Contagion, containment, consent: infectious disease pandemics and the ethics, rights, and legality of state-enforced vaccination

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Infectious diseases have long played a dramatic role in human history: Thucydides’ description of the plague of Athens, and its effects on Athenians, remains one of the

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most famous ancient recordings of the ravages of a virulent disease.\(^1\) Two further, prominent examples of pandemics spring to mind: the Black Death, famed for eliminating approximately one-third of the European population between 1347 and 1350,\(^2\) and the 1918 Spanish Influenza Pandemic, which obliterated more Americans in a single year, than who died in battle in World War I, World War II, the Korean War and the Vietnam War, combined.\(^3\) While it is too early to know the full ramifications of the present SARS-COV-2 pandemic,\(^4\) the threat it—and all highly infectious diseases—poses remains constant.\(^5\) Constituting a risk to more than simply individual health, such diseases have the potential to disrupt the fundamental bases of society, the very threads upon which our social, political, and economic foundations rest. While not all public health emergencies\(^6\) are alike, and not all pandemics can be solved in the same manner, in the case of COVID-19,\(^7\) there is one potential remedy of particular (although not singular) importance: the vaccine.

While, at present, no vaccine against COVID-19 has been successfully developed, a staggering 70 potential vaccines are in development, three of which are already in clinical trial.\(^8\) The promise of a vaccine looms large: should one (or more) prove its worth, it could be used to bring an end to the present pandemic, be used to control ‘flare-ups’, and act as an insurance policy for any future outbreaks.\(^9\) The same principles

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1 David P. Fidler, *International Law and Infectious Diseases* 1 (1999). Thucydides describes this as a ‘kind of sickness which far surmounted all expression of words [which] exceeded human nature in the cruelty wherewith it handled each one.’ See David Grene (trans.), *The History of the Peloponnesian War* 50 (1989).

2 Michael J. Selgelid, *Ethics and Infectious Disease*, 19* Bioethics* 272, 274 (2005).

3 *Id.* at 274. The Spanish Flu led to the deaths of some 20 million people globally. Cf. Manya Magnus, *Essential of Infectious Disease Epidemiology* 210 (2008).

4 The WHO defines a pandemic as an epidemic which has succeeded in crossing international boundaries, and which is said to ‘affect a large number of people’, and an epidemic as ‘an occurrence in a community or region of “cases of an illness . . . clearly in excess of normal expectancy”. The SARS-COV-2 outbreak was declared a pandemic by the WHO on March 11th, 2020 Cf. World Health Organization (WHO), *Ethical Considerations for Developing a Public Health Response to Pandemic Influenza*, www.who.int/csr/resources/publications (accessed Apr. 12, 2020) and WHO, *Statement on the Second Meeting of the International Health Regulations (2005) Emergency Committee Regarding the Outbreak of Novel Coronavirus (2019-nCoV)*, https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov) (accessed Apr. 23, 2020). For the purposes of this piece, of which the SARS-COV-2 outbreak is the contextual focus, only the term ‘pandemic’ will be used.

5 WHO, *Ethical Considerations, Id.*

6 A ‘public health emergency of international concern’ (PHEIC) is a formal declaration by the WHO, in accordance with the International Health Regulations (IHR) (2005), of an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response. A PHEIC is said to be formed when a situation arises that is ‘serious, sudden, unusual, or unexpected’, and which ‘carries implications for public health beyond the affected state’s national border’ and ‘may require immediate international action’. For more, cf. The discussion on the International Health Regulations, infra.

7 The disease caused by SARS-COV-2.

8 Cf. The WHO, *Draft Landscape of COVID-19 Candidate Vaccines, 11 April 2020*, https://www.who.int/blueprint/priority-diseases/key-action/Novel_Coronavirus_Landscape_nCoV_11April2020.PDF?ua=1 (accessed Apr. 12, 2020).

9 As the Economist writes, a COVID-19 vaccine “would not just save lives”, it could change the course of the pandemic: it would protect those who were vaccinated from getting sick, and by reducing the number of susceptible people, it would prevent the virus from spreading, thus also protecting the unvaccinated. *Briefing: Creating immunity to Covid-19*, The Economist, April 18, 2020, at 13.
underlie any vaccine: in the very least, prophylactic protection is provided to those at risk of contracting the disease; at best, the disease upon which the vaccine seeks to act will ultimately be eradicated. Both principles ultimately seek the same goal: to sufficiently disrupt a disease’s chain of transmission.

By the middle of April, more people were dying of COVID-19 every three days than had died of Ebola in West Africa over three years; at the time of writing, approximately a third of the global population is in some form of lockdown. The threat SARS-COV-2 presents is a significant one, as too are the myriad of issues, questions, and dilemmas it raises. This piece will attempt to discuss just one: In the face of a pandemic, and in response to a contagion such as SARS-COV-2, can the law allow a state to enforce, or compel, its citizens to undergo vaccination? Using arguments drawn from ethics, human rights, and principles of international law, this essay will attempt to address some of the complexities inherent in such questions. (By virtue of the breadth of this topic, it cannot address all.11) It will argue, further, that such questions are pertinent for the simple reason that a pandemic, by its very status as a declared global health emergency, demands the answers to such questions now. This inherent urgency poses a two-fold risk: first, that if decisions are not taken on whether prospective remedies are to be compelled or enforced, the disease may continue to spread. Secondly, that if such decisions of compulsion and enforcement are not addressed adequately, human rights and civil liberties may be (inadvertently) compromised. Future pandemics, as Cave writes, are inevitable, and without sufficient preparedness, the ‘potential for emergency responses to exceed the boundaries of proportionality is clear’.12

ETHICS

The ethical concerns associated with a concept such as compulsory vaccination are many, varied, and more complex than can be adequately discussed here. Of note, however, are the following observations. As with any medical treatment, preventive or otherwise, the exercise of choice by competent adults is a cornerstone of medical law.13 Competent refusal of medical treatment—even where fatal—must be honored.14 Obtaining valid consent from individuals before a medical intervention is an obligation under the principle of respect for the autonomy of persons.15 Accordingly, the decision to vaccinate is one which ordinarily rests with the individual, insofar as that individual retains, in a basic sense, autonomy over their person. Associated with this ‘right’ to choose what happens to one’s body is the equivalent right to decline, without fear of social repercussion, what does, or does not happen.

The presumption of personal autonomy is not, however, immutable—it is most often overridden, for example, in the provision of emergency medical care where, in the absence of evidence to the contrary (and when faced with a patient unable to provide

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10 Id.
11 Among the issues outside of the scope of this essay are as follows: who might be the focus of compulsory vaccination (eg, the elderly, healthcare workers, those in a ‘risk group’), the different levels or forms of compulsion that may be possible, and the potential sanctions for breaching or refusing compulsory vaccination. 12 EMMA CAVE, Voluntary Vaccination: The Pandemic Effect, 37 LEGAL STUD. 279, 294 (2017).
13 Id., at 279.
14 Id.
15 Keymanthri Moodley et al., Ethical Considerations for Vaccination Programmes in Acute Humanitarian Emergencies, 91 BULL. WORLD HEALTH ORGAN. 290, 293 (2013).
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It is presumed by healthcare providers—in accordance with their duties of beneficence\(^\text{16}\) and non-maleficence\(^\text{17}\)—that the patient before them would wish to receive all necessary and reasonable medical treatment. In the context of compulsory vaccination, a similar rationale could be applied in order to justify the curtailment of personal autonomy, presuming beneficence not to an individual, but to the wider public. Here, a state could decide to introduce compulsory vaccination, as means by which to prevent further harm to its population (duty of non-maleficence), by removing, treating, or curing the particular contagion before it (duty of beneficence).

A difficulty with vaccination, however, is that it is a form of preventive medicine, one that relies on a communitarian response: that of herd immunity. Defined as ‘the protection afforded to non-vaccinated individuals by the vaccinated in their vicinity’, herd immunity causes protection simply by the fact that vaccinated (or recovered\(^\text{18}\)) individuals are less likely to be infected, therefore lowering the risk of exposure for those who remain unvaccinated.\(^\text{19}\) Herd immunity is crucial for ensuring the effectiveness of a vaccine, relying on the attainment of a high enough level of immunity to a disease so as to make exposure to the organism that causes the disease extremely unlikely.\(^\text{20}\) Herd immunity could suggest the need for compulsion is redundant where enough of a population volunteer to receive a vaccination; poor uptake, however and the corresponding notion of ‘free-riders’ warns of the dangers of absolute volition. If too many elect not to receive a vaccination, or choose instead to ‘ride’ on the safety of another’s vaccine, the requisite threshold herd immunity requires in order to be effective may not be reached, and the ‘herd’, or group, may be left collectively vulnerable: an insufficiently immune proportion of a population can allow a disease to continue to circulate. Rates of refusal for measles vaccination are an example of this danger: these remain significant enough in some parts of the world to guarantee reservoirs, which lead to continuous recurrences of the disease.\(^\text{21}\) The recent measles outbreak in the USA is an example of this: in 2019, some 1282 individual cases of measles were confirmed in 31 states; the majority of these, the Centers for Disease Control and Prevention (CDC) noted, had not been vaccinated against the disease.\(^\text{22}\)

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16 The duty, in other words, to act in a patient’s best interest.
17 The duty to avoid causing (further) harm.
18 ‘Natural’ (as opposed to ‘artificial’ or ‘induced’) herd immunity can be achieved through infection, when a sufficient percentage of a population has been infected with the disease in question and then recovered. In such circumstances, however, the immunity conferred on those who have recovered must be long-lasting (if not permanent), and the lethality of the disease must not be such that significant deaths are risked if the disease is allowed to circulate unobstructed within a population. In the case of COVID-19, it is not yet clear whether such immunity can be conferred naturally in the long term and that this would not require significant numbers to have been infected. Cf. European Centre for Disease Control (ECDC), Risk Assessment on COVID-19, 8 April 2020, https://www.ecdc.europa.eu/en/current-risk-assessment-novel-coronavirus-situation (accessed Apr. 23, 2020).
19 Stanley A. Plotkin, Vaccination against the Major Infectious Diseases, 322 Life Sci. 943, 950 (1999).
20 Thomas May, Public Communication, Risk Perception and the Viability of Preventive Vaccination against Communicable Diseases, in ETHICS AND INFECTIOUS DISEASE 237 (Michael J. Selgelid, Margaret P. Battin and Charles B. Smith, eds., 2008).
21 Arthur L. Caplan, Is Disease Eradication Ethical?, 373 Lancet 2192, 2193 (2009).
22 Centers for Disease Control and Prevention, Measles Cases and Outbreaks, www.cdc.gov/measles/cases-outbreaks.html (accessed Apr. 14, 2020). Note that while many states in the USA have compulsory vaccination against childhood diseases such as measles, medical, conscientious, and religious exemptions are frequently sanctioned. Furthermore, parents are generally ‘at liberty’ to opt out of vaccination, for the only
Irrespective of who may give it, the law demands that consent, where possible, be informed—this is particularly so where risk is involved. The problem with novel pathogens, however, is that their treatments too are novel, and many of the risks associated with a new vaccine treatment may not—despite the best efforts of the developers—be known. While the research and development phase of a vaccine may be expedited in the face of a public health emergency, any new treatment must nevertheless be subject to rigorous clinical trials in which it demonstrates its efficacy before it can be granted regulatory approval.\textsuperscript{23} The especial contagiousness of SARS-COV-2 and relative severity of COVID-19 appear demand even greater precipitousness: there has been suggestion that in lieu of standard clinical trials, ‘challenge trials’—in which vaccinated volunteers would be deliberately exposed to the SARS-COV-2 virus in order to more expeditiously test a potential vaccine’s effectiveness—should be used.\textsuperscript{24} Can the same safety—to both trial volunteers and, later, future recipients of the vaccine, be guaranteed in such circumstances? Likewise, while rare, long-term side effects may later arise: there have been suggestions, for example, that the H1N1 flu vaccine used in the 2009–10 pandemic may be linked to narcolepsy in children.\textsuperscript{25} A novel vaccine thus posits a paradox during times of crisis: On the balance between beneficence and non-maleficence, should one outweigh the other? Should, for example, only vaccines that have been proved effective and safe be used?\textsuperscript{26} How then should we define ‘effective’ and ‘safe’? What if the usual safety mechanisms, being conventional, randomized, double-blinded trials, are not possible (or undesirable) in the face of a particularly pernicious pathogen? Given the urgency of such situations, does the existence of uncertainty, which risks causing inadvertent harm, defy the principle of non-maleficence? And, what of those who may, exceptionally, suffer adverse consequences? Should they be entitled to compensation, for a lack of beneficence?\textsuperscript{27}

\textbf{INTERNATIONAL HEALTH REGULATIONS}

At the core of the international legal framework governing the issue of pandemics—and the many difficult dilemmas they pose—is the WHO’s International Health Regulations (IHR).\textsuperscript{28} The IHR define their purpose and scope to be to ‘prevent, protect

\textsuperscript{23} Samantha Vanderslott, Andrew Pollard and Tonia Thomas, Coronavirus Vaccine: Here Are the Steps It Will Need to Go Through during Development, The Conversation, Mar. 30, 2020.

\textsuperscript{24} The Economist, supra note 9, at 15. The Economist notes that while ‘ethical ramifications of such trials are troubling’, under certain conditions they may be justified, especially given that small challenge trials can produce results comparable to those of a much larger field trial in only a matter of weeks.

\textsuperscript{25} Cave, supra note 12, at 281, citing European Centre for Disease Prevention and Control, Narcolepsy in Association with Pandemic Influenza Vaccination (A Multi-Country European Epidemiological Investigation) (2012). But, see CDC, Narcolepsy Following Pandemrix Influenza Vaccination in Europe, https://www.cdc.gov/vaccinesafety/concerns/history/narcolepsy-flu.html (accessed Apr. 27, 2020).

\textsuperscript{26} Moodley et al., supra note 15, at 291.

\textsuperscript{27} Most (Western) states have chosen to operate a form of ‘no-fault’ compensation scheme, on the presumption that the risk to the individual of contracting the disease is presumed to outweigh the risks associated with vaccination; it is not difficult to assume this would remain the status quo in the fact of mandatory, ‘emergency’ vaccine treatment.

\textsuperscript{28} Constitution of the World Health Organization, art. 21. The IHR (2005) entered into force, generally, on June 15, 2007, and are currently binding on 196 states parties, including all 194 Member States (countries) of WHO.
against, control, and provide a public health response to the international spread of disease in ways that commensurate with [and] which avoid unnecessary interference with international traffic and trade.\textsuperscript{29} Originally adopted in 1951, and revised in 2005, the ideological basis for the IHR is two-fold: they are based on the concept of public health and the intersection between this and human rights. Prominently featured is the precautionary principle, which imposes an obligation to protect populations against reasonably foreseeable threats, even under conditions of uncertainty.\textsuperscript{30} In the face of a significant risk, this justifies state-imposed restrictions taken with the intention to prevent tangible harms, even in the absence of complete scientific information.\textsuperscript{31}

The IHR thus aims to provide a legal framework for the prevention, detection, and containment of public health risks, ideally at source (and before they spread across borders), with the intention that this be implemented in ways that are consistent with other international law and agreements.\textsuperscript{32} The IHR are centered around the notion of a ‘public health emergency of international concern’ (PHEIC; see supra, note 6.). The importance of the PHEIC process is the scope it provides for the implementation (and potential curtailment) of domestic law (and rights) to the problem at hand. Hypothetically, so long as a prospective solution remains within the requirements of the IHR, and the principles which support this (including those aforementioned), such solution could make significant demands of a society and of the individuals who reside within this.

To ensure such demands are not deployed superfluously, standards have been promulgated to delineate circumstances of permissible derogation. The most commonly cited example is the Siracusa Principles on the Limitation and Derogation of Provisions in the International Covenant on Civil and Political Rights. Conscripted in response to concerns about the violation of individual human rights that may occur when a state acts to protect the public good,\textsuperscript{33} the Siracusa Principles set out the narrowly defined circumstances in international law in which human rights may be restricted in the face of a public (health) emergency; these principles may provide a useful guide, for example, when restricting individual freedoms (eg, the right to consent) in the public interest (eg, herd immunity) during a pandemic. The Siracusa Principles note that public health may be invoked as a ground for limiting certain rights ‘in order to allow a state to take measures dealing with a serious threat to the health of the population or individual members of the population’; these measures—which include compulsory vaccination—must be specifically aimed at preventing disease or injury or providing care for the sick and injured (with due regard to be had to the WHO’s IHR).\textsuperscript{34} The principles require that any measures taken which limit individual human rights be (i)
provided for and carried out in accordance with law; (ii) directed toward a legitimate objective of general interest; (iii) strictly necessary in a democratic society to achieve the objective; (iv) least intrusive and restrictive to achieve the objective; (v) be based on scientific evidence; (vi) neither arbitrary nor discriminatory in application and of limited duration; (vii) respectful of human dignity; and (viii) subject to review.

While it is fundamental that both the rule of law be respected and preserved during a public health crisis, Shu-Acquaye is right to note that there are ‘interpretive difficulties’ when it comes to the protection of human rights in such circumstances. Models such as the Siracusa Principles can thus be interpreted as ‘trying to ensure careful consideration’ in balancing the rights of the individual against the state’s interest in ensuring the well-being of the larger population. Nevertheless, while these principles provide guidelines on the necessary compromises to be made between individual rights and those of society, their effectiveness, as a mechanism of international law, depends on the consent and willingness of states to uphold and exercise these—they are, but a non-binding, soft law mechanism. The sovereignty of states looms large in formulating a global response to emerging infections, despite the fact that the very process of globalization undermines the sovereignty of the state to deal nationally with such a crisis. Although such problems bypass the state, and become international in nature, it is ultimately upon the state the responsibility for these remedies lie.

Thus, the central importance of the state and its sovereignty is a basic weakness of international law and of standards such as the Siracusa Principles. The centrality of the state in such a system relies upon each state having implemented effective national health policies. As the body that oversees the implementation of the IHR, responsibility falls to the WHO to ensure Member States are meeting their obligations. What happens if a state fails to do so? In a PHEIC, such as the present, for example, Member States may deploy any such mechanism to combat the COVID-19 pandemic, so long as this remains in line with accepted international standards—ie, mechanisms like the Siracusa Principles. With reference to these, the simplest, and arguably most legitimate, means by which to enforce mandatory vaccination would be through the creation of domestic legislation, which seeks to codify and elucidate a state’s stance on infectious disease control. Such measures, however, first require states to decide upon
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their limits of rights—restrictions and legal derogations. Equally importantly—although unfortunately outside the scope of this piece—once such limits have been determined, what will become of those who have breached these?43

HUMAN RIGHTS

Infectious disease control invariably implicates a significant number of human rights, least among them the rights to life, health, liberty and security of person, privacy, an adequate standard of living, food, housing, education, and development and economic, political, civil, social, and cultural rights.44 The list is extensive, and not exhaustive. Of these, two in particular will be discussed: the rights to health and life. The first is typically said to be initially implicated in a pandemic. This right is a fundamental part of our human rights and of our understanding of a life in dignity.45 Uncertainty exists, however, as to whether ‘health’ is a meaningful, identifiable, operational, and thus enforceable right or whether it is merely aspirational.46 When too broadly defined, it lacks clear content and is less likely to have a meaningful impact—for example, if health is, in the WHO’s words, a ‘state of complete physical, mental, and social well-being’, then this is effectively impossible to achieve.47 Difficulty also lies with the inability to distinguish, or isolate, the right to health from all other economic, social, and cultural rights, which are elemental to ensuring the conditions in which people can be healthy; these include the rights to safe drinking water, adequate sanitation, food and housing, a healthy working environment, and so forth.48 Furthermore, it cannot be said the right to health means that an individual has the right to good health, nor that the corresponding government has a duty to make sure all its citizens are healthy.49 Fidler suggests that not only is such an interpretation otherwise untenable (especially in the context of a contagious disease outbreak), but it also posits the idea that the government, in upholding such an ideal, might legitimately act in ways inimical to other civil and political rights.50

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43 There is much debate on the role criminal law may play in punishing or deterring those who seek to undermine disease control efforts like compulsory vaccination. Cave (Cf. supra note 20, at 296–297) discusses, for example, whether intentional or reckless transmission of an infectious disease could constitute an offence against the person akin to (grievous) bodily harm.

44 Fidler, supra note 1, at 169.

45 Office of the United Nations High Commissioner for Human Rights (OHCHR), The Right to Health: Fact Sheet No. 31, https://www.ohchr.org/Documents/Publications/Factsheet31.pdf (accessed Apr. 16, 2020).

46 Lawrence O. Gostin, Scott Burris and Zita Lazzarini, The Law and the Public’s Health: A Study of Infectious Disease Law in the United States, 99 COLUM. L. REV. 59, 99 (1999).

47 Id., at 28.

48 OHCHR, supra note 45, at 3.

49 Fidler, supra note 1, at 183. The overall human rights framework, he writes, allows individuals life, liberty ‘and the pursuit of obesity’.

50 Id., at 183.
The Special Rapporteur to the UN High Commission for Human Rights, however, has noted that the right to health is an inclusive one, containing both freedoms and entitlements. This is of note, for of the freedoms apparent within this is the right to control one's health, which encompasses the right to be free from non-consensual medical treatment and experimentation—ie, the right to consent. Entitlements, meanwhile, are held to include the right to a system of health protection that provides equality of opportunity for people to enjoy the highest attainable standard of health, and, perhaps most persuasively for our purposes, the right to prevention, treatment, and control of diseases. This begs the question: in the context of compulsory vaccination, whose right to health is being spoken of? An individual's right (itself a variable determinate) or the vaguer—though no less valid—public right? The latter is framed around the health of a society, as determined and upheld (most often, through the provision of public health services) by the wider state. Under this conception, the public's health can too be framed around the same freedoms and entitlements above. Protecting the public right to health thus presents a convincing argument in favor of measures such as compulsory vaccination, which seek to restrict other, more individualistic rights (eg, the right to liberty).

Closely tied to the right to health, and much less unclear in its full application, is the right to life. Article 3 of the Universal Declaration on Human Rights declares ‘everyone has the right to life’. Likewise, the International Covenant on Civil and Political Rights (ICCPR) specifies an ‘inherent right to life ... protected by law. No one shall be arbitrarily deprived of life’. To speak of a right to health then, could also be to speak of a right to life, to the intervention of public health where (and when) this is otherwise threatened. If, for example, an infectious disease begins to spread with virulence, could it not be argued that state intervention, for the sake of the preservation of lives, is, in effect, upholding both the right to health and, consequently, the right to life? This is an argument that perhaps further strengthens the concept of a public right to health, as framed above. Competing with both rights—whether viewed singularly or collectively—are additional rights such as the right to benefit from scientific progress, the freedom from inhuman and degrading treatment, and the right to liberty.

Few rights, even among the most fundamental, are absolute, and the priority to be accorded among them, in any given situation, is a complex exercise. Although human rights instruments prohibit the state from infringing upon particular individual rights, so too, do they permit a state to limit or suspend certain rights under specific

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51 This mandate was created in conjunction with the WHO.
52 OHCHR, supra note 45, at 3, 4.
53 Id., at 3, 4.
54 Id.
55 The right to liberty of one's self is, in many ways, a reflection of the right to personal autonomy, and recognition of the right obliges states to protect individuals against unlawful interference. Note that under many human rights instruments, such as the European Convention of Human Rights (ECHR), exception is made for 'the lawful detention of persons for the prevention of the spreading of infectious diseases'. Cf. ECHR, art. 5(1).
56 ICCPR, art. 6.1. The ECHR also protects the same: cf. art. 2.
57 Cf. supra note 55.
58 Some rights, however, cannot be diminished. The right of life is one, as is the prohibition against torture and cruel or inhuman treatment.
circumstances. Article 4 of the ICCPR, for example, declares that states may deviate from the Covenant during ‘an officially proclaimed period of public emergency which threatens the life of the nation’, to the ‘extent strictly required by the exigencies of the situation’; what such necessities are, or what constitutes appropriate circumstances in which to allow deviation, is not defined or further elucidated here—determination of this rests with the state seeking to deploy such powers. Again, the state in question must do so via recourse to the necessary ethical and legal justifications (or derogations); and again, responsibility for determination falls *prima facie* upon the domestic state.

**CONCLUSION**

As we can presently observe, we live in a world of ‘globalized’ health, where an infectious disease outbreak has the potential to spread fear, malady, and disruption, in less time than it once took to deliver a letter. Given this, and the recognized scope of pandemic diseases to wreck unassailable havoc, the possibility, indeed, probable necessity, arises for a state response to the jurisdiction and capacity of vaccination policy. As is expected where individual and public liberties are concerned, the ethical dilemma surrounding the curtailment of consent demands that a delicate balance be struck between this and the wider common good. While human rights prove a natural qualification to such proposed state powers, even these have their own limitations. And it is on this heavily nuanced fence the legality of state-enforced vaccination appears to sit. While the latter will be determined in large part by the legal and factual nuances of a particular state, any human rights qualifications must nevertheless remain within the appropriate boundaries—ie, standards such as the Siracusa Principles. Absolute revocation of one’s rights, or ethical entitlements, is not legitimized for the purposes of disease control. Perhaps most pressingly, as this piece has attempted to illustrate, it is in the hands of individual states that the responsibility for disease control and the adoption of international legal practices lie. In the face of an ongoing (and ever-evolving) pandemic, it is pertinent decisions on matters such as compulsory vaccination are taken now, before they must be made in haste, in the absence of proper consideration for the ethical and legal complexities contained within.

59 Gostin, Burris and Lazzarini, *supra* note 46, at 33.