PAPER

Adding justice to the clinical and public health ethics arguments for mandatory seasonal influenza immunisation for healthcare workers

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The very first requirement in a hospital is that it should do the sick no harm.

Florence Nightingale

ABSTRACT

Ethical considerations from both the clinical and public health perspectives have been used to examine whether it is ethically permissible to mandate the seasonal influenza vaccine for healthcare workers (HCWs). Both frameworks have resulted in arguments for and against the requirement. Neither perspective resolves the question fully. By adding components of justice to the argument, I seek to provide a more fulsome ethical defence for requiring seasonal influenza immunisation for HCWs. Two critical components of a just society support requiring vaccination: fairness of opportunity and the obligation to follow democratically formulated rules. The fairness of opportunity is informed by Rawls’ two principles of justice. The obligation to follow democratically formulated rules allows us to focus simultaneously on freedom, plurality and solidarity. Justice requires equitable participation in and benefit from cooperative schemes to gain or profit socially as individuals and as a community. And to be just, HCW immunisation exemptions should be limited to medical contraindications only. In addition to the HCWs fiduciary duty to do what is best for the patient and the public health duty to protect the community with effective and minimally intrusive interventions, HCWs are members of a just society in which all members have an obligation to participate equitably in order to partake in the benefits of membership.

Both clinical ethics and public health ethics frameworks have been used to examine the ethical permissibility of mandating seasonal influenza vaccine for HCWs. Both frameworks have resulted in arguments for and against the requirement. On one hand, clinical ethics frameworks lend support for mandatory HCW immunisation based on the fiduciary duty that healthcare personnel have to patient well-being. On the other hand, infringement on HCW autonomy has been cited as a primary objection to requiring immunisation. Public health ethics frameworks have been used to justify mandatory programmes through support for the claim that protecting the community through HCW immunisation is fundamental to population health. Public health ethics frameworks also have been used to support the claim that there is no direct evidence that mandatory vaccination programmes prevent disease in patients, therefore should not be implemented.

Neither the clinical nor the public health ethics frameworks resolve the question fully. By adding components of justice to the argument, I seek to provide a more fulsome ethical defence for requiring seasonal influenza immunisation for HCWs. I begin with the foundational moral tenet that we have an obligation to protect the vulnerable. While this obligation has moral weight in everyday life, it is especially salient in the healthcare relationship. In this case we have an obligation to implement a comprehensive approach, especially requiring annual immunisation, to protect vulnerable patients, with immunisation providing the most effective transmission prevention.

How do we evaluate the ethical soundness of this comprehensive approach, especially requiring persons working in the healthcare milieu to be vaccinated?

ETHICAL CONSIDERATIONS FROM THE CLINICAL PERSPECTIVE

Clinical ethics prioritises the provider–patient interaction, focusing on the fiduciary duty of the provider to the patient. In the present scenario, the duty to keep medically vulnerable patients safe from becoming infected with influenza, which
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could be fatal to already ill patients even if mild in healthy HCWs, can be supported using ethical considerations from the clinical perspective. One of the most common approaches to ethical analysis in the clinical setting is a principle-based method. This approach grounds a provider’s ethical duty in four prima facie principles used in clinical ethics: respect for persons, beneficence, non-maleficence and justice. Respect for persons requires that individuals who are capable of considering their personal goals be allowed to act according to their interest, and that individuals with diminished ability to do so be protected. Applying respect for persons, one presumes that medically vulnerable, capable patients would choose not to acquire a life-threatening infection in their position of compromised health. The second principle, beneficence—providing benefits to others—requires doing what is best for the patient. Closely related is the third, non-maleficence—the obligation to do no harm—which clearly requires HCWs to avoid spreading a potentially fatal infection to patients. With influenza, an infectious respiratory condition transmitted through casual contact, all components of the comprehensive infection control approach are necessary to prevent transmission and avoid harm. Finally, justice, expressed in the clinical context as fair access to or allocation of resources, demands that patients who cannot mount an effective response to the influenza vaccine themselves be surrounded by other infection control resources (including immunised HCWs) to prevent transmission.

Clinical ethics considerations also have been used to reject support for requiring HCW immunisation. The principle of respect for persons has been used to defend HCWs’ right to refuse the seasonal influenza vaccine. This argument transposes the HCW into the ‘patient’ role, the vaccination programme into the ‘provider’ role and moves the principle of respect for persons from prima facie to primary. Rather than respect for persons sitting on equal terms with beneficence, non-maleficence and justice, it becomes the overarching force driving the argument against requiring HCWs’ vaccination.

While ethical considerations from the clinical perspective can begin to focus the ethical lens on required HCW influenza vaccination programmes, there are at least two important tensions left unresolved. The first tension is between the fiduciary duty and the autonomy of the HCW. This tension between whose rights—the patient’s or the HCWs—to honour in this case is often attributed to John Stuart Mill’s ‘harm principle’. The naïve interpretation of Mill’s harm principle is that one person’s autonomy ends only when it begins to cause harm to another. This limit to autonomy is complicated by the fiduciary responsibility in the clinical relationship and takes on special significance when one individual is a healthy HCW and the other is a medically fragile patient. A more robust reading of Mill reveals his acknowledgement that we do not live as autonomous islands, rather individuals may be ‘...rightfully compelled to bear his fair share in the common defence, or in any other joint work necessary to the interest of the society of which he enjoys the protection’ (p.15). Regardless of the HCW duty to the patient, all persons are responsible for bearing their part of the weight, so the greater good stays afloat.

A second issue left unresolved with the clinical ethics perspective is the failure of the clinician’s action to directly benefit the patient in the room. In the case of influenza immunisation, there is not a direct 1:1 relationship between a HCW taking the vaccination and resulting protection a particular patient. Seasonal influenza vaccination is a population-level intervention, not an individual-level intervention. The influenza vaccine is not 100% effective for individuals; its protection varies annually, with recent estimates between 60% and 75%. This means that the benefits of an influenza vaccination programme accrue to individuals only when the population is protected. For an individual to be protected fully from seasonal flu, both she and those around her must be immunised. This concept, called herd immunity, requires all eligible patients and HCWs to be immunised to achieve the desired goal of protecting vulnerable patients for whom a case of influenza could be deadly.

During the influenza season, three groups simultaneously affect each other: vulnerable patients, HCWs, and the wider community (figure 1). Persons from each group move (with varying frequency) from one group to another. Vulnerable patients interact with HCWs who live in and interact with their communities. Each group consists of persons who are immune to, ill with, and vulnerable to influenza. Those who are immune become so either through immunisation or through recovering from seasonal influenza infection. Those who are vulnerable will include unimmunised and persons for whom the immunisation, though taken, was ineffective. Among vulnerable patients, even with 100% uptake in medically eligible patients, the vaccine effectiveness will be lower than expected in a healthy population due to patients’ compromised ability to mount an effective immune response. This will leave a greater proportion vulnerable to influenza infection and severe morbidity and mortality. Vaccinated HCWs form a protective barrier around these vulnerable patients when 100% of all medically able HCWs are immunised as part of a comprehensive prevention programme. Even when the vaccine is less than 100% effective, keeping the infection out of the HCW pool through herd immunity will minimise or eliminate exposure to the infection even among those for whom the vaccine’s effect is attenuated or absent.

Herd immunity has been characterised as a public good, once coverage is high enough to reduce the reproductive rate of the infection below a critical level, benefits accrue to all individuals in a population, vaccinated or not. Complete vaccination (ie, 100% of medically eligible workers) will leave on average 70% of HCWs protected and allow them to serve as a protective barrier around the 30% of healthy HCWs as well as the higher proportion of vulnerable patients for whom the vaccine did not work. Vaccination coverage in the general public will be far below 100%, leaving many vulnerable and ill persons to spread infection to the 30% of vaccinated HCWs for whom the vaccination did not work. Herd immunity does its work when vulnerable HCWs in the 30% avoid exposure due to the protective ring of vaccinated HCWs who prevent the infection from reaching them. If a vulnerable HCW is exposed and brings the infection back to the healthcare facility, the protective ring can prevent the infection from reaching vulnerable patients. During the influenza season, facilities risk harming vulnerable patients should unvaccinated community members be allowed to ‘jump’ the protective ring of immune HCWs surrounding vulnerable patients. Requiring visitors to be immune (via high community vaccination) or limiting visits of unvaccinated persons during peak influenza season could remedy this risk.

ETHICAL CONSIDERATIONS FROM THE PUBLIC HEALTH PERSPECTIVE

The role of herd immunity has motivated some scholars to examine the ethics of mandatory HCW influenza vaccination programmes through the public health ethics lens. Using a model that focuses on the community or population as the ‘patient’, ethical considerations from the public health perspective obligate us to the health of the community in addition to concern about the individual. While there is not a single,
agreed-upon framework in public health ethics, numerous ethical principles converge to drive analyses. Two important ethical constructs included in public health frameworks are least restrictive means and evidence-based action. Least restrictive means requires that public health interventions be the least intrusive on individual autonomy as possible to meet the goal. Although required immunisation is more restrictive than a voluntary approach, there is a great deal of evidence that, even with active campaigns, voluntary uptake of annual influenza vaccination remains too low to affect herd immunity. Requiring HCWs to be immunised brings rates up to nearly 100%.

In concert with minimal restriction on autonomy, public health action must be evidence-based; the intervention must work. If there is an absence of evidence of effectiveness, the precautionary principle allows implementation as long as there is reason to believe the intervention works and little or no harm is caused. Measuring effectiveness of mandatory immunisation programmes can include both process and outcome measures. Process measures, such as whether requiring vaccination yields higher herd immunity compared with vigorous encouragement, support implementation. Outcome measures, such as whether it reduces influenza-related morbidity and mortality, are challenging to obtain in part due to complexities of finding appropriate comparison groups. Several well-designed studies completed to date show that high levels of immunisation among HCWs reduce mortality, and more recently, reduce morbidity.

In addition to the primary ethical constructs of least restrictive means and evidence-based action, other important constructs in public health ethics frameworks include health equity, community engagement, and reciprocity. Health equity, including protection of vulnerable persons, clearly supports an effective intervention to prevent influenza among medically vulnerable patients. Community engagement, a cornerstone of public health practice, is important in any effort that can be viewed as impinging on autonomy. Many communities have an interest in influenza prevention, including patients, their loved ones, HCWs and institutions; all should be engaged. Finally, the principle of reciprocity plays a role in public health ethics frameworks. In short, this principle requires that when asked to act in the interest of the greater good, this act or action should be facilitated. This means that institutions requiring HCWs to be immunised must make vaccines accessible and easy to obtain for all employees.

Both clinical and public health ethical frameworks have been used to make judgements about whether mandating annual influenza vaccine is fair and just. Each adds partial clarity to the analysis. However, both of these approaches fail to resolve the issue satisfactorily. The lack of resolution results in large part because the problem has been inadequately framed as either a struggle between autonomy and beneficence in the clinical ethics framework or as equivocal evidence in the public health framework. Both frameworks fail to fully address our obligations, as members of a democratic society, to the greater good.

**ETHICAL CONSIDERATIONS FROM JUSTICE THEORY**

To address the gaps left by clinical and public health ethics perspectives, I suggest that we add a third lens—justice—through which we can focus the ethics of requiring seasonal influenza immunisation of HCWs. Justice allows for individual rights and freedom, but importantly, it limits autonomy when it harms or impinges upon that of others. Justice as an ethical principle determines how we as a society distribute burdens and benefits. Various theorists have conceptualised the just distribution of such burdens and benefits in a different ways, including fairness, rights to ownership and capabilities. While justice is an important consideration from both the clinical and public health perspectives, I apply justice here as a broader theory of fairness and use two critical components of a just society to support requiring vaccination: fairness of opportunity and the obligation to follow democratically formulated rules.

Fairness of opportunity is informed by the work of John Rawls. Rawls said, “Justice is the first virtue of social institutions, as truth is of systems of thought” (p.3). Rawls discussed...
justice as fairness in a democratic society, which he described as ‘...a fair system of social cooperation between citizens regarded as free and equal...’ (p.39).26 In his first principle of justice Rawls stated that “[e]ach person has the same indefeasible claim to a fully adequate scheme of equal basic liberties, which scheme is compatible with the same scheme of liberties for all’ (p.42).26 He applied this principle to what he defines as basic rights consisting primarily of political liberty, which includes participation in the political process and a short list of essential rights and freedoms. Rawls described a second principle addressing inequalities, noting the primacy of fair opportunity to gain access to these basic liberties. Rawls’ basic liberties and essential freedoms exclude health, however, several contemporary bioethicists have argued eloquently that health is a basic dimension of human flourishing and ought to be considered a basic liberty.27 28

Our obligation to follow democratically formulated rules further defines justice as applied here. It allows us to focus simultaneously on freedom—bound by Rawls’ first principle—plurality and solidarity. It is the recognition that, despite our differences, we have similar basic interests and together we can do what we cannot do alone. Justice as defined here is the equitable participation in and benefit from cooperative schemes to gain or profit socially as individuals and as a community. For example, most of us do not remove and manage the trash that we produce; we do not purchase our own landfill, build our own recycling plant and buy our own truck to transport our waste there. Instead, we pool our money with our neighbours and purchase a single system for far less than we would each pay if we were to build them on our own. We each pay in an amount, regardless of whether or how much trash each of us creates, to share the benefits of a clean, pest-free neighbourhood. The community also benefits by consolidating the land and energy used to deal with our waste. Individuals benefit. Communities benefit. Similarly, we pool our resources to deliver better education, build roads and infrastructure, and produce and distribute food.

Several principles are implicit in such cooperative efforts. The first, equity, is different than the previously described concept of ‘health equity’. Here, we are talking about equity with an eye towards Rawls’ original position and veil of ignorance.23 We ask the question, how would I like to be treated if I were you? What rules would I want in place if I were unsure of who I would end up being in this society—the top competitor or the most vulnerable person? Making decisions from this position requires one to experience empathy—knowing how to put oneself in another’s shoes. The question becomes, ‘Would I support an immunisation requirement if I could not know whether I would end up as the vulnerable ill person, or the parent of a vulnerable child, or the HCW?’

The second principle essential for cooperative schemes is fairness. Fairness in this sense dictates that there is a role for every party and that each is responsible for his or her part. The whole is greater than the sum of its parts, yielding more benefit to each individual when all persons participate. This, as outlined above, is how herd immunity works. Individuals are best protected when all other individuals are also protected.

The third and closely related principle is the obligation to follow the law. In a just and democratically organised society, there exists an obligation to follow laws.29 30 This principle supports agreed upon (legislated) requirements that create a safe and productive society. Allowing an individual discretion to do only what he prefers nullifies the state’s ability to protect its citizens.

An illustrative analogy to requiring HCW influenza vaccination emerges from the fair and just requirement to stop at a four-way intersection. The four-way stop sign in an intersection is a great equaliser. All persons must stop regardless of demographic characteristics, social standing, age, profession, income or any other difference. Individuals have varying motivations for stopping—to ensure they do not hit anyone else, to keep from getting a traffic fine, to keep themselves and their passengers safe, among others. It is only fair that we all stop to keep everyone safe. Regardless of their reasons, each person stops in order to keep everyone safe. In actuality, only three drivers must stop to keep everyone safe. If, on rare occasions, a driver fails to stop—whether it is caused by brake failure, being pushed into the intersection from behind, sliding on an icy road or driving an ambulance carrying a patient in urgent need of medical care—everyone would remain safe if the other three drivers stopped as expected, allowing the fourth driver to pass through. This cooperative scheme works because we all agree that stopping is required; if one of the other three drivers approaching the intersection feels he deserves special (unfair) consideration and does not stop, the four-way stop scheme fails and both that driver and the one experiencing an emergency risk being hurt or dying.

The system of the four-way stop works because no matter how inconvenient for us, we stop. We commit to the greater good for our own benefit—to avoid harming others and ourselves, even when it imposes upon us. This is herd immunity—each individual is protected only when all others participate, even though it might impose upon us. It is also fair and just—all drivers stop because they wear a veil of ignorance, unsure of whether they at some point will be the one whose brakes fail or who needs an ambulance ride to receive lifesaving medical care.

The implications of applying the justice lens to the argument for requiring all HCWs rests on the fact that protection for self depends on full participation of all; maximisation of our own protection from influenza is achieved by providing protection to others. The benefits of cooperation are synergistic and far exceed the additive effects of individual actions. Justice also dictates that exemptions to immunisations in a required scheme should be rare and challenging to acquire. To be fair and equitable in the just sense, exemptions should be limited to medical contraindications only. In addition to distributing the small burden of immunisation fairly, allowing no exemptions (other than medically necessary) promotes solidarity.30 31 Data show that individuals’ perceived obligation to bear burdens is affected by their belief that others also must bear them.12 Participation increases when a mandatory scheme is viewed as fair; once the sense of fairness begins to erode, participation declines.

**ADDITIVE EFFECT OF CLINICAL ETHICS, PUBLIC HEALTH ETHICS AND JUSTICE**

Examining the question of whether we ought to require HCWs to be immunised for seasonal influenza using the three lenses of clinical ethics, public health ethics and justice brings added clarity to support for such programmes. From the clinical ethics perspective, the focus on beneficence and fiduciary duty to the patient provides a starting point for requiring HCW participation in a comprehensive approach to protecting vulnerable patients. The addition of a public health ethics lens brings greater focus onto the community’s obligation to create herd immunity as a protective barrier for its most vulnerable. Finally, the addition of the justice lens—through our maximising our own health by maximising the health of others and through our obligation to participate in cooperative schemes—further supports a comprehensive programme that includes immunisation with medical exceptions only.

OBJECTIONS
Once a system resolves the costs (both time and financial) related to reciprocity and allows exemptions only on the basis of bona fide medical contraindications to maximise herd immunity, the remaining primary objection to requiring HCW immunisation is a libertarian interpretation of autonomy. An ‘autonomy at all costs’ interpretation might hold sway in situations where one’s action (or inaction) poses no risk of harm to others. It is less convincing in situations where one’s action is required to bring about benefit to others. Such an interpretation holds no sway when one’s action presents harm to others. HCW influenza immunisation is, at minimum, required to bring about benefit to others, and in certain communities is required to prevent direct harm to others. Benefitting patients and preventing harm lies at the heart of the fiduciary relationship. Participating in the common good has long been considered a responsibility of all persons who benefit from communal living—many contemporary writers including Rawls, Jennings, O’Neill and Dawson make a clear case for considering individual behaviour as it relates to the good of others, although from quite varied philosophical traditions. Protecting others, especially the vulnerable, is at the core of just societies. A libertarian interpretation of autonomy is compatible only in situations where a HCW’s refusal to take the influenza vaccine poses no risk of harm to others, a situation that exists only in the absence of influenza.

CONCLUSION
The cumulative effect of adding justice to clinical and public health ethical perspectives brings into clear focus an HCW’s obligation to take the seasonal influenza immunisation. In addition to the HCW’s fiduciary duty to do what is best for the patient and the public health duty to protect the community with an effective and minimally intrusive interventions, HCWs are members of a just society in which all members have an obligation to participate equitably in order to partake in the benefits of membership.

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