

## In brief

### Vaccine hesitancy

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#### Background

- [Vaccine hesitancy](#) lies somewhere between complete acceptance and refusal of all vaccines. Factors that contribute to vaccine hesitancy include confidence in the vaccine and/or provider, complacency and convenience.(1)
- Vaccine hesitancy remains a [barrier to full population inoculation](#) against highly infectious diseases.(2)
- For the [COVID-19 vaccines](#), factors such as the expedited development, relative novelty, complexity in explaining the mode of action of these vaccines, genuine knowledge voids such as long term safety data, [negative stories](#), personal knowledge and misinformation have led to some public uncertainty.(1, 3) [Confidence in the importance](#) of vaccines had the strongest univariate association with vaccine uptake.(4)
- The availability of [online anti-vaccine narratives](#) is noted as a leading cause of the rise in vaccine hesitancy regarding COVID-19.(5)
- There are concerns that the reports of [blood clots](#) following the AstraZeneca vaccine may contribute to vaccine hesitancy .(6)
- Attitudes to vaccination can [change over time](#) and people who are initially hesitant can still come to see a vaccine's safety, efficacy and necessity.(1) Different [degrees of risk](#), in terms of local cases of disease, correspond with different proportions of populations willing to vaccinate, and so prevalence of vaccine hesitancy is context specific. (7)
- For COVID-19, [intent to vaccinate](#) has increased as countries deploy vaccines on larger scales.(1, 8)
- Vaccine hesitancy may disproportionately affect [minority groups](#), such as ethnic groups and people with [mental health difficulties](#).(1)(9) A [recent survey](#) found people of Black, Asian and mixed ethnic backgrounds are 53%, 36% and 67% less likely to have been vaccinated when compared to their white counterparts.(5, 9)

#### Vaccine hesitancy: rates and reasons

- A systematic review on COVID-19 vaccine hesitancy worldwide published February 2021 found [varied vaccine acceptance rates](#), from 23.6% in Kuwait to 97.0% in Ecuador.(10)
- In [healthcare workers](#) internationally, the prevalence of COVID-19 vaccination hesitancy worldwide ranged from 4.3 to 72% (average = 22.51%).(11) In a [US survey](#) reasons for health professionals responding no or undecided to receiving the COVID-19 vaccine included: concerns about unknown risks of the vaccines, wanting to wait for other's experiences, not trusting the rushed US Food and Drug Administration process and concerns about adverse effects.(12)
- A [rapid systematic review](#) found that the percentage of people intending to vaccinate has decreased over the course of the pandemic, with data from March to May 2020 showing 79% intend to

vaccinate and 12% not intending to vaccinate, compared with 60% and 20% in June-October 2020 data. Being female, younger (<25 years), of lower income or education level and belonging to an ethnic minority group were consistently associated with being less likely to intend to vaccinate.(13)

- In [Australia](#), an online survey of over 3000 adults in August 2020 found 59% would definitely get the vaccine, 29% had low levels of hesitancy, 7% had high levels of hesitancy and 6% were resistant. Females, those living in disadvantaged areas, those who reported that risks of COVID-19 was overstated, those who had more populist views and higher levels of religiosity were more likely to be hesitant or resistant.(14)

### Vaccine hesitancy: interventions

- A 2014 [World Health Organization systematic review](#) on addressing vaccine hesitancy found several interventions including: social mobilisation, mass media, communication tool-based training for healthcare workers, non-financial incentives, and reminder-recall activities.(15)
- [Strategies](#) to address vaccine hesitancy can be described at an organisational, interpersonal and individual level. At an organisation level, they include standing orders, audit and feedback, reminders and recalls and point-of-care prompts. At an interpersonal level, strategies include clinician recommendations, strong recommendations and presumptive, announcement-style language. Finally, at an individual level, strategies include training and educating clinicians and developing patient education materials.(16)
- Overcoming barriers in [minority populations](#) requires community-engaged campaigns that acknowledge and address the historical injustices and ongoing inequities, emphasise understandable and culturally appropriate messages that directly address people's concerns, and tap into existing community infrastructure.(17)
- The [confidence of physicians](#) and public health officials can be instrumental in allaying people's fears.(18)
- Addressing vaccine hesitancy amongst healthcare workers is crucial. Strategies to achieve this include: addressing any misunderstanding and concerns, [working with middle managers](#) to act as advocates and agents of change, [educate through webinars and seminars](#), monitor social media to refute erroneous claims, find the right spokesperson and emphasise the legal responsibility.(19, 20)
- [Primary care](#) can expand access to vaccines and overcome vaccine hesitancy by building flexibility into the sites, times, and methods for administering COVID-19 vaccines, as well as engaging the most trusted purveyors of healthcare in many communities.(21)
- Interventional [educational campaigns](#) targeted towards populations at risk of vaccine hesitancy may reduce misinformation and avoid low inoculation rates.(2, 18)
- [Partnerships](#) between academic health centres and community organisations can enhance public health educational efforts to reduce vaccine hesitancy.(22)
- For those with intent to be vaccinated, [interventions](#) such as default appointments and onsite vaccination effectively increase uptake.(18)
- [Social media strategies](#) encouraging healthcare providers and the medical community to effectively 'Tweet up' to combat the mounting threat of vaccine misinformation and hesitancy.(23)
- Data from influenza vaccination shows the impact of [shared decision making](#) suggested a positive effect on vaccination rates.(8) Some [decision aids](#) have been developed, such as one developed by Bond University and The University of Sydney for AstraZeneca.(24)

- There is some concern that teaching the public to [understand science](#), the seemingly obvious way to mitigate anti-scientific sentiment, may fall short.(18)
- Communication about COVID-19 vaccine safety will play a key role in maintaining the public's confidence in vaccination. The [World Health Organization](#) has a manual on COVID-19 vaccine safety communication.(25)

To inform this brief, PubMed and Google searches were conducted using terms related to COVID-19 AND vaccine AND hesitancy on 4 May 2021. The Critical Intelligence Unit maintains a living evidence table on [COVID-19 vaccines](#)

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