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Ethical Concerns Regarding Mandatory Influenza Vaccination in Healthcare Practitioners

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Abstract: *An escalating international geographical mobility enhances and facilitates the promptness of infectious disease spreading across large regions. The transmission of influenza to healthcare practitioners, as a result of nosocomial influenza outbreaks, has been well documented. Consequently, healthcare institutions have devoted extensive efforts to the large-scale prevention of nosocomial transmission of influenza through vaccination programmes of healthcare personnel. Nevertheless, despite well-aimed endeavours of voluntary vaccination, sustained augmented-level annual immunization percentages are low. Moreover, many ethical challenges regarding vaccination are still very much present.*

Keywords: *healthcare practitioners; mandatory influenza vaccination; ethics; nosocomial influenza; public health*

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Introduction

An increasing global geographical mobility enhances the quickness infectious disease spreading over large areas. This is the highly significant reason why each country can assure immunization programs and related agendas which would be effective in order to reach and preserve the herd immunity [1]. Otherwise, when individuals are unvaccinated, the whole population absorbs the hazard [2]. In terms of preventive medicine, vaccinations have been confirmed to be the most successful pharmacological procedure. Nevertheless, soon after the initial development of vaccines, many ethical and legal questions appeared, regarding their necessity, actual effectiveness, beneficence, recipient autonomy, justice, and overall transparency.

The transmission of influenza to healthcare practitioners, as a result of nosocomial influenza outbreaks, has been well documented. This is not unexpected knowing that healthcare practitioners represent a heterogeneous group of professionals, including physicians, nurses, laboratory technicians, pharmacists, midwives, dental professionals, healthcare students, and administrative staff [3]. Consequently, healthcare facilities have placed wide-ranging efforts into large level prevention of influenza nosocomial transmission through vaccination programmes of healthcare personnel, with realistic long-standing prospects that vaccination of healthcare practitioners can result in the secondary protection of high-risk influenza patients. This is reasonable, since unvaccinated healthcare practitioners may significantly contribute to nosocomial influenza outbreaks in healthcare settings, too [4]. Moreover, the appearance of influenza viruses resistant to antiviral agents over

the past time cycle additionally reinforces the role of vaccination as a head measure for the prevention of nosocomial influenza [5]. Nevertheless, regardless of well-aimed and continuous attempts of voluntary vaccination, unceasing high-level annual immunization rates are insufficient. Although vaccinations are the most effective pharmacological interventions for the protection of both healthcare workers and patients from infectious diseases which can be prevented by vaccines, one can always challenge the idea of mandatory influenza vaccination for healthcare practitioners, considering various ethical concerns [6].

Mandatory influenza vaccination in healthcare practitioners

Influenza vaccination is considered the most effective measure to prevent the transmission of the disease in healthcare facilities, which causes risks for both patients and healthcare practitioners [7]. However, vaccination coverage among healthcare practitioners continues to be suboptimal (<40% in Europe, >70% in the USA) [8, 9], even though vaccination of healthy healthcare practitioners is known to be associated with less influenza, less cumulative days of influenza-like sickness, as well as less cumulative days of absence from work [10, 11]. Since unvaccinated healthcare practitioners seem to be the main source of nosocomial influenza, according to the US Centers for Disease Control and Prevention, it is estimated that around 80% immunization coverage is necessary to prevent influenza transmission in healthcare facilities and to bring it to a safe level [12]. This is important given that hospital influenza has a particularly high mortality rate with a median of 16%, and as high as 60% in at-risk groups, such as transplant patients or patients in intensive care units [13]. Although it was established that under voluntary influenza immunization policy, hospital influenza outbreaks appear every flu season, most voluntary policies which augment vaccination rates in healthcare practitioners have not been very successful [14, 15]. Thus, it is clear that the effects of conventional educational programmes and campaigns generally only have a modest impact [16].

The objective of any mandatory vaccination course of action is to achieve prevalent vaccination among the eligible population [17]. This way, the primary goal of mandatory vaccination programmes preventing patients of higher risk of complications from becoming infected, suitably focus on decreasing morbidity and mortality [18]. Healthcare worker vaccination against influenza is also coherent with a collective professional duty to treat all patients impartially and to take essential safety measures as opposed to preventable harms [19]. Although mandatory vaccination was verified to function and accomplish more vaccination, it produces commotion in medical ethics for healthcare workers, as it was stated that a mandatory influenza vaccination

policy infringes the individual's privilege to reject unwanted treatment, and furthermore underlined that any competent adult has the right to make a decision on their own treatment and refuse unwanted medical interventions [20]. However, this autonomy argument primarily focuses on individual rights of healthcare practitioners to refuse immunizations, disregarding the rights of patients [14]. In this case, one can always shift the focus from everyone else's rights against being infected with a transmittable disease to denial privileges. However, for supporters of mandatory vaccination, all scientific, ethical, legal, and financial requirements have been met, and accordingly, vaccination is consistent with a collective professional duty, and being immune is a part of the accountability of being a healer [21]. In other words, individuals who chose a healing vocation, unreservedly presume this duty to care and to make available the best possible medical treatment [22]. Widespread vaccination of healthcare workers against influenza should be considered standard patient care, while non-vaccination should be considered as maleficent care [23].

Looking for reasons regarding the decline of influenza vaccination, one may usually identify several groups of healthcare practitioners: unaware (consider themselves at a low risk), unbelieving (do not believe in the effectiveness), unmotivated (fear of side-effects and long-term complications), and unconcerned (vaccination stations are not available) [24]. Cognitive preconceptions involved in vaccination decision-making and potential obstacles which may alleviate their effect are numerous. For example, there is a tendency to prefer a potentially-harmful inaction to a potentially less harmful act, a tendency to prefer a known risk (no treatment) to unknown risk, a tendency to place more weight on costs and benefits today than on those realized in the future, a tendency to judge occurrence of side effects as likely and frequent, or a tendency to prefer natural products or substances even when they are identical or worse than synthetic alternatives [24]. However, considering that the common side effects of influenza vaccination are mild and self-limiting, and because the serious and extensive side effects of influenza vaccination are rare, if balanced with vaccination benefits, influenza vaccination must be considered safe [23]. To continue, overall efforts should extensively focus on expanding awareness and knowledge on advocated vaccines and their efficacy and safety [25].

Ethical considerations from both the clinical and public health perspectives have been used to investigate whether it is ethically acceptable to request the seasonal influenza vaccine for healthcare practitioners. Taking into account different components of justice, some argue that healthcare practitioner immunization exemptions should be limited to medical contraindications only [26], since justice allows for individual rights and freedom, but importantly, it limits autonomy when it harms or intrudes upon that of others. Thus, promoting the healthcare practitioners influenza vaccination should cover

various activities including the distribution of written and electronic announcements promoting influenza vaccination, on-site vaccination within clinic with mobile vaccination availability, free of charge vaccination, distribution of educational materials, electronic distribution of information about the progress of the vaccination, and when applicable, mandatory completion of declination vaccination forms regarding medical and non-medical reasons [7, 9]. Despite this, the implementation of vaccination would not be full, even in the case of mandatory vaccinations, since healthcare practitioners may refuse it for personal beliefs, and simply be transferred to positions without contact with patients [27].

If voluntary acceptance of vaccination by healthcare practitioners is not optimal, the patients' welfare, public health and also the healthcare practitioners' own health interests should prevail over concerns regarding personal autonomy, and then fair mandatory vaccination policies for healthcare practitioners might be satisfactory [21]. In that way, mandatory vaccination policies must be carefully adjusted to adequately balance the risks and benefits of influenza vaccination for healthcare practitioners and patients [4]. In addition, the most vulnerable groups in our societies must be protected, such as the immunocompromised persons, the elderly (patients >65 years old), critically ill patients and young children in whom severe complications may develop, thus leading to hospitalization and even death [25, 28, 29]. Therefore, mandatory vaccination programmes need to be implemented through the widest cooperation of all available professional and non-profit organizations, as well as state, healthcare, and public health entities. This way, building trust in the healthcare system and reinforcing the importance of vaccination will be a feasible objective. After all, the public has the right to anticipate that healthcare practitioners and the institutions in which they work will take all the needed and sensible safety measures to keep them safe and minimize harm [19].

Conclusions

When public health is put at risk, healthcare associations and public health establishment have an obligation to take action, especially if an inexpensive, as well as effective method to accomplish patients' safety is available. Accordingly, the mandatory vaccination of medical workers may be an ethically-justified approach in cases in which the harm to patients and the overall population is considered to outweigh the autonomy of the individual healthcare practitioner. Moreover, mandatory vaccination of healthcare workers against influenza is coherent with a collective professional duty and it should be respected as a standard patient care. Promoting the influenza vaccination of healthcare practitioners should extensively focus on expanding

awareness and knowledge about the efficacy and safety of vaccines. Mandatory vaccination programs need to be accomplished through the widespread collaboration of professional and non-profit organizations, as well as state, healthcare, and public health associations. Although there are many attempts to create workable and effective standards considering influenza vaccination for healthcare practitioners, many ethical challenges regarding mandatory vaccination are still very much present, and they require to be addressed.

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References

- [1] N.E. Moran, S. Gainotti and C. Petrini, "From compulsory to voluntary immunisation: Italy's National Vaccination Plan (2005-7) and the ethical and organizational challenges facing public health policy-makers across Europe," *J. Med. Ethics*, vol. 34, no. 9, pp. 669-674, Sep. 2008.
- [2] C. Constable, N.R. Blank and A.L. Caplan, "Rising rates of vaccine exemptions: problems with current policy and more promising remedies," *Vaccine*, vol. 32, no. 16, pp. 1793-1797, Apr. 2014.
- [3] P. Loulergue and O. Launay, "Vaccinations among medical and nursing students: coverage and opportunities," *Vaccine*, vol. 32, no. 38, pp. 4855-485, Aug. 2014.
- [4] A.M. Stewart and M.A. Cox, "State law and influenza vaccination of health care personnel," *Vaccine*, vol. 31, no. 5, pp. 827-832, Jan. 2013.
- [5] H.C. Maltezou and S. Tsiodras, "Antiviral agents for influenza: molecular targets, concerns of resistance, and new treatment options," *Curr. Drug Targets*, vol. 10, no. 10, pp. 1041-1048, Oct. 2009.
- [6] J.C. Tilburt, P.S. Mueller, A.L. Ottenberg, G.A. Poland and B.A. Koenig, "Facing the challenges of influenza in healthcare settings: the ethical rationale for mandatory seasonal influenza vaccination and its implications for future pandemics," *Vaccine*, vol. 26, Suppl. 4, pp. D27-D30, Sep. 2008.
- [7] H. Guanche Gacell, A. Villanueva Arias, E. Guilarte García, R. Rubiera Jiménez and R. Nonato Alfonso, "A Successful Strategy for Improving the Influenza Immunization Rates of Health Care Workers without a Mandatory Policy," *Int. J. Occup. Environ. Med.*, vol. 6, no. 3, pp. 184-186, Jul. 2015.
- [8] "Health Personnel Still Not Receiving Flu Vaccine", *JAMA*, vol. 312, no. 21, pp. 2203, 2014.

- [9] H.C. Maltezou and A. Tsakris, "Vaccination of health-care workers against influenza: our obligation to protect patients," *Influenza Other Respir. Viruses*, vol. 5, no. 6, pp. 382-388, Nov. 2011.
- [10] H.C. Maltezou, "Nosocomial influenza: new concepts and practice," *Curr. Opin. Infect. Dis.* vol. 21, no. 4, pp. 337-433, Aug. 2008.
- [11] J.A. Wilde, J.A. McMillan, J. Serwint, J. Butta, M.A. O'Riordan and M.C. Steinhoff. "Effectiveness of influenza vaccine in health care professionals: a randomized trial," *JAMA*, vol. 281, no. 10, pp. 908-913, Mar. 1999.
- [12] K. Quan, D.M. Tehrani, L. Dickey, E. Spiritus, D. Hizon, K. Heck, P. Samuelson, E. Kornhauser, R. Zeitany, S. Mancía, L. Thrupp, S.M. Tiso and S.S. Huang, "Voluntary to mandatory: evolution of strategies and attitudes toward influenza vaccination of healthcare personnel," *Infect. Control Hosp. Epidemiol.*, vol. 33, no. 1, pp. 63-70, Jan. 2012.
- [13] C.D. Salgado, B.M. Farr, K.K. Hall and F.G. Hayden, "Influenza in the acute hospital setting," *Lancet Infect. Dis.*, vol. 2, no. 3, pp. 145-155, Mar. 2002.
- [14] S. Wicker and H.F. Rabenau, "A Patient Safety Issue: Mandatory Influenza Vaccination for Health Care Workers," *Procedia in Vaccinology*, vol. 2, no. 1, pp. 101-105, 2010.
- [15] S. McLennan and S. Wicker, "Reflections on the influenza vaccination of healthcare workers," *Vaccine*, vol. 28, no. 51, pp. 8061-8064, Nov. 2010.
- [16] K.W. To, A. Lai, K.C. Lee, D. Koh and S.S. Lee, "Increasing the coverage of influenza vaccination in healthcare workers: review of challenges and solutions," *J. Hosp. Infect.*, vol. 94, no. 2, pp. 133-142, Oct. 2016.
- [17] J. Flanigan, "A defense of compulsory vaccination," *HEC Forum*, vol. 26, no. 1, pp. 5-25, Mar. 2014.
- [18] A.H. Antommaria, "An ethical analysis of mandatory influenza vaccination of health care personnel: implementing fairly and balancing benefits and burdens," *Am. J. Bioeth.*, vol. 13, no. 9, pp. 30-37, 2013.
- [19] A.L. Ottenberg, J.T. Wu, G.A. Poland, R.M. Jacobson, B.A. Koenig and J.C. Tilburt, "Vaccinating health care workers against influenza: the ethical and legal rationale for a mandate," *Am. J. Public Health*, vol. 101, no. 2, pp. 212-216, Feb. 2011.
- [20] A.C. Miller and D.W. Ross, "Mandated influenza vaccines and health care workers' autonomy," *Virtual Mentor*, vol. 12, no. 9, pp. 706-710, Sep. 2010.
- [21] E. Galanakis, A. Jansen, P.L. Lopalco and J. Giesecke, "Ethics of mandatory vaccination for healthcare workers," *Euro Surveill.*, vol. 18, no. 45, pp. 20627, Nov. 2013.
- [22] E.D. Pellegrino, "Toward a virtue-based normative ethics for the health professions," *Kennedy Inst. Ethics J.*, vol. 5, no. 3, pp. 253-277, Sep. 1995.
- [23] N. Cortes-Penfield, "Mandatory influenza vaccination for health care workers as the new standard of care: a matter of patient safety and

- nonmaleficent practice,” *Am. J. Public Health*, vol. 104, no. 11, pp. 2060-2065, Nov. 2014.
- [24] A. Dubov and C. Phung, “Nudges or mandates? The ethics of mandatory flu vaccination,” *Vaccine*, vol. 33, no. 22, pp. 2530-2535, May 2015.
- [25] H. C. Maltezou and G.A. Poland, “Vaccination policies for healthcare workers in Europe,” *Vaccine*, vol. 32, no. 38, pp. 4876-4880, Aug. 2014.
- [26] L.M. Lee, “Adding justice to the clinical and public health ethics arguments for mandatory seasonal influenza immunisation for healthcare workers,” *J. Med. Ethics*, vol. 41, no. 8, pp. 682-686, Aug. 2015.
- [27] H.C. Maltezou, S. Wicker, M. Borg, U. Heininger, V. Puro, M. Theodoridou, and G.A. Poland, “Vaccination policies for health-care workers in acute health-care facilities in Europe,” *Vaccine*, vol. 29, no. 51, pp. 9557-9562, Nov. 2011.
- [28] G.A. Poland and R.M. Jacobson, “The age-old struggle against the antivaccinationists,” *N. Engl. J. Med.*, vol. 364, no. 2, pp. 97-99, Jan. 2011.
- [29] A.E. Fiore, T.M. Uyeki, K. Broder, L. Finelli, G.L. Euler, J.A. Singleton, J.K. Iskander, P.M. Wortley, D.K. Shay, J.S. Bresee, N.J. Cox and Centers for Disease Control and Prevention (CDC), “Prevention and control of influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010,” *MMWR Recomm. Rep.*, vol. 59, no. RR-8, pp. 1-62, Aug. 2010.