

COVID & Beyond

Lessons from the pandemic and
the future of life-course
immunisation in Europe



**Coalition for
Life-course
Immunisation**

Acknowledgements

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Executive summary

Before COVID-19, vaccines may have been synonymous with children or older adults. During the pandemic, however, people of all ages and backgrounds have been made aware of vaccines and vaccination. For some people, this might be the first time in their lives they remember getting a vaccine. The sheer scale at which COVID-19 vaccines have been designed, manufactured and administered is a marvel of science and one which will never go unnoticed.

But moving beyond COVID-19, there is a worry that vaccines will become a thing of the past and be put to one side until another global pandemic strikes. Ensuring this doesn't happen is crucial. Never has there been a better opportunity to raise awareness and make the case for life-course immunisation. Aside from COVID-19, numerous vaccinations can help to prevent infectious diseases – raising the profile of these is just as important.

Therefore, we see the need for action from European policy makers, healthcare professionals and advocacy groups to ensure that immunisation is strengthened and continued beyond the pandemic. We call on these stakeholders to:

Spend more on prevention

On average, EU countries spend 0.4% of healthcare budgets on immunisation.¹ They should increase spending on immunisation to 2.5%, to ensure better performance of existing programmes, as well as timely access to novel vaccines.

Harness technology to manage vaccination

The EU should expand existing COVID-19 platforms so they can be used to schedule and record other vaccinations. An 'EU Digital Vaccination Record' should be considered as part of the EU's future policy on health.

Widen access to vaccination

National European governments should work with healthcare providers, community leaders and local authorities to allow routine vaccinations to be administered in local settings such as pharmacies, community centres, supermarkets and places of worship.

Make vaccination free at the point of use

European governments should remove payment costs for routine immunisation. They should remove financial barriers posed by charging different people for vaccines, making access easier for marginalised groups.

Strengthen communication

The EU should continue to use interactive dashboards to monitor vaccination uptake and to inform and empower citizens about recommended vaccines. Vaccination uptake should be incorporated into the monitoring of routine immunisations and the EU should require member states to submit yearly vaccination uptake figures.

Take a life-course approach towards immunisation

National European governments should take a life-course approach towards immunisation. To reduce the burden of vaccine-preventable diseases (VPDs) across the lifespan, vaccination schedules need to include people of all ages and stages of life.

We know that vaccines save lives and prevent severe disease – COVID-19 vaccines are a shining example of this fact. Making sure that this message is continued after the pandemic is vital. Immunisation – for people of all ages and at all stages of life – should become a major health priority for Europe beyond COVID-19. We mustn't stop now.

Introduction

Since our initial conversations with individuals and experts in the spring of 2021, a lot has changed with the pace and scale of the COVID-19 vaccination rollout in Europe. The emergence of two new ‘variants of concern’ – Delta and Omicron – have threatened to undo all the work achieved through vaccination; the latter variant has forced countries to authorise additional ‘booster’ or third doses to steady rising COVID-19 cases.

Despite these setbacks, the overall picture in Europe is now looking positive. As we move into the spring of 2022, there is quiet optimism that COVID-19 will become endemic much like influenza (flu). With over 80% of adults in the EU/EEA vaccinated (over 60% of whom are boosted),² it is hoped that enough has now been done to turn the tide on COVID-19.

Beyond this pandemic, however, lies another major infectious disease outbreak. While we don’t know when it will happen, we know vaccination can help to prevent it. Ensuring that everyone has the opportunity to receive routine immunisations for existing VPDs throughout their lives is crucial to help foster healthier populations and reduce the social, economic and health burdens of disease.

About this report

Following on from our ‘Snapshots’ report published in April 2021,³ CLCI has continued to gather the views of various experts on the COVID-19 vaccine rollout and its implications for other routine immunisations. We have gathered further testimonials, as well as interviews with an MEP, a patient charity advocate and a paediatrician to gain perspectives from a policy, patient and medical standpoint.

This final report aims to summarise these views while quantifying the successes and challenges of the COVID-19 vaccination rollout and other immunisation programmes in Europe.

This report is divided into three sections and answers the following questions which have been revised from our initial report:

- **Has COVID-19 raised the profile of vaccination across all ages and stages of life in Europe?**
- **How have European governments and citizens responded to COVID-19 vaccination?**
- **What needs to happen in a post-COVID Europe to encourage life-course immunisation?**

The final section includes a set of bespoke recommendations for policy makers and health stakeholders on how future European immunisation programmes can be improved and the lessons from COVID-19 which can be applied to them.

Has COVID-19 raised the profile of vaccination across all ages and stages of life in Europe?

“It is hard to think of a time when the world was so dependent on the rapid universal availability of a vaccine – in every community and in every country.”

Prof David Salisbury, Associate Fellow, Chatham House, UK

There is no doubt that the COVID-19 pandemic has raised the profile of vaccination and what a vaccine “is” and what it “does”. Looking beyond COVID-19 vaccines, has it helped to raise awareness and people’s understanding of other immunisations? Has it also helped increase uptake and coverage of other vaccinations?

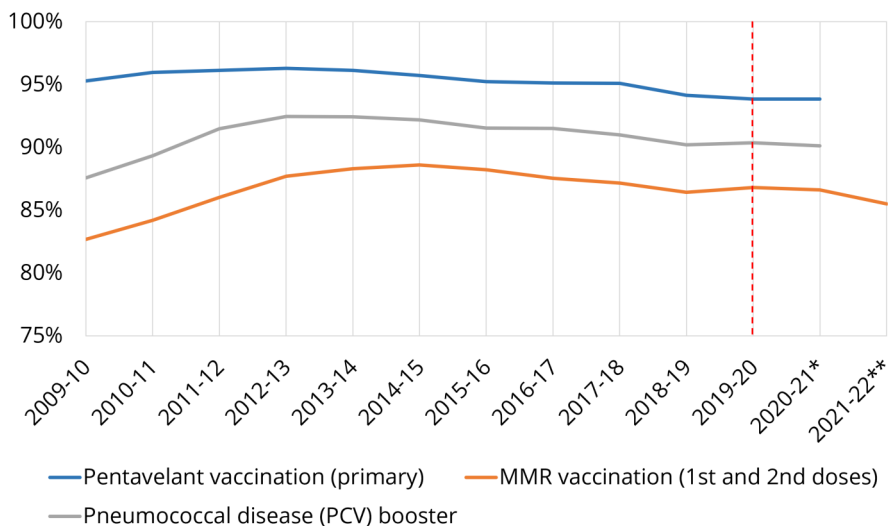
Childhood vaccinations

“In addition to having to rebuild immunisation rates back, we have cohorts of lost children around the world who were missed during the pandemic, some of whom may have had zero doses of vaccine.”⁴

Dr Angus Thomson, senior social scientist, UNICEF

According to World Health Organization (WHO) estimates, 23 million children missed out on basic childhood vaccines in 2020 – 3.7 million more than in 2019.⁵ With national lockdowns being implemented globally, many people may have not accessed paediatric services due to the pandemic’s impact on healthcare. In England, over a quarter of people (26%) were not aware that routine childhood vaccinations should continue as normal.⁶ Figures in England suggest that uptake for multiple routine childhood vaccinations have declined since the beginning of the pandemic:

Figure 1: Percentage of children vaccinated by their second and fifth birthdays, England, 2009-2022 (red line indicates the beginning of COVID-19 pandemic)⁷



* In 2019-20, all children in the 12-month cohort were eligible for the hexavalent (6-in-1) vaccination, which replaced the 5-in-1 vaccination for those aged 2 in 2020/21. 5- & 6-in-1 and PCV vaccinations are for all children vaccinated by their second birthday. MMR vaccination doses account for all children by their fifth birthday.

**2021/22 data for 6-in-1 and PCV vaccinations unavailable. MMR vaccination data from February 2022 suggests coverage of 2 doses in 5-year-olds in England is currently 85.5%.⁸

Despite improvements in coverage since 2009, this appears to be unravelling as a consequence of the pandemic. At a European level, routine childhood vaccination has been suboptimal in some places even before COVID-19. According to data from the European Centre for Disease Prevention and Control (ECDC), measles second-dose vaccination coverage was 89% in 2018⁹ – well below the WHO’s 95% target. In France, where the lowest coverage figure was recorded (80%), measles cases reached 2,919 in 2018 – one of the highest in Europe.¹⁰ Although European countries have committed to eliminating measles by 2015, the disease continues to spread across the continent.¹¹

“I was really worried when the pandemic hit that my son, who was only four months old when we went into the first lockdown, would end up missing routine vaccinations or getting them late.”

Sam Nye, Confederation of Meningitis Organisations Network Lead for Meningitis Research Foundation, UK

While measles cases in Europe have been lower due to lockdowns and children mixing less, a decline in vaccination means that there are concerns many children starting school in the coming years could be exposed to the virus. In the UK, it is estimated that around one in 10 children starting school are now going to be at risk of measles as a result of disruptions caused by COVID-19.¹² It is imperative that routine childhood immunisations are not disregarded and that they are administered in places where gaps have emerged during the pandemic.

HPV vaccination

While the UK and all EU/EEA countries recommend that young women and girls – and in some countries all adolescents – should receive the human papillomavirus (HPV) vaccine,¹³ the COVID-19 pandemic has severely impacted routine uptake. With many schools closed during lockdowns and school nurses usually being the ones who administer the vaccination, millions of young Europeans will have missed the opportunity to receive this life-saving vaccine. The key window of opportunity to get vaccinated against HPV may have now passed.

“The trend of vaccinations after the COVID-19 pandemic was critical...there was a decline in some recommended vaccines, especially ones for adolescents like HPV.”

Senior public health specialist, Italy

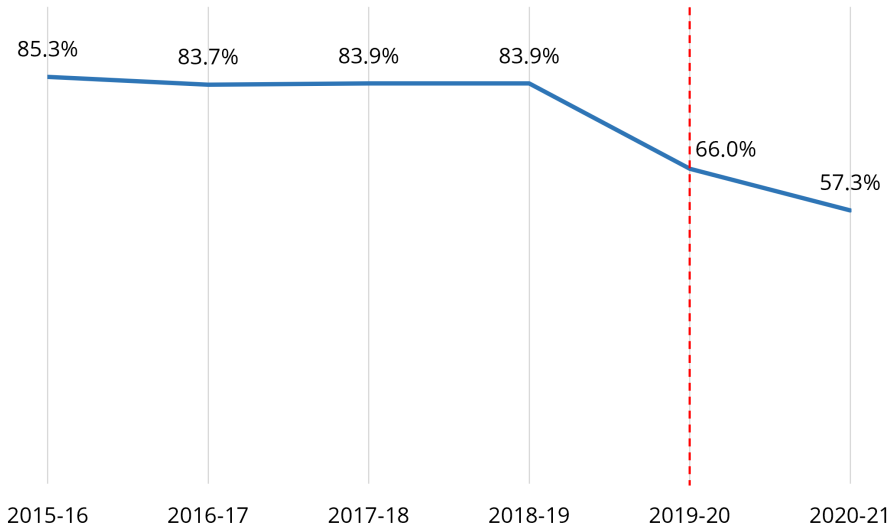
However, before the pandemic, HPV vaccination uptake in the EU was suboptimal with many countries below the WHO's 90% target.¹⁴ According to the European Cancer Organisation, coverage rates for the final dose of the HPV vaccine programme in some countries is far below this goal:

Table 1: Final HPV dose rate, 2019¹⁵

Netherlands	53%
Italy	40%
Germany	31%
France	24%
Luxembourg	14%

In the UK, where coverage has been consistently higher in recent years, COVID-19 has had a negative impact – coverage has fallen more than 25% compared to pre-pandemic levels:

Figure 2: Annual UK HPV vaccine coverage (2 doses) by academic year, 2015-2021 (red line indicates the beginning of COVID-19 pandemic)¹⁶



Whether the pandemic will have the same impact on the rest of the EU/EEA is yet to be known. Moving beyond COVID-19, more needs to be done to ensure that young people are offered the HPV vaccine and are able to access it without any hindrance. Evidence suggests that cervical cancer rates are 87% lower in vaccinated female populations.¹⁷ This great achievement can only be sustained through effective and accessible vaccination programmes. The focus now needs to be on recovering HPV vaccine programmes and reducing future disruptions.

Flu vaccination

“In 2021, flu vaccination increased by 5% in the elderly and approximately doubled in health care personnel compared to the previous year. Experts agree that high adherence to the vaccination campaign against COVID-19 has increased the general confidence of the Italian population towards vaccinations.”

Senior public health specialist, Italy

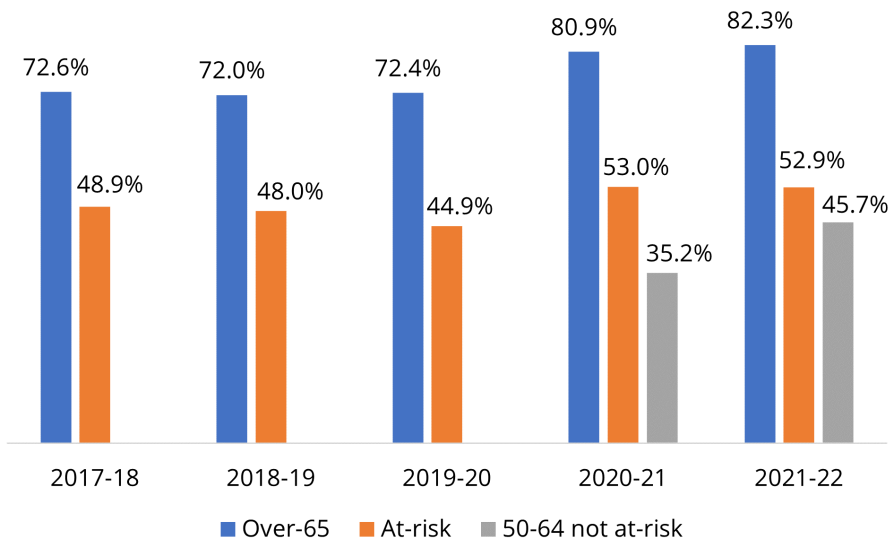
It could be suggested that COVID-19 has helped to raise the profile of flu vaccination. As SARS-Cov-2 and flu are both respiratory viruses, there are similarities between their symptoms and infectiousness, which has helped people to understand the severity of the latter. Given its seasonal occurrence too, communication about flu vaccination has continued throughout the winters of 2020 and 2021, thus keeping it in people’s minds during the pandemic. Studies have suggested that there is increased severity if flu and COVID-19 are contracted at the same time,¹⁸ making flu vaccination even more imperative. From our conversations, it has been suggested that flu vaccination has increased, particularly in older adult populations:

“Flu vaccination among older people in Spain has had its highest uptake in the last season.”

Dr Francisco Gimenez, President, Balmis Institute of Vaccines, Spain

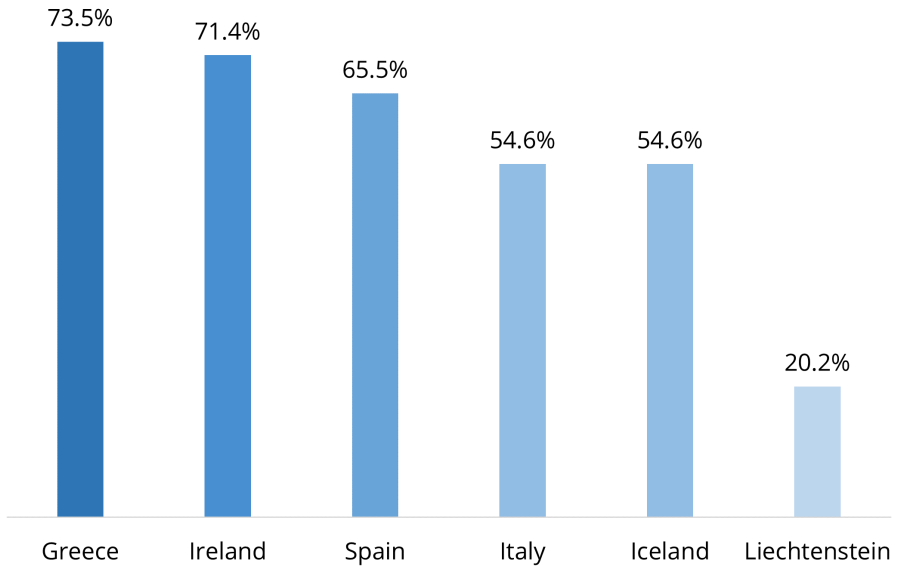
In places such as England, where free flu vaccination was expanded to all people over the age of 50 in December 2020,¹⁹ there has been an increase in uptake across at-risk people (aged 6 months to 64 years) and older populations:

Figure 3: Flu vaccine uptake in England, 2017-2022²⁰



While flu vaccine uptake in England is high in older adults, it remains low across Europe. Data from 2020 suggests that flu vaccination in some European countries is still below the WHO 75% uptake target, though countries such as Greece and Ireland come close to meeting this:

Figure 4: Flu vaccine uptake in people aged 65 years and over in EU/EEA countries, 2020²¹



Although there will be a better understanding of whether COVID-19 has shifted attitudes on flu vaccination once more data is published in the coming years, current statistics indicate that only a handful of countries have seen increased uptake. The most recent EU27 figures from 2019 suggest flu vaccination uptake in over-65s stood at 42%.²² Beyond the pandemic, much more will need to be done to meet the WHO 75% target. If COVID-19 vaccines become “routine” like the flu vaccine, it is crucial to ensure that people do not forget the latter.

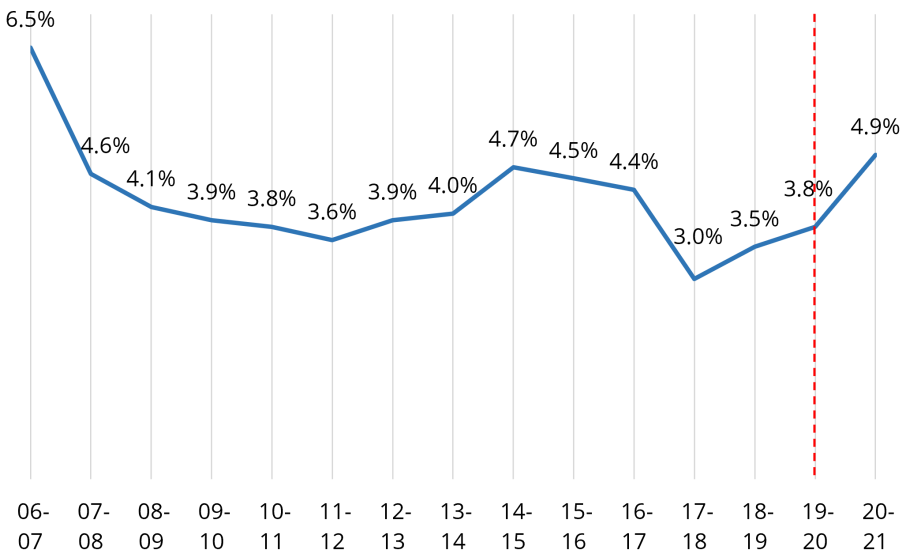
Pneumococcal vaccination

“As pharmacists, nurses and others gain skills and experience with vaccination – and the public becomes accustomed to being vaccinated in local pharmacies and clinics – there is a real opportunity to step up flu and pneumococcal vaccination in future.”

Gary Finnegan, Editor, Vaccines Today, Ireland

Despite 25,000 cases and 1,600 deaths from invasive pneumococcal disease in Europe across all age groups in 2018,²³ vaccination uptake remains suboptimal. While little collective European data currently exists on pneumococcal vaccine uptake, pre-pandemic figures point to low coverage of around 20% to 30%.²⁴ In countries such as England where data is more widely available, figures suggest there has been a slight increase in uptake since the beginning of the pandemic. Nonetheless, while cumulative coverage^a in people aged 65 and over in England is 70.6%, year-on-year uptake has remained low:

Figure 5: Pneumococcal vaccine uptake in people aged 65 and over in England, 2006-2021 (red line indicates the beginning of COVID-19 pandemic)²⁵



^a Cumulative coverage refers to the overall number of pneumococcal vaccines administered anytime up to 31 March 2021.

“Doctors and adult patients, knowing the pulmonary impact of COVID-19, required, even demanded in some cases, vaccination against pneumococcal invasive diseases. This demonstrates how COVID-19, due to its severity among ageing adults, made healthy adults more sensitive to vaccines.”

Prof Catherine Weil-Olivier, independent expert, France

While uptake has increased since 2020, data over the past 16 years indicates that pneumococcal polysaccharide vaccine (PPV) uptake in people aged 65 and over in England has averaged around 4.2%. Although there has been a 1.1% increase since March 2020, the 2020/21 figure is only just above the average. As with COVID-19 and the flu, there is hope that more people become aware of the need to get the pneumococcal vaccine to prevent serious illness from pneumococcal pneumonia: another severe respiratory disease if contracted.

How have European governments and citizens responded to COVID-19 vaccination?

“Provided quality and efficacy controls are maintained and vaccines continue to be voluntary and free at the point of delivery, governments must recognise that immunisation is a cost-effective means to maintain public health and hence economic wellbeing for society.”

Dr Malcolm Taylor, General Secretary, CLCI, UK

The response of European governments

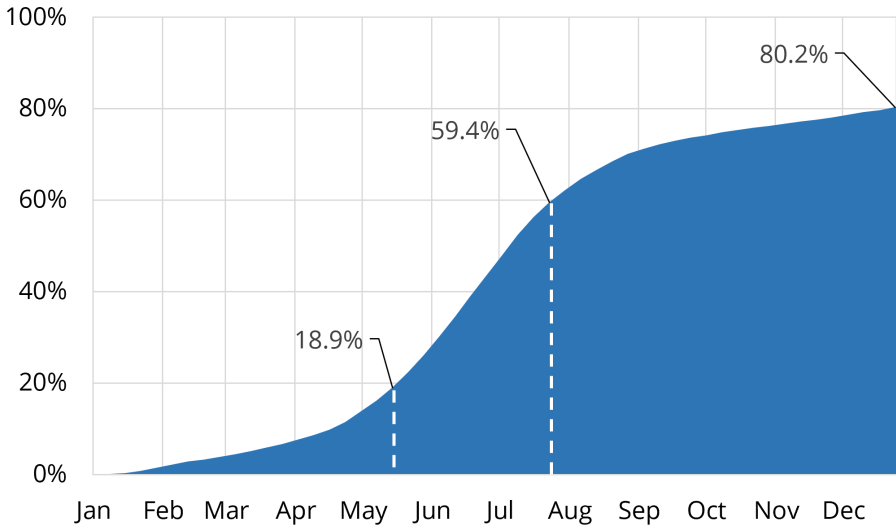
By the end of 2020, the EU and other European countries had approved the use of newly developed COVID-19 vaccines and begun rolling them out through mass vaccination programmes. During the early stages, older and clinically vulnerable populations were prioritised, followed by all other adult populations. During the later stages of 2021, some countries began authorising the use of vaccination in children under the age of 18 too. This stage-by-stage rollout based on health and age group has been seen as a pragmatic approach, given that COVID-19 is more severe and fatal in older populations and those with underlying health conditions.²⁶ Despite initial logistical issues with vaccines, the fast mobilisation of healthcare workers and widening of access to vaccines has led to high overall uptake across the continent.

The response of European citizens

Due to the mass scale of production, distribution and administration, COVID-19 vaccination levels across Europe have been strong. While anti-vaccine sentiment and hesitancy has been seen across the continent, uptake has been relatively high, suggesting that European citizens have responded positively to calls from their respective governments to roll up their sleeves and get vaccinated. As of April 2022, over four in five adults in the EU/EEA received a primary course (2 doses) of vaccination, with

over three in five boosted.²⁷ In 2021, when the vaccine was rolled out in stages to all EU/EEA citizens over the age of 18, uptake was rapid in the first eight months:

Figure 6: Cumulative vaccine uptake (% of 2 doses) among adults (18+) in EU/EEA countries, January-December 2021²⁸



While rates began to ease in the autumn and have now plateaued, the speed at which vaccines were initially administered is phenomenal. Between mid-May and mid-July 2021, over 40% of European adults received their second dose.

However, not all Europeans have responded to the call to get vaccinated against COVID-19

With more than one in 10 European adults still unvaccinated, a large proportion of citizens have not responded to this vaccination campaign. While countries such as Portugal have seen successful uptake – a 100% first-dose and 94% second-dose adult vaccination rate – countries like Bulgaria have seen very low uptake, with under two fifths of adults fully vaccinated (35% as of early April 2022).²⁹

Several factors can be attributed to low uptake in parts of Europe, which highlight the growing challenges associated with this vaccination programme. Misinformation and poor communication have hindered uptake, while a lack of spending on immunisation may have limited some countries' abilities to vaccinate too. In some respects, poor government decision-making has resulted in these challenges, while online platforms and social media have also facilitated anti-vaccine sentiment.³⁰ There have also been marked inequalities in uptake between marginalised and underserved populations in Europe, highlighting structural and access barriers. These have all resulted in disengagement from some European citizens to get vaccinated against COVID-19.

Misinformation

“Unfortunately, in the Croatian population, we’ve had anti-vaccine fake news spreading on social media, which has also been spread by some politicians too.”

MEP Tomislav Sokol, Croatia

Alongside the COVID-19 pandemic, there has been an “infodemic” – an overabundance of often false and misleading information that has spread alongside the disease.³¹ While misinformation predates COVID-19, it has grown in scale and severity, especially since the rollout of vaccines in December 2020. Misinformation and fake news on social media platforms discrediting COVID-19 vaccines have become widespread. The Centre for Countering Digital Hate notes that 31 million people follow anti-vaccine groups on Facebook, with 17 million people subscribing to similar YouTube accounts.³²

“Of course, the [Croatian] government is doing its utmost to promote vaccination and protect people’s lives, but we have the problem of political interest groups using modern media to spread fake news.”

MEP Tomislav Sokol, Croatia

Misinformation has the potential to reduce trust in the vaccination process. One study of 4,000 participants in the UK suggests that exposure to misinformation can decrease the likelihood of someone getting a COVID-19 vaccine by 6.2%.³³ Given that social media accounts held by anti-vaccine individuals have increased their following by at least 7.8 million people since 2019,³⁴ misinformation poses one of the biggest threats to the COVID-19 vaccine campaign and will only prolong the pandemic further. Online anti-vaccine sentiment also has the potential to damage other immunisation programmes in the future, such as the flu vaccine, and expose Europeans to the threat of new pandemics beyond COVID-19.

Poor communication

“After six months, vaccination began to decline...people who weren't vaccinated began to question the vaccine and the communication from the government was very poor. We had the prime minister and president telling us in June [2021] that all restrictions had been put on standby and that we'd defeated the pandemic. It was a relaxation for everyone, and it made it very difficult for the government to communicate the importance of vaccination to those who had not been vaccinated.”

Radu Ganescu, chronic disease patient advocate, Romania

Successful vaccination campaigns largely depend on how much people trust vaccines, the competence and reliability of institutions that deliver them, and the principles that guide government decisions and actions.³⁵

During this pandemic, the high level of distrust in government and the politicisation of the COVID-19 response³⁶ has meant a lack of vaccination uptake and engagement across some European countries. Previous CLCI research has suggested that uptake has been lower given the absence of effective messaging from political stakeholders and the emphasis on personal freedom from citizens.³⁷ In places such as Eastern Europe, there is now more of an emphasis on vaccination being a personal choice:

“Nowadays, everybody is speaking more about their human rights; nobody is thinking about collective responsibility in terms of vaccination.”³⁸

MEP Tomislav Sokol, Croatia

Without effective communication from governments and other stakeholders to persuade people otherwise, this has resulted in lower uptake and heightened scepticism in COVID-19 vaccination. Until this is corrected, uptake in countries such as Bulgaria and Romania will remain suboptimal.

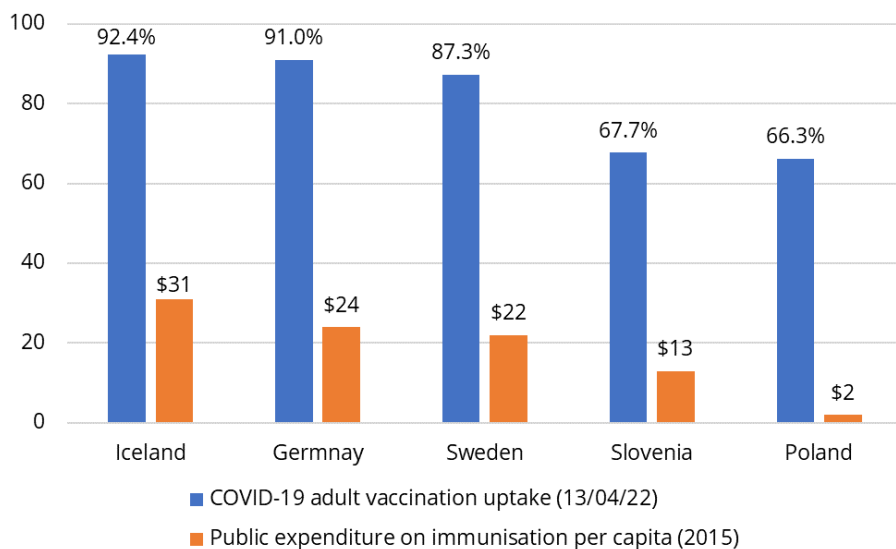
The Oxford/AstraZeneca vaccine and the challenges of communicating about vaccine safety

Due to a rare but severe blood clotting side effect in a small number of people who received the Oxford/AstraZeneca vaccine in early 2021, it was subsequently suspended in 12 EU countries. While the vaccine was reinstated by the European Medicines Agency, recommendations differed for certain age groups.³⁹ Although these cases were extremely rare, in many European countries, confidence dwindled: in France, Germany and Spain, more than half of citizens believed the vaccine was unsafe as a result of the side effects reports.⁴⁰ While the risks associated with contracting COVID-19 far outweigh the risks with vaccination,⁴¹ the poor communication about this vaccine resulted in trust beginning to erode in the process of immunisation.

Lack of spending

When comparing the most recent data on immunisation spending from 2015 to COVID-19 vaccination uptake, there is a clear correlation between low spending and uptake:

Figure 7: COVID-19 vaccination (2 doses) and immunisation spending in five European countries^{42, 43}



While Western European nations have committed to higher spending on immunisation per capita in recent years, some Eastern European countries have spent much less and have also had lower COVID-19 vaccine take-up. Beyond COVID-19, spending on immunisation needs to be increased and sustained to ensure greater uptake with future routine vaccination programmes.

Inequalities in uptake between different populations

Across Europe, there have also been large gaps in uptake between certain population groups. Marginalised and underserved populations, such as minority ethnic groups, those from

disadvantaged socioeconomic backgrounds, undocumented migrants, people experiencing homelessness, and those with disabilities have faced a range of challenges in getting vaccinated against COVID-19.⁴⁴ This suggests that there are structural barriers such as scepticism towards healthcare systems and issues with access, which are more likely to hinder some people's ability to get vaccinated.⁴⁵

In places such as England, Norway and Sweden, large disparities can be seen between older populations who identify as minority ethnic and those who were born in those countries or identify as White. During the first six months of the vaccine rollout, uptake was significantly lower in minority ethnic groups:

Figure 8: Vaccination uptake (2 doses) in people aged 70 years and over by ethnic group, 8 December 2020 to 9 May 2021, England⁴⁶

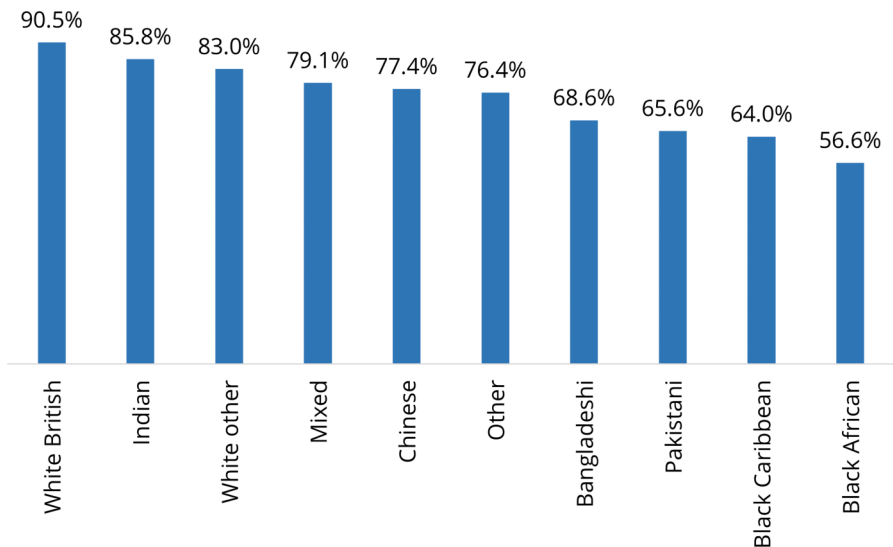


Table 2: Vaccination in people aged 75 and over in Norway, May 2021⁴⁷

Place of birth	Uptake
Norway/Sweden/Denmark	90%
Iraq	51%
Somalia	34%

Table 3: Vaccination in people aged 80 and over in Sweden, May 2021⁴⁸

Place of birth	Uptake
Sweden	91%
North Africa	59%
Sub-Saharan Africa	44%

In England, uptake has also been lower in less advantaged socioeconomic groups: people living in more deprived areas, those who have never worked or are long-term unemployed, those with no qualifications and those who do not own their own home all had lower vaccination rates than those from more advantaged socioeconomic groups.⁴⁹

Lower uptake levels across marginalised groups in Europe is concerning: addressing the specific barriers faced by these groups is important to ensure that everyone in society is best protected against COVID-19.

What needs to happen in a post-COVID Europe to encourage life-course immunisation?

“The lessons of the benefits from coronavirus vaccination need to be applied to other vaccines too: vaccines save lives.”

Prof David Salisbury, Associate Fellow, Chatham House, UK

For all the social, economic and health challenges posed by COVID-19, this pandemic has demonstrated the importance of using immunisation to protect populations from disease. Despite challenges and resistance in some countries, vaccination across Europe has, on the whole, been positive. To encourage life-course immunisation in the future, European countries need to harness the successes of the COVID-19 vaccination rollout and apply these to future programmes. They should:

- **Spend more on prevention**
- **Harness technology to manage vaccination**
- **Widen access to vaccination**
- **Make vaccination free at the point of use**
- **Strengthen communication**
- **Take a life-course approach towards immunisation**

Spend more on prevention

COVID-19 has forced all European countries to increase their health budgets and ramp up spending on vaccination. Yet before the pandemic, little consideration had been given to the importance of preventative healthcare. Across the EU^b between 2015 and 2019, 77% spent less than 0.5% on immunisation, with Luxembourg and Latvia the only countries spending over 1%.⁵⁰

^b Including the UK

To prevent future pandemics, governments need to be better prepared by investing more in vaccination programmes. Not only can vaccines support the health of individuals, but they can also strengthen the resilience of healthcare systems by reducing hospitalisations and the burden of disease. Vaccines are also socioeconomically beneficial; healthier citizens equals wealthier and more productive economies.

Recommendation: European countries should increase spending on vaccination as a proportion of their health budgets to at least 2.5% (in line with Luxembourg).

There needs to be sustainable immunisation financing that ensures the performance and resilience of existing immunisation programmes, supply to vaccines, and timely access to novel vaccines. EU member states should commit to the recommendations outlined by the European Council in 2018:

“Develop and implement vaccination plans...aimed at increasing vaccination coverage...[which] include provisions for sustainable funding and vaccine supply, a life-course approach to vaccination, capacity to respond to emergency situations, and communication and advocacy activities.”⁵⁵

Harness technology to manage vaccination

One outcome from the COVID-19 pandemic has been the use of technology to monitor disease outbreaks, alert people when they have come into contact with someone and allow people to access their vaccination records. While the pandemic has forced many governments to rethink how they track VPDs and immunisation, this should not stop at COVID-19. Similar innovations should be used for other routine vaccinations in the future. In places such as Canada, apps have been developed to help people monitor and schedule vaccination:

CANImmunize

In Canada, the digital platform CANImmunize has been developed to help individuals keep track of their vaccinations and get vaccinated on time. Public health authorities can also use CANImmunize to help with surveillance and health promotion. It also contains expert-reviewed information and resources about vaccination in Canada, including fact sheets on recommended vaccines, vaccination schedules and advice on how to manage the side effects of vaccines.⁵⁶

In Europe, these platforms could be replicated through expanding existing services like the EU Digital COVID Certificate. Providing people with tools that allow them to schedule vaccinations at the push of a button will make the immunisation process more accessible for millions of people across Europe and could help to sustain awareness of vaccination. One of the successes of the COVID-19 vaccination programme has been the ease with which people can book an appointment to get vaccinated. This accomplishment should continue beyond the pandemic.

Recommendation: The EU should expand its Digital COVID Certificate platform so that it can be used to schedule and record other vaccinations.

An 'EU Digital Vaccination Record' should be considered as part of the EU's future policy on health to help manage immunisations like flu and pneumococcal for adults, and hexavalent vaccinations for children.

Widen access to vaccination

Another successful aspect of the COVID-19 vaccination programme that should continue beyond the pandemic is the ability for people to get vaccinated in different locations. Given the need to vaccinate as many people as quickly as possible, mass vaccination centres have been established to achieve this.

While this may not be necessary for seasonal routine vaccinations, the places which have been used during the pandemic should be considered as hubs to vaccinate people for other diseases. For example, in places such as England, pharmacies, community centres, supermarkets, places of worship and shopping centres have all been utilised effectively and could be used for future flu vaccine programmes.

NHS England COVID-19 vaccination sites

In England, over 3,000 vaccination sites have been established, with 99% of the country living within ten miles of a site. This includes 1,650 pharmacy locations, as well as other public locations like football stadiums, museums and universities.⁵⁷ The diversity and breadth of these locations have enabled more people to get vaccinated at a time and place which best suits them.

Widening vaccination to places that are easier to reach can make immunisation more accessible and convenient. Improving convenience is a crucial aspect of reducing vaccine hesitancy; living in a region and community where it is possible to get vaccinated can help to improve uptake and remove barriers.⁵⁸

Recommendation: National European governments should work with their respective healthcare providers to ensure routine vaccination programmes are accessible in multiple locations.

In addition to health centres and pharmacies, policy makers should widen national immunisation programmes by using local settings to administer vaccinations like HPV, flu and pneumococcal. National governments should coordinate with relevant stakeholders such as community leaders, healthcare professionals and local authority stakeholders to achieve this.

Make vaccination free at the point of use

A key aspect of the COVID-19 vaccination programme in Europe that has proved beneficial is the fact that it has been free. This has not been the case with other vaccination programmes such as the flu vaccine:

Table 4: Out of pocket vaccine payment for population groups recommended seasonal influenza vaccine, 2017–18 influenza season (blue boxes indicate out of pocket payment)⁵⁹

Country	Children and adolescents	Older population	Clinical risk groups	Pregnant women
Belgium		☒	☒	☒
Bulgaria		☒	☒	
Cyprus		☒	☒	☒
Czech Republic				☒
Estonia		☒	☒	
Latvia		☒		☒
Liechtenstein		☒	☒	☒
Lithuania		☒		
Norway		☒	☒	☒
Poland		☒	☒	☒
Slovenia	☒			
Sweden		☒	☒	☒

While over a third of EU/EEA countries charge at least one recommended group for flu vaccination, the large majority of EU member states^c offer COVID-19 vaccinations free of charge.⁶⁰ Removing the cost of routine vaccines and placing them under a national health service like the COVID-19 vaccination could improve uptake and help remove financial access barriers.

Recommendation: All national European governments should remove payments and cover the cost of routine immunisation.

Countries should remove financial barriers posed by charging different people for vaccines, making access easier for those from marginalised and lower socioeconomic groups.

Strengthen communication

Despite vaccination communication being lacklustre in some European countries, there have been aspects that have worked well and should be strengthened and continued beyond the pandemic. The use of real-time data to track and monitor COVID-19 cases and vaccine uptake has helped to create better transparency on disease outbreaks and immunisation.

ECDC COVID-19 Vaccine Tracker

As part of the EU's COVID-19 vaccination communication, the ECDC established an interactive 'Vaccine Tracker' that allows people to see the current vaccine uptake levels across Europe. This tool provides the most up to date and accurate information on immunisation figures in different countries, a breakdown of uptake by age and target groups, as well as individual country profiles with links to national resources.⁶¹

Furthermore, public messaging on vaccination has been ramped up during the pandemic and emitted through numerous channels.

^c Including the UK

Continuing with this scale of communication and the key messages on the importance of vaccination is crucial to maintain the public's awareness, understanding and desire to get vaccinated.

Recommendation: The EU (through the ECDC) should continue to use interactive dashboards to guide citizens and monitor vaccination uptake.

A dashboard should inform people about the vaccinations they are entitled to receive by signposting them to their respective national government's resources. Existing platforms, such as the ECDC's Surveillance Atlas of Infectious Diseases,⁶² should be expanded to incorporate these changes, as well as including vaccination uptake in its monitoring of VPDs such as flu, pneumococcal disease, HPV and measles. To achieve this, the EU needs better requirements from its member states to submit yearly vaccination uptake figures.

Take a life-course approach towards immunisation

Finally, national European governments should take a life-course approach towards immunisation. To reduce the burden of VPDs across the lifespan, national vaccination schedules need to incorporate people of all ages and stages of life. At present, schedules vary significantly on who should receive routine vaccinations.⁶³ Improving cohesion on vaccination policy is necessary to ensure that all Europeans remain protected throughout the life-course.

Recommendation: The ECDC should establish a common vaccination schedule across all member states.

To achieve a life-course approach, the ECDC should implement a universal vaccination schedule for the EU/EEA. This should include specific vaccine recommendations for children, adolescents, older adults and people living with medical conditions, and member states should agree on the age specifications of these groups.

Conclusion

COVID-19 has fundamentally shifted the way Europeans think about immunisation. Right now, people's understanding and awareness of immunisation is at an all-time high, and sustaining this interest is crucial. Citizens of all ages throughout the life-course have a better understanding of vaccination thanks to the pandemic.

But beyond COVID-19, more needs to be done. The social, economic and health benefits of other vaccinations can be harnessed by European governments and institutions committing to better investment in vaccination programmes, using technological and infrastructural innovations to improve access to immunisation, and strengthening communication to ensure that people are aware of the importance of vaccines. These are the lessons to be taken away from the pandemic that should be applied to European vaccination programmes of the future.

While Europe continues to economically recover from this pandemic and adapts to the new ways of life that have taken hold, one thing is certain: vaccination is a tried and tested method that should continue to be championed way beyond COVID-19. The case for life-course immunisation must continue to be made to ensure that people remain healthier throughout their lives and not burdened with VPDs.

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