



PRACTICE POINTER

Covid-19 vaccination hesitancy

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What you need to know

- Lack of confidence in vaccines for covid-19 poses direct and indirect threats to health, and could derail efforts to end the current pandemic
- Concerns about unknown future effects, side effects, and a lack of trust are common reasons given by people who say they are unlikely to have a covid-19 vaccine
- No single intervention is likely to be able to address vaccine hesitancy
- Consider barriers to uptake of vaccination at a population level and in groups who have lower rates of vaccine uptake
- Develop local approaches by engaging members of the community and co-producing communications and materials that meet population needs

Rollout of covid-19 vaccination is well underway, with more than 700 million doses given worldwide as of April 2021.¹ Vaccination is highly effective at reducing severe illness and death from covid-19. Vaccines for covid-19 are also safe, with extremely low risks of severe adverse events.²⁻⁴ A major threat to the impact of vaccination in preventing disease and death from covid-19 is low uptake of vaccines. In this practice pointer we offer an overview of vaccine hesitancy and some approaches that clinicians and policymakers can adopt at the individual and community levels to help people make informed decisions about covid-19 vaccination.

What is vaccine hesitancy?

The World Health Organization defines vaccine hesitancy as a “delay in acceptance or refusal of safe vaccines despite availability of vaccine services.”⁵ It is caused by complex, context specific factors that vary across time, place, and different vaccines, and is influenced by issues such as complacency, convenience, confidence, and sociodemographic contexts.⁶ Vaccine hesitancy may also be related to misinformation and conspiracy theories which are often spread online, including through social media.^{7,8} In addition, structural factors such as health inequalities, socioeconomic disadvantages, systemic racism, and barriers to access are key drivers of low confidence in vaccines and poor uptake.^{5,9-11} The term vaccine hesitancy, although widely used, may not adequately convey these wider determinants that influence decisions to delay or refuse vaccination.

How common is vaccine hesitancy?

Vaccine hesitancy is a global problem. Surveys in 2021 report that between 50% and 60% of all respondents worldwide would be willing to receive a covid-19 vaccine, with wide variations across

countries.^{12,13} In the UK, surveys have found variation in willingness to have a vaccine between ethnic groups. The UK Household Longitudinal survey asked 12 035 participants (in November 2020) “how likely or unlikely would you be to take the vaccine?” Overall only 18% of respondents were hesitant (answering unlikely or very unlikely), in contrast with high levels of hesitancy in people of Black ethnicity (72%) followed by South Asians of Pakistani and Bangladeshi heritage (both 42%), and mixed ethnicities (32%), though levels of vaccine hesitancy were comparable with White people in respondents of Chinese ethnicity.¹⁴ UK data (as of 11 March 2021) show lower vaccination rates (among those eligible for vaccination) in Black African and Black Caribbean (58.8% and 68.7%, respectively), Bangladeshi (72.7%), and Pakistani (74%) ethnic groups compared with White British (91.3%), and lower vaccination rates in people who live in more deprived areas (most deprived 87%, least deprived 92.1%).¹⁵

Higher vaccine hesitancy is also reported among women (women 21%, men 15%), younger age groups (28% in 25-34 years, versus 14% in 55-64 years), and in people with a lower education level (24% in secondary school graduates; 13% in university graduates).¹⁴ These data follow a historical trend in the UK of lower uptake of pneumococcal, influenza, rotavirus, and shingles vaccines among socioeconomically disadvantaged individuals¹⁶⁻¹⁸ and ethnic minorities.^{11,19} Similarly, a lower uptake has been observed with childhood immunisations in ethnic minority populations.¹¹ Variation in covid-19 vaccination rates is also seen between religious groups. Vaccination rates have been lower in Muslim (72.3%), Buddhist (78.1%), Sikh (87%), and Hindu (87.1%) groups compared with Christian (91.1%).¹⁵

Vaccine hesitancy among healthcare workers (HCWs) is an area of concern because of HCWs’ roles as trusted sources of health information, and because of their greater personal exposure to infections acquired in a healthcare setting. This is particularly the case in HCWs of ethnic minorities, who comprise a high proportion of NHS workers in the UK. Data from one NHS trust show lower rates of covid-19 vaccination in ethnic minority HCWs (70.9% in White workers versus 58.5% in South Asian and 36.8% in Black workers; $P < 0.001$ for both).^{2,20}

What are the causes of covid-19 vaccine hesitancy?

Confidence in the importance of vaccines has the strongest association with vaccine uptake; however, confidence in the importance (necessity and value), safety, and effectiveness of vaccines fell in many countries between 2015 and 2019.²¹ WHO listed

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vaccine hesitancy among the top 10 global threats to health in 2019.²² Drivers of low confidence in covid-19 vaccination are listed in [box 1](#). The ‘Understanding Society’ UK Household Longitudinal survey highlighted that the main reason for hesitancy was concerns about future unknown effects, with 42.7% of respondents specifying this.¹⁴ Less common reasons included those under the bracket of “other” (12.2%), worries about side effects (11.4%), concern that others are in more urgent need of the vaccine (7.7%), and lack of trust in vaccines (7.6%).¹⁴ However, the survey found that people of Black ethnicities were more likely to state that they “don’t trust vaccines” compared with White people (29.2% v 5.7%), and people of Pakistani and Bangladeshi ethnicities often cited concerns about vaccine side effects (35.4% v 8.6%).¹⁴ Some reports indicate a rise in vaccine hesitancy following the AstraZeneca vaccine safety scare across Europe and Africa.^{24 25} Historical precedents show that widely publicised safety scares can have profound and long-lasting effects on vaccine confidence.²⁶

Box 1: Causes and drivers of low confidence in covid-19 vaccines^{5 7 9 11 23}

- Socioeconomic and healthcare inequalities and inequities
- Structural racism and previously unethical research involving some ethnic minority groups
- Social disadvantages including lower levels of education and poor access to accurate information
- Misinformation, disinformation, rumours, and conspiracy theories, in particular through social media
- Lack of effective public health messages or targeted campaigns
- Barriers to access, including vaccine delivery time, location, and cost related to socioeconomic inequalities and marginalisation

How to approach covid-19 vaccine hesitancy

Approaching vaccine hesitancy is complex, and therefore no single intervention can address this entirely, especially in the context of covid-19 where evidence for effective strategies to address it is currently limited.²⁷ When considering the most effective methods to increase vaccine uptake, we advocate comprehensive multi-component approaches tailored to the local population, combined with good communication at an individual level.²⁷ At a broader national level, a multifaceted, non-stigmatising approach is needed to share communication (in a variety of mediums) from trusted sources.¹¹ This includes traditional media channels (for example, television, radio, public transport advertising, and internet) to engage different groups regarding public health policies and counter any misinformation.^{28 29}

Recognising barriers to uptake ([box 2](#)) helps to inform appropriate interventions to address them ([box 3](#)). The key is to build confidence, particularly listening to people’s concerns, being respectful of different religious or cultural beliefs, and being aware of historically rooted understandable mistrust, as well as other ethical considerations around clinical interventions.¹¹ They will usually be open to engage in dialogue about vaccine safety, efficacy, and importance, and discuss the risks and benefits of vaccination.

Box 2: Stated reasons for low uptake of covid-19 vaccines among the public^{21 30 31}

- Concerns about long term effects, side effects, and unknown future effects on health
- Previous side effects to other routine vaccines such as influenza vaccine

- Low confidence in vaccines, including their importance, safety, and efficacy
- Lack of trust in the manufacturing and country of production of vaccines, vaccine technology, the pharmaceutical industry, government, and public health bodies
- Concerns about the speed of development of covid-19 vaccines
- Concerns about vaccines’ incompatibility with religious beliefs
- Previously negative experiences of healthcare, including racial discrimination
- Lower risk and perception of lower risk of covid-19 (especially among younger age groups)
- Lack of communication from trusted providers and community leaders
- Practical concerns such as inconvenient vaccine delivery time and location
- Not offered vaccine because of inaccurate patient contact information
- Direct and indirect costs of vaccine (in some low and middle income countries)
- Apprehensions surrounding fertility, pregnancy, and breastfeeding
- Belief in conspiracy theories such as covid-19 not being real, or that vaccines modify DNA
- Recent covid-19 infection

Box 3: Summary of strategies for interventions to increase vaccination uptake^{11 27 32}

- Offer tailored communication from trusted sources such as community representatives, healthcare providers, and local authorities that is culturally relevant and accessible in multiple languages.
- Improve access to vaccines. This may include flexible delivery models in the community, such as GP practices and outreach programmes with good transportation links.
- Community engagement. Work with community champions, youth ambassadors, faith leaders, and healthcare workers to raise knowledge and awareness on vaccinations; celebrate household members, friends, relatives, and role models being vaccinated; foster an approach of community immunity and helping others; and create locally developed action plans and a continuous, open, and transparent dialogue.
- Training and education of those involved with engagement activities at a local level: use relevant educational materials (eg, eLearning modules) in presentations and communication skills training.

HCWs are a trusted source of information on vaccination and can influence local vaccination rates in individuals and at a population level. HCWs working alongside local authority members, faith leaders, and “community champions” can facilitate engagement, guide household decision makers, and make vaccine recommendations.^{11 33}

Improving access and removing barriers

Historically, interventions based on reminder/recall notifications have improved vaccination uptake in several groups and settings, although limited evidence supports their use specifically for addressing hesitancy.^{23 34}

Offering appointments in the evenings or weekends may improve accessibility for some. People with disabilities or those who have been shielding may find it particularly hard to attend a vaccination appointment. Considering an individual’s distance from the vaccination site, offering to arrange appropriate transportation, or using home visiting facilities can maximise access for these

patients.¹¹ Vaccination sites away from formal healthcare settings, such as places of worship and work based environments, can offer a degree of familiarity and enable reach within communities that distrust government or medical sources.³³ They also offer the opportunity for peer support from friends, family members, and colleagues who have agreed to be vaccinated.

Community engagement and local interventions

Religious or traditional community leaders can engage key audiences through open discussion, advocacy, and integrated community activities.²³ Where appropriate, this could be alongside group discussions with HCWs in local settings to improve awareness, reinforce messages, and promote consistency.^{23,27,28} Having readily available online material for HCWs and vaccine recipients—such as eLearning modules—will reinforce messaging for vaccine safety and effectiveness.²⁸

Consider engaging local health, political, community, legal, and academic representatives to help authorities understand relevant issues and build trust with community partners.³⁵ Written, audio, or visual information might be translated into a range of suitable languages or produced in a more accessible format (box 4).^{32,35–38}

Box 4: Online resources

- NHS Choices. Coronavirus vaccine. <https://www.nhs.uk/conditions/vaccinations/>
- NHS England Coronavirus (covid-19) Resource Centre. <https://coronavirusresources.phe.gov.uk/covid-19-vaccine/resources/>
- Vaccine Knowledge Project. <https://vk.ovg.ox.ac.uk/vk/>
- Video by Gavi the Vaccine Alliance. Four types of vaccines and how they work. <https://www.youtube.com/watch?v=IFjVllcCvc>
- WHO Global Vaccine Safety. https://www.who.int/vaccine_safety/en/
- US Centers for Disease Control and Prevention: Vaccines and Immunisations. <https://www.cdc.gov/vaccines/covid-19/index.html>
- The covid-19 vaccine communication handbook. <https://hackmd.io/@scibehC19vax/home>
- Johns Hopkins Medicine. <https://www.hopkins-medicine.org/health/conditions-and-diseases/coronavirus/is-the-covid19-vaccine-safe>
- British Medical Association. Covid-19: how to communicate with different groups about the vaccine. <https://www.bma.org.uk/advice-and-support/covid-19/vaccines/covid-19-how-to-communicate-with-different-groups-about-the-vaccine>

Regular reporting of vaccine uptake at a local level by different population demographics, including ethnicity, can help to monitor the overall vaccine coverage and identify where resources need to be further targeted.¹¹

Discussing vaccination with a patient

Discussion and engagement with patients who are vaccine hesitant should be conducted in an open, honest, and non-judgmental manner (boxes 5, 6).³⁹ HCWs are well placed to have these conversations given their expertise in communication skills and biomedical training, although evidence is lacking to say whether vaccination uptake is greater if HCWs discuss vaccinations, versus staff in administrative roles. Various approaches have been studied,²³ from calling patients who have not received a vaccine to supplying online or paper based resources to inform patients of benefits and safety issues. One simple example is the “elicit-share-elicit” approach.³² The HCW asks open ended questions to identify concerns and then offers to share their expertise about

this concern. Tailored education based on specific attitudes, and previous experiences have also been shown to be beneficial.³⁹ This approach maintains an empathetic relationship, and provides an opportunity to communicate risk and support for decision making. For example, if a patient tells you they are concerned about the speed of the vaccine rollout, you might highlight the accelerated collaborative international drive that has taken place, which has occurred without compromising on scientific rigour to establish safety and efficacy including through ethics approval and expert peer review and will be continuously monitored by regulators. Recent concerns over a possible link between coronavirus vaccines and rare blood clots show that this monitoring is taking place, and can even detect serious side effects as rare as one in 250 000 people vaccinated.⁴⁰

Box 5: Individual level interventions for healthcare workers³⁹

- Educational online or written material
- Specialist immunisation clinics
- Tailored education
- “Elicit-share-elicit” approach
- Active listening
- Motivational interviewing

Box 6: Top tips for HCWs communicating with vaccine-hesitant patients³⁶

- Be aware of cultural and emotional differences
- Recognise the unique contexts, such as difficulties in accessing healthcare and adhering to public health guidance
- Provide clear and up-to-date guidance
- Repeatedly check understanding
- Adjust styles for differing literacy, education, and language levels
- Have reliable, up-to-date, and accessible sources of information on hand
- Avoid using jargon and stigmatising language
- Support equity by identifying and targeting vulnerable groups

Exploring the person’s priorities—what they have looked forward to, or missed most during the current pandemic—can help to contextualise the importance of the vaccination programme as a collective effort to enable society to come out of lockdown, reverse restrictions, and minimise economic hardships.

One of the key difficulties can be communicating risk, for example, the risk of developing severe infection from covid-19 versus the risk of developing symptoms following vaccination. Understanding a patient’s perceptions of risk and health beliefs is key to establishing a shared dialogue through which HCWs can discuss data clearly, using simplified language where appropriate. Engaging with patients on the dynamic, evolving, and at times uncertain nature of scientific evidence is also imperative, especially in the context of covid-19 and vaccines.

Education into practice

- Do you have a local policy for identifying and engaging patients who are vaccine hesitant in general, and specifically for covid-19 vaccine hesitancy?
- What strategies have you used to increase vaccine uptake in your facility and how have you monitored their impact?

- What online and community resources do you have access to for increasing vaccine confidence?

How this article was made

This article uses best available evidence, recent research papers, the latest advice from the World Health Organization, and expert opinion. We searched systematic reviews, other relevant published research, and latest guidelines using MEDLINE, EMBASE, and Google Scholar in March and April 2021. Additional resources were drawn from our personal datasets.

How patients were involved in the creation of this article

A patient read the manuscript and provided feedback on the relevance and usefulness of the recommendations. The patient specifically requested that we also discuss the root causes of low take up of vaccine among ethnic minorities, including wider determinants of health.

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