

Moving the margins

Improving adult pneumococcal
vaccine uptake in marginalised
groups



Health and care

Community

Prevention

International

Inequalities

Life expectancy

Economy

Diseases and Conditions

Acknowledgements

ILC-UK would like to thank all those who took part in the interviews on which this report is based. They have all provided in-depth accounts of the key issues relating to adult pneumococcal vaccination uptake in their countries and regions of focus, which were central to the development of this report.

This report has been supported by a charitable contribution from Pfizer.

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Executive summary

Vaccination remains the primary and most effective preventative strategy for protecting older people against pneumococcal disease. However, uptake is low. Across Australia, Canada, Germany, Japan, the Netherlands, Spain, the UK and the US, our research finds that:

1. Marginalised and underserved groups^a face specific barriers to obtaining pneumococcal and other routine vaccinations

These include:

- a. Suboptimal access to personal health records (this is necessary for individuals to take control of their health)
- b. A lack of targeted messaging
- c. Access barriers, including: cost, being unable to access a primary care facility due to physical disability or living in a resource-poor area
- d. Lack of trust in government and the health system

“When we saw the prioritisation of indigenous seniors, finally, in COVID-19, a lot of the times we were hearing that they didn’t trust it, ‘Why are we being put first again? because previously, when we were put first we were being used as guinea pigs.’”

Laura Jamieson, Field Support, and Frankie Antone, Health Policy Analyst, from Ontario Federation of Indigenous Friendship Centres, Canada

Moreover, despite clear barriers to access, there is a lack of data on how uptake varies between different groups, making it hard to identify risk groups, target messaging to those groups, and improve uptake.

2. Compared to those for other routine adult vaccinations, there are few structures in place to improve pneumococcal vaccination uptake

This significantly contributes to suboptimal vaccination coverage across the entire adult population, including all marginalised and

^aOur research finds the following groups to be a particular risk of poor uptake: (1) Ethnic minorities (2) Indigenous populations (3) Low-income groups (4) Undocumented and homeless people (5) Those with conservative political attitudes (6) Individuals living in areas with poor healthcare infrastructure.

underserved communities. The structural barriers include:

- a. Policy makers failing to educate the public and a lack of awareness on behalf of healthcare professionals (HCPs) on the value of the pneumococcal vaccine
- b. Recommendations around adult pneumococcal vaccination that are unclear or that change frequently, which makes it hard for public health and HCPs to recommend vaccination to patients
- c. National Immunisation Technical Advisory Groups (NITAGs) that don't include experts on adult immunisation, or anyone who works directly with patients or groups at risk due to social vulnerabilities
- d. A lack of HCPs with the ability to administer the vaccine

Tackling the barriers that contribute to inequality in uptake will help close this gap, while tackling structural barriers will help improve coverage rates across the board.

“So for the flu vaccination and the COVID-19 vaccination, there is an active call and recall... whereas that’s not the case for the pneumococcal vaccine... GP practices are not actively chasing [the public] and [the public] are not receiving any information about it.”

Dr Ivan Aloysius, Principal GP and Joint clinical Director, The Health Triangle Primary Care Network, UK

Recommendations

“COVID-19 is the biggest health problem the world has faced in the last 100 years. And the answer was a vaccine.”

Patrick Cashman, Immunisation Coordinator, Hunter New England Health, Australia

There's a meaningful push to safeguard population health in light of the significant toll the COVID-19 pandemic has had on societies and the rise in inequalities at both a global and regional level:

- The World Health Organisation (WHO) is planning to adopt a convention on pandemic preparedness¹
- The EU's revised Global Health Strategy aims to strengthen healthcare systems and deliver better healthcare
- WHO's Immunisation Agenda 2030² has prioritised life course immunisation and vaccination equity³

These policy initiatives are underpinned by the United Nation (UN)'s Sustainable Development Goals, which call for universal health coverage and to reduce the burden of communicable diseases by 2030.⁴

All of these factors, along with the UN Secretary-General calling for a sustained focus on preventative healthcare delivery at the 2022 World Health Summit in Berlin, point to putting more emphasis on vaccination as an effective and cost-effective preventative healthcare intervention.

WHO should:

- **Call on all developed EU member states to implement a coverage target of 75% for adult pneumococcal vaccination, similar to the existing target for flu.**

Ensure the upcoming convention on pandemic preparedness covers rigorous and comprehensive monitoring and surveillance of pneumococcal disease, along with a vaccination coverage target of 75%.

National governments should:

- **Implement a national 10-year strategy to reduce health inequities, with clear targets and close monitoring.**
- **Ensure mandatory reporting of adult pneumococcal vaccination in their national immunisation register.**

This should be in line with WHO's 2030 immunisation agenda, with targets to improve inequalities in immunisation throughout people's lives.

This will help to achieve national immunisation targets.

- **Make it standard practice for health systems to collect routine vaccination uptake data for patients from different demographics.**

The UK and US currently capture data about uptake inequalities for flu vaccination across different demographics: this should be scaled up so that it can be used for targeted health management approaches.

- **Implement a “call and recall” system for adult pneumococcal vaccination.**

Each vaccination invitation should be accompanied by educational information on pneumococcal disease, on the benefits of vaccination, and on the risks of not being vaccinated.

- **Ensure that those who may be at greatest risk of low uptake don't bear the cost of paying for vaccination. Offer incentives, such as vouchers, to marginalised and underserved groups.**
- **Invest in an electronic health record (EHR) system for vaccination.**

Give individuals access to their own data to allow them to take control of their health. EHRs should be supported by additional health information on routine adult immunisation tailored to different demographic groups (e.g., made culturally appropriate).

In partnership with third sector/community organisations that represent marginalised populations, should:

- **Consider a system of accreditation for healthcare providers to indicate those with inclusive and diverse spaces. This may help marginalised groups, feel safe accessing health services.**

Countries should consider adopting the Pride in Practice and NHS Rainbow Badge programme currently used in the UK.

- **Invest in targeted public awareness campaigns. They should also fund programmes that specifically tackle vaccine hesitancy.**

Campaigns should be targeted to different groups by highlighting the key concerns for each one. Consider including information on pneumococcal vaccination alongside other vaccine-preventable diseases, like the flu. Campaigns should be run regularly to ensure the message reaches these groups.

Healthcare systems should:

- **Implement the role of “immunisation lead” in each primary care practice.**

This should be a nurse or doctor with the requisite knowledge and expertise on immunisation who is responsible for ensuring targets are met and that patients eligible for vaccinations are invited, and that the practice's HCPs understand the importance of immunisation.

- **Ensure NITAGs prioritise adult vaccination by involving stakeholders who are experts on adult immunisation or the needs of older people, HCPs who work directly with patients, and community stakeholders who understand the barriers to uptake.**
- **Involve HCPs who aren't doctors or nurses in the administration of vaccinations.**

This will help increase uptake and spread responsibility for vaccination across more HCPs to alleviate staff pressure and an overwhelmed workforce. Any HCP that works with people from clinical at-risk groups should be able to educate patients on the importance of pneumococcal vaccination and administer it. To widen access and reduce inequalities in uptake, community pharmacists should also be allowed to administer vaccinations.

- **Allow individuals to receive multiple vaccinations during one clinic visit.**

For instance, offer patients pneumococcal vaccination at the same time as flu vaccination, to reduce the number of primary healthcare appointments required.

Investing in prevention in an ageing world

Along with improving population health, investing in preventative health strategies like adult pneumococcal vaccination can have significant economic benefits for individuals, health systems and economies.

The case for prevention

Immunisation programmes are known across the G20 to be both cost-effective and cost-saving.⁵ Communicable diseases cost G20 economies \$32 billion every year, in terms of productivity losses among those aged 50-64. This amount is more than the US military budget for 2019.

Increasing preventative health spend by just 0.1 percentage points could unlock an additional 9% of spending every year by people aged 60 and over, and 10 hours of volunteering by each person aged 65 and over.⁶

Yet policy makers have continued to miss the mark. Indeed, on average OECD countries spend less than 3% of their total health budgets on preventative healthcare and less than 10% of their preventative healthcare budgets on immunisation programmes.⁷ Considering that most immunisation programmes are targeted at children, it's not surprising that take up of pneumococcal vaccination is so low among adults from marginalised groups.

Moreover, given our rapidly ageing populations, vaccine-preventable diseases (VPDs) like pneumococcal disease put many older people at greater risk of poor health and even premature mortality.

Pneumococcal disease receives very little policy attention. Deaths from pneumonia among adults aged 70 and over have increased by 60% in the last two decades,⁸ it's imperative that we ensure that everyone eligible for vaccination, including older people, receive it.

The COVID-19 pandemic has harshly demonstrated not only the importance of immunisation in safeguarding adult population health, but that tackling health inequities must be at the heart of public health policy and strategy.

Recently there has been a significant push at the global and regional level to safeguard population health, especially in the aftermath of the pandemic.

WHO is planning to adopt a convention on pandemic preparedness.⁹ The plan is to ensure a multi-sectoral approach to strengthening national, regional and global capacities along with resilience to future pandemics.

Alongside this, the EU's upcoming revised Global Health Strategy aims to strengthen healthcare systems and deliver better healthcare. This year stakeholders have the opportunity to inform the strategy and help set the priorities for EU member states.¹⁰

And WHO's Immunisation Agenda 2030¹¹ includes life course immunisation as one of its strategic priorities, along with equity of vaccination, and includes indicators for success that address under-vaccination.¹²

These policy initiatives are underpinned by the UN's Sustainable Development Goals, which call for universal health coverage and to reduce the burden of communicable diseases by 2030.¹³

Introduction

Pneumococcal disease causes 1.6 million deaths around the world every year, more than seasonal influenza (flu), malaria or HIV/AIDS.¹⁴

It spreads from person to person through coughing, sneezing and close contact.

Because the immune system naturally weakens with age, older people are at increased risk of pneumococcal infections regardless of their health status.¹⁵ Approximately three million cases of community-acquired pneumonia are expected every year across Europe alone.^b Of these cases, a third – or one million people – are hospitalised.

Pneumococcal pneumonia is the most common type of bacterial pneumonia.¹⁶ Patients with this type of pneumonia are three times more likely to die than patients with pneumonia from other causes.¹⁷ It's particularly dangerous for older people. US research suggests that people aged over 65 are over 10 times more likely to be hospitalised with pneumococcal pneumonia than those aged 18-49.¹⁸

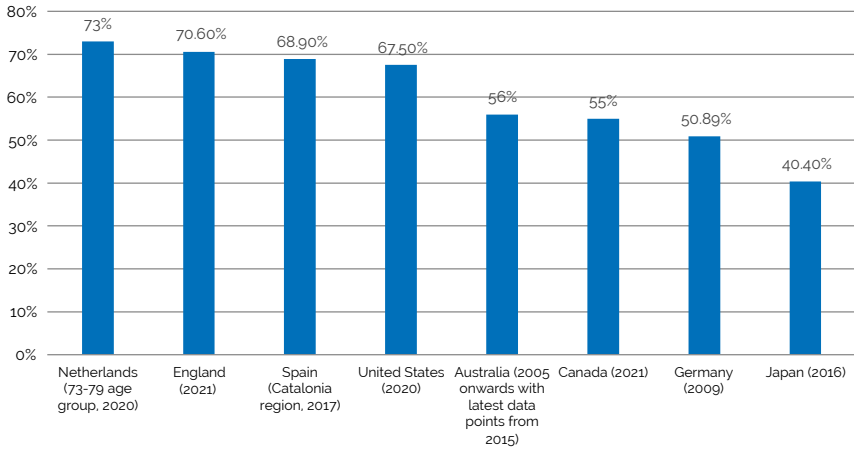
Older people from marginalised and underserved groups have historically been the least likely to be vaccinated against infectious diseases, and the adult pneumococcal vaccine is no exception. Coverage among those at risk due to social vulnerabilities is unacceptably low. In the US, studies indicate that of those aged 65 and over, those who are least likely to be vaccinated are people from ethnic minorities, those living in rural communities, those who are less educated, and those from low-income households. Taking the last group as an example, one study found a 23.5% gap in vaccination rates between the lowest and highest income deciles.¹⁹

The COVID-19 pandemic has acted as a harsh reminder that tackling health inequities must be at the heart of public health policy and strategy. We've seen an unprecedented number of interventions to reach marginalised groups and tackle health inequalities. These include widening access by deploying mobile vaccination units in areas with low uptake and higher infection rates, launching culturally appropriate health message campaigns, and working closely with trusted figures or institutions to combat vaccine hesitancy.

^bCommunity-acquired pneumonia is defined as pneumonia acquired outside a hospital setting. It's a leading cause of morbidity and mortality globally, with children and older people disproportionately affected.

Nevertheless, the possibility remains that when it comes to adult pneumococcal vaccination, we will continue to miss the mark, particularly for those from groups at risk due to social vulnerabilities.

Figure 1: Adult pneumococcal vaccination coverage, by country/region and date²⁰



We've seen a tremendous push to persuade adults to get vaccinated for flu in recent years, but the same can't be said for pneumococcal vaccination. While the WHO's *Immunisation Agenda 2030*²¹ includes life-course immunisation as one of its strategic priorities, along with equity of vaccination, WHO recommends that "measures to sustain high coverage in children should be prioritised over initiating a pneumococcal vaccination programme for older adults."²²

It's no surprise then that very little has been published on the inequalities in adult pneumococcal vaccination uptake, and even less on what's being done to tackle them. This report aims to fill this research gap and understand:

1. The inequalities that exist in adult pneumococcal vaccination uptake
2. The barriers facing marginalised and underserved groups and why they exist
3. The solutions to tackle these barriers and reduce inequalities in adult pneumococcal vaccination uptake

ILC conducted 34 stakeholder interviews with experts from: Australia, Canada, Germany, Japan, the Netherlands, Spain, the UK and the US. The stakeholders we interviewed included healthcare professionals (HCPs), as well as experts in healthcare and public health delivery, adult pneumococcal vaccination, adult immunisation, and health inequalities. We also spoke to representatives from a range of organisations, including some who work directly with marginalised and underserved communities. Throughout this publication, we draw on lessons learned from the COVID-19 pandemic and highlight examples of good practice.

Different countries take different approaches to pneumococcal vaccination

All the countries discussed in this report recommend pneumococcal vaccination for older people. Most countries recommend the vaccination for those aged 65 and over, except Germany and the Netherlands (60 and over) and Australia (70 and over). The countries covered here also offer this vaccination to those deemed to be 'at-risk' clinically, although the definition of this term varies by country.

There are two vaccines that offer adults protection from pneumococcal disease: the pneumococcal polysaccharide vaccine (PPV) and the pneumococcal conjugate vaccine (PCV).

Table 1: Vaccination recommendations for older people, by country²³

Countries	Age	Recommendations	Fee
Australia	70+	<ul style="list-style-type: none"> - PCV13 - PPV23 (individuals who have previously received PPV23 are also recommended one dose of PCV13 at least 12 months afterwards) 	Free
Canada	65+	PPV23	Free
Germany	60+	PPV23	Free
United States	65+	<ul style="list-style-type: none"> - PCV15/PCV20 - PPV23 (only for those who already received PCV15) 	Not free; covered by private insurers
United Kingdom	65+	PPV23	Free
Japan	65+	PPV23	Not free; subsidised by local government
Netherlands	60+ (but those aged 73-79 were prioritised during the pandemic)	<ul style="list-style-type: none"> - PPV23* - PCV15/PCV20 (expected to be registered in the next few years) <p>*revaccination every five years (until the age of 80)</p>	Free
Spain	65+	<ul style="list-style-type: none"> - PPV23 - PCV15/PCV20 (expected to be registered in the next few years) 	Free

Significant uptake inequalities by demographic group exist

Our findings indicate significant inequalities in pneumococcal vaccination uptake. However, our stakeholder interviews as well as academic studies inform us that the lack of standardised and disaggregated data on how likely marginalised groups are to take up vaccination makes comparison and improvement harder. For this reason, stakeholders would often refer to inequalities in flu and COVID-19 vaccination uptake, as it's likely that such inequalities make it more likely that there are also similar inequalities in uptake for pneumococcal vaccination.

That being said, our stakeholders agreed that the inequalities in uptake for pneumococcal vaccination are likely to be even greater than those seen for other routine vaccinations, such as the flu or COVID-19, due to the limited policy attention it has attracted so far. And inequalities intersect, with individuals belonging to more than one group at risk due to social vulnerabilities: for example, there's often a strong link between being in a low income group and being of a minority ethnicity.

People from ethnic minorities

Several expert stakeholders, especially those from English-speaking countries, stated that take up for pneumococcal vaccination is likely to be lower among people from ethnic minorities compared with the rest of the population.

Stakeholders offered the insight that during the COVID-19 pandemic people from these groups were both at greater risk of infection and less likely to be vaccinated against COVID-19.

There's also evidence from recent studies that suggests uptake of both pneumococcal and COVID-19 vaccination is low among these groups:

- 2020 data from the US shows that coverage was significantly lower among Black, Hispanic and Asian communities than White ones: coverage was 72.4% among White adults but 50.8%, 48.1% and 54.9% for Black, Hispanic and Asian adults respectively.²⁴

- In the UK, 2020 data suggests that for all routine adult vaccinations, including the pneumococcal vaccine, take up was lower among Black Caribbean and Black African populations (50%) compared to the White population (70%).²⁵
- In Canada, people who identify as First Nations (81%), Black (82%) or Arab (85%) were less likely to have received at least one dose of the COVID-19 vaccine than the general population (92%) during 2021 and 2022.²⁶

“People of colour experience significant health disparities when it comes to adult vaccination, that have worsened in the last year for flu vaccine, and we’ve seen this especially in the pandemic. Even so, the last time I looked, there were pneumococcal disparities as well, for people of colour.”

Dr Laura-Lee Hall, President, Center for Sustainable Health Care Quality and Equity – National Minority Quality Forum, US

WHO defines health inequities as:

The systematic differences in health status or in the distribution of health resources between different population groups, arising from the social conditions in which people are born, grow, live, work and age. Health inequities have significant social and economic costs both to individuals and societies. They are unfair and could be reduced by the right mix of government policies.²⁷

Health inequalities matter because:

- Social factors account for 30-55% of health outcomes²⁸
- Health inequalities are estimated to cost the EU €980 billion a year (equivalent to 9.4% of EU GDP)²⁹

Reducing inequalities in life expectancy by 50% would generate monetised benefits for EU countries, ranging from 0.3% to 4.3% of GDP.³⁰

Our research also identifies migrant populations as being less likely to be vaccinated against pneumococcal disease. This group is defined as people who were born outside of their country of residence or who have recently moved to their current country of residence. While the two groups aren't mutually exclusive, a key difference between this group and minority ethnic populations is that migrants are less likely

to have fully integrated with their local community. Language and cultural barriers are often the biggest challenges for this group.

Our stakeholders felt that the advent of the COVID-19 pandemic uncovered barriers that migrant populations already faced in getting vaccinated, such as language barriers, or lack of information on how to navigate the healthcare system. Similarly the pandemic helped bring to light the issues likely to be preventing people from accessing routine vaccination, including the adult pneumococcal vaccine.

“Even around the COVID-19 vaccine, we knew from previous flu campaigns that there was low uptake for our [migrant] community. We make assumptions that they come to this country and they understand the NHS, and they understand what is available. If people are used to paying for their healthcare, just because now it’s free doesn’t mean that they know this. It’s a huge psychological shift for someone. To me, it’s an assumption we make, you know, rather than making sure we’re educating people.”

Charles Kwaku-Odoi, Chief Officer, Caribbean and African Health Network, UK

One German respondent mentioned that during the COVID-19 pandemic, first-generation Turkish women who immigrated to Germany in the 1960s were more likely to live alone and not speak German, and were more likely to be unvaccinated. Indeed, evidence suggests that COVID-19 vaccination rates in Germany are 8% lower among migrant communities compared to the native-born population.³¹

Indigenous populations

Indigenous populations are distinct social and cultural groups that share collective ancestral ties to the lands and natural resources where they live, occupy, or from which they have been displaced.³² These groups are generally known to have unacceptably poor health outcomes. Our stakeholders from Australia and Canada pointed out that they’re also less likely to be vaccinated than the general population. A study of north-western Ontario, Canada, which has a high proportion of indigenous people, found they were almost 50% more likely than the general population to contract invasive pneumococcal disease.³³

Australia is the only country in our research to have a specific recommendation for groups at risk due to social vulnerability under their National Immunisation Programme.³⁴ People from the Aboriginal and Torres Strait Islander populations are eligible for pneumococcal vaccination at age 50 and over, compared to 70 and over for the rest of the population. They are also recommended additional protection: a single dose of PCV13 followed by two doses of PPV23, one a year later, then another at least five years later.

This is because, while Australia's indigenous population accounts for only 3% of the total population, 11% of all instances of invasive pneumococcal disease reported in 2018 were from this group.³⁵

Despite this addition, pneumococcal vaccination coverage has remained very low; in fact, figures for people from indigenous populations aged 50-64 declined between 2004-05 and 2012-13, from 30% to 23%. This included regional differences, with the majority of the decline in vaccination rates being seen among those from remote regions.³⁶

Our stakeholders from both countries made it clear that many barriers contribute to poor health outcomes, including low vaccination uptake.

“Aboriginal people are really overrepresented in every poor health statistic and economic statistic. Just having clinics nearby with Aboriginal staff and good doctors and nurses and just having the vaccine in the fridge in the clinics is insufficient.”

Patrick Cashman, Immunisation Coordinator, Hunter New England Health, Australia

People from low-income groups

Our stakeholders from the US and Japan highlighted income inequality as a significant driver of unequal uptake, with those from low-income groups showing lower take up rates than those from high-income groups. In addition, a US study in 2017 found a 23.5% gap in vaccination rates between the lowest and highest income deciles.³⁷

However, vaccination isn't free for all adults in either the US or Japan, which explains these findings.

“Some municipalities provide it for free (100% publicly funded) and others usually charge... which results in inequalities.”

Dr Satoshi Ohno, Professor, Clinical Research Centre, Shimane University Hospital, Japan

In Japan, implementation of the pneumococcal immunisation programme is under municipal control, rather than under the jurisdiction of the national government. Some municipalities are eligible for a national subsidy; they may also elect to further subsidise the cost of vaccination, while ineligible municipalities may only subsidise a portion of the costs for patients.³⁸ This means that some municipalities provide vaccination to patients free of charge, while others charge, with the cost usually being around ¥4,000-5,000 (approximately \$29 – \$36).

In municipalities where vaccination is free to patients, uptake rates are almost double that of the national average.³⁹ Other research has found that vaccination rate decreases by 3.02% for every ¥1000 increase in vaccination cost; and by 1.91% for every 1% increase in unemployment rate.⁴⁰

Undocumented and homeless people

Both the US and Japan offer affordable healthcare programmes for low-income groups, allowing people with low incomes to receive pneumococcal vaccination free of charge. But undocumented and homeless people may not be eligible for these programmes.

“Homeless people or people who do not have the resident registration (Japanese and foreign origins) have low vaccination rates because the vaccination coupon they need to receive the vaccine are sent based on the resident registration.”

Dr Shota Hamada, Executive Chief Researcher, Institute for Health Economics and Policy, Japan

“We have a high proportion of people who are undocumented from Central America and South America, so if you’re undocumented, you’re not Medicare eligible.”

Dr Jewel Mullen, Associate Dean for Health Equity, Office of Health Equity, and Associate Professor, Department of Population Health, and Courtesy Associate Professor, Department of Internal Medicine, at Dell Medical School, University of Texas at Austin, US

During the COVID-19 pandemic, local governments in Japan specifically targeted vaccination for homeless people who hadn't received a vaccination invitation due to lack of a permanent address.⁴¹

Those with conservative political attitudes

People who hold conservative political attitudes tend to have higher rates of vaccine hesitancy. Our stakeholders from the US and Germany commented that political attitudes are likely to contribute to low uptake rates. Political attitudes can be traced along geographical lines in both these countries.⁴² For instance, East Germany tends to have a higher proportion of people with conservative political attitudes, which were linked to greater vaccine hesitancy during the COVID-19 pandemic. And in the US, all 16 states that met President Biden's goal of having at least 70% of their adult population vaccinated for COVID-19 voted Democrat.⁴³

It's worth noting that there are likely to be other underlying factors that contribute to these geographical differences. Nevertheless, research suggests political attitudes appear to be linked to uptake.

“In the US, and particularly post COVID-19 vaccine, we are seeing increasing political divide, that who you vote for can also determine your proclivity to get vaccinated.”

Stephanie Perniciaro, Associate Research Scientist in Epidemiology (Microbial Diseases), Yale School of Public Health, US

Those living in areas with poor healthcare infrastructure

People living in places where it's difficult to access healthcare services physically are at greater risk of being locked out of the healthcare system. Some of our expert stakeholders commented on rural and urban inequalities in vaccination uptake. In places like Australia, Canada, and the US, our stakeholders generally viewed rural communities as being at greater risk of low uptake than their urban counterparts, with poor health infrastructure (and as a consequence poor access) being the main cause.

“There's also an urban/rural divide. So particularly if you're living further from care... There's often fewer places to get a vaccine if you live in an a rural environment.”

Lois Privor-Dumm, Director, Policy, Advocacy and Communications, International Vaccine Access Centre, John Hopkins University, US

But this sentiment wasn't shared by all. Our stakeholders pointed out that in Europe, rural areas may have better uptake rates, because small discrete communities have all their essential services in one place rather than dispersed across large urban areas.

“Sometimes rural areas are better placed to vaccinate than the urban ones because everything is so close together and because it’s a community type of environment as well.”

Sibilia Quilici, Executive Director, Vaccines Europe, EU

It’s worth mentioning that certain geographical locations have lower uptake due to their demographic make-up. For instance, having a higher proportion of low-income migrant populations in one area can contribute to geographical differences in coverage rates.

“We know that in certain areas in Rotterdam, for instance, have many people from migrant backgrounds. The vaccination rates [in these areas] are half of that of the people of the better income areas.”

Dr Ted van Essen, General Practitioner and Chair, Dutch Influenza Foundation, Netherlands

By mid 2021, between 40% and 59% of people living in Rotterdam had had two COVID-19 jabs: much lower than the national average of 77% at that time.⁴⁴ This reflects data that suggests migrant populations in the Netherlands are more likely to be vaccine hesitant than other groups. Earlier that year a study found that while 80% of the native Dutch population said they would get vaccinated, only 43% of migrant groups shared this view.⁴⁵

There are several barriers contributing to inequity in adult pneumococcal vaccination uptake

Lack of data

On the whole, our expert stakeholders argued that we need better data to fully understand how to improve adult pneumococcal vaccine uptake. This includes timely data on uptake rates alongside rates of infection.

“We need timely monitoring of vaccination uptake. Only once you have the data you can act. If you don’t have the data, you just don’t know and it’s easy to do nothing... Each month each vaccination should be linked to a dedicated uptake, depending on the population. And if it is not reached, when it needs to be reached before the winter, for example, then you can run a communications campaign to say, ‘Hey, hello, everyone, you need to protect the population, do it now.’”

Sibilia Quilici, Executive Director, Vaccines Europe, EU

Alongside this, we need better data on marginalised and underserved populations. Many commented that data on inequalities was non-existent.

“With pneumococcal, we don’t have standard collection of data by race, ethnicity and language in this country to even know whether or not the disparities are as good or worse, or as bad or worse, as we think they are.”

Dr Jewel Mullen, Associate Dean for Health Equity, Office of Health Equity, and Associate Professor, Department of Population Health, and Courtesy Associate Professor, Department of Internal Medicine, at Dell Medical School, University of Texas at Austin, US

The message from stakeholders was clear: that it’s unlikely that governments will prioritise vaccination without good data to prove why it’s worthwhile. Lack of data also prevents targeted approaches to population health management.

One example of data being used to tackle inequalities comes from Toronto, Canada.

“Toronto is a huge city. And so, during the COVID-19 vaccine rollout, certain postal codes that were deemed high risk (based on a number of demographic factors), were eligible for vaccination earlier than other groups.”

Katrina Bouzanis, Programme Manager, International Federation on Ageing, Canada

The COVID-19 pandemic had been a catalyst to collect better data on marginalised groups. It was suggested that these efforts should continue post-pandemic to improve routine vaccination among these groups.

“During the COVID-19 pandemic, we started to collect data to be able to understand how effective some of the mitigation strategies that we put in place to help people were... But we didn’t do this initially, we weren’t pulling that data and we weren’t looking at it regularly. Eventually, we realised that we needed it. Now we know how important that data is. Hopefully, we will continue to do that for routine vaccination.”

Zahir Hirji, President, Infection Prevention and Control Canada, Canada

Our stakeholders from Canada and the US commented that their countries don't use Electronic Health Records (EHRs), which puts the onus on individuals to remember if they've been vaccinated. For those who live in precarious situations, such as migrant workers or homeless people, this can be a significant barrier to vaccination.

“In Ontario, we still have a yellow paper card that manages vaccination. So, if you lose that card, you basically have no record of what you’ve received and what you have. And the doctor won’t know and if you change doctors or anything like that, you basically have no record. So, the patient records are really just sort of non-existent in that sense.”

Katrina Bouzanis, Programme Manager, International Federation on Ageing, Canada

Healthy People 2030 initiative (US)

The US Department of Health and Human Services has created the *Healthy People 2030* initiative (the fifth iteration of this initiative), which sets out data-based national goals and objectives for health promotion and disease prevention, with ten-year timescales. It calls for health equity, eliminating health disparities, and attaining health literacy, while addressing the social determinants of health.⁴⁶

The initiative includes targets to reduce hospital admissions for pneumonia among older people, increase the proportion of adults recommended for evidence-based preventative healthcare, and reduce access barriers.

But for many of these targets there's only baseline data available. For instance, based on 2016 data, the number of hospital admissions for pneumonia was 713.9/100,000 adults. The target is to reduce this to 642.5/100,000. With no further data available since 2016, it's difficult to measure progress at this time.

Having a national strategy with clear targets on reducing the pneumococcal disease burden and tackling inequalities in access is a step in the right direction. But this is also a prime example of how suboptimal data collection can hinder progress.

Lack of targeted messaging

Our stakeholders felt that targeting appropriate health information specifically for marginalised groups is particularly important. They felt that some groups, particularly those from ethnic minorities and/or migrant populations, were likely to be more influenced by misinformation and to become vaccine hesitant.

“We have seen during the pandemic... that certain immigrant groups, who have lived in Germany for decades, are not reached, as they only inform themselves with media from the homeland, and as such put themselves outside of society. Also, these groups are very susceptible to fake information in social media.”

German National Reference Centre for Streptococci, Germany

Our stakeholders identified targeted messaging, co-designed with the target groups, as the best messaging approach. In addition to using the native languages of target groups, the tone must also be considered to ensure it's culturally appropriate.

“The Government had a public campaign, really trying to target migrant communities in different languages, Turkish, Russian. But the way of the communication might actually have not really succeeded in reaching them. Because there is a sort of cultural difference, at least for some migrant communities, they struggled with the German way of being direct.”

Anna Brückner, Health and long-term care policy advisor, German National Association of Senior Citizens’ Organisations, Germany

While not a commonly expressed view, there was concern that messaging wasn’t reaching those considered the “oldest old”. For instance, a stakeholder from Spain commented that most of their country’s promotional campaigns around immunisation were digital, specifically social, rather than sent by post. Post is often this group’s preferred method of communication, as many don’t use the internet.

“There is no media information that reaches the “oldest old” adults, because they are not on social media. So maybe we have to reach the adults through other channels, they love papers, but we are not printing anymore. I’m very concerned about the rural areas. Spain is still a very rural country. More than 40% of older adults live in villages with very poor Wi Fi connection.”

Elena Moya, Vice-President, Spanish Association Against Meningitis, Spain

This year, the Spanish Association Against Meningitis aims to reach the “oldest old”, as described by our stakeholder, by printing flyers with simple infographics for primary care facilities to display. They also hope that family members will see these and communicate the importance of the pneumococcal vaccination to them.

Protect your mob (Australia)

In 2022, Lung Foundation Australia co-designed a digital marketing campaign with a communications agency owned by indigenous people, encouraging people from Aboriginal and Torres Strait Islander populations to protect themselves from flu and pneumonia in the lead up to winter. The campaign promoted the “Protect your mob” website,⁴⁷ which offered culturally appropriate information about the importance of vaccination as well as information on eligibility.

Lung Foundation Australia supplemented the digital campaign by building relationships with Aboriginal Medical Services and other community organisations to create trust with the target population. Aboriginal and Torres Strait Islander health services and organisations shared the Lung Foundation’s social media tiles and messaging to their audiences as well.

Their most successful social media ad included imagery featuring people aged over 65, with a secondary message on the pneumococcal vaccine. There was a 489.4% increase in unique website page views compared to the previous year’s campaign. Average time spent on the website was 5.38 minutes, suggesting that users were engaged with the content.

Access barriers

Our stakeholders also argued that poor access prevents marginalised and underserved groups from receiving pneumococcal vaccination. They described poor access as a barrier predominantly for those in resource-poor settings (these need not necessarily be rural areas, although this is most often the case) and those on low incomes.

“If you have to travel an hour away to the nearest clinic and pay \$90 to get a vaccine, you’re probably not going to do it. Whereas if it’s free and your doctor offers it to you, it’s much easier.”

Stephanie Perniciaro, Associate Research Scientist in Epidemiology (Microbial Diseases), Yale School of Public Health, US

A few stakeholders also pointed to groups who receive care, or live with a disability, may also find access to be a barrier. For instance, a German stakeholder suggested that individuals receiving care are often dependent on their caregivers to take them to their primary care physician.

Vaccination centres (Netherlands)

During the COVID-19 pandemic the Netherlands instituted vaccination centres to help with the vaccine rollout. In 2023 they plan to roll out dedicated vaccination centres across the country to provide COVID-19 and other routine vaccinations. This programme will help reduce the footfall in primary care facilities, cut costs, and offer a place where people can easily access vaccination, as these sites will be equipped to hold a large number of vaccines.

“So, we had to start vaccination centres all over the country, and they’re still in place there. And it was decided that this is also a very good way to do all the other vaccinations.”

Dr Ted van Essen, General Practitioner and Chair, Dutch Influenza Foundation, Netherlands

As we’ve already seen, our stakeholders from the US and Japan were most likely to emphasise cost as the single most important driver of inequalities in uptake for their countries. High costs disproportionately affect people from ethnic minorities, and migrants - especially those who are undocumented as they’re less likely to have health insurance.

Yet cost can still be a barrier in the US for those who have health insurance. It’s often unclear whether a particular insurance scheme will cover the vaccine; patients often have to pay upfront before claiming the cost back, which can be a barrier for those who can’t afford to do this.

“Unfortunately, the way that our health insurance system works, [the pneumococcal vaccine] is maybe covered by your providers. So, you pay, and they might reimburse you... If someone has to decide between buying groceries or buying a vaccine even with reimbursement, groceries are going to win every time. And that’s normal. That’s not, unexpected. I feel like cost is the most important barrier.”

Stephanie Perniciaro, Associate Research Scientist in Epidemiology (Microbial Diseases), Yale School of Public Health, US

For stakeholders from countries where vaccination is free of charge, indirect costs, such as travel costs required while visiting a healthcare provider, or the reluctance or inability to take time off to access healthcare services, weren’t commonly cited as a barrier. This may reflect the fact that there’s so little investment in improving adult

pneumococcal vaccination coverage generally that these inequalities aren't as pronounced.

Lack of trust in governments and health systems

For people from ethnic minorities, including indigenous populations, mistrust can be a significant barrier to vaccination uptake.

“Here in Baltimore City, there is a 20-point disparity between Black residents and White residents. Now those disparities have been shrunk. But it’s only due to a very concerted effort to reach out to people where they are... Our takeaway here is the importance of community-focused communication and engagement. Because they engage the community, not the health system. So it’s a partnership, rather than saying it’s the health system that owns all of this, really getting more of the understanding that the health system has to work alongside community organisations and your different people within the community to really help build trust.”

**Lois Privor-Dumm, Director, Policy, Advocacy and Communications,
International Vaccine Access Centre, John Hopkins University, US**

In Canada, the government identified people from indigenous populations as being at risk and put them among the first to receive COVID-19 vaccination. However, many people from indigenous populations were hesitant, as they worried why they were going first. In the past, indigenous populations had been subject to medical experimentation at the hands of the Canadian government.

“When we saw the prioritisation of indigenous seniors, finally, in COVID-19, a lot of the times we were hearing that they still didn’t trust it, because it was this continuum of, ‘Why are we being put first again? because previously, when we were put first we were being used as guinea pigs, being tested on and all of these things.’ So it was this double edged sword of being like, ‘Awesome. We’re prioritising vaccines.’ But on the flip side of it, you know, solid questions.”

**Laura Jamieson, Field Support, and Frankie Antone, Health Policy Analyst, from
Ontario Federation of Indigenous Friendship Centres, Canada**

Population health management approaches targeting these groups may therefore have the opposite affect than intended. Community-based approaches may be better placed to address the needs of such marginalised groups.

Population health management, which uses data to better understand emerging health needs, is clearly important. But it's equally important that public health bodies invest in the tools needed to identify and understand issues around culture and health to tackle mistrust. Experts in the needs of marginalised groups consider local community strategies to be the best way to tackle this barrier.

The pandemic has offered successful examples of allocating resources to overcome the many barriers to vaccination, including mistrust in the system and HCPs, and of the information distributed by governments and healthcare providers.

“The COVID-19 vaccination programme spent more effort, time, money, all of those things in reaching vaccine-hesitant groups. We saw how having those real local range of venue locations, and all of that really had an impact on uptake. And that’s the key difference in the success of the COVID-19 vaccination programme [compared with other vaccination programmes], in terms of addressing those inequalities.”

Jenny Lippiatt, Professionals and Practice Programme Manager, Age UK, UK

Training ambassadors (US)

A number of different types of US stakeholders, including universities, public health bodies, small businesses, and third-sector organisations, have partnered with local community organisations to tackle vaccine hesitance.

In 2021, the National Minority Quality Forum’s Centre for Sustainable Health Care and Equity partnered with a network of pastors to launch the Faith Health Alliance. Their aim was to increase awareness of the benefits of COVID-19 and flu vaccination within African American communities across the US. The Alliance offers virtual and in-person events, focus groups with pastors, and dissemination of materials on flu vaccination to parishioners and vaccination clinics. It also offers communications support for faith leaders in their communities.⁴⁸ The intention is to expand this programme across the country and to offer further education on shingles and pneumococcal vaccination.

The University of Maryland has partnered with a number of stakeholders to initiate a programme called Shots at the Shop. It aims to engage 1,000 black-owned barbershops and hair salons nationwide to act as certified health advocates. These advocates

help their clients make informed COVID-related decisions and dispel misinformation. Barbers and stylists from across the US are invited to apply for a \$1,000 grant to participate. The programme enables advocates to conduct fact-based conversations with clients, provide vaccination information materials and information on where to get vaccinated, and hold on-site vaccination clinics.⁴⁹

Covid Chats (UK)

The COVID Health Equity Manchester group created the Covid Chats programme to help minority ethnic communities, people with disabilities, and other marginalised groups overcome vaccine hesitancy. The programme recruits and trains volunteers from a diverse range of backgrounds and ages as digital assistants, who provide information on the COVID-19 virus and vaccine, and offer their time to answer questions about the subject.

Covid Chats can be one-to-one or small group conversations, and can be over the phone, by video, or face-to-face. The volunteers have the cultural knowledge to better understand and address the specific concerns of different groups and may conduct chats in a variety of languages. They're trained by the Manchester Adult Education Service, public health professionals, and other NHS teams.⁵⁰

Although not commonly cited, the LGBT+ community have also had negative experiences with medical professionals, which contributes to mistrust among this group. In the 1960s and 1970s behavioural aversion therapy was common. Many individuals now in their 50s and 60s still have mistrust towards the healthcare sector and this can be a significant barrier to accessing vital preventative medicine.⁵¹

“For our communities, there is historic distrust of any medical provisions or services. Older LGBTQ+ people, who are in their mid or late life now may have received psychological treatment or things like aversion therapy, by medical services, trying to effectively cure them from being gay or transgender. And so for that reason, a lot of these communities are disengaged from health services and are very suspicious of anything that they receive from health services.”

Lawrie Roberts, Pride in Ageing Manager, LGBT Foundation, UK

Our stakeholder also alluded to how more recent experiences of being misgendered by a HCP can contribute to feelings of mistrust.

It's likely that there are more groups that experience mistrust. But public health policy makers are unlikely to uncover the barriers they face unless they speak to organisations that work directly with these groups. Context will differ by country, and even by region, so it's important to use evidence from the geographical areas where interventions are planned when creating strategies to tackle mistrust.

Pride in Practice (UK)

The LGBT Foundation's Pride in Practice initiative engages with primary care practices on LGBT+ issues, to minimise discrimination and hostility. The initiative addresses sexual orientation, gender identity and trans status. It works with GP practices, dental surgeries, pharmacies and optometrists to ensure LGBT+ people have access to inclusive healthcare that understands and meets the needs of local communities. The initiative awards primary care practices bronze, silver or gold status upon completion of a training and assessment process.

The initiative has seen an 11% increase in LGBT+ people accessing primary care services in Greater Manchester, including a 35% increase in access to community pharmacies.⁵²

The initiative's benchmarking and award process is now part of Stonewall's NHS Rainbow Badges scheme.⁵³ HCPs wear a physical badge as a way of demonstrating to patients that they offer fair and equitable healthcare.

Structural barriers contribute to suboptimal uptake

Lack of effort to educate the public and improve uptake

“I think we need to clarify what [the vaccine is] all about, what it’s helpful for, what it’s going to protect you from.”

Zahir Hirji, President, Infection Prevention and Control Canada, Canada

Our stakeholders generally argued that policy makers have failed to make a concerted effort to educate the public on pneumococcal disease and vaccination. There are very few public health campaigns or “call and recall” approaches (e.g., text messages or letters) to let people know they should receive the pneumococcal vaccination.

“So for the flu vaccination and the COVID-19 vaccination, there is an active call and recall. GP practices are expected to contact [their patients] again and again, whereas that’s not the case for the pneumococcal vaccine... So we offer them the pneumococcal vaccine, but the practices are not actively chasing [the public] to have the vaccine and [the public] are not receiving any information about it.”

Dr Ivan Aloysius, Principal GP and Joint clinical Director, The Health Triangle Primary Care Network, UK

Many are left unaware of the risks of being unvaccinated, or even that they’re eligible for vaccination. According to a 2016 pan-European study, only 29% of adults are even aware that it’s possible to be vaccinated against pneumonia.⁵⁴

“I do think frequency of the message is important. Making the message part of the seasonal flu messages could be one way of doing it. So anyone who’s 70, add it to the back of the flu message.”

Bruce Langoulant AM, Chair, Meningitis Centre Australia, Australia

“Every six months or every year or every three years, adults should be asked to go to the doctor or to discuss with their pharmacist or whoever. We should have this check up happening automatically. No reason why the kids have access to that and not the adults.”

Sibilia Quilici, Executive Director, Vaccines Europe, EU

While the Netherlands and Japan both have reminders for people to get their pneumococcal vaccination once they're eligible, our stakeholders felt that their public health bodies aren't doing enough to educate the public on pneumococcal disease and the benefits of vaccination.

“Even in cases where our regional governments have reduced the co-payment to improve uptake, very few older adults know that they are eligible, we generally need to advertise this better. And where there has been some advertisement at the regional level, it needs to be more targeted to subgroups with low uptake.”

Dr Igarashi Ataru, Associate Professor, Unit of Public Health and Preventative Medicine, Yokohama City University School of Medicine, Japan

“There should be more government campaigns to the general public, because nowadays a letter is sent to eligible people, but if they only see this information once, maybe it's not enough. They need more repetition and general awareness.”

Jeltje Luinenburg, Pharmacists and Policy Officer, Royal Dutch Pharmacists Association, Netherlands

National pneumococcal vaccination programmes (Netherlands and Japan)

In 2020, the Netherlands initiated a pneumococcal vaccination programme for people aged 60-80,⁵⁵ with the aim that everyone aged 60, 65, 70 and 75 would be invited over a five-year period. Older people are given the PPV23 vaccine, which requires a dose every five years to maintain effectiveness. Revaccination with PPV23 is offered for those up to the age of 80. The programme currently prioritises those aged 70-79, as they're at higher risk of severe COVID-19 and pneumococcal infections.⁵⁶ Results of the 2020 campaign, which invited those aged 73-79 to be vaccinated, found that 73% of the population received the vaccine. Unfortunately, lack of data monitoring means we can't compare these with previous vaccination uptake figures to see how effective the programme has been.

Japan created a five-year national routine vaccination programme in 2014, offering the PPV23 vaccine to everyone aged 65 and over. Individuals were also invited at five-year age intervals (65, 70, 75 and 80).⁵⁷

There are some shortcomings to this approach: the five-year strategy means that those who miss getting vaccinated at 65 don't get another opportunity until they reach 70. These programmes also omit those who are clinically at risk.

The Japanese programme invites patients using one notification letter only, with no follow-up, so many miss their chance. While the country has seen a significant improvement in uptake: from 20.9% to 40.4% (after only two years), lack of communication may be preventing further gains.⁵⁸

Electronic vaccination records and reminders (France)

Mesvaccines.net is a personalised electronic vaccination record that generates a personalised vaccination recommendation list upon filling out a questionnaire. The questionnaire covers age, health status and occupation. Depending on eligibility, participants receive regular email reminders when they're due to get vaccinated.

“Do people even know that the pneumococcal vaccine exists? Do they even know that depending on their age, health status, they're actually eligible for this vaccination today? Not sure. What I liked about this intervention, you as an individual remain in ownership of your data. It's a tool that empowers you as an individual to take the decision to be vaccinated based on reliable information you receive from the system. And this is I think, what people need today, and it's not available in other countries.”

Sibilia Quilici, Executive Director, Vaccines Europe, EU

Lack of awareness among HCPs

Lack of awareness among HCPs is a key issue. Our stakeholders felt that primary care physicians were in a pivotal position to advise on and motivate vaccination. Failing to ensure that this happens is a missed opportunity to improve uptake rates.

“The most important campaigner is your doctor, but the doctor is not suggesting this. I think this is very, very important.”

Esther Martinez Almazan, Geriatrician, Spanish Geriatrics Society, Spain

Lack of awareness among HCPs affects all adults eligible for the vaccine, including those clinically at risk, who may also come from a marginalised or underserved background.

“From the perspective of lung disease and through the programme that I run and all the patients I speak to, particularly if you're diagnosed and at a younger age, when they go back to their GPs after we've educated them and say, 'Go back and ask your doctor to check if your pneumonia vaccination is up to date', they will go back and the doctor will say, 'Oh, no, you don't get your first dose until you're 70, you're too young.' So again, it's that the gap is around upskilling and education of the healthcare providers [because] a patient will walk out of the doctor's room and not question it.”

Amanda Curran, Respiratory Care Nurse, Lung Foundation Australia

Some stakeholders felt that HCPs should lead by example; they felt that individuals would be much more likely to get vaccinated if they knew that their primary care physician had done so already.

“The strongest promotion of the vaccine is when the GP says, or the nurse says, to the patient, ‘Look, you really need this vaccine.’ And if you’re 65 and over or in the groups at risk as a GP, if you say, ‘I have mine you know’, for example, flu vaccine. It sends a strong message.”

George Kassianos CBE, Immunisation Lead, Royal College of General Practitioners, UK

The apparent root cause is that the education curricula currently being run for HCPs don't offer appropriate information on the subject.

“The problem is doctors do not know anything about vaccination because the medical education on facts on vaccines hardly exists in the Dutch curriculum.”

**Dr Ted van Essen, General Practitioner and Chair,
Dutch Influenza Foundation, Netherlands**

Much more can be done at the primary care level to encourage people to get the pneumococcal vaccination. For example, in the UK, every GP surgery has an immunisation lead who ensures that all their patients are reminded when they're eligible for routine vaccination. However, that member of staff may not be an expert in immunisation and vaccination. As they may not have the requisite knowledge, they might not be able to readily communicate about pneumococcal disease with patients, as well as the importance of vaccination.

Unclear and changing recommendations

Stakeholders from the US and Australia both mentioned that recent changes in adult pneumococcal recommendations, along with ambiguity in recommendation guidelines, could well be a barrier to uptake. Taking the US as an example, the Center for Disease Control and Prevention (CDC) recommends two options for older people: the PCV20, or the PCV15 plus the PPV23. However, the CDC doesn't provide any further information, such as the benefits and drawbacks of each. While this is to ensure that guidelines don't favour one manufacturer over another, it means that individuals may feel it is their responsibility to identify which vaccine is best for them. However, this gives adults an illusion of choice, as they will receive whichever vaccine their providers have available. These issues make vaccination less convenient and can contribute to vaccine hesitancy.

“Anytime there’s a recommendation for an either/or, it confuses people. It’s pushing a lot of responsibility onto individual consumers who might be ill-prepared to make that kind of decision, especially when there’s not a lot of easily accessible information... they’re just like, ‘Well, I have all these great options, but I don’t know what to pick, so I won’t.’ So then you’ll have to access your provider, but then you’re stuck with yet another hurdle, ‘Do I trust my provider if they tell me to get A versus B?’ Frustratingly, it’s essentially going to boil down to what providers will have in stock.”

Stephanie Perniciaro, Associate Research Scientist in Epidemiology (Microbial Diseases), Yale School of Public Health, US

In the UK, the Joint Committee on Vaccination and Immunisation (JCVI) stopped offering pneumococcal vaccination for a brief period in 2013.⁵⁹ This may have contributed to low uptake rates, by causing HCPs to lack confidence in the vaccine, and meaning that they don’t recommend it as much as they do other routine vaccinations.

“The pneumococcal vaccine was recommended for those 65+ and groups at risk. But at one point, the JCVI said, ‘This vaccine doesn’t really do much for prevention,’ - so we scrapped it. But then suddenly, the JCVI says, ‘It’s a wonderful vaccine’... But hold on a second, you were just telling us that it was not worth it, and now suddenly, you say it is such a great vaccine? Once you lose the confidence of the GP in the vaccine, it takes a long time to gain it back.”

George Kassianos, CBE, Immunisation Lead, Royal College of General Practitioners, UK

In Australia, policy makers raised the eligibility age from 65 to 70, and replaced the recommended single dose of PPV23 with a single dose of PCV13.⁶⁰ While these changes took effect in 2020, the COVID-19 pandemic disrupted routine immunisation: as a result, not all HCPs are aware of these updates, leaving people to fall through the cracks.

“So we changed the age that the adult pneumococcal vaccine is funded. So we still get a lot of calls to the public health unit from the GP saying, ‘Oh, you know, this person here is 65, do I have to give them anything now?’ It’s still ingrained into them that those 65 plus are eligible... So these changes came in not long before the pandemic, so I think a lot of people just aren’t up to date with it.”

Patrick Cashman, Immunisation Coordinator, Hunter New England Health, AU

The system isn't set up to improve uptake in adults

There's very little infrastructure to ensure that adults receive pneumococcal vaccination. Our stakeholders noted that the membership of National Immunisation Technical Advisory Groups (NITAGs) isn't always diverse. For instance, Canada's National Advisory Committee on Immunisation (NASCI) doesn't include any representatives of older people or marginalised groups, or anyone with expertise in adult immunisation.

In addition, not enough HCPs (which includes specialists like diabetologists) are authorised to administer vaccinations. Any HCP who works with clinical at-risk groups should be able to advise their patients on this vaccination; ideally they should also be able to administer it. Previous ILC-UK research finds that those clinically at risk are often left behind, making this even more important: in the UK between 2018 and 2020, of the 597,000 people in clinical risk groups who were eligible for the pneumococcal vaccination, only 17% were vaccinated.⁶¹

Community pharmacists aren't permitted to administer vaccinations in many countries, although they're particularly well placed to widen access by making it more convenient. Offering vaccination at pharmacies is a key strategy to reduce health inequalities.

Similarly, nurses are another group of professionals who would widen access.

“Nurses are rarely, or in most cases, not even involved in the spectrum of infection prevention activities. They are excluded from education and professional competence building or waved away... Despite all this the fact that it's within the scope of practice and the core competencies of the nursing profession, during COVID-19, too much was done in 'domain protection'.”

European Specialist Nurses Organisation (ESNO), Microbial Focus Group, EU

The ESNO calls for a *“health professional domain climate change”* with regard to tackling infections, including future pandemics, can only take place with a motivated, sustainable and competent workforce of nurses.

Some stakeholders also pointed out that because older people tend to visit their primary care provider for a host of health problems, and only have a short amount of time with the primary care physician, vaccination isn't a top priority for either of them.

“Many surgeries have a system where people go to the surgery, and if they’re of a certain age it pops up on their screen and the doctor or nurse says, ‘Oh, you need to have the pneumococcal vaccine’, and they give it. But the challenge with that is very often [older people] are coming for something else... The problem with these popups is that sometimes you’ll have a whole list at the side of the screen, telling you they need a medication review, they need a blood pressure check, they need all sorts of things. So, does the clinician have this time to remind them? They may just not have the time to act on the reminders.”

**Helen Donovan, Professional Lead for Public Health Nursing,
Nursing Department, Royal College of Nursing, UK**

Recommendations

WHO should:

- **Call on all developed EU member states to implement a coverage target of 75% for adult pneumococcal vaccination, similar to the existing target for flu.**

Ensure the upcoming convention on pandemic preparedness covers rigorous and comprehensive monitoring and surveillance of pneumococcal disease, along with a vaccination coverage target of 75%.

National governments should:

- **Implement a national 10-year strategy to reduce health inequities, with clear targets and close monitoring.**

This should be in line with WHO's 2030 immunisation agenda, with targets to improve inequalities in immunisation throughout people's lives.

- **Ensure mandatory reporting of adult pneumococcal vaccination in their national immunisation register.**

This will help to achieve national immunisation targets.

- **Make it standard practice for health systems to collect routine vaccination uptake data for patients from different demographics.**

The UK and US currently capture data about uptake inequalities for flu vaccination across different demographics: this should be scaled up so that it can be used for targeted health management approaches.

- **Implement a "call and recall" system for adult pneumococcal vaccination.**

Each vaccination invitation should be accompanied by educational information on pneumococcal disease, on the benefits of vaccination, and on the risks of not being vaccinated.

- **Ensure that those who may be at greatest risk of low uptake don't bear the cost of paying for vaccination. Offer incentives, such as vouchers, to marginalised and underserved groups.**

- **Invest in an EHR system for vaccination.**

Give individuals access to their own data to allow them to take control of their health. EHRs should be supported by additional health information on routine adult immunisation tailored to different demographic groups (e.g., made culturally appropriate).

Public health bodies, in partnership with third sector/community organisations that represent marginalised populations, should:

- **Consider a system of accreditation for healthcare providers to indicate those with inclusive and diverse spaces. This may help marginalised groups, feel safe accessing health services.**

Countries should consider adopting the Pride in Practice and NHS Rainbow Badge programme currently used in the UK.

- **Invest in targeted public awareness campaigns. They should also fund programmes that specifically tackle vaccine hesitancy.**

Campaigns should be targeted to different groups by highlighting the key concerns for each one. Consider including information on pneumococcal vaccination alongside other vaccine-preventable diseases, like the flu. Campaigns should be run regularly to ensure the message reaches these groups.

Healthcare systems should:

- **Implement the role of "immunisation lead" in each primary care practice.**

This should be a nurse or doctor with the requisite knowledge and expertise on immunisation who is responsible for ensuring targets are met and that patients eligible for vaccinations are invited, and that the practice's HCPs understand the importance of immunisation.

- **Ensure NITAGs prioritise adult vaccination by involving stakeholders who are experts on adult immunisation or the needs of older people, HCPs who work directly with patients, and community stakeholders who understand the barriers to uptake.**

- **Involve HCPs who aren't doctors or nurses in the administration of vaccinations.**

This will help increase uptake and spread responsibility for vaccination across more HCPs to alleviate staff pressure and an overwhelmed workforce. Any HCP that works with people from clinical at-risk groups should be able to educate patients on the importance of pneumococcal vaccination and administer it. To widen access and reduce inequalities in uptake, community pharmacists should also be allowed to administer vaccinations.

- **Allow individuals to receive multiple vaccinations during one clinic visit.**

For instance, offer patients pneumococcal vaccination at the same time as flu vaccination, to reduce the number of primary healthcare appointments required.

Conclusion

We know that populations around the world are ageing rapidly. But they're also become more demographically diverse, in ways that can widen health inequalities. This means there is an urgent and growing need to prioritise tackling health inequalities, especially when these inequalities relate to preventable conditions, such as pneumococcal disease.

Along with the significant health benefits for individuals, there are wider national economic benefits to be gained if we invest in increasing adult pneumococcal vaccination uptake.

Nevertheless, this report demonstrates that adult pneumococcal vaccination continues to be under-prioritised. Structural barriers that affect the entire adult population may disproportionately affect marginalised populations: these must be addressed at both the global and national level. But we must also recognise that these groups face other barriers, specific to them, that prevent them from accessing healthcare and put them at increased risk of being left behind.

Across Australia, Canada, Germany, Japan, the Netherlands, Spain and the UK, we've seen examples of interventions that have improved vaccination uptake. In addition, we've seen how the COVID-19 pandemic has clearly exposed inequalities in health and access to vaccination, which has resulted in greater awareness of the underlying causes and barriers to health equity.

But awareness needs to be backed by action. Reducing inequalities in adult pneumococcal vaccine uptake will require both accountability at a national governmental level and local targeted approaches.

In most developed countries, the most effective solution to improving healthy life expectancy is investing in strategies targeted at the groups that are at most risk of poor health, and most likely to slip through the cracks. Without investing in these solutions we're unlikely to see any health improvements and we will continue to fail those most in need.

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About ILC

The International Longevity Centre UK (ILC) is the UK's specialist think tank on the impact of longevity on society. The ILC was established in 1997, as one of the founder members of the International Longevity Centre Global Alliance, an international network on longevity. We have unrivalled expertise in demographic change, ageing and longevity. We use this expertise to highlight the impact of ageing on society, working with experts, policy makers and practitioners to provoke conversations and pioneer solutions for a society where everyone can thrive, regardless of age.



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Published in 2022 © ILC-UK 2022
Registered Charity Number: 1080496.