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The international community joined together during the late twentieth century to form a world trade system. Although imperfect, the world trade system contains adjudicable and enforceable norms designed to facilitate global economic activity. Human health is at least as important as trade in terms of its effects on the wellbeing of populations. Moreover, health hazards—biological, chemical, and radionuclear—have profound global implications. Whether these threats' origins are natural, accidental, or intentional, the harms, as well as the response, transcend national frontiers and warrant a transnational response. Despite their high importance, the International Health Regulations (IHR) are antiquated, limited in scope, and burdened by inflexible assumptions and entrenched power structures.¹ This essay examines problems of obsolescence, narrow reach, and rigidity associated with the IHR, and proposes a new conception for world health law in the 21st Century.

ANTIQUATED GLOBAL HEALTH GOVERNANCE: THE HISTORICAL ORIGINS OF THE IHR

The origins of the IHR, the only global rules governing the international spread of infectious diseases, date back to the first International Sanitary Conference, held in Paris in 1851 to address the European cholera epidemics. During the latter half of the nineteenth

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413
century, ten sanitary conferences were held and eight conventions were negotiated (most did not come into force) to address the trans-boundary effects of infectious diseases. The International Sanitary Convention dealing with cholera was adopted in Venice in 1892, followed by another Convention dealing with plague in 1897. In 1903, the International Sanitary Convention replaced the conventions of 1892 and 1897.

At the turn of the twentieth century, the international community established regional and international institutions to enforce these conventions. American states set up the International Sanitary Bureau (ISB) in 1902, which became the Pan American Sanitary Bureau (PASB), a precursor to the Pan American Health Organization (PAHO). European States developed their own multilateral institution in 1907, L'Office International d'Hygiène Publique (OIHP). The Health Organization of the League of Nations (HOLN) was formed between the two world wars in 1923. Article XXIII of the League of Nations Covenant meekly stated that members would “endeavor to take steps in matters of international concern for the prevention and control of disease.” The ISB, OIHP, and HOLN were separate institutions, without harmonization of goals or practices.

The United Nations was established after the horrors of World War II. One of the U.N.'s primary functions was the protection of global health. The World Health Organization (WHO) was established by the U.N. in order to fulfill this mandate. Its preamble expresses universal aspirations.

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6. See *id*.

7. Article 55 of the U.N. Charter states that a primary objective of the U.N. is to promote “higher standards of living” and “solutions of international . . . health . . . problems.” U.N. CHARTER art. 55.

stating that its “principles are basic to the happiness, harmonious relations and security of all peoples.” The WHO Constitution grants the agency the power to seek Member State adoption of conventions (Article 19), promulgate regulations (Article 21), and make recommendations (Article 23).

Pursuant to the agency’s Article 21 power, WHO Member States adopted the International Sanitary Regulations (ISR) on July 25, 1951. The ISR were renamed the International Health Regulations in 1969. The IHR initially applied to six diseases: cholera, plague, relapsing fever, smallpox, typhus, and yellow fever. The IHR were slightly modified in 1973 (particularly for cholera) and again in 1981 (to exclude smallpox, in view of its global eradication). The IHR currently apply only to cholera, plague, and yellow fever—the same diseases originally discussed at the first International Sanitary Conference in 1851. Thus the IHR have not been significantly changed since the ISR’s initial adoption in 1951 and predate modern health threats such as HIV/AIDS, SARS, and bioterrorism.

The 1995 World Health Assembly (WHA), in response to outbreaks of...
cholera in Peru, plague in India, and Ebola hemorrhagic fever in Zaire, resolved to revise the IHR.\textsuperscript{14} Since that time, the WHA\textsuperscript{15} and other WHO governance structures\textsuperscript{16} have affirmed the importance of the reform process. The WHO Secretariat published a proposed revision of the IHR on January 12, 2004.\textsuperscript{17} Member States reviewed the draft during regional consultations and then in inter-governmental negotiations, with a view to adoption by the WHA in 2005.\textsuperscript{18}

THE PROBLEMS OF SOVEREIGNTY, HORIZONTAL GOVERNANCE, AND ENTRAINED POWER

Global health governance, then, is antiquated and sharply limited in scope. Even within its narrow reach, the WHO has experienced marked difficulties in enforcing the IHR in each content area.\textsuperscript{19} Why have nation states thus far resisted global health governance when they have acceded to global trade governance? Although perhaps not as readily quantifiable as economic gains from free trade, the trans-boundary effects of health hazards are profound. Biological, chemical, and radionuclear agents all have far-reaching consequences. With our modern system of global trade

\textsuperscript{14} Revision and Updating of the International Health Regulations, WHA Res. 48.7, World Health Assembly, 48th Ass., 12th plen. mtg. (May 12, 1995).


\textsuperscript{19} See Gostin, IHR, supra note 1, at 2624 (“[M]ember States have: (i) not promptly reported notifiable diseases; (ii) not met hygienic standards at borders; (iii) required health certificates for non-listed diseases such as HIV/AIDS; and/or (iv) exceeded the allowable maximum measures by imposing bans on entry of travelers or goods without sufficient scientific justification. Member States do not comply for diverse reasons such as popular sovereignty or self-governance, political or economic interests, and incapacity due to lack of expertise or resources.”).
and international travel, nation states can no longer seal their borders to escape such hazards, if indeed they ever could. The health and economic effects of SARS and avian influenza, along with ongoing concerns about emerging infectious diseases and bioterrorism, may spur WHO Member States to agree to stronger forms of international health law. Continuing resistance to effective health regulation is most plausibly explained by countries' outdated assumptions about sovereignty, horizontal governance, and entrenched power.20

Sovereignty

Sovereignty, although often criticized, remains an influential idea in international relations, particularly in matters of health. Sovereignty has multiple dimensions, but includes political authority over internal affairs, power to control border crossings, and freedom from external interference.21 The police power to protect the public's health and safety is a traditional prerogative of national sovereignty.22 Assertions of sovereignty, of course, are not always detrimental. A nation's decision to impose scientifically-based health regulations that are more stringent than required under international law is not simply a valid assertion of autonomy. Health regulations based on good science can provide increased protection for the state and its neighbors.

When used to preserve a poorly regulated status quo, however, assertions of sovereignty can severely harm global interests in health. Consider the potential adverse health effects within each of the three main spheres of sovereignty. First, state power to control internal affairs enables political leaders to set low standards for public health surveillance and regulation. Given the cross-boundary effects of health threats, a state's failure to identify and respond promptly to domestic health threats poses substantial risks to both its own citizens and other nations.23 Second, the state's control over borders allows governments to ignore international health standards in regulating the flow of goods and people across its

borders. The state may either set weak standards (facilitating the spread of disease) or overly strict standards (needlessly affecting travel and trade). Indeed, many international disputes arise from travel or trade restrictions imposed by international agencies or the states themselves. Finally, a state's assertion of non-interference provides an ostensible justification for failing to comply with international health norms. A country may delay notifying the WHO of an emerging health threat, prevent its scientists from sharing information, or refuse to cooperate with international agencies.

Respect for sovereignty is particularly problematic because countries have built-in incentives for secrecy and inaction in the face of emerging health threats. Public notification of health hazards can adversely affect a country's economy and prestige. It can trigger media coverage or travel advisories affecting trade and tourism and adversely affect the reputation and electoral prospects of political leaders. One need only look at the political and economic effects of SARS in Asia and North America to understand the potentially perverse incentives of transparency in matters of health.

**Horizontal Governance**

Connected to the problem of sovereignty is the preference for horizontal governance of health threats. Under horizontal governance, nations regulate health threats through bilateral or regional agreements, eschewing the imposition of rules by international health agencies. Indeed, since the European sanitary conferences in the nineteenth century, governments have focused primarily on border controls to prevent health threats. Horizontal governance is not a particularly effective method of protecting global health. Border controls can rarely prevent the

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24. FIDLER, supra note 5, at 67-68.
26. Gostin, IHR, supra note 1, at 2626 ("In many ways, it is in a country's [interests] to overlook WHO recommendations and regulations . . . . This dynamic was illustrated during the SARS outbreaks when China delayed notification to the WHO, and Ontario, Canada, resisted WHO travel advisories."); see also Keith Bradsher, The SARS Epidemic: The Economic Impact, N.Y. TIMES, Apr. 21, 2003, at A1 (describing the SARS epidemic as causing "the worst economic crisis in Southeast Asia since the wave of bank failures and currency devaluations that swept the region five years ago").
27. Fidler, supra note 20, at 487.
spread of disease, particularly if the threat is not detected promptly.\textsuperscript{28}

Vertical governance is likely to be far more effective by setting uniform standards for national health surveillance and regulation based on science.\textsuperscript{29} Vertical governance means that international health agencies can set minimum public health capacities at the regional and national levels. Yet countries exhibit deep reservations about yielding their sovereignty to multinational authorities.\textsuperscript{30} Vertical governance does not require countries to forego all autonomy, but greater devolution of power would enable the WHO to establish and enforce a system of global health preparedness that would make every country safer.

\textit{Entrenched Power}

The current stagnation in global health governance may also be attributable to entrenched power structures. Economically and politically powerful countries, principally in Europe and North America, have had a disproportionate influence on the global health agenda.\textsuperscript{31} This geopolitical imbalance results in multiple problems for world health.

First, geopolitical centers of power have acted as if it were possible to protect themselves from the endemic diseases of the developing world. The bilateral and multilateral agreements in nineteenth-century Europe could be understood as an attempt to seal the Western European frontier to prevent the movement of epidemics from Africa and Asia.\textsuperscript{32} It is possible to see a similar dynamic today with border and immigration policies designed to fend off diseases such as hemorrhagic fever, tuberculosis, and HIV/AIDS.\textsuperscript{33}

Second, the developed world has an abiding interest in continuing its economic vitality through free trade agreements. It is perhaps for this reason that the IHR focus as much on commerce as health. The avowed “purpose of [the IHR] is to ensure the maximum security against the international spread of diseases with a minimum interference with world

\textsuperscript{28} \textit{Id.} at 486.
\textsuperscript{29} Gostin, \textit{IHR, supra} note 1, at 2626-27.
\textsuperscript{30} \textit{Id.}
\textsuperscript{31} See, e.g., David P. Fidler, \textit{Microbialpolitik: Infectious Diseases and International Relations,} 14 Am. U. Int’l L. Rev. 1, 21 (1998) (noting that “infectious disease control as a matter of concern for the international system depends to a large extent on [the interests of] powerful states”).
\textsuperscript{32} \textit{FIDLER, supra} note 5, at 30-31.
\textsuperscript{33} \textit{See id.} at 13-14.
traffic. Yet, the SARS outbreaks demonstrated the need for decisive public health action, sometimes at the expense of commerce and trade. Developed countries have similarly insisted on furthering their economic interests through the creation and protection of intellectual property rights for pharmaceutical companies, making lifesaving vaccines and drugs largely unaffordable in developing countries. For example, although ninety-five percent of the burden of HIV/AIDS is in the developing world, only eight percent of those in need of antiretroviral treatments in this area have access to them.

Finally, developed countries have resisted systematic action to provide technical and financial assistance for health protection in poorer countries. This failure to allocate resources equitably has powerful ramifications for world health. Resource-poor countries do not have the means to protect their own populations from the disproportionate burdens of endemic disease. The marked health disparities between the rich and poor regions of the world pose fundamental questions of fairness. At the same time, poor countries do not have the capacity for surveillance and response to emerging infections to prevent major outbreaks. This is not simply a problem in developing countries but poses a major concern in the developed world. In an age of global travel and commerce, health hazards can move rapidly across the world. Health protection is only as

35. Lawrence O. Gostin et al., Ethical and Legal Challenges Posed by Severe Acute Respiratory Syndrome: Implications for the Control of Severe Infectious Disease Threats, 290 JAMA 3229 (2003) [hereinafter Gostin, SARS].
36. Giovanni Andrea Cornia, Globalization and Health: Results and Options, 79 BULL. WORLD HEALTH ORG. 834, 837 (2001) (noting that “even in the cases in which [the Agreement on Trade-Related Aspects of Intellectual Property Rights] allows parallel imports of cheap generic drugs, trade pressures by [developed countries] limits access to affordable drug imports”).
37. World Health Org., Coverage and Need for Antiretroviral Treatment (June 2004), at http://www.who.int/3by5/coverage/en/ (noting that only eight percent of those in the developing world and four percent of those in Africa who require antiretroviral treatment were receiving antiretroviral treatment in June, 2004).
40. LAURIE GARRETT, BETRAYAL OF TRUST: THE COLLAPSE OF GLOBAL PUBLIC HEALTH (2000) (arguing that the weakness of the public health infrastructure in developing
good as the weakest link, so low capacities in poor countries threaten every nation.

TOWARD A NEW CONCEPTION OF GLOBAL HEALTH GOVERNANCE

To overcome the problems of sovereignty, horizontal governance, and entrenched power, the international community should consider a new conception for global health based on the rule of international law. The WHO’s proposed revision of the IHRs, if expanded, could serve as a model for effective public health governance.

The Salience of Health over Trade

The IHR should stress the salience of global health and the WHO’s role in achieving that purpose. The WHO should dedicate itself to the protection and promotion of global health. Wherever possible, health rules should respect travel and trade, while assuring that promoting global health remains the WHO’s primary mission. That is the vision of the WHO Constitution, which does not mention the protection of trade or commerce.

Wide Jurisdiction

The narrow scope of the IHR impedes the WHO in effectively dealing with modern health threats. The revised IHR cover “all events potentially constituting a public health emergency of international concern.” This new approach is preferable because it is flexible, prospective, and covers all hazards (radiological, chemical, and biological), whether naturally-occurring, accidental, or intentional. It does not require amendment of the IHR each time a novel health threat emerges.

Comprehensive Data Collection

Rapid and comprehensive data collection is crucial to global health. Yet surveillance is hindered by the reluctance of countries to fully cooperate. Global surveillance can be dramatically improved by effective

41. See Gostin, IHR, supra note 1.
42. See Revision of the IHR, supra note 16.
43. IHR Revision—Working Paper, supra note 17, art. 5(1).
44. FIDLER, supra note 5, at 65 (“The IHR surveillance system has broken down because Member States regularly fail to notify WHO of outbreaks of diseases subject to the IHR.”).
vertical governance. First, the WHO could establish criteria for uniform data sets, core informational requirements, and timely monitoring and reporting. These norms would help set a standard for national and global surveillance. Second, the WHO should expand its data sources beyond official government channels. “Small-world networks” consisting of scientists, health professionals, membership associations, and non-governmental organizations could considerably broaden the sources of health information. Finally, the WHO should utilize modern technology for surveillance, including electronic health records and the internet, to gather and analyze surveillance data. The WHO is already beginning this process, and it could be enhanced through the revised IHR.

National Public Health Preparedness

Uniformly strong public health capacities at the national level offer the best prospect for global health. Prompt and efficient monitoring and response at the national level is critically important to prevent the proliferation of disease. 45 To improve national competencies, the WHO should set minimum standards for laboratories, data systems, and response. By setting performance standards and measuring outcomes, the WHO could continually help member states evaluate their public health preparedness. Compliance with international health norms has been a serious problem that must be addressed by the WHO. This could be accomplished through a combination of hard and soft law: mediation, adjudication, and incentives.

A related problem is that poor countries cannot meet minimum standards for public health preparedness. The international community, therefore, should substantially increase technical and financial assistance for health system improvement in developing countries. This commitment would not be open-ended; nor would it necessarily be sufficient to meaningfully reduce global health disparities. However, at a minimum, the developed world should help assure that all nations have core public health capacities for surveillance and containment of emerging health threats of global importance. This kind of commitment not only allows progressive development of higher standards of health in resource-poor countries, but also is in the interests of the industrialized world.

Human Rights Safeguards

The IHR were promulgated before the development of international

45. See Gostin, SARS, supra note 35, at 3231.

422
human rights law. As a result, the IHR do not protect individual rights under international law. Many aspects of global health regulation affect human rights, including surveillance (privacy), vaccination and treatment (bodily integrity), travel restrictions (movement), and isolation and quarantine (liberty). Health measures may also be applied inequitably, leading to discrimination against unpopular groups, such as migrants and ethnic minorities. The IHR could demonstrate respect for human rights by incorporating the internationally accepted norms contained in the Siracusa principles, which require health measures to be necessary, proportionate, and fair.\textsuperscript{46} Health measures should be based on the rule of law and provide due process for persons whose liberty is placed in jeopardy.

\textit{Good Public Health Governance}

WHO member states have not always followed basic principles of good public health governance. They have sometimes acted in ways that are insular and discriminatory, without adequate regard to science. The WHO could set an example of good public health governance by complying with the principles of transparency, objectivity, and fairness. The agency's policies and recommendations should be established in an open manner, based on scientific evidence, and exercised equitably. The agency gains credibility by its adherence to science, the truthfulness of its disclosures, and its fair-dealings with countries, rich and poor alike.

\textit{The Future of Global Health Governance}

More effective monitoring and management of international health threats is undoubtedly a global public good. Yet, the question arises whether international law is the most effective institutional vehicle to achieve this objective. After all, the WHO has been relatively impotent in enforcing the existing IHR. During the SARS outbreaks, moreover, the agency was active and effective without the need for formal international law.

Certainly, revised IHR will not assure capable leadership and sound governance by the WHO. Yet, the revision offers an opportunity for a renewed commitment by the international community to a shared vision of

global health. The revision would give the WHO a clear mission, significantly enhanced jurisdiction, and formal power to set standards and make recommendations. By assenting to a far-reaching revision of the IHR, Member States would cede some control over health threats of international importance and grant to the WHO a measure of centralized authority.

International law can help forge a new conception of global health governance that assures:

- the salience of health over trade;
- broad jurisdiction over conditions of international public health importance;
- global surveillance through core data requirements and “small-world networks”;
- national public health preparedness by enforcing standards, creating incentives, and cultivating developmental and technical assistance;
- human rights protection through incorporation of the Siracusa principles; and
- good public health governance through transparency, objectivity, and fairness.

By adhering to the rule of law, the international community can take a vital step toward better protection against the biological, chemical, and radiological hazards posed in the modern age.