

Vaccine Hesitancy Among Healthcare Workers in the COVID-19 Era

Gabriella Checchi, MMS Faculty Advisor: Lisa Murphy PA-C, MSPAS Department of Medical Science

Abstract

Today, SARS-CoV-2 continues to spread throughout the world and mutate, infecting hundreds of millions of people. And yet, many members of the community are hesitant to receive the vaccine to protect against it.

Some of these community members include healthcare workers.

Factors associated with vaccine hesitancy among healthcare professionals needs to be understood so that better efforts can be made by public health agencies to target and educate these individuals.

Introduction

Vaccine hesitancy: the delay of or refusal to vaccinate oneself or one's dependents when vaccination is available

Factors that contribute to vaccine hesitancy:

- Emotional
- Social
- Lack of professional education on vaccines

Hesitancy is multifactorial. By lessening vaccine hesitancy among professionals who provide healthcare to these individuals, the overall rate of COVID-19 vaccination hesitancy may decrease.

Global Outlook of Correlating Factors

- Demographics
 - Ethnicity: Black Caribbean, Black African, White Other
 - Age under 25-30
- Perceived risk
 - Previous COVID-19 infection
 - Sense of low risk of infection
 - Concern for safety of the vaccine
 - Pregnancy
- Social
- High rating on COVID-19 conspiracy beliefs scale
- Low trust in employer
- Low trust in government
- Low trust in science
- Non-reliable information from public health authorities
- Lack in belief of benefit of vaccine
- Not wearing a mask in public
- Dismissing guidelines to keep physically distant from others
- Lack of acceptance of other vaccines

Conclusion

Hopefully by further education and providing resources for healthcare professionals, those who show vaccine hesitancy themselves will consider the benefits of vaccination and recommend vaccination against COVID-19 to their patients.

In doing so, a subset of community members who, after speaking with their healthcare provider, may be more likely to consider vaccination who otherwise would not have.

More resources need to be available that specifically target healthcare workers with factors that correlate with vaccine hesitancy

Resources for Healthcare Professionals

For prescribing information and patient education handouts about the Pfizer Inc. COVID-19 vaccine, visit www.Pfizer.com/products/product- detail/Pfizer-biontech-covid-19-vaccine

For information on mRNA vaccines, clinical trial data and eligibility of Moderna Inc. COVID-19 vaccine visit

https://eua.modernatx.com/covid19vaccine-eua/providers/

Patient education resources for healthcare professionals are available at https://www.cdc.gov/vaccines/covid-19/index.html

A Threat to Public Health

- As of April 2022 worldwide:
 - According to Our World in Data, there have been:
 - 507.05 million confirmed cases of COVID-19
 - 6.21 million confirmed deaths due to COVID-19
 - According to the WHO, there have been 2 variants of interest with increased virulence and decreased effectiveness of current vaccines
- 32% of Americans show hesitancy towards receiving COVID-19 vaccine
- 22.51% of healthcare workers around the world show hesitancy towards vaccination against SARS-CoV-2



- World Health Organization. Tracking SARS-CoV-2 variants. Updated January 25, 2022. Accessed January 25, 2022. https://www.who.int/en/activities/tracking-SARS-CoV-2-
- Eggertson L. Lancet retracts 12-year-old article linking autism to MMR vaccines. CMAJ. 2010;182(4):E199-E200. doi:10.1503/cmaj.109-3179. Accessed January 25, 2022.
- Paterson P, Meurice F, Stanberry LR, Glismann S, Rosenthal SL, Larson HJ. Vaccine hesitancy and healthcare providers. Vaccine. 2016;34(52):6700-6706. https://doi.org/10.1016/j.vaccine.2016.10.042. Accessed January 22, 2022
- Cohen J. Covid-19 Vaccine Hesitancy is Worse in E.U. than U.S. Forbes. Published March 8, 2021. Accessed January 11, 2022.
- https://www.forbes.com/sites/joshuacohen/2021/03/08/covid-19-vaccine-hesitancy-is-worse-in-eu-than-us/?sh=1d714de3611f Ritchie H, Mathieu E, Rodés-Guirao L et al. Coronavirus Pandemic (COVID-19). OurWorldInData.org. Accessed on January 11, 2022. https://ourworldindata.org/coronavirus
- Safety Concerns Remain Main Driver of Vaccine Hesitancy. AP-NORC Center for Public Affairs Research. Published February 2021. Accessed January 11, 2022. https://apnorc.org/projects/safety-concerns-remain-main-driver-of-vaccine-hesitancy
- Holzmann-Littig C, Braunisch MC, Kranke P, et al. COVID-19 Vaccination Acceptance and Hesitancy among Healthcare Workers in Germany. Vaccines (Basel). 2021;9(7):777. Published 2021 Jul 12. doi:10.3390/vaccines9070777. Accessed January 22, 2022.
- Biswas N, Mustapha T, Khubchandani J, Price JH. The Nature and Extent of COVID-19 Vaccination Hesitancy in Healthcare Workers. J Community Health. 2021;46(6):1244-1251 doi:10.1007/s10900-021-00984-3. Accessed January 20, 2022.
- Woolf K, McManus IC, Martin CA, et al. Ethnic differences in SARS-CoV-2 vaccine hesitancy in United Kingdom healthcare workers: Results from the UK-REACH prospective nationwide cohort study. Lancet Reg Health Eur. 2021;9:100180. doi:10.1016/j.lanepe.2021.100180. Accessed January 20, 2022.
- Ethiopia: a cross-sectional study. Epidemiol Infect. 2021;149:e225. Published 2021 Oct 14. doi:10.1017/S0950268821002259. Accessed January 20, 2022.

0. Aemro A, Amare NS, Shetie B, Chekol B, Wassie M. Determinants of COVID-19 vaccine hesitancy among health care workers in Amhara region referral hospitals, Northwest

- 11. Mohammed R, Nguse TM, Habte BM, Fentie AM, Gebretekle GB. COVID-19 vaccine hesitancy among Ethiopian healthcare workers. PLoS One. 2021;16(12):e0261125. Published
- 2021 Dec 17. doi:10.1371/journal.pone.0261125. Accessed January 20, 2022.
- 12. Li M, Luo Y, Watson R, et al. Healthcare workers' (HCWs) attitudes and related factors towards COVID-19 vaccination: a rapid systematic review. Postgraduate Medical Journal Published Online First: 30 June 2021. doi: 10.1136/postgradmedj-2021-140195. Accessed January 20, 2022.
- 13. Papagiannis D, Rachiotis G, Malli F, et al. Acceptability of COVID-19 Vaccination among Greek Health Professionals. Vaccines (Basel). 2021;9(3):200. Published 2021 Feb 28. doi:10.3390/vaccines9030200. Accessed January 20, 2022.

14. Pfizer-BioNTech COVID-19 Vaccine (also known as BNT162b2. Pfizer Inc. Updated 2022. Accessed April 9, 2022. https://www.pfizer.com/products/product-detail/pfizer-biontech-

- <u>covid-19-vaccine</u>
- 5. Vaccine Overview for Vaccination Providers. Moderna Inc. Updated March 2022. Accessed April 9, 2022. https://eua.modernatx.com/covid19vaccine-eua/providers/ 16. COVID-19 Vaccination Clinical & Professional Resources. Cdc.gov. Updated December 21, 2021. Accessed April 9, 2022. https://www.cdc.gov/vaccines/covid-19/index.html