COVID-19 Critical Intelligence Unit: Vaccine hesitancy

In brief

Vaccine hesitancy

12 May 2021

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)

• Interventions such as default appointments and onsite vaccination effectively increase uptake.(18)

• For those with intent to be vaccinated, interventions such as decision aids have been developed, such as one developed by Bond University and The University of Sydney for AstraZeneca.(24)
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- 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](https://www.who.int) 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**


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In brief documents are not an exhaustive list of publications but aim to provide an overview of what is already known about a specific topic. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.
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