

HPV and the Ethics of CDC's Vaccination Requirements for Immigrants

ABSTRACT. The United States may justifiably exclude unvaccinated aliens, perhaps even under the assumption of Open Borders, according to which people should generally be permitted to settle in countries of their choosing. Furthermore, there are good reasons to endorse the Centers for Disease Control and Prevention's (CDC's) current vaccination-related exclusion criteria, which were last revised in 2009. I frame my discussion around CDC's 2008 decision to permit immigrant girls and women to be excluded if they were not vaccinated against human papillomavirus (HPV)—a decision that was quickly reversed and that led to the 2009 revisions to CDC's vaccination-related immigrant exclusion criteria.

INTRODUCTION

Joseph Carens' groundbreaking article on immigration ethics ("Aliens and Citizens: The Case for Open Borders") begins with the observation that "[b]orders have guards and the guards have guns" (1987, 251). I begin my article with a similar observation: border guards have *syringes* (or at least their associates do). Aliens who do not want to be turned away by a border guard's gun must often agree to be injected with vaccines. While Carens challenges the popular consensus that states have an expansive moral right to forcibly restrict migration, my focus is narrower. I will evaluate the claim that states have an expansive moral right to require migrants to become vaccinated. In particular, I will examine and ultimately defend the criteria that the US Centers for Disease Control and Prevention (CDC) use to determine which vaccines may be required of migrants to the US. I frame my discussion around CDC's decision to require immigrant girls and women to receive the vaccine against human papillomavirus (HPV)—a decision that it quickly reversed and that led to significant changes in CDC vaccination-related exclusion criteria.

There are political, psychological and historical reasons to be skeptical about popular support for the coercive vaccination of aliens. Aliens have little or no political power, and the rights of (potential) immigrants—like questions about immigration justice, more generally—do not feature prominently in popular political discussions about exclusion criteria. Also, insights from psychology give us reason to think that citizens are inclined to endorse unreasonable ideas about the risks that immigrants pose to public health. For example, Mary Douglas and others have shown that popular ideas about purity and health are partially constituted by the ideas that bind together the political community (2002). We have a psychological propensity to believe that health is linked to living like our people, and that disease is linked to living like a foreigner. This psychological propensity may inform public health policy, including vaccination policies for immigrants. Finally, like many other countries, the United States has often blamed diseases upon the presence of “others” within the community. For example, David Oshinsky writes:

In the 1840s, the Irish were accused of bringing cholera to New York City; fifty years later, the Jews were suspected of spreading tuberculosis, also known as “the tailor’s disease.” Each time an epidemic appeared, native New Yorkers looked reflexively toward the immigrant slums. (2006, 20)

This history is not yet history. In the past year, prominent conservative politicians and political commentators worried that the thousands of unaccompanied minors at the southern US border portend a public health crisis (Bouie 2014).

The popular tendency to blame disease upon “dirty” foreigners is not generally supported by the evidence. For example, the most serious outbreaks of polio “occur[red] in the advanced ‘sanitary’ nations of the West,” and were often concentrated within areas of those countries that had “the lowest population density and the best sanitary conditions” (Oshinsky 2006, 9, 22). Likewise, there is little reason to think that the Central American children who have arrived at the US/Mexico border are going to cause major outbreaks of “swine flu, dengue fever, Ebola virus, and tuberculosis,” as US Representative Phil Gingrey claimed in a letter he wrote to CDC (Gingrey 2014; Fox 2014). Indeed, many of these children come from countries that have higher vaccination rates than the US has been able to achieve.

These facts about politics, psychology, and history are good reasons to refuse to unreflectively endorse existing alien vaccination policies. In

particular, we ought to evaluate the criteria that CDC uses to determine whether an alien’s failure to receive a particular vaccine may be a reason to refuse her request for a visa or a green card. In the next section (2), I explain the current (post-2009) CDC criteria, and I describe how these criteria arose from debates about whether immigrants could be excluded if they had not received the HPV vaccine. Then, I offer a general defense of the 2009 criteria (section 3). I identify weighty moral reasons to endorse these criteria, and I argue that the 2009 criteria are more justified than the criteria they replaced (i.e. the criteria that led to the short-lived HPV vaccination requirement for immigrant girls and women). I extend my defense of the 2009 CDC criteria by arguing that they may be justified even under the assumption of Open Borders, according to which aliens have an expansive right to settle where they would like (section 4). Finally, I identify conditions under which the current CDC criteria may support HPV vaccination requirements for aliens seeking entry or legal permanent resident status (section 5).

2. HPV AND THE 2009 CDC CRITERIA

Under section 212(a)(1)(A)(ii) of the Immigration and Nationality Act (INA) (8 U.S.C. 1182(a)(1)(A)(ii)), noncitizens who seek either to enter the United States or to receive legal permanent status may be denied if they have not been vaccinated “against vaccine-preventable diseases recommended by the Advisory Committee for Immunization Practices.”¹ The Advisory Committee for Immunization Practices (ACIP) is an independent advisory board for CDC (CDC 2014b). It provides guidance for vaccination policies for children and adults, including information about dosage and contraindications. For example, both the American Academy of Pediatricians and the American Academy of Family Physicians follow ACIP vaccination schedules (AAP 2014; AAFP 2014). In accordance with the Immigration and Nationality Act, CDC relies upon ACIP recommendations when it publishes the “Technical Instructions” for the medical examinations performed upon aliens by the US Citizenship and Immigration Services (USCIS). The list of vaccines on USCIS Form I-693, which must be completed to receive a visa or green card, is populated from the list of vaccines that ACIP recommends (CDC 2013b; USCIS 2013a).

Until 2009, CDC allowed potential immigrants to be excluded if they had failed to receive any of the vaccines that ACIP recommended. (I will sometimes use the shorthand of “vaccine requirement,” but I mean only that USCIS has discretion to exclude people who have not received the

“required” vaccine.) That is, USCIS was permitted to exclude an alien if ACIP thought that it would be good for US citizens to receive a vaccine that the alien had not received. This policy was in effect in 2007 when ACIP began recommending that girls and young women in the United States receive the Gardasil vaccine, which protects against four strains of HPV (CDC 2007). This quadrivalent HPV vaccine (sometimes called HPV4), protects against HPV-16 and -18, which cause 70% of cervical cancers and most cancers of the vulva, anus, and penis (De Vuyst et al. 2009). HPV4 also protects against HPV-6 and -11, which cause 90% of genital warts. There is no reason to think that the members of ACIP intended to change immigration policy when they added the Gardasil vaccine to their list. The mission of ACIP is to recommend vaccines for US citizens. However, the Immigration and Nationality Act turned a new ACIP recommendation for citizens into a new requirement for immigrants. Beginning in July 2008, women and girls between the ages of 11 and 26 could have been excluded from consideration for US visas and green cards if they had not received the HPV vaccine.

By 2007, HPV vaccination was already contentious in domestic US politics. For example, people from diverse constituencies were resisting efforts to require HPV vaccination for public school attendance, based on both unjustified worries about vaccine safety and justified objections to the unorthodox influence of pharmaceutical companies on political decision-making processes surrounding school vaccination requirements (Udesky 2007; Schwartz et al. 2007). The fact that the USCIS HPV vaccination requirements would apply only to immigrant *girls* and *women* triggered a new objection to HPV mandates: some people claimed that CDC vaccination exclusion criteria were unjustly discriminatory against women and girls (see e.g. Canales 2010; ACOG 2009). Indeed, the new HPV vaccination requirement was clearly discriminatory on its face. And there was little justification for making this gender-based distinction in vaccination-related exclusion criteria, since both men and women can carry and transmit HPV, and both men and women can suffer from HPV-related diseases (though HPV-related diseases are more common among women).² CDC could have responded by expanding its HPV vaccination requirement to include boys and men, as some suggested could be done (Chen 2012).³ Indeed, in 2011 ACIP started recommending HPV vaccination for boys and men (CDC 2011).⁴ Had the law not changed in the interim, this newer ACIP recommendation would have made a failure to be vaccinated against HPV a reason to exclude both girls/women *and* boys/men who wanted

visas or green cards, and therefore would have avoided worries about unjust gender discrimination.

But CDC went a different way. In November 2009, CDC announced new criteria for determining which of the ACIP-recommended vaccinations could be required of immigrants (CDC 2009). These are the criteria (the bullet points are in the original):

- The vaccine must be age-appropriate for the immigrant applicant.
- The vaccine must protect against a disease that has the potential to cause an outbreak.
- The vaccine must protect against a disease that has been eliminated or is in the process of being eliminated in the United States (CDC 2012a; CDC 2014b).

This set of criteria represents a significant departure from previous policy, both in its *form* and *substance*.

The previous policy had the form of a simple conditional: if a vaccine was recommended by ACIP, then it could be required by USCIS. But the new policy identifies a set of three criteria. As I understand them, these criteria are meant to be individually necessary and jointly sufficient for USCIS to require a vaccine. On my reading, if an ACIP-recommended vaccine satisfies all three of these criteria, then a failure to receive that vaccine may be a reason for exclusion. But, if an ACIP-recommended vaccine does not meet all of these criteria, then USCIS will not be able to use an immigrant's failure to receive that vaccine as a reason to deny that immigrant a visa or a green card.⁵

The changes to the substance of CDC's vaccine exclusion criteria are more interesting than the changes to its form. In particular, the new criteria inject multiple relevant ethical considerations into the text of vaccination-related exclusion policy. Before 2009, the justification for CDC's policy was not well articulated. While it seems likely that the legislators and government officials who created previous policy were motivated by a broad set of commitments, these commitments were not explicit in the law. Instead, the law had the unfortunate veneer of coercive paternalism, since it permitted USCIS to require immigrants to receive any of the vaccines that ACIP recommended for US citizens. But paternalism cannot be the justification (or at least the best justification) of immigrant vaccination policy. The mere fact that something is *good* for a citizen is insufficient reason to require it for immigrants. For example, health authorities have sometimes recommended a vegan diet and regular orgasms, but I assume

that USCIS should not be permitted to exclude potential immigrants merely because they eat cheese or practice unqualified celibacy.

The mere fact that the 2009 criteria are explicit about the moral reasons for vaccination-related exclusion criteria is an improvement over the previous policy. But, of course, the real question is whether this set of three criteria is justified. I think that it is. In the next section, I argue that states may permissibly exclude aliens who have not received vaccines that meet this set of criteria. But in the remainder of this section I show that each of these three criteria points towards moral considerations that are relevant to decisions about whether a vaccine may be required of migrants. These reasons are efficacy, harm prevention, and fairness.

Efficacy is the primary moral reason for the first criterion, which mandates that required vaccines be age appropriate. Some vaccines provide protection only to people in certain age ranges. For example, ACIP now says that HPV vaccines are age appropriate for boys and girls between 11 or 12 and 26 years of age. This is because HPV vaccines have proven effective for people in that age range. Children younger than 11 are very unlikely to have been previously exposed to HPV, while almost everyone over the age of 26 has already been exposed to HPV (CDC 2012b). It makes good medical and moral sense to require vaccines only for people who are likely to develop individual immunity from that vaccine.⁶

The second criterion limits the list of vaccines that may be required of aliens to those that protect against diseases that can cause outbreaks. This criterion may (partially) express a community's claim to a right to protect its members from serious harms. The focus on the possibility of an "outbreak" is telling, since outbreaks cause significant harms or, to use CDC's definition, outbreaks cause "the occurrence of more cases of disease than could be anticipated in a given area or among a specific group of people over a particular period of time" (CDC 2009, 58634 fn1). If a disease could not contribute to an outbreak, then a vaccine against that disease could not help the community to prevent additional harms to itself. And, therefore, a commitment to protect the community from serious harms would not count in favor of requiring immigrants to receive that vaccine.

The third criterion states that the vaccines required of aliens must protect against diseases that have been eradicated or are in the process of being eradicated. I think that this criterion may express a community's claim to two kinds of rights: a right to protect the community from serious harms and a right to ensure that members of the community make a fair

contribution to public goods. On one hand, the third criterion (like the second criterion) may express a community's right to prevent outbreaks. Consider that for some diseases, herd immunity requires vaccination rates higher than 90% or 95% (Fine 1993; Meissner, Strebel, and Orenstein 2004). So, even small numbers of unvaccinated immigrants may undermine the community's protection and make outbreaks more likely. On the other hand, the third criterion may also express a community's claim to a right to exclude free-riders, and to ensure a fair distribution of the costs of public goods (Viens, Bensimon, and Upshur 2009; Dawson 2007; Navin 2013). Unvaccinated immigrants may benefit from herd immunity without contributing to it. This sort of free-riding on herd immunity may be unfair—and subject to state coercion—even when it does not undermine herd immunity (and is not harmful in itself).⁷

3. JUSTIFYING THE 2009 CDC CRITERIA

There are weighty moral reasons to embrace all three of the 2009 CDC criteria: the community has a right to use effective measures to prevent serious harms to its members and to enforce a fair distribution of the costs of valuable social goods. But the fact that there are weighty moral reasons to support the 2009 CDC criteria is not sufficient to justify these criteria, since there may be even weightier moral reasons to reject these criteria. In this section, I introduce two reasons that may seem to defeat the moral case for the 2009 CDC criteria: informed consent and immigration justice.

First, someone could object to all forms of coercive vaccination—including vaccination-related exclusion criteria—on the grounds that coercive vaccination is always inconsistent with the bioethical ideal of informed consent and with a human right to be free from coercive medical treatment. For example, critics of *domestic* vaccination policies often invoke the principle of informed consent; they argue that this principle always grants citizens a right to refuse vaccines (see e.g. Fisher 1997). Someone might respond that immigrants are not entitled to be protected by US laws that require informed consent. But even if this were true (and I doubt very much that it is), aliens are clearly entitled to their human rights. And there is a human right to be free from nonconsensual medical treatment, a right that some have invoked to criticize alien vaccination requirements.⁸ For example, Sheyn argues that requiring HPV vaccination of immigrant girls and women would have violated their human right to be free from nonconsensual medical treatment (2009). However, Sheyn's objection generalizes, and may be directed against all forms of coercive

vaccination. Requiring vaccines against measles and rubella is just as nonconsensual as requiring vaccines against HPV. So, all vaccination-related acts of immigrant exclusion may seem to be human rights violations.

In response, I think that coercive vaccination is not unjust, *per se*, even if it seems to be inconsistent with the ideal of informed consent or with the human right to be free from nonconsensual medical treatment. This is because vaccination is not merely a personal medical treatment, but is also a means by which the state may (1) prevent people from harming others and (2) ensure that people make fair contributions to the public good of herd immunity. Jessica Flanigan (following Onora O’Neill) has recently argued that “the principle of informed consent does not go so far as to justify harming others with one’s medical choices” (Flanigan 2014, 17; O’Neill 2004). I would add that the principle of informed consent also does not go so far as to justify free-riding on public goods, like herd immunity. I agree, of course, that the moral rights of potential disease victims (which include unvaccinated persons) ought to feature prominently in our thinking about public health policy. But the fact that (potential) disease *victims* are also often disease *vectors* means that we must respond to the other-regarding aspects of vaccination choices when we deliberate about coercive vaccination (Battin et al. 2009).⁹ While the dual role of contagious persons (as victims and vectors) does not by itself justify coercive vaccination, it means that our commitment to informed consent (and to freedom from nonconsensual treatment) is insufficient to make coercive vaccination is unjust. While I have not said enough here to resolve questions about the permissibility of coercive vaccination, I will take for granted that an adequate defense of coercive vaccination can sometimes be made.¹⁰

A second worry is more pressing for the purposes of this paper: it may seem unjust to impose vaccination requirements on immigrants if the same requirements are not also imposed on citizens. The United States does not revoke the citizenship of domestic vaccine refusers, but it may deny entry and permanent residence to aliens who refuse vaccines. This unequal treatment of citizens and immigrants may seem unjust, even if coercive vaccination is sometimes justified.¹¹ I take up this worry in the next section, under the banner of immigration justice.

4. TWO CONCEPTIONS OF IMMIGRATION JUSTICE

Whether the 2009 CDC criteria satisfy the demands of immigration justice depends upon what immigration justice demands. But, of course,

there are deep disagreements about what immigration justice demands, and I cannot hope to resolve those disagreements in this paper. Instead, I will argue that the 2009 CDC criteria may be justified from the point of view of both of the two major conceptions of immigration justice. I will also argue that the introduction of the 2009 CDC criteria was an instance of moral progress from the point of view of both of the major conceptions of immigration justice.

More than anyone else, Joseph Carens has set the stage for recent Anglo–American academic debates about the ethics of immigration. Accordingly, I will follow Carens by dividing conceptions of immigration justice into two major categories: the “conventional assumption” and “Open Borders.”¹² According to the conventional assumption, “states have a moral right to exercise considerable discretionary control over entry and settlement” (Carens 2013, 173). On this view, human rights and a minimal humanitarian concern may place some restrictions on immigration policy, but states generally have wide discretion to decide who can enter and remain within their borders. This may be for a number of reasons, including commitments to cultural preservation, national self-determination, and economic protectionism.

In contrast, according to Open Borders, “borders should generally be open and people should normally be free to leave their country of origin and settle in another” (Carens 2013, 225). This may be for a number of reasons, including commitments to cosmopolitan egalitarianism, libertarianism, or Utilitarianism. Advocates of Open Borders may admit of some restrictions on immigration, but these must overcome the strong presumption that people have the right to travel and settle where they would like. Of course, academic debates about immigration justice usually involve more fine-grained distinctions than the one between the conventional view and Open Borders (in addition to a variety of justifications for various positions), but I hope that this rough divide will suffice for my purposes.

Under the conventional assumption, immigration restrictions may be justified if they promote a legitimate state interest and do not violate human rights or minimal humanitarian commitments. Accordingly, the conventional assumption offers firm support to vaccination-related exclusion criteria, since vaccination-related exclusion criteria may promote legitimate state interests. Even the CDC’s pre-2009 criteria may seem to be justified under the conventional assumption, since a state has an interest in having a healthy population, and since the pre-

2009 vaccine exclusion criteria allowed USCIS to exclude aliens who had not received the vaccines that ACIP had recommended for citizens. Importantly, the conventional assumption places some limits on exclusion criteria, and the pre-2009 CDC criteria may have violated those limits. In particular, the conventional assumption requires states to respect the human rights and the basic needs of potential migrants, even though the conventional assumption does not require states to otherwise grant equal (or any) weight to the rights and interests of potential migrants. For example, it is inconsistent with the conventional assumption for a state to require immigrants to be subjected to medical treatment or experimentation, since there is a human right to be free from non-consensual medical treatment and experimentation. Furthermore, the conventional assumption prohibits racist or sexist immigration policies, and it requires societies to prioritize admissions for refugees, i.e. people who have nowhere else to go. Even though the pre-2009 criteria may seem to be justifiable, these moral side-constraints may motivate two kinds of objections to these earlier criteria. First, vaccination-related exclusion criteria would be unjust if they violated a human right to be free from nonconsensual medical treatment. But we can block this objection since (as I argued earlier) vaccination is not a personal medical treatment. Second, vaccination-related exclusion criteria might be unjustly discriminatory if they were applied only to members of a particular gender, race, nationality, etc. In particular, it may have been unjustly discriminatory for USCIS to require only girls and women to receive the HPV vaccine. It follows that the CDC's revocation of its gender-specific HPV vaccination requirements was an instance of moral progress from the point of view of the conventional assumption about immigration justice.

The conventional assumption tells in favor of the CDC's 2009 criteria. A state has a legitimate interest in using efficacious means to protect its members from serious harms and to fairly distribute the burdens of providing valuable public goods. These are weighty state interests. We might wonder, however, whether the 2009 CDC criteria will satisfy the conventional assumption's moral side-constraints. For example, the 2009 criteria do not explicitly prohibit race- or gender-specific vaccine exclusion criteria. But perhaps we could protect against this worry by observing that discriminatory vaccination requirements would not be *unjustly* discriminatory if they helped to protect the community, e.g. by ensuring that people who were much more likely to become victims and vectors were vaccinated. In this case, forms of discrimination that would

otherwise be unjust might be permitted. A fuller discussion of permissible discriminatory coercion in the name of public health is, unfortunately, beyond the scope of this paper. So, let's move on to discuss whether CDC's vaccination-related exclusion criteria could be justified under the assumption of Open Borders.

According to the idea of Open Borders, we cannot justify immigration restrictions merely by appealing to the interests of the receiving country (Carens 2013, 225). Instead, states must be able to justify immigration restrictions impartially. They must be able to show that the reasons for immigration restrictions are sufficiently weighty to defeat potential immigrants' interests in their freedom of movement, equal opportunity, and socio-political equality (Carens 2013, 227–28). The mere fact that a vaccine would be good for immigrants is insufficient reason to keep out aliens who refuse to become vaccinated. So, it seems clear that the pre-2009 CDC criteria will not be justified under the assumption of Open Borders. Of course, the state has an interest in having the healthiest possible population, but this consideration seems unlikely to be weighty enough to defeat potential immigrants' interests in the various freedoms and opportunities that immigration would allow them to enjoy. Furthermore, people who defend Open Borders because of their commitment to eradicating various forms of global inequality (including inequalities of health outcomes) may have weighty reasons to admit unvaccinated aliens. If unvaccinated migrants from very poor societies become ill, they are likely to receive better medical treatment in the US than they would have received in their country of origin.¹³

I think CDC's 2009 criteria are likely to be justified under the assumption of Open Borders. Even under Open Borders, states may restrict the freedom of movement of unvaccinated aliens—and may undermine their equality of opportunity and socio-political equality—in the name of protecting the community from disease outbreaks (Carens 2013, 276–77). Here, CDC's second criterion is apt. It requires that a vaccine protect against a disease that may cause outbreaks. I think it is also consistent with Open Borders for states to exclude people who refuse to make fair contributions to public goods. A potential immigrant's rights to freedom of movement, equal opportunity and socio-political equality do not entitle her to free-ride upon public goods. To make the point more abstractly: a person's pro tanto right to participate in a particular cooperative activity may be defeated if she has an intention not to play by the fair rules that govern that cooperative activity. (You don't have to let a committed cheater play in your card game, even if you ordinarily should let in new players.)

An advocate of Open Borders may object that what is unjustified about the CDC's 2009 vaccination-related exclusion criteria is not that they are coercive, but that they are unequally coercive. They impose greater burdens on aliens than the state imposes on its members.

It's true that citizens of the US do not lose their citizenship if they refuse to vaccinate, but domestic vaccination programs are more coercive than they may first appear to be. For example, children who are citizens of the US must receive a long list of "recommended" vaccines before they will be permitted to attend state-recognized daycare centers or public, private, and charter schools. Children must receive vaccines that protect against the following diseases: mumps, measles, rubella, polio, tetanus, diphtheria, pertussis, *haemophilus influenzae* type b (Hib), hepatitis A, hepatitis B, rotavirus, varicella, and pneumococcal disease. Furthermore, adult citizens are often required to receive even more vaccinations if they want to attend university, or if they want to be employed in the military or in the healthcare professions. For example, they may have to receive vaccines against seasonal influenza and meningococcal disease. When it comes to vaccines, perhaps the 2009 CDC criteria demand of immigrants only as much as is (justifiably) demanded of US citizens.

I think this is largely correct, but alien vaccination requirements may still seem to be both *more coercive* and *more problematically coercive* than domestic vaccination requirements.

First, alien vaccination requirements may seem to be more coercive than domestic vaccination requirements because citizens may avoid vaccinations more easily than may aliens. For example, citizen children who are cared for and educated at home can avoid vaccination requirements. Also, adult citizens can avoid workplace vaccination requirements by choosing jobs that do not require them to receive vaccines. Furthermore, many states have permissive exemption policies and allow unvaccinated children and adults to avoid vaccine requirements with ease and without penalty. In contrast, it may be more burdensome for aliens to be exempted from USCIS vaccination requirements. In particular, USCIS makes vaccination exemptions available only through the I-601 waiver process, but the filing fee for this form is \$585 (as of 2013), and a potential immigrant may also have to pay an attorney to complete the paperwork (USCIS 2013b). Furthermore, one must reject all vaccines to receive the I-601 exemption. In contrast, the exemption application process in many US states is pro forma—cheap and easy—and often allows for selective refusal.

Recent and ongoing efforts to make domestic vaccination policies more coercive may (partially) block the objection that alien vaccination requirements are more coercive than domestic vaccination requirements. In the past few years, some states in the US have made it more difficult to receive vaccine exemptions (Gambino 2013; Tavernise 2012; McGreevy and Lin II 2015; Michigan Department of Public Health 2015). Given current popular and elite rhetoric on this issue, it seems likely that other states will follow, and that domestic vaccination programs may become more coercive in the future (see e.g. USA Today Editorial Board 2014). And if domestic vaccination programs become more coercive, then this will undermine the objection that vaccination-related exclusion criteria are more coercive than domestic vaccination policies.

Second, US alien vaccination requirements may seem to be more problematically coercive than US domestic vaccination requirements. Most citizens are vaccinated when they are children. This means that contemporary coercive vaccination of citizens may be more easily defended by appeals to paternalism than the coercive vaccination of aliens may be, since paternalism is generally a weightier reason to coerce children than adults. Consider that the state is often permitted to constrain the behavior of children to protect children's interests. But paternalism is a less weighty reason (some would say it is a much less weighty reason or no reason at all) to coerce adults (Mill 1998, I.9). So, the fact that citizens receive almost all of their vaccinations as children, when the state has good paternalistic reasons to require that they be vaccinated, means that the vaccination of citizen children (even if it is coercive) may be more easily justified by reasons of paternalism than may the coercive vaccination of adult immigrants. Therefore, even if domestic vaccination programs were just as coercive as alien vaccination programs, we would still need a different justification for the coercive vaccination of adult aliens, i.e. one that relied less upon paternalism.

A final reason to worry about whether CDC's 2009 criteria could be justified under Open Borders is that current US law requires immigrants and persons seeking permanent legal residence to pay for their own vaccines. And some vaccines are expensive, especially those for which cheap generics are not yet available, e.g. the HPV vaccines. So, USCIS vaccination requirements may (unintentionally) serve as a proxy for policies that prioritize admissions for wealthier aliens, since they may make it easier to exclude poor people. Of course, advocates of the conventional assumption may be content to prioritize admissions for the wealthy,

since it may be in a state's interest to admit wealthier people. However, prioritizing admissions for wealthier aliens is unlikely to be justified under the conditions of Open Borders, since a society's interest in having wealthier members seems unlikely to defeat a potential immigrant's rights, e.g. to freedom of movement, equal opportunity and socio-political equality. So, if US immigration policy is going to realize the ideal of Open Borders, and if the US seeks to maintain the 2009 CDC criteria (which it has very good reasons to do), then the US ought to assist poorer aliens in paying for their vaccinations or it ought to remove expensive vaccines from the USCIS list.

5. IMPLEMENTATION ISSUES AND HPV VACCINATION

I hope to have shown that there are good reasons to reject CDC's pre-2009 criteria—the criteria that led to the (short-lived) requirement that immigrant girls and women receive the HPV vaccine. I also hope to have shown that the current CDC vaccination exclusion criteria are well-justified from the point of view of immigration justice, on either the conventional assumption or the assumption of Open Borders. But I think it remains an open question whether HPV vaccination may be required of immigrants under the current criteria. I began this paper by discussing the role that the new HPV vaccine played in the development of CDC's 2009 vaccination-related exclusion criteria. I want to close this paper by reflecting on whether HPV vaccines could be required of immigrants under the current criteria.

CDC has made up its mind. It claims that

HPV does not meet the new vaccination criteria set by CDC and is not required for the immigrant medical exam. HPV is not known to cause outbreaks. Also HPV is the most common sexually transmitted infection (STI) in the United States and is not close to being eliminated at this time. (CDC 2012a)

CDC does not treat a failure to be vaccinated against HPV as a reason to permit a person to be excluded from entry or permanent residence.

I do not think it is so clear that current CDC criteria rule out HPV vaccination requirements for immigrants. At the very least, we should not take CDC's judgment as the final word on the matter. In some cases, CDC has gotten things wrong, while in others we may still raise important questions. For example, I do not think CDC can justify its current policy of requiring immigrants to be vaccinated against tetanus. Tetanus cannot cause outbreaks; it is not even infectious. There is currently no hope of

eliminating tetanus, since the bacterium that causes this disease is endemic in the environment. So, the vaccine for tetanus clearly does not meet either the second or third of CDC's 2009 criteria. There may be other reasons to require tetanus vaccination, but they are not to be found in CDC's 2009 criteria.¹⁴

Let's look more closely at the reasons CDC gives for why HPV does not meet its 2009 vaccine exclusion criteria. First, HPV-related diseases are nowhere close to being eliminated in the United States. Also, since current HPV vaccines offer protection against only some of the strains of HPV, these vaccines are, in principle, unable to eradicate all HPV diseases. But CDC's claim that HPV is "not close to being eliminated" overstates the demands of its third criterion, which requires only that the "vaccine must protect against a disease that . . . is in the process of being eliminated in the United States." Is it too much of a stretch to think that the current HPV vaccines are part of a "process" of eradicating HPV diseases? Higher rates of HPV vaccination (at which current US public health policy aims) may lead to the eradication of the strains of HPV that current vaccines protect against. Indeed, there is evidence that even today's relatively low rates of HPV4 vaccination have already caused dramatic reductions in the incidence of the HPV strains this vaccine protects against. For example, one study found that the incidence of HPV-6, -11, -16, and -18 among females between the ages of 14 and 19 dropped by 56% in the 4 years after the 2006 introduction of the Gardasil (HPV4) vaccine (Markowitz et al. 2013). And we accomplished this amazing result—which should reduce that 14–19 year old cohort's rate of cervical cancer by close to 40%—with a relatively low vaccine uptake rate (only around 30%). Since HPV vaccination efforts may have already saved thousands of lives, I think it is at least plausible to think that current HPV vaccination efforts are part of a "process" of eliminating HPV diseases. If the HPV vaccine does not now meet CDC's third criterion, it seems likely to meet that criterion in the near future.

What about HPV vaccines and CDC's *second* criterion? CDC claims that HPV "is not known to cause outbreaks" (CDC 2012a). It is true that HPV cannot cause outbreaks under current conditions, because (to quote CDC), "nearly all sexually active men and women get it at some point in their lives" (CDC 2014a). But what if HPV-16 and -18 became relatively uncommon (a goal at which public health authorities are certainly aimed)? Under this hoped-for future condition, it seems to me that HPV vaccination could prevent outbreaks, i.e. "more cases of disease than could

be anticipated.” So, even if the HPV vaccine may not now satisfy CDC’s second criterion, it may satisfy that criterion in the future, if domestic efforts to promote HPV vaccination are successful. Therefore, CDC should be open to a future reexamination of whether HPV vaccination satisfies their second criterion.

6. CONCLUSION

I have offered a general defense of CDC’s 2009 vaccination-related exclusion criteria. And I have argued that HPV vaccination may meet these criteria, if not now, then at some near future time. This is a striking conclusion, since CDC’s 2009 criteria resulted from its objection to the fact that its previous policy led to HPV vaccination requirements for aliens.

ACKNOWLEDGMENTS

I thank Ami Harbin, Peter Higgins, Matt Lister, Heidi Malm, Phyllis Rooney, and the anonymous reviewers for their helpful comments.

NOTES

1. This statute allows unvaccinated people to be excluded, but an alien’s vaccination status is not sufficient to generate a legal right to enter or to remain in the country. Also, USCIS has discretion to admit people who are not vaccinated against ACIP-recommended vaccines.
2. HPV causes cancers of the cervix, vulva, vagina, anus, penis, throat, and tonsils, but the rates of HPV-caused cancers are significantly higher among women than among men (CDC 2014a; CDC 2011).
3. To be clear, Chen focuses on gender equality in *domestic* laws surrounding HPV vaccination. But her arguments apply also to USCIS policies (2012).
4. The other change in HPV vaccine policy during this time was that the FDA approved (and CDC began recommending) another HPV vaccine, Cervarix (CDC 2010). Like Gardasil, Cervarix protects against strains 16 and 18, though it does not protect against strains 6 and 11. So, Cervarix is a bivalent HPV vaccine (sometimes called HPV2), while Gardasil (HPV4) is a quadrivalent HPV vaccine.
5. We might wonder whether the second and third criteria are meant to be individually necessary or whether only their disjunction is supposed to be necessary. For example, perhaps it would be enough if (1) the vaccine were age-appropriate and if (2) the vaccine prevented against a disease that caused outbreaks, even if (3) the disease the vaccine protects against had *not* been

eliminated and even if there were *no* current process towards its eradication. However, I do not think that a broader reading of the relevant CDC documents supports this interpretation. Consider what CDC say about the Zoster vaccine (which protects against shingles):

Zoster does not meet the new vaccination criteria set by CDC and is no longer required for the immigrant medical exam. Zoster is not known to cause outbreaks. Thus, it does not meet the new CDC vaccination criteria. (CDC 2012a)

Here, the fact that Zoster fails to meet the second criterion is sufficient to justify its exclusion from the list of USCIS-required vaccines. This supports an interpretation of the 2009 CDC criteria according to which each of the three criteria expresses a necessary condition for making a vaccine required by the USCIS.

6. This criterion does not (on my view) add anything to the pre-2009 policies. This is because ACIP has always recommended only *age-appropriate* vaccines. As CDC puts it: “ACIP recommends vaccines for a certain age range in the general U.S. public. These ACIP recommendations will be used to decide which vaccines are age appropriate for the general immigrant population” (2012a). Since it was pre-2009 policy to require ACIP-recommended vaccines, it was also pre-2009 policy to require only age-appropriate vaccines.
7. Here, I resist Luyten et al., who argue that noncontribution to herd immunity is always “in itself a harmful act” (2011, 283).
8. The UN Committee on Economic, Social and Cultural Rights has found that the right to health identified in the International Convention on Economic, Social and Cultural Rights (ICESCR) includes “the right to control one’s health and body . . . such as the right to be free from torture, non-consensual medical treatment and experimentation” (UN Committee on Economic, Social and Cultural Rights 2001, 130).
9. *The Patient as Victim and Vector* is the definitive treatment of the complexities raised by the dual role of the person infected with a contagious disease (Battin et al. 2009). In an earlier article, the authors of that book (joined by J. Botkin) observed that, “If we consider the patient’s status as victim, or as vector, the emphasis might shift, from the health care that might be most desirable for the individual patient to broader social concerns and the worldwide distribution of care that might enable all to achieve opportunities over a reasonable life span” (Francis et al. 2005, 314).
10. In some of my other work I have argued that the balance of reasons may sometimes incline in favor of coercive vaccination (Navin 2016, chap. five). In short, I think that coercive vaccination is permissible when it is a neces-

sary means for protecting the best interests of children, preventing people from infecting each other, or ensuring that citizens make a fair contribution toward efforts to create and maintain herd immunity. Others have made similar arguments. See e.g. Field and Caplan (2008), and Viens, Bensimon, and Upshur (2009).

11. Here, I assume that there is nothing uniquely problematic from the point of view of immigration justice about exclusion criteria that act only as proxies for the domestic laws of a society, i.e. exclusion criteria that coerce immigrants only as much—and for the same ends—as domestic laws coerce citizens. If an immigration policy requires only that immigrants follow justified domestic laws, then I think it follows quickly that the immigration policy is justified.
12. The following two paragraphs have benefitted from Wellman (2015).
13. I thank Peter Higgins for suggesting this point.
14. I suspect that the failure of the tetanus vaccine to meet CDC's criteria has been overlooked because vaccines against diphtheria and pertussis are now widely available only in combination vaccines that also include the tetanus vaccine, and because requiring vaccines against pertussis and diphtheria can be justified in terms of the 2009 CDC criteria (Centers for Disease Control and Prevention 2013a). However, since the tetanus vaccine does not satisfy CDC's criteria, there is good reason for the US to support the wide availability of diphtheria and pertussis vaccines that do not include the tetanus vaccine. I have found no evidence of efforts in this direction.

REFERENCES

- AAFP (American Academy of Family Physicians). 2014. "AAFP Immunization Schedules." Accessed July 24. <http://www.aafp.org/patient-care/immunizations/schedules.html>
- AAP (American Academy of Pediatrics). 2014. "AAP Recommended Immunization Schedules." *American Academy of Pediatrics*, January 31. <http://www2.aap.org/immunization/izschedule.html>
- ACOG (American Congress of Obstetricians and Gynecologists). 2009. "ACOG Joins Opposition to Mandatory HPV Vaccine Requirement for Immigrant Girls and Women." February 2. <https://www.acog.org/About-ACOG/News-Room/News-Releases/2009/ACOG-Joins-Opposition-to-Mandatory-HPV-Vaccine-Requirement-for-Immigrant-Girls-and-Women>
- Battin, Margaret, Leslie P. Francis, Jay A. Jacobson, and Charles B. Smith. 2009. *The Patient as Victim and Vector: Ethics and Infectious Disease*. New York: Oxford University Press.

- Bouie, Jamelle. 2014. "America's Long History of Immigrant Scaremongering." *Slate*, July 18. http://www.slate.com/articles/news_and_politics/politics/2014/07/immigrant_scaremongering_and_hate_conservatives_stoke_fears_of_diseased.html
- Canales, Christie V. 2010. "HPV Vaccination Requirement for Female Immigrants: An Example of Discrimination." *Journal of Gender, Race & Justice* 13 (3): 779–806.
- Carens, Joseph. 1987. "Aliens and Citizens: The Case for Open Borders." *The Review of Politics* 49 (02): 251–73.
- Canales, Christie V. 2010. "HPV Vaccination Requirement for Female Immigrants: An Example of Discrimination." *Journal of Gender, Race & Justice* 13 (3): 779–806.
- . 2013. *The Ethics of Immigration*. New York: Oxford University Press.
- CDC (Centers for Disease Control and Prevention). 2007. "Quadrivalent Human Papillomavirus Vaccine Recommendations of the Advisory Committee on Immunization Practices (ACIP)." *Morbidity and Mortality Weekly Reports (MMWR)*, March 23. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5602a1.htm>
- . 2009. "Criteria for Vaccination Requirement for U.S. Immigration Purposes." In *Federal Register*, 74, No. 218:58634. Government Printing Office. <http://www.gpo.gov/fdsys/pkg/FR-2009-11-13/pdf/E9-27317.pdf>
- . 2010. "FDA Licensure of Bivalent Human Papillomavirus Vaccine (HPV2, Cervarix) for Use in Females and Updated HPV Vaccination Recommendations from the Advisory Committee on Immunization Practices (ACIP)." *Morbidity and Mortality Weekly Report (MMWR)*, May 28. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5920a4.htm>
- . 2011. "Recommendations on the Use of Quadrivalent Human Papillomavirus Vaccine in Males—Advisory Committee on Immunization Practices (ACIP), 2011." *Morbidity and Mortality Weekly Report (MMWR)*, December 23. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a3.htm>
- . 2012a. "New Vaccination Criteria for U.S. Immigration: Frequently Asked Questions (FAQs)." *Centers for Disease Control and Prevention*, March 29. <http://www.cdc.gov/immigrantrefugeehealth/laws-regs/vaccination-immigration/revised-vaccination-immigration-faq.html>
- . 2012b. "HPV Vaccine Information for Clinicians Fact Sheet." <http://www.cdc.gov/std/hpv/stdfact-hpv-vaccine-hcp.htm>
- . 2013a. "Tetanus (Lockjaw) Vaccination." *Centers for Disease Control and Prevention*. <http://www.cdc.gov/Vaccines/vpd-vac/tetanus/default.htm>
- . 2013b. "Technical Instructions for Panel Physicians and Civil Surgeons." *Centers for Disease Control and Prevention*. <http://www.cdc.gov/immigrantrefugeehealth/exams/ti/index.html>

- . 2014a. “Genital HPV Infection Fact Sheet.” *Centers for Disease Control and Prevention*. <http://www.cdc.gov/std/hpv/stdfact-hpv.htm>
- . 2014b. “ACIP Advisory Committee on Immunization Practices (ACIP) Home Page.” *Centers for Disease Control and Prevention*. <http://www.cdc.gov/vaccines/acip/>
- Chen, Elizabeth J. 2012. “Equal Protection: Why the HPV Vaccine Should Be Mandated for Both Boys and Girls.” *Washington University Journal of Law and Policy* 38: 289–324.
- Dawson, Angus. 2007. “Herd Protection as a Public Good: Vaccination and Our Obligations to Others.” In *Ethics, Prevention, and Public Health*, edited by Angus Dawson and Marcel Verweij. 160–78. New York: Clarendon Press, Oxford.
- De Vuyst, Hugo, Gary M. Clifford, Maria Claudia Nascimento, Margaret M. Madeleine, and Silvia Franceschi. 2009. “Prevalence and Type Distribution of Human Papillomavirus in Carcinoma and Intraepithelial Neoplasia of the Vulva, Vagina and Anus: A Meta-Analysis.” *International Journal of Cancer* 124 (7): 1626–36.
- Douglas, Mary. 2002. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*. New York: Routledge.
- Field, Robert L., and Arthur L. Caplan. 2008. “A Proposed Ethical Framework for Vaccine Mandates: Competing Values and the Case of HPV.” *Kennedy Institute of Ethics Journal* 18 (2): 111–24.
- Fine, Paul E. M. 1993. “Herd Immunity: History, Theory, Practice.” *Epidemiologic Reviews* 15 (2): 265–302.
- Fisher, Barbara Loe. 1997. “The Moral Right to Conscientious, Philosophical, and Personal Belief Exemption to Vaccination.” *National Vaccine Information Center (NVIC)*, May 2. <http://www.nvic.org/informed-consent.aspx>
- Flanigan, Jessica. 2014. “A Defense of Compulsory Vaccination.” *HEC Forum* 26 (1): 5–25.
- Fox, Maggie. 2014. “Vectors or Victims? Docs Slam Rumors That Migrants Carry Disease.” NBC News, July 9. <http://www.nbcnews.com/storyline/immigration-border-crisis/vectors-or-victims-docs-slam-rumors-migrants-carry-disease-n152216>
- Francis, Leslie P., Margaret P. Battin, Jay A. Jacobson, Charles B. Smith, and Jeffrey Botkin. 2005. “How Infectious Diseases Got Left Out—And What This Omission Might Have Meant for Bioethics.” *Bioethics* 19 (4): 307–22.
- Gambino, Lauren. 2013. “Oregon Senate Passes Bill on Vaccination Education.” *Modern Healthcare*, June 8. <http://www.modernhealthcare.com/article/20130608/INFO/306089936>

- Gingrey, Phil. 2014. "Letter from Phil Gingrey, Member of the House of Representatives, to Thomas R. Frieden, Director of Centers for Disease Control and Prevention," July 7. http://thinkprogress.org/wp-content/uploads/2014/07/gingrey_letter_to_cdc_on_public_health_crisis.pdf
- Luyten, Jeroen, Antoon Vandeveldel, Pierre Van Damme, and Philippe Beutels. 2011. "Vaccination Policy and Ethical Challenges Posed by Herd Immunity, Suboptimal Uptake and Subgroup Targeting." *Public Health Ethics* 4 (3): 280–91.
- Markowitz, Lauri E., Susan Hariri, Carol Lin, et al. 2013. "Reduction in Human Papillomavirus (HPV) Prevalence Among Young Women Following HPV Vaccine Introduction in the United States, National Health and Nutrition Examination Surveys, 2003–2010." *Journal of Infectious Diseases*.
- McGreevy, Patrick, and Rong-Gong Lin II. 2015. "California Gov. Jerry Brown Appears Open to Restricting Vaccine Waivers." *Los Angeles Times*, February 4. <http://www.latimes.com/local/politics/la-me-pol-measles-vaccination-20150205-story.html>
- Meissner, H. Cody, Peter M. Strebel, and Walter A. Orenstein. 2004. "Measles Vaccines and the Potential for Worldwide Eradication of Measles." *Pediatrics* 114 (4): 1065–69.
- Michigan Department of Public Health. 2015. "Immunization Waiver Information." Accessed March 23. http://www.michigan.gov/mdch/0,4612,7-132-2942_4911_4914_68361-344843--,00.html
- Mill, John Stuart. 1998. "On Liberty." In *On Liberty and Other Essays*, edited by John Gray. Oxford: Oxford University Press.
- Navin, Mark. 2013. "Resisting Moral Permissiveness about Vaccine Refusal." *Public Affairs Quarterly* 27 (1): 69–85.
- . 2016. *Values and Vaccine Refusal: Hard Questions in Ethics, Epistemology and Health Care*. New York: Routledge.
- O'Neill, Onora. 2004. "Informed Consent and Public Health." *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences* 359 (1447): 1133–36.
- Oshinsky, David M. 2006. *Polio: An American Story*. New York: Oxford University Press.
- Schwartz, J. L., A. L. Caplan, R. R. Faden, and J. Sugarman. 2007. "Lessons from the Failure of Human Papillomavirus Vaccine State Requirements." *Clinical Pharmacology & Therapeutics* 82 (6): 760–63.
- Sheyn, Elizabeth. 2009. "An Accidental Violation: How Required Gardasil Vaccinations for Female Immigrants to the United States Contravene International Law." *Nebraska Law Review* 88 (3): 524.

- Tavernise, Sabrina. 2012. "Washington State Makes It Harder to Opt Out of Immunizations." *The New York Times*, September 19. http://www.nytimes.com/2012/09/20/health/washington-state-makes-it-harder-to-forgo-immunizations.html?_r=0
- Udesky, Laurie. 2007. "Push to Mandate HPV Vaccine Triggers Backlash in USA." *The Lancet* 369 (9566): 979–80.
- UN Committee on Economic, Social and Cultural Rights. 2001. *Report on the Twenty-Second, Twenty-Third and Twenty-Fourth Sessions*. New York and Geneva: United Nations. <http://www.un.org/documents/ecosoc/docs/2001/e2001-22.pdf>
- USA Today Editorial Board. 2014. "Vaccine Opt-Outs Put Public Health at Risk: Our View." *USA Today*, April 13. <http://www.usatoday.com/story/opinion/2014/04/13/vaccines-measles-misinformation-risks-editorials-debates/7682093/>
- USCIS (U.S. Citizenship and Immigration Services). 2013a. "Report of Medical Examination and Vaccination Record – USCIS Form I-693." <http://www.uscis.gov/sites/default/files/files/form/i-693.pdf>
- . 2013b. "Application for Waiver of Grounds of Inadmissibility." July 2. <http://www.uscis.gov/i-601>
- Viens, A. M., Cécile M. Bensimon, and Ross E. G. Upshur. 2009. "Your Liberty or Your Life: Reciprocity in the Use of Restrictive Measures in Contexts of Contagion." *Journal of Bioethical Inquiry* 6 (2): 207–17.
- Wellman, Christopher Heath. 2015. "Immigration." In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Summer 2015. <http://plato.stanford.edu/entries/immigration/>