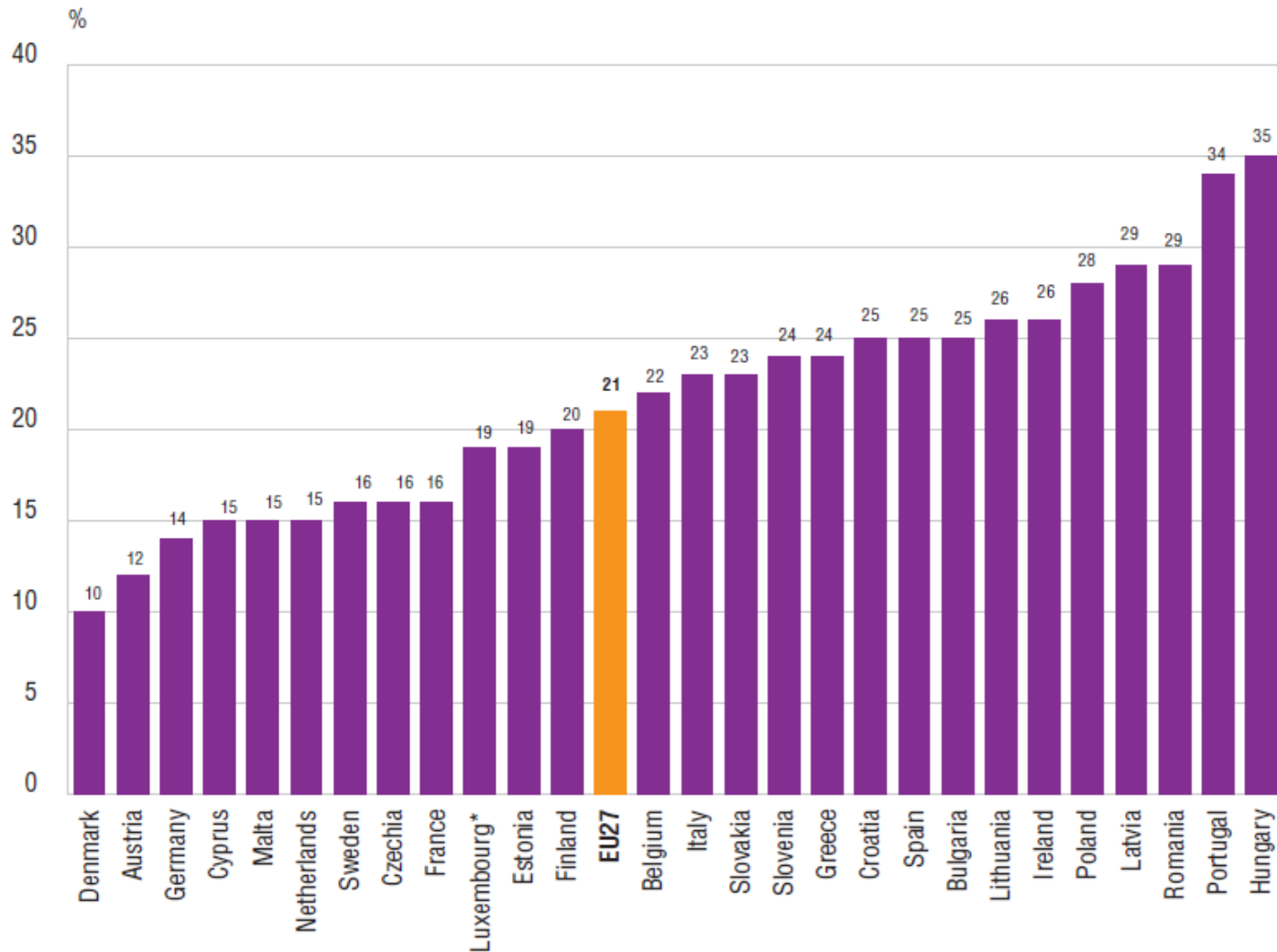
Errata: 31 March 2021. In the first paragraph of the Conclusions, the text was revised to more accurately reflect the current situation, and a footnote was added on page 11.

© European Centre for Disease Prevention and Control. Stockholm, 2021.

Suggested citation: European Centre for Disease Prevention and Control. Rollout of COVID-19 vaccines in the EU/EEA: challenges and good practice. 29 March 2021. Stockholm: ECDC, 2021.



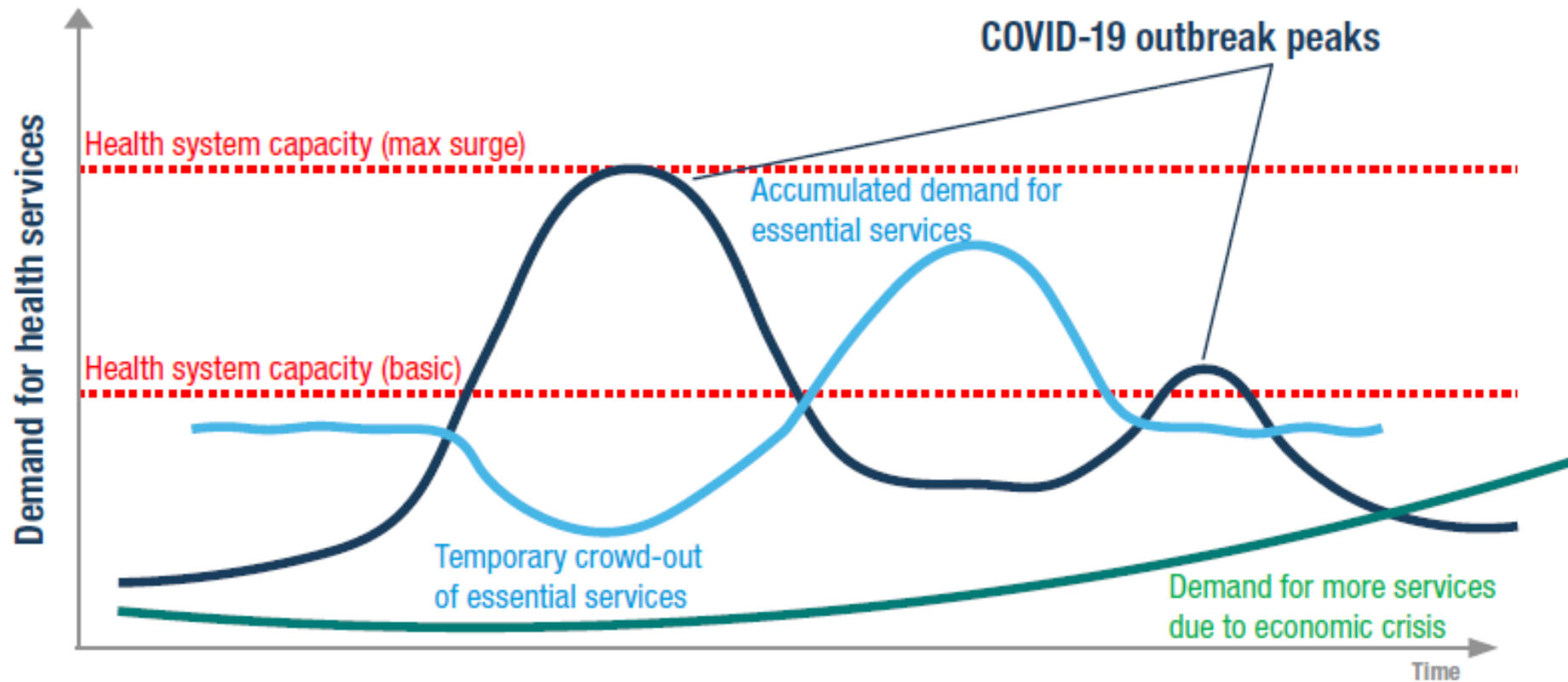
Unmet needs during the first year of COVID



Source:
Eurofound
survey



The seesaw

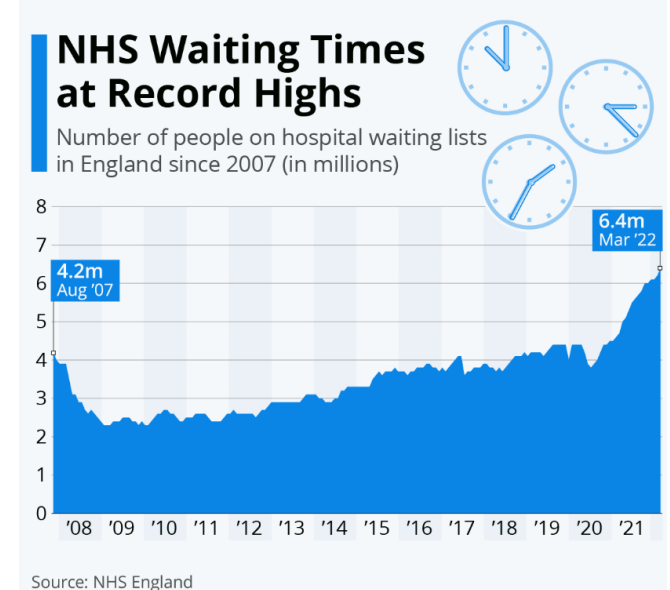


Source: Jakab et al. (2020) Managing health systems on a seesaw, Eurohealth, 26(2)



Restricted access but increased demand

- Increasing demand due to:
 - COVID-19 cases
 - Pent-up demand
 - Health impact of pandemic
 - Long-COVID cases
 - Long-term impacts

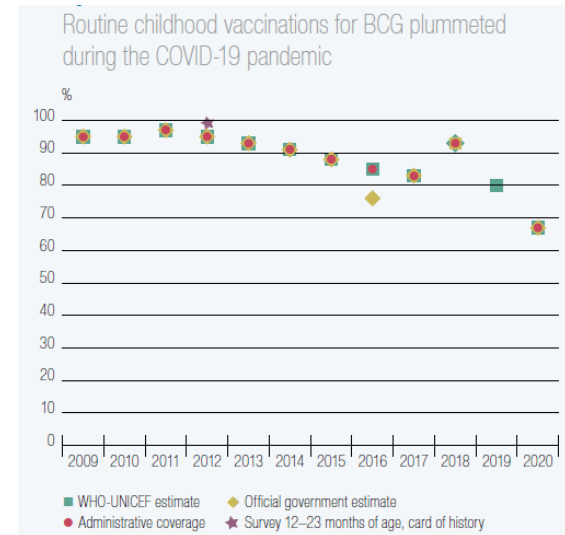




Disruption of routine immunizations

- Routine vaccinations were among the health services most disrupted by the pandemic
- Even more so vaccinations outside of infancy

e.g. Montenegro





-
- A hand holding a smartphone, which is the central node of a network. The network consists of various health-related icons connected by white lines. The icons include: a first aid kit, a pill, a dumbbell, a person in a hard hat, a document with a checkmark, a DNA helix, a speech bubble with three dots, a smartwatch, a microscope, an ambulance, a smartphone with a red background, a battery, a test tube with a red drop, a heart rate monitor, and a person in a red circle. The background is a teal color with light blue circles.



New modes of service delivery

- Extending the range of **sites and providers**, e.g.:
 - sports halls
 - airports
 - mobile units
 - vaccinating people at home
 - pharmacies
 - universities
 - pubs





Location of vaccination services

- High vaccination rates where vaccinations can be provided **where people live and work**, e.g.:
 - Military
 - People in nursing homes
 - Health workers (where vaccinations are provided in the same health care settings)



New modes of service delivery

- Extending the range of **workforce**
 - Going beyond physicians and nurses
 - Paramedics
 - Medical students
 - Pharmacists
 - Doctors' assistants
 - Dentists
 - Veterinarians
 - Volunteers



Incentives, requirements and mandates

- **Incentives**
 - e.g. monetary incentives
- **Requirements**
 - e.g. EU Digital COVID-19 certificate
 - domestic vaccine passports (e.g. in Belgium)
- **Mandates**
 - making vaccination mandatory, e.g. for health workers (Italy, France, Germany)





Financing



- All EU countries made COVID-19 treatment and vaccination **free of charge**
- (although testing was not necessarily covered during all phases)
- They also removed financial barriers to **other health services** (e.g. for undocumented migrants in Belgium)



Demand side

- Beliefs, attitudes and behaviours
 - Disease risk perception
 - Uncertainty about the safety and effectiveness of the vaccines
- “infodemic”
- misinformation
- disinformation





5Cs model on acceptance and uptake

Confidence: the person's trust in the vaccines efficacy and safety, the health services offering them, and the policy makers deciding on their rollout

Complacency: whether or not the person considers the disease itself to be a serious risk to their health

Calculation: the individual's engagement in extensive information searching to weigh up the costs and benefits

Constraints (or convenience): how easy it is for the person in question to access the vaccine

Collective responsibility: the willingness to protect others from infection, through one's own vaccination



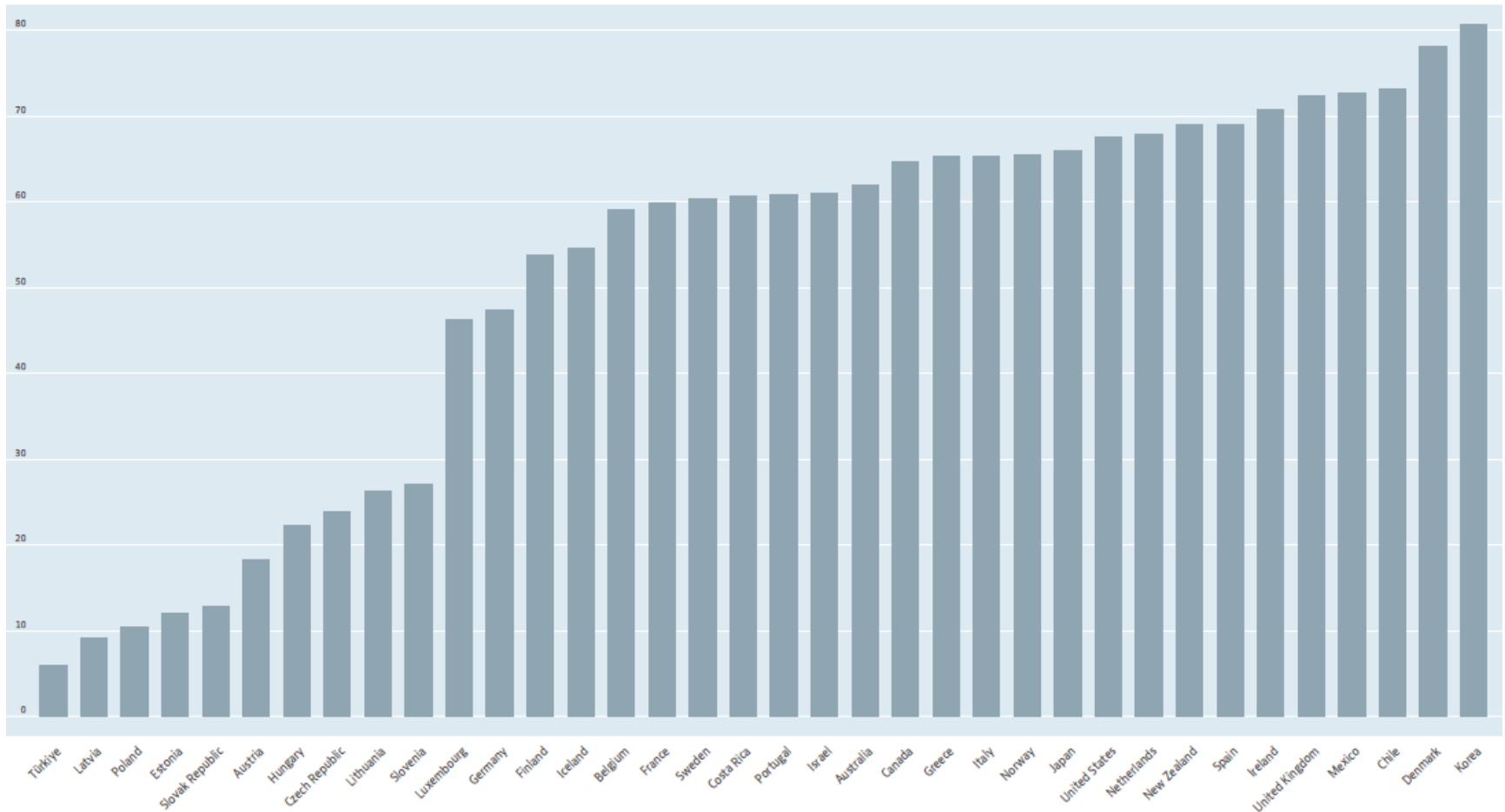
Overall challenges during COVID

- Vaccine supply and logistics
- Shortages in health workers and equipment
- Monitoring vaccine safety
- Information systems to track vaccination uptake
- Addressing vaccine confidence and demand (including through addressing misinformation and disinformation)
- Educating health workers
- Equity



Influenza vaccination

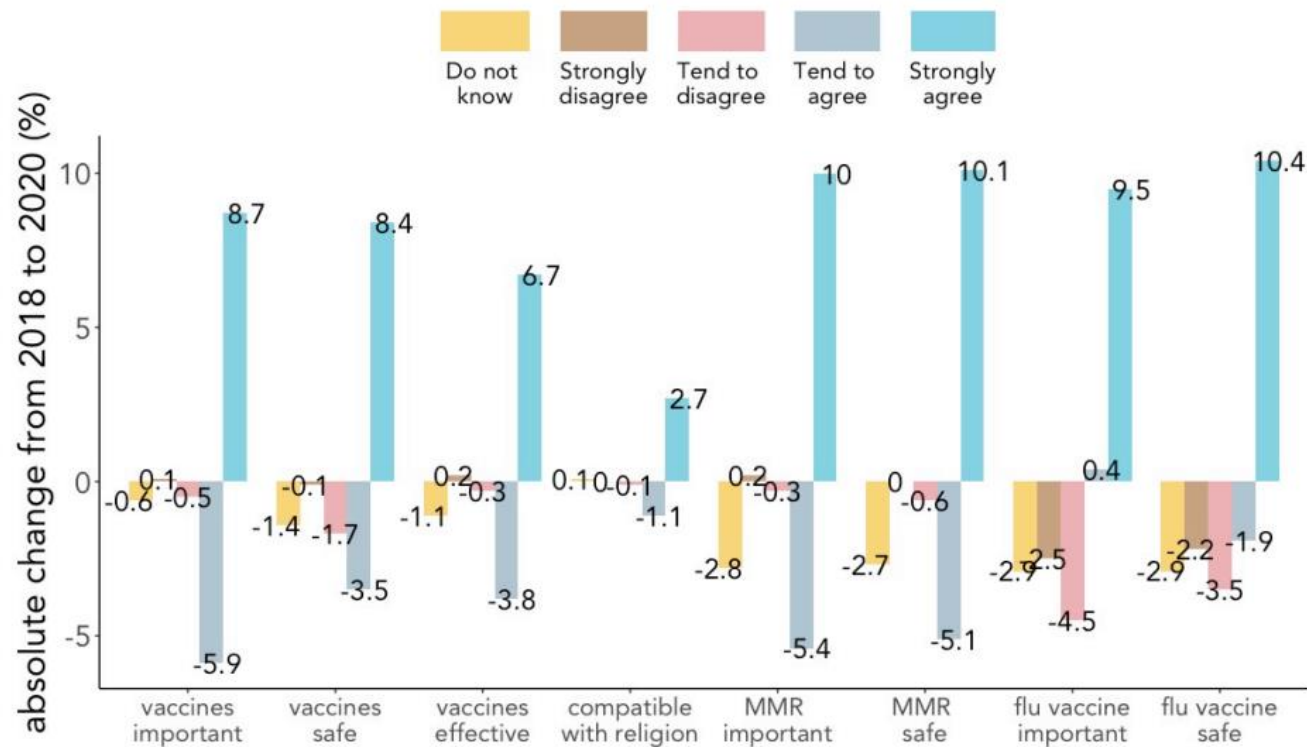
Influenza vaccination rates in OECD countries, 2021 or latest available year





Vaccine confidence

Figure 2.2 Change in vaccine confidence across the EU, 2018 to 2020



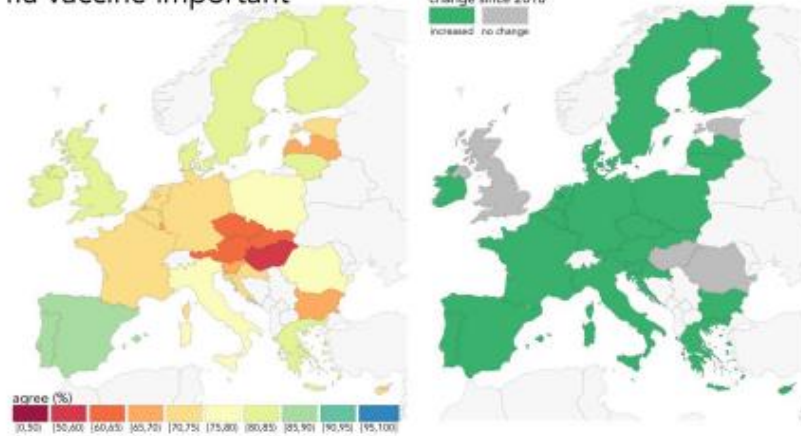
Source: Vaccine Confidence Report 2020



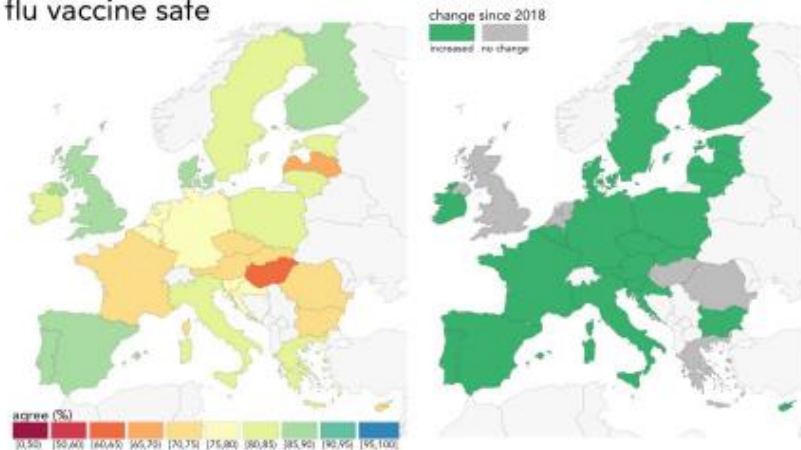
Vaccine confidence

Country-level public vaccine confidence in the importance and safety of the seasonal influenza vaccine in 2020 and change since 2018

flu vaccine important



flu vaccine safe



Source: Vaccine Confidence Report 2020



Implications for the post-COVID world?

- Window of opportunity for bolstering vaccine confidence and demand?
- Digital tools?
- Information systems to track vaccination uptake and outcomes?
- Equity?
- Other supply side changes?

Thank you for your attention!

<https://eurohealthobservatory.who.int>

Analysing Health

Systems and Policies

