

## 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](#)

## References

1. Smith K, Lambe S, Freeman D, et al. COVID-19 vaccines, hesitancy and mental health. *Evidence Based Mental Health*. 2021;24(2):47.
2. Dror AA, Eisenbach N, Taiber S, et al. Vaccine hesitancy: the next challenge in the fight against COVID-19. *European Journal of Epidemiology*. 2020;35(8):775-9.
3. Lockyer B, Islam S, Rahman A, et al. Understanding COVID-19 misinformation and vaccine hesitancy in context: Findings from a qualitative study involving citizens in Bradford, UK. *Health expectations : an international journal of public participation in health care and health policy*. 2021.
4. de Figueiredo A, Simas C, Karafillakis E, et al. Mapping global trends in vaccine confidence and investigating barriers to vaccine uptake: a large-scale retrospective temporal modelling study. *The Lancet*. 2020;396(10255):898-908.
5. Tasnime O, Azeem M. How can we address COVID-19 vaccine hesitancy and improve vaccine acceptance? *The BMJ Opinion*. 2021.
6. Visontay E. Australia warned it won't achieve herd immunity unless it deals with vaccine hesitancy [internet]. United Kingdom: The Guardian; 2021 [cited 5 May 2021]. Available from: <https://www.theguardian.com/australia-news/2021/apr/06/australia-warned-it-wont-achieve-herd-immunity-unless-it-deals-with-vaccine-hesitancy>.
7. Baumgaertner B, Ridenhour BJ, Justwan F, et al. Risk of disease and willingness to vaccinate in the United States: A population-based survey. *PLOS Medicine*. 2020;17(10):e1003354.
8. Kothari A, Pfuhl G, Schieferdecker D, et al. The barrier to vaccination is not vaccine hesitancy: patterns of COVID-19 vaccine acceptance over the course of the pandemic in 23 countries. *medRxiv*. 2021:2021.04.23.21253857.
9. Khan MS, Ali SAM, Adelaine A, et al. Rethinking vaccine hesitancy among minority groups. *The Lancet*.
10. Sallam M. COVID-19 vaccine hesitancy worldwide: a concise systematic review of vaccine acceptance rates. *Vaccines*. 2021;9(2).
11. Biswas N, Mustapha T, Khubchandani J, et al. The nature and extent of COVID-19 vaccination hesitancy in healthcare workers. *Journal of Community Health*. 2021:1-8.
12. Meyer MN, Gjorgjieva T, Rosica D. Trends in health care worker intentions to receive a COVID-19 vaccine and reasons for hesitancy. *JAMA Network Open*. 2021;4(3):e215344-e.
13. Robinson E, Jones A, Lesser I, et al. International estimates of intended uptake and refusal of COVID-19 vaccines: A rapid systematic review and meta-analysis of large nationally representative samples. *Vaccine*. 2021;39(15):2024-34.
14. Edwards B, Biddle N, Gray M, et al. COVID-19 vaccine hesitancy and resistance: correlates in a nationally representative longitudinal survey of the Australian population. *PLOS ONE*. 2021;16(3):e0248892.

15. World Health Organization. Strategies for addressing vaccine hesitancy - a systematic review [internet]. Switzerland: WHO; 2014 [cited 5 May 2021]. Available from: [https://www.who.int/immunization/sage/meetings/2014/october/3\\_SAGE\\_WG\\_Strategies\\_addressing\\_vaccine\\_hesitancy\\_2014.pdf](https://www.who.int/immunization/sage/meetings/2014/october/3_SAGE_WG_Strategies_addressing_vaccine_hesitancy_2014.pdf).
16. Finney Rutten LJ, Zhu X, Leppin AL, et al. Evidence-based strategies for clinical organizations to address COVID-19 vaccine hesitancy. *Mayo Clinic Proceedings*. 2021;96(3):699-707.
17. Strully KW, Harrison TM, Pardo TA, et al. Strategies to address COVID-19 vaccine hesitancy and mitigate health disparities in minority populations. *Frontiers in Public Health*. 2021;9(384).
18. Rosenbaum L. Escaping catch-22 – overcoming COVID vaccine hesitancy. *New England Journal of Medicine*. 2021;384(14):1367-71.
19. Seale H. It's crucial COVID vaccine hesitancy among health workers is addressed [internet]. Australia: NewsGP; 2021 [cited 5 May 2021]. Available from: <https://www1.racgp.org.au/newsqp/clinical/it-s-crucial-covid-vaccine-hesitancy-among-health>.
20. Smith, T. Dealing with COVID-19 vaccine hesitancy among health care workers [internet]. United States: AMA; 2021 [cited 5 May 2021]. Available from: <https://www.ama-assn.org/delivering-care/public-health/dealing-covid-19-vaccine-hesitancy-among-health-care-workers>.
21. Ratzan S, Schneider EC, Hatch H, et al. Missing the point – how primary care can overcome COVID-19 vaccine “hesitancy”. *New England Journal of Medicine*. 2021 May 5.
22. Peteet B, Belliard JC, Abdul-Mutakabbir J, et al. Community-academic partnerships to reduce COVID-19 vaccine hesitancy in minoritized communities. *EClinicalMedicine*. 2021;34:100834.
23. Hernandez RG, Hagen L, Walker K, et al. The COVID-19 vaccine social media infodemic: healthcare providers' missed dose in addressing misinformation and vaccine hesitancy. *Human Vaccines & Immunotherapeutics*. 2021:1-3.
24. COVID-19 vaccination. Decision support tools [internet]. Australia: Ask Share Know; 2019 [cited 5 May 2021]. Available from: <https://askshareknow.com.au/resources/immunisation/covid19vaccination/>.
25. World Health Organization. COVID-19 Vaccines: Safety Surveillance Manual [Internet]. Switzerland: WHO; 2021 [cited 5 May 2021]. Available from: [https://www.who.int/vaccine\\_safety/committee/Module\\_Communication.pdf](https://www.who.int/vaccine_safety/committee/Module_Communication.pdf).

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