

Examples of Evidence-Based Solutions to Increase Vaccine Confidence and Uptake



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention



COVID-19 Vaccine Confidence: Rapid Community Assessment Tool

This table provides a list of solutions/interventions to address specific issues identified by rapid community assessment.

Domain: What People Think and Feel

PROBLEM AREAS	INTERVENTION CATEGORY AND DESCRIPTION
<p>Community members have low trust in vaccines.</p> <p>Community members do not feel that vaccines are safe or effective.</p> <p>Community members do not feel that vaccines are important for COVID-19 prevention.</p>	<p>1. Educational campaign:</p> <ul style="list-style-type: none"> a. Educational campaign consisting of informational posters with disease risk, letters, educational materials, group educational session highlighting disease salience and importance of vaccine, posters encouraging vaccination to protect yourself^{1, 2} b. Personalized education about vaccine³ c. Employee health education in workplace settings⁴ d. Decision aid that guides individual through vaccination decision-making process⁵ e. Health risk appraisal (assessing health risk behaviors and uptake of preventive care)⁶ f. TV/media ads to raise awareness about disease and response efficacy for a specific population (e.g., 65+ and 50+)⁷ <p>2. Institutional recommendation:</p> <ul style="list-style-type: none"> a. Institutions and workplaces encourage vaccination and provide vaccination stickers^{2,8,9} <p>3. Not categorized:</p> <ul style="list-style-type: none"> a. Vaccination campaign in a workplace or congregate setting consisting of a mandatory declination policy where HCWs sign a form saying they are declining the vaccine and understand the risks of non-vaccination to themselves and others⁹

Domain: Social Processes

PROBLEM AREAS	INTERVENTION CATEGORY AND DESCRIPTION
Community lacks strong social norm emphasizing vaccination.	<ol style="list-style-type: none"> 1. On-site vaccination: <ol style="list-style-type: none"> a. Increase convenient access to and affordability of vaccine by providing vaccination on site or at workplace⁴ 2. Institutional recommendation: <ol style="list-style-type: none"> a. Institutions and workplaces encourage vaccination and provide vaccination stickers^{2,8,9} 3. Not categorized: <ol style="list-style-type: none"> a. Institutions and workplaces encourage vaccination and provide vaccination stickers^{9,10}

Domain: Practical Issues

PROBLEM AREAS	INTERVENTION CATEGORY AND DESCRIPTION
Community experiencing barriers to accessing the vaccine	<ol style="list-style-type: none"> 1. On-site vaccination: <ol style="list-style-type: none"> a. Increasing vaccination access with vaccination offered near hospital/clinic entrances⁹ b. Increasing vaccine accessibility in work site/high traffic areas⁸ c. Vaccination at clinics, conferences, and house staff lounges¹¹ d. Increasing accessibility (e.g., mobile carts, during night and weekend shifts)^{1, 4} e. Offer an option of getting vaccinated at home¹² 2. Free/Affordable Vaccines: <ol style="list-style-type: none"> a. Free vaccines, free vaccination services^{2, 4, 1, 3, 14}

Domain: What People Think and Feel

PROBLEM AREAS	INTERVENTION CATEGORY AND DESCRIPTION
<p>Community members have low trust in vaccines.</p> <p>Community members do not feel that vaccines are safe or effective.</p> <p>Community members do not feel that vaccines are important for COVID-19 prevention.</p>	<ol style="list-style-type: none"> 1. Educational campaign: <ol style="list-style-type: none"> a. Educational campaign consisting of informational posters with disease risk, letters, educational materials, group educational session highlighting disease salience and importance of vaccine, posters encouraging vaccination to protect yourself^{1,2} b. Personalized education about vaccine^{3, 12, 16} c. Employee health education in workplace settings¹⁻⁴ 2. Reminders and recall <ol style="list-style-type: none"> a. Letter, telephone, and email reminders^{11,15-17} b. Walk-in clinics^{14,16} c. Patient outreach for reminder and assistance with follow-up and appointments¹⁶ 3. Message Framing: <ol style="list-style-type: none"> a. Messaging that emphasizes the disadvantages of not getting vaccinated¹⁸ b. Letters/messaging that emphasize vaccination norms (that most people get vaccinated)¹⁹ 4. Incentives <ol style="list-style-type: none"> a. Incentives for vaccination, including free lunches, raffles, lottery tickets, and cash prizes⁴ b. Monetary incentives for vaccination^{9,20} 5. Institutional Recommendation <ol style="list-style-type: none"> a. Institutions and workplaces encourage vaccination and provide vaccination stickers, thereby creating an institutional norm to get vaccinated^{2, 9-11} 6. Vaccine champions: <ol style="list-style-type: none"> a. Vaccine champions: Influential figures get vaccinated and promote vaccination¹⁵

Acknowledgement: Dr. Erin James, Dr. Aryn Malik, and Dr. Saad Omer from Yale University, Institute for Global Health carried out the review of evidence on behavioural interventions to increase uptake of adult vaccination.

References

1. Bryant KA, Stover B, Cain L, Levine GL, Siegel J, Jarvis WR. Improving influenza immunization rates among health-care workers caring for high-risk pediatric patients. *Infect Control Hosp Epidemiol.* 2004;25:912-7.
2. Mustafa M, Al-Khal A, Al Maslamani M, Al Soub H. Improving influenza vaccination rates of healthcare workers: a multipronged approach in Qatar. *East Mediterr Health J.* 2017;23:303-10.
3. Arthur AJ, Matthews RJ, Jagger C, Clarke M, Hipkin A, Bennison DP. Improving uptake of influenza vaccination among older people: a randomised controlled trial. *Br J Gen Pract.* 2002;52:717-8, 20-2.
4. Sand KL, Lynn J, Bardenheier B, Seow H, Nace DA. Increasing influenza immunization for long-term care facility staff using quality improvement. *J Am Geriatr Soc.* 2007;55:1741-7.
5. Chambers LW, Wilson K, Hawken S, Puxty J, Crowe L, Lam P-P, et al. Impact of the Ottawa Influenza Decision Aid on healthcare personnel's influenza immunization decision: a randomized trial. *J Hosp Infect.* 2012;82:194-202.
6. Dapp U, Anders JA, von Renteln-Kruse W, Minder CE, Meier-Baumgartner HP, Swift CG, et al. A randomized trial of effects of health risk appraisal combined with group sessions or home visits on preventive behaviors in older adults. *J Gerontol A Biol Sci Med Sci.* 2011;66:591-8.
7. Wallace C, Corben P, Turahui J, Gilmour R. The role of television advertising in increasing pneumococcal vaccination coverage among the elderly, North Coast, New South Wales, 2006. *Aust N Z J Public Health.* 2008;32:467-70.
8. Jiang C, Whitmore-Sisco L, Gaur AH, Adderson EE. A quality improvement initiative to increase Tdap (tetanus, diphtheria, acellular pertussis) vaccination coverage among direct health care providers at a children's hospital. *Vaccine.* 2018;36:214-9.
9. Drees M, Wroten K, Smedley M, Mase T, Schwartz JS. Carrots and sticks: achieving high healthcare personnel influenza vaccination rates without a mandate. *Infect Control Hosp Epidemiol.* 2015;36:717-24.
10. Gilardi F, Castelli Gattinara G, Vinci MR, et al. Seasonal influenza vaccination in health care workers. A pre-post intervention study in an Italian paediatric hospital. *Int J Environ Res Public Health.* 2018;15.
11. Ohrt CK, McKinney WP. Achieving compliance with influenza immunization of medical house staff and students. A randomized controlled trial. *Jama.* 1992;267:1377-80.
12. Arthur AJ, Matthews RJ, Jagger C, Clarke M, Hipkin A, Bennison DP. Improving uptake of influenza vaccination among older people: a randomised controlled trial. *Br J Gen Pract.* 2002;52:717-8, 20-2.
13. Oguz MM. Improving influenza vaccination uptake among healthcare workers by on-site influenza vaccination campaign in a tertiary children hospital. *Hum Vaccin Immunother.* 2019;15:1060-5.
14. Zimmerman RK, Nowalk MP, Raymond M, Tabbarah M, Hall DG, Wahrenberger JT, et al. Tailored interventions to increase influenza vaccination in neighborhood health centers serving the disadvantaged. *Am J Public Health.* 2003;93:1699-705.
15. Abramson ZH, Avni O, Levi O, Miskin IN. Randomized trial of a program to increase staff influenza vaccination in primary care clinics. *Ann Fam Med.* 2010;8:293-8.
16. Humiston SG, Bennett NM, Long C, Eberly S, Arvelo L, Stankaitis J, et al. Increasing inner-city adult influenza vaccination rates: a randomized controlled trial. *Public Health Rep.* 2011;126(Suppl 2):39-47.
17. Hull S, Hagdrup N, Hart B, Griffiths C, Hennessy E. Boosting uptake of influenza immunisation: a randomised controlled trial of telephone appointing in general practice. *Br J Gen Pract.* 2002;52:712-6.
18. Nan X, Xie B, Madden K. Acceptability of the H1N1 vaccine among older adults: the interplay of message framing and perceived vaccine safety and efficacy. *Health Commun.* 2012;27:559-68.
19. Yokum D, Lauffenburger JC, Ghazinouri R, Choudhry NK. Letters designed with behavioural science increase influenza vaccination in Medicare beneficiaries. *Nat Hum Behav.* 2018;2:743-9.
20. Tao L, Lu M, Wang X, Han X, Li S, Wang H. The influence of a community intervention on influenza vaccination knowledge and behavior among diabetic patients. *BMC Public Health.* 2019;19:1747.