



American College of Preventive Medicine

Mandatory Vaccination for Healthcare Workers

Policy Recommendation:

The American College of Preventive Medicine supports mandatory (except for medical exemptions) vaccination or presumptive evidence of immunity against hepatitis B, influenza, measles, mumps, rubella, pertussis, and varicella for healthcare workers.

Key Issues:

1. Healthcare workers are frequently exposed to vaccine-preventable diseases, rendering them vulnerable to infection, which also places patients at risk for these diseases.
2. With the projected increase in the elderly population, these individuals are more likely than younger persons to contract vaccine-preventable infections and require hospitalization.
3. As the workforce continues to age, healthcare workers will, likewise, be more vulnerable to vaccine-preventable diseases.
4. Vaccination rates among healthcare workers are suboptimal and can be improved.
5. The establishment of a mandatory influenza vaccination policy by healthcare facilities significantly improves coverage among their healthcare workforce.

Supporting Evidence:

1. In hospital, ambulatory, and emergency settings, healthcare workers are frequently exposed to bodily secretions and excreta that are potentially harmful, rendering them particularly vulnerable to contracting a variety of infections in the workplace. Healthcare workers have also been found to be sources of vaccine-preventable diseases such as measles, mumps, rubella, influenza, hepatitis B, diphtheria, pertussis, and shingles.¹⁻⁸ In addition to morbidity and mortality, vaccine-preventable diseases are associated with absenteeism, hindrance of healthcare services, and costs due to diagnosis, treatment, prophylaxis, contact tracing, and infection control.^{2-3, 9,10}

Vaccination of healthcare workers has been shown to reduce patients' risk of infection.^{8, 11-13} Four cluster randomized control trials have shown that patient risk is reduced with influenza vaccination of healthcare workers in long term care facilities.¹⁴⁻¹⁹ In addition to preventing the spread of infection to patients, mandatory vaccination with MMR or evidence of measles immunity in healthcare workers may potentially aid in achieving elimination of measles.²⁰ Waning immunity from previously infected or vaccinated individuals against pertussis poses a risk for infection of healthcare workers.^{21, 22} Vaccination of healthcare workers with Tdap is a cost-effective strategy to prevent pertussis outbreaks within healthcare settings.²³

2. The prevalence of individuals over 65 years old in the United States is projected to increase from 12.4% (approximately 35 million) in 200 to 19.6% (approximately 19.5 million) in 2030.²⁴

²⁵ Elderly individuals (>65) are more likely to suffer from multiple comorbidities and have a weakened immune system compared to younger individuals.²⁶ In addition, older individuals are more likely to be hospitalized, and they commonly reside in nursing homes, skilled nursing facilities, and other healthcare facilities.²⁷ These factors increase the risk of shingles and influenza, both of which are preventable by vaccination.^{28, 29}

Individuals over 50 years old are more susceptible than younger persons to morbidity and mortality from vaccine-preventable diseases including shingles and influenza.^{28, 29} Shingles occur in almost one out of three individuals, of which 1-4% of affected individuals are hospitalized for complications.²⁸ Approximately 10-15% of individuals who contract shingles develop postherpetic neuralgia, a complication that increases with age.²⁸ Elderly individuals are also more likely to succumb to influenza compared to younger individuals.^{29, 30} This results from increased hospitalization and superimposed bacterial infection, which ultimately leads to sepsis, multisystem organ failure, and death.²⁹ Ensuring vaccination or evidence of immunity (in the case of varicella) among healthcare workers can prevent can protect against and reduce the spread of influenza and shingles within healthcare settings.

3. As the population of older Americans continues to increase, the U.S. healthcare workforce, too, is aging.^{31, 32} Overall, the age of elderly individuals in the workforce increased from 18% in 2008 to 24% in 2018.^{31, 32} Healthcare workers over the age of 75 are at five times higher risk of experiencing falls compared to workers aged 18-19, which increases the risk of hospitalization, rendering them more likely to contract nosocomial infections.³² Therefore, mandatory vaccination of healthcare workers would decrease the likelihood of older workers contracting or spreading vaccine-preventable diseases.

4. The rates of vaccination for influenza are suboptimal for certain healthcare workers.^{33,34} Although influenza vaccine coverage in healthcare is high in comparison to other professions, among healthcare workers coverage is lowest in administrative staff and long-term care facility workers.³⁵ The incidence of pertussis in the U.S. has been increasing, from 1010 cases in 1976 to 27,550 cases in 2010;³⁶ numerous pertussis outbreaks have occurred in hospitals, resulting in infection and transmission among healthcare workers and to other patients.³⁶ Tdap vaccination rates are also suboptimal in healthcare workers.³⁶ In 2013, only 47.2% of healthcare workers were vaccinated with Tdap, with coverage being lower in long-term care facilities and other clinical settings (dental, chiropractic, and optometric offices) compared to hospitals.³⁶

The uptake of influenza vaccinations among healthcare workers has been carefully evaluated.³⁷⁻⁴¹ Barriers to uptake include knowledge gaps of guidelines, underestimation of their own risk, lack of access, misconceptions on vaccine effectiveness and safety, lack of support, and use of naturopathic modalities.³⁶⁻⁴⁰ Healthcare workers who declined influenza vaccination most commonly expressed the belief that getting the vaccine was not beneficial.³⁵

Vaccines are generally considered readily available and accessible. In several studies, the availability of no-cost immunization at convenient locations has been associated with increased uptake of influenza vaccination.³⁷⁻⁴¹ Seasonal vaccination against influenza is often provided within hospitals for healthcare workers and is covered by insurance.^{38, 39} In addition, healthcare institutions at time of employment often provide vaccination against vaccine-preventable diseases. Interventions with on-site, no-cost, and actively promoted influenza vaccinations have demonstrated increased coverage among healthcare workers and decreased seasonal influenza-related morbidity⁴² and should be employed broadly in healthcare facilities.

5. Despite the recommendation by the Advisory Committee on Immunization Practices that all healthcare workers should receive an annual influenza vaccination and efforts to promote voluntary compliance, coverage in the United States during the 2016-17 influenza season was estimated to be 78.6%, with coverage being the highest (96.7%) among healthcare workers whose employer required it.³⁴ Hospitals and health systems that have instituted mandatory seasonal influenza policy for their workforce have reported nearly 100% coverage^{43, 44} with targeted outreach and education strategies increasing acceptability of the policy among healthcare workers in the facility.⁴³ Expanding vaccine policies to include mandatory (except for medical exemptions) vaccination or presumptive evidence of immunity against hepatitis B, influenza, measles, mumps, rubella, pertussis, and varicella for healthcare workers and employing other strategies that have been successful in raising influenza vaccination rates is likely to positively influence coverage rates for the other vaccinations in a similar fashion.

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