Health Care Workers and Mandated Influenza Vaccinations Cortni Engler

Of all the debates that plague the health care system, one issue tends to stand out. The debate, rife with controversy and touching on personal beliefs, duties of care, individual freedoms, and the broader concept of collective responsibility poses the question: should healthcare workers be mandated to receive the influenza vaccine? Answering this question has proven to be a delicate balance between personal convictions and communal well-being. There are a multitude of reasons behind supporting a mandate for influenza vaccinations. One of these is that healthcare settings are highly susceptible to influenza transmission. In these environments, healthcare workers regularly come into close contact with vulnerable populations: the elderly, the young, the immunocompromised, and those with comorbidities. Further to this, many healthcare workers are governed by a code of ethics that ensures the health and safety of patients is of utmost priority. Within this ethical framework, healthcare workers are obligated to take measures to ensure safety and undertake a duty of care to do everything within their control to protect the health and safety of the patients they come into contact with directly or indirectly. One of the measures within a healthcare workers control is getting vaccinated against influenza; if the values of community-minded care, the protection of vulnerable populations, and the ethical obligations they are bound by don't motivate voluntary vaccination, then the implementation of mandated influenza vaccines becomes both necessary and justifiable.

There are a number of contributing factors to the spread of influenza in healthcare facilities that involve healthcare workers, one of which is the high patient volume seen in many of these facilities such as hospitals. A study on the 2017-2018 influenza season revealed:

The 2017-2018 influenza season in the US was marked by a high severity of illness, wide geographic spread, and prolonged duration. Rates of hospitalization in all age groups were the highest observed since seasonal influenza surveillance was instituted in 2005. This was associated with substantial increases in patient volumes in hospitals and hospital systems, which led to disruptions in flow, patient care, and staffing. (Harris et al.)

When there are high patient volumes, the likelihood of coming into contact with a carrier, whether asymptomatic or not, is increased. Increased volume leads to an increase in proximity

between patients, allowing for the airborne transmission of influenza viruses. It also increases the risk of contamination on common surfaces such as door handles and taps. With less distance between patients and high turnover, it is harder for healthcare workers to implement control procedures and ensure basic measures such as hand washing are adhered to. It is imperative that surfaces are cleaned and disinfected to help minimize the spread of influenza, and with high turnover it can be difficult for healthcare staff to follow stringent cleaning protocols, especially when turnover is coupled with an urgency to provide care to those waiting. This isn't just a problem with common surfaces, but with the personal protective equipment (PPE) used by healthcare workers as well. Sakaguchi et al. performed a study in which an influenza virus was deposited onto a rubber glove, an N95 respirator, a surgical mask, a gown, a coated wooden desk, and stainless steel. The samples were left for 1, 8, and 24 hours. They found that the infectivity of the influenza virus tested was maintained for 8 hours on all the materials, but that the rubber glove maintained infectivity for a full 24 hours, indicating a clear facilitation of influenza transmission in healthcare facilities.

It is not only the environments in which healthcare professionals work in that warrant being vaccinated against influenza, but the people they work with as well. Healthcare workers come into close contact with vulnerable populations, including those who are immunocompromised. Backer asserts that the greatest toll of influenza is on the elderly (those aged 65 and older) and those with underlying chronic illness, and that these vulnerable people are "precisely the population in our hospitals, intermediate care facilities, and long-term care facilities" (1144). While catching influenza may not be debilitating as a healthy adult, those who are vulnerable are at a higher risk for complications such as pneumonia, or even death. These patients have limited ability to enhance their immunity against influenza viruses, making reliance on 'herd-immunity' critical. Healthcare workers receiving the influenza vaccine can limit the potential for contact between these highly susceptible groups and the virus. Unfortunately, the data shows that despite being in close contact with those in the America's who are most vulnerable, a significant portion of healthcare workers are not getting vaccinated against influenza. A recent meta-analysis conducted by Fan et al. found that the overall vaccination rate amongst healthcare workers is 67.1%. This is a disappointing statistic considering influenza related deaths account for approximately 500,000 deaths annually worldwide and that "several comorbidities are known to increase the risk of lethal influenza virus infection. In addition,

43

pregnancy and age are known risk factors, with very young (<1 year of age) and elderly (>65 years of age) individuals being the most vulnerable populations" (Krammer et al.).

The concerning nature of low vaccination rates in healthcare workers extends beyond that of the environments they work in and the people they work with. It also poses an ethical concern as most professions within health care are governed by a code of ethics prioritizing patient safety. The American Nurses Association says in their Code of Ethics for Nurses that "the nurse's primary commitment is to the patient, whether an individual, family, group, community, or population" (5). Further to this, it states:

Nurses must examine the conflicts arising between their own personal and professional values, the values and interests of other who are also responsible for patient care and healthcare decisions, and perhaps even the values and interests of the patients themselves. Nurses address such conflicts in ways that ensure patient safety and that promote the patient's best interests while preserving the professional integrity of the nurse and supporting interprofessional collaboration. (American Nurses Association 5)

Formalized in code or not, healthcare workers have a significant ethical responsibility towards the safety of their patients. Russi and Baltimore introduce a study that found nearly 50% of healthcare workers didn't believe influenza was a threat to their own health and nearly 25% didn't believe it was a threat to those around them. Further, approximately 33% didn't believe the influenza vaccine would help protect those around them and approximately 20% did not believe it would protect themselves (222). Personal beliefs on the influenza vaccination aside, part of a healthcare workers ethical responsibility is to act in the best interests of their patients and to promote their health and safety – this means taking measure to ensure such safety and minimizing their exposure to risk. Backer states, "vaccination against influenza is currently advocated as part of a comprehensive approach to patient safety and health care associated infection" (1145). The influenza vaccination is not just an individual health choice, it is an integral part in protecting patients and preventing influenza. Because one-third of healthcare works in the Russi and Baltimore study did not believe that the influenza vaccination would protect them, it is important to educate nurses about the vaccine's efficacy, and examining this allows for a more comprehensive understanding of this complex issue.

"The vaccine does not always work; some recent studies suggest that its effectiveness may be closer to 40%–60% than to more optimistic (and commonly quoted) estimates" (Russi

44

and Baltimore 222). This lack of confidence in influenza vaccination efficacy rates underscores the debate in personal autonomy versus mandated vaccinations. The perceived inefficiency combined with conflicting scientific data poses the question: if there is no conclusive evidence supporting the vaccines efficacy, should the imposition of mandatory influenza vaccinations supersede individual rights and freedoms? Mah elaborates on this debate and asserts that in comparison to other public health measures, such as smoking bans, influenza vaccinations come with a tangible risk to the individual receiving it (193). When efficacy rates are shown to be significantly lower than previously demonstrated, the side effects the individual could potentially experience negate the benefits. The flaw in this perspective lies in the misconception that in order to benefit at-risk populations, the influenza vaccine needs to achieve 100% efficacy. It is imperative that health care workers recognize that even without absolute immunity, influenza vaccinations can mitigate the risk of influenza related complications and potential fatalities in vulnerable populations. Russi and Baltimore substantiate this when they contend:

The fact that it is not 100% effective and that we need to continue to study its impact upon patient populations should not dissuade us from communicating that vaccination is a relatively low-risk intervention that has a reasonable likelihood of enhancing the safety of both caregivers and patients. (223)

There are many factors that go into testing the efficacy of the influenza vaccination. Age, underlying comorbidities, influenza type, and the degree of strain matching are some of the variables that make it difficult to get a true estimation of the vaccine's efficacy. Further to this, the influenza virus is known for its ability to undergo mutations that make it difficult to get accurate strain matches. Despite these difficulties, the data on the influenza vaccine's efficacy show a positive impact on immunity, reduction of related illnesses, and reduction of fatalities. DiazGranados et al. found that vaccine efficacies were "65% against any strain, 78% against matched strains and 55% against not-matched strains."

It is crucial to recognize the significance that influenza vaccinations hold. They provide a level of immunity against potentially life-threatening illnesses that holds significant importance for those it aims to protect. Achieving a 100% efficacy level is not required in order to see substantial benefits. As evidenced by the data presented, the impact of the influenza vaccine is both significant and valuable to those whom are at risk and under the care of healthcare workers.

45

It should be no debate that vaccination is the most effective means to prevent influenza infection. The statistical data available, public health initiatives aimed at encouraging vaccinations, and a resounding agreement from the medical community indicates that the influenza vaccination plays a critical role in protecting both healthcare workers and the vulnerable populations they serve. Healthcare workers in susceptible environments and working with those most at-risk also have a moral and ethical obligation to safeguard their patients. It is evident by the low vaccination rates amongst healthcare workers that relying on the importance of personal protection and collective responsibility has not, up to this point, been effective. It stands to reason that mandating influenza vaccinations for healthcare workers is the next step in ensuring the ongoing health and well-being of those most vulnerable, and our society as a whole.

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