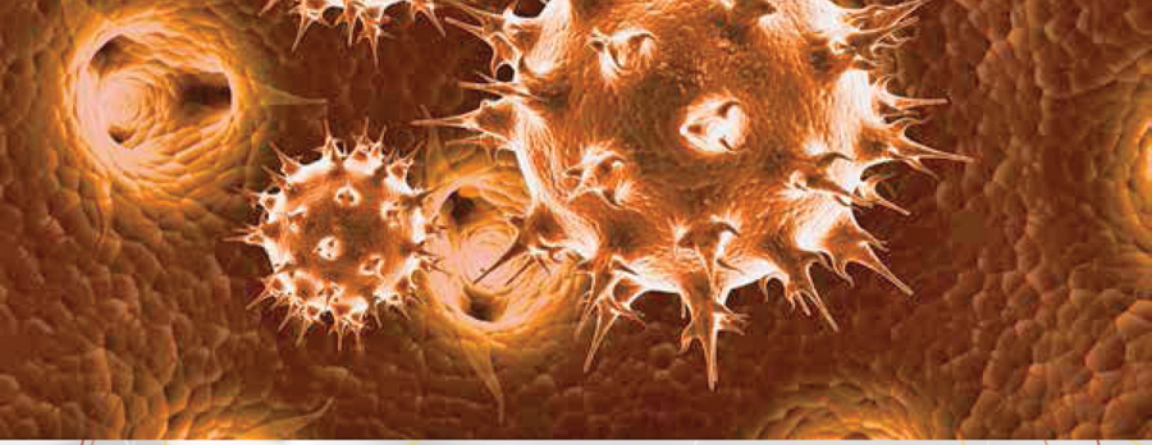
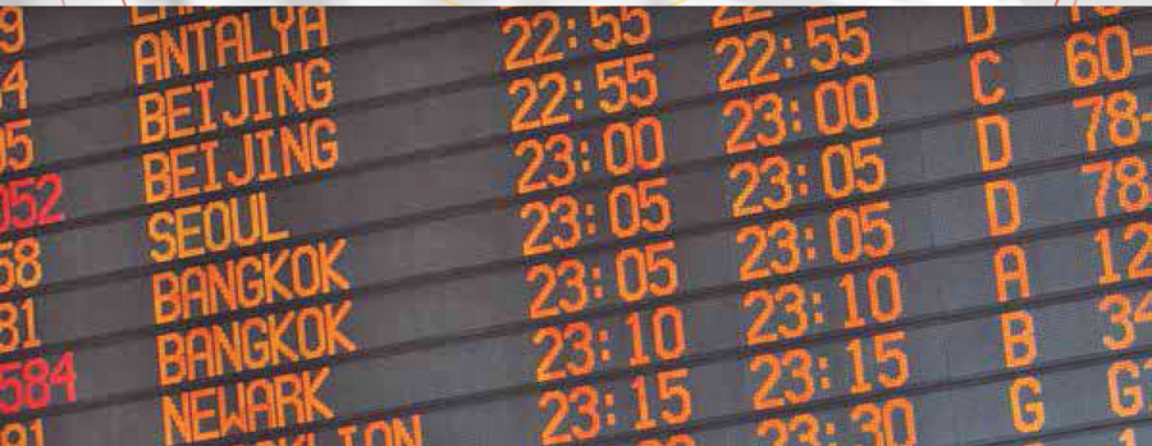


SARA E. DAVIES, ADAM KAMRADT-SCOTT,
AND SIMON RUSHTON

DISEASE DIPLOMACY

INTERNATIONAL NORMS AND GLOBAL HEALTH SECURITY



Disease Diplomacy

This page intentionally left blank

Disease Diplomacy

International Norms and Global Health Security

SARA E. DAVIES,
ADAM KAMRADT-SCOTT,
and SIMON RUSHTON

Johns Hopkins University Press
Baltimore

Printed in the United States of America on acid-free paper
2 4 6 8 9 7 5 3 1

Johns Hopkins University Press
2715 North Charles Street
Baltimore, Maryland 21218-4363
www.press.jhu.edu

Library of Congress Cataloging-in-Publication Data

Davies, Sara Ellen, author.
Disease diplomacy : international norms and global health security /
Sara E. Davies, Adam Kamradt-Scott, and Simon Rushton.
p. ; cm.
Includes bibliographical references and index.
ISBN 978-1-4214-1648-9 (pbk. : alk. paper)—ISBN 1-4214-1648-4 (pbk. : alk. paper)—ISBN 978-1-4214-1649-6 (electronic)—ISBN 1-4214-1649-2 (electronic)
I. Kamradt-Scott, Adam, 1974– , author. II. Rushton, Simon, 1978– , author.
III. Title.
[DNLM: 1. World Health Organization. 2. Communicable Disease Control—legislation & jurisprudence. 3. Disease Outbreaks—prevention & control. 4. Health Policy. 5. Health Services Administration. 6. International Cooperation. 7. World Health. WA 33.1]
RA441
362.1—dc23 2014026796

A catalog record for this book is available from the British Library.

Special discounts are available for bulk purchases of this book. For more information, please contact Special Sales at 410-516-6936 or specialsales@press.jhu.edu.

Johns Hopkins University Press uses environmentally friendly book materials, including recycled text paper that is composed of at least 30 percent post-consumer waste, whenever possible.

This page intentionally left blank

APSED	Asia Pacific Strategy for Emerging Diseases
ASEAN	Association of South East Asian Nations
AusAID	Australian Agency for International Development
CAFELTP	Central African Field Epidemiology and Laboratory Training Program
CDC	Centers for Disease Control and Prevention
EAIDSNet	East African Integrated Disease Surveillance Network
EID	Emerging Infectious Diseases
EU	European Union
FAO	Food and Agriculture Organization
GISN	Global Influenza Surveillance Network
GOARN	Global Outbreak Alert and Response Network
GPHIN	Global Public Health Intelligence Network
HPAI	Highly Pathogenic Avian Influenza
IATA	International Air Transport Association
IGWG	Inter-Governmental Working Group
IHR	International Health Regulations
ISR	International Sanitary Regulations
MDBS	Mekong Delta Basin Surveillance network
NFP	National Focal Point
OIE	World Organization for Animal Health
PAHO	Pan American Health Organization
PHEIC	Public Health Emergency of International Concern
PMM	ProMED-mail
SACIDS	South African Centre for Disease Surveillance
SAGE	Strategic Advisory Group of Experts
SARS	Severe Acute Respiratory Syndrome

SEARO	South East Asia Regional Office
SPS	Sanitary and Phytosanitary
UNSIC	United Nations System Influenza Coordinator
WHA	World Health Assembly
WHO	World Health Organization
WPRO	Western Pacific Regional Office
WTO	World Trade Organization

In preparing this book we have received tremendous institutional support from a variety of sources that we would like to individually acknowledge. SD would like to thank the Australian Centre for Health Law Research at the Faculty of Law, Queensland University of Technology, and the Centre for Governance and Public Policy and Griffith Asia Institute, Griffith University, for generously providing time and financial support during this project. SD would also like to acknowledge that her research on this project was supported under the Australian Research Council's Discovery Project funding scheme (Project Number DP0878792). AKS would like to thank the secretariat and management team of the Health Diplomacy Monitor based at Carleton University, Canada, and the Marie Bashir Institute for Infectious Diseases and Biosecurity, University of Sydney, which funded a number of trips to Geneva to attend World Health Assemblies. In addition, AKS would like to thank Harley Feldbaum for his support as well as several members of the WHO Secretariat identified in this book (and a few who aren't) for generously giving their time to discuss the IHR. SR would like to thank Griffith University for funding a visit to Brisbane during which this book was originally planned, and to acknowledge the support of the European Research Council, who funded much of his work on this project (Ideas Grant 230489—GHG).

Collectively we owe a particular debt of gratitude to Jeremy Youde for generously reading large parts of the manuscript in draft form. We greatly appreciated his constructive engagement as well as his scholarship and friendship. In addition, we have been fortunate to receive helpful comments and advice from a number of others, including Sara Glasgow, Jason Sharman, and Frank Smith. We would also like to thank the anonymous reviewers for Johns Hopkins University Press—those who read the book proposal and the manuscript—for their

extremely insightful comments, which provided us with the impetus to refine and improve our arguments.

We would like to sincerely thank our editor at JHUP, Suzanne Flinchbaugh, for her enthusiasm, expert guidance, and above all, her patience.

Finally, our love and deepest gratitude to our respective families for their support and encouragement through the long gestation period of this book. Writing a three-authored book across two hemispheres is not an easy process and they have endured much: Skype calls at antisocial hours, "holidays" spent writing, and countless hours listening to us moaning about one another. But we got there in the end.

Introduction

Threats to health have never respected human-imposed borders. Through the ages, governments and rulers have been forced to consider the best ways of protecting their populations from disease. The strategies they have employed have varied and have had varying levels of success, with responses being hampered for much of human history by a lack of accurate scientific knowledge about the etiology and epidemiology of disease. Scientific advances mean that we now know more than ever before about infectious diseases, both how to prevent and how to treat them. Indeed, by the late 1970s, following the successful eradication of smallpox, it seemed to many that we were winning our "ancient struggle with the microbes" (Garrett 1996, 66). But the gains that science has brought have been counterbalanced by broader social, political, economic, and technological changes. As the world has modernized, urbanized, and globalized, the range of threats to human health has multiplied exponentially. Pathogens that once took months or even years to spread beyond their regions of origin can now circumnavigate the globe in a matter of hours. In addition, with the growing menace of antimicrobial resistance, it appears that the pathogens are fighting back. This new reality has required diplomats and policymakers to join with health practitioners and scientists to develop new ways of addressing the threats posed to human health by infectious disease outbreaks. The result has been health's emergence as a key contemporary foreign and security policy concern and a renaissance of "disease diplomacy" as states have attempted to negotiate ways to collectively strengthen the global system of disease surveillance and control (Fidler 1997, 59). This book charts the recent remaking of this system, illustrated through the case of the revised International Health Regulations, through which we examine the ways that states and other international actors have attempted to rise to the challenge of delivering "global health security."

The 2003 outbreak of Severe Acute Respiratory Syndrome (SARS) was a milestone in the development of this new disease diplomacy. Perhaps more clearly than ever before, SARS highlighted the extent to which globalization had changed the landscape of health and the degree to which local disease outbreaks could quickly become national and international security problems. SARS cemented the burgeoning collaboration among health, security, and foreign policy officials, a relationship that has broadened and deepened in subsequent years. Indeed, it no longer sounded novel, still less radical, when UN Secretary-General Ban Ki-moon noted in 2009 that

> global health touches upon all the core functions of foreign policy: achieving security, creating economic wealth, supporting development in low-income countries and protecting human dignity. Government and non-Government stakeholders have started to recognize the strategic value of how and why the foreign policy community's support for the health sector is vital for advancing both. The need for increased foreign policy and diplomatic activities on global health problems has created opportunities and challenges for those who shape the foreign and health policies of Member States. (UN General Assembly 2009, 2)

As the Secretary General suggested, the shift from "local" health problems to "global" health problems has been underpinned by a variety of collective values, including economic progress, human rights, and international development (McInnes et al 2014). But, as others have rightly suggested (Aldis 2008; Collier and Lakoff 2008; Koblentz 2011), the seriousness of the perceived security threat posed by infectious disease outbreaks has led to this particular area of health becoming the most high-profile, and arguably the most successful, example of sustained political engagement among foreign, security, and health policy communities.

One of the most concrete embodiments of the imperative for a more globalized response to disease and security was the growing acceptance through the 1990s of the need to substantively revise the International Health Regulations (IHR), the international legal framework that has provided the basis for international outbreak surveillance and containment efforts since the early 1950s. The revised IHR were eventually adopted by World Health Organization (WHO) member states in May 2005. In this book we trace the lead-up to this development and the political opportunities and challenges that have followed. The new regulations embody a number of significant changes in the behavior expected of governments and other bodies (not least the WHO) in the event of a disease outbreak. In the first chapters of the book we explore the reasons put forward by states for acceptance of these changes at that particular time: a response to the changing envi-

ronment that facilitated the rapid spread of novel infectious disease outbreaks; an attempt to iteratively improve the effectiveness and efficiency of the global health security regime; and changes in understandings about the relationship among disease, security, and sovereignty. The central argument of this book is that the IHR revision process and the subsequent discourse highlighting the importance of state compliance with the instrument have constituted the codification of a new set of expectations about how a "responsible state" (and a "responsible international community") should behave in the event of a disease outbreak that has the potential to spread across national borders.

This book examines these changes in expectations, presenting an account of IHR revision as the emergence of a new package of norms that underpin the contemporary global health security regime and examining the extent to which states have currently internalized those norms. In providing this account, we focus explicitly on the roles of agency, ideas, and external "material" factors, noting how various actors have strategically utilized particular milestones or events to push for ideational change. In particular, we chart the impact that securitization and the emergence of health as a foreign policy issue has had on persuading states to adopt a much more demanding IHR framework. We argue that the global health security narrative has been an important discursive tool that has facilitated political support for the IHR revision process. Yet, as we go on to argue later in the book, the acceptance of new behavioral expectations does not automatically result in those expectations being fulfilled. There are many stumbling blocks along the way and serious obstacles still to be overcome.

Development of the International Infectious Disease Control Regime

The earliest attempts by governments to protect their populations and territories against the ingress of disease were the quarantine procedures that began to be applied in the mid-fourteenth century. In this period, knowledge about the etiology of diseases and the mechanics of transmission was somewhat limited. Considerable confusion existed, for example, over what caused infectious diseases to appear in new geographical locations. Multiple theories were advanced to explain outbreaks of diseases such as influenza, cholera, plague, typhoid, and yellow fever, including meteorological phenomena, telluric conditions, foul-smelling air, and even spiritual and/or moral depravity (Porter 1999). As time progressed, however, some began to suspect that these diseases were related to the movement of people and goods. In 1377 the city-state of Venice, which had been severely affected by the Black Death as it spread across Europe, introduced quarantine arrangements for the first time. Noting that the disease appeared to have arrived

on ships carrying goods for trade, Venice implemented a requirement that all newly arriving ships be prevented from unloading cargo or passengers for a period of 40 days, this length of time reportedly being chosen because it was equivalent to the time Christ and Moses spent isolated in the desert (Goodman 1952; Delich and Carter 1994). In addition, captains of vessels were required to report whether any passengers on board exhibited signs or symptoms of illness, and this practice gave rise in turn to vessels carrying a Bill of Health that indicated whether the port of departure was free of disease (Stock 1945). Although the procedure was initially controversial, other city-states—and not only ports—soon followed Venice's lead. Milan, Marseilles, Majorca, and Florence all implemented protocols aimed at protecting their respective populations by preventing the importation of diseases. However, because of the rudimentary level of knowledge about how diseases spread, the measures implemented were often haphazard and inconsistently applied, which in turn added to the confusion about the nature of infectious diseases.

Although medical knowledge gradually improved over the next few hundred years, by the mid-nineteenth century questions still remained about how diseases were transmitted. In 1851, the first International Sanitary Convention, the earliest example of an attempt to formalize international cooperation regarding disease control, was convened in Paris in response to a series of deadly cholera outbreaks that were sweeping through Europe. The convention brought together representatives from 12 European states, each country being represented by a medical doctor and a diplomat, an early example of close cooperation between the health and foreign-policy communities. The conference did not, however, prove to be a success. It lasted a full six months and failed to achieve its objective of producing an international agreement to halt the spread of the disease, principally due to ongoing differences in opinion concerning how and by whom cholera was being transmitted across Europe (Goodman 1952). Between 1851 and 1944, 14 further international sanitary conventions or conferences were held, all primarily instigated in response to the impact that disease outbreaks were having on international trade (Fidler 1999). As Yves Beigbeder (1998, 73) has observed, these meetings attempted to "ensure the 'defence of Europe' against exotic pestilences" while removing "hindrances to international commerce and transport." Various quarantine and outbreak cooperation frameworks were proposed at these meetings in an attempt to achieve these aims, but while agreement was reached in 1907 on the need to establish a new international organization to facilitate data collection and to alert the international community to disease outbreaks (Howard-Jones 1978), consensus on an international legal framework proved elusive.

When the WHO was formed in 1948, one of the first tasks it was assigned was to develop an international legal framework to "ensure maximum security against the international spread of diseases with a minimum interference with world traffic" (WHO 1983, 5). Given the failure to reach agreement on this over the previous 100 years, the WHO completed its task surprisingly rapidly. In one of the organization's earliest significant successes, the International Sanitary Regulations (ISR) were adopted in 1951 by the fourth World Health Assembly (WHA)—the supreme decision-making body of the organization, composed exclusively of governments. The basis of this regulatory framework was a requirement that governments report to the WHO outbreaks of particular infectious diseases and that such information could then be disseminated to other states to allow them to put appropriate measures in place. The 1951 regulations identified six quarantinable diseases that must be reported to the WHO because they were highly contagious, caused widespread human suffering, and were disrupting international trade.[1] In 1969, when the ISR were revised and renamed the International Health Regulations, the scope was reduced to four diseases; in 1981, following the successful eradication of smallpox, the list was reduced yet again, to only three: cholera, plague, and yellow fever.

The obligations of member states under these regulations were relatively straightforward and were automatically binding on all member states (Katz and Fischer 2010). Even so, governments—particularly those with high numbers of quarantinable diseases to report—often failed to comply with the obligation to report outbreaks because they believed they would suffer embargos on their people and goods if they did (Zacher and Keefe 2011, 41) or because they had concerns about their reputation and prestige (Delon 1975; Cash and Narasimhan 2000). Non-reporting of disease outbreaks became common practice, and the WHO's hands were tied: it had no means of enforcement, and under the terms of the IHR it was unable to act on any information unless the outbreak was formally reported and verified by the government(s) concerned.[2] The effectiveness of the regulations as a means of controlling the international spread of disease was therefore clearly hampered by reliance on governments fulfilling their obligations in the face of significant disincentives to comply. There were other problems too, not least the failure of the regulations to keep pace with changing disease threats. Cholera, yellow fever, and plague, the three diseases to which the IHR applied after 1981, had been largely eradicated in developed countries (Fidler 2005), but the regulations still did not apply to high-profile new diseases such as HIV/AIDS, Marburg virus, or monkeypox. By the late 1980s, then, it was becoming increasingly clear that the existing IHR were no longer fit for purpose.

As we discuss in more detail in chapter one, several events in the early- to mid-1990s served to reinforce the message that the IHR required urgent attention. These included serious outbreaks of cholera in Latin America, plague in India, and Ebola in Zaire, as well as heightened concern over the potential cross-border implications of biological and chemical weapon use (Tucker 1999). As member states assembled in Geneva to discuss these various threats to human health at the WHA in May 1995, a political consensus emerged on the need to revise the outdated and ineffective IHR and ensure that the WHO's disease-outbreak alert and response capabilities were appropriate to the task they now faced. The WHA duly passed two resolutions: WHA48.7, "Revision and Updating of the International Health Regulations," and WHA48.13, "Communicable Disease Prevention and Control: New, Emerging, and Re-Emerging Infectious Diseases" (WHA 1995a, 1995b), tasking the WHO director-general with beginning the process of updating the IHR. At this point, the story we follow in this book begins in earnest. Yet it was another decade before the revision process was completed when, in May 2005, the revised International Health Regulations were endorsed by the 58th WHA. In doing so, the WHA formalized a new set of understandings about the behavior expected of states and other international actors in the event of an outbreak (and, indeed, the measures states would have to put in place in preparation for future outbreaks). The new regulations entered into force on June 15, 2007, and since then, as we discuss in chapters four and five, the institutionalization of these new norms—both in terms of states' willingness and their capacity to comply—has remained an ongoing (and highly politicized) process.

For much of this book we focus on the ways in which the new (post-2005) global health security regime represents a departure from what preceded it. However, we also follow important continuities. The new regime was not created de novo and in fact builds in important ways on what went before. From the 1851 International Sanitary Convention onward, international cooperative efforts in this area have always been concerned with striking a balance between disease control on one hand and the desire to avoid unnecessary interference with international travel and trade on the other. Clearly, scientific knowledge has advanced immensely since the 1850s, greatly enhancing our ability to detect, identify, treat, and contain disease outbreaks. There have also been some significant changes in emphasis; in the case of the IHR (2005), the change has been away from a focus on border controls and toward attempts to contain disease outbreaks at their source. The overall aims of the international infectious disease control regime have, however, remained stable over a long period of time.

The WHO is well established as the principal forum for intergovernmental discussion on international disease control issues. While other institutions, such as the World Trade Organization (WTO) and the Biological and Toxin Weapons Convention, have roles to play in the global health security regime, the WHO remains undeniably at its core. Of course, states have not always agreed with the WHO's stance and often did not abide by the agreements that they had made at the WHA; yet the WHO maintained its role (even if during the Cold War states saw its role as less important), and this familiarity as both technical adviser and political facilitator would become crucial during the IHR revision years. Furthermore, and this is perhaps most crucial for explaining the significance that we attach to the IHR revision process—despite the fact that noncompliance with the IHR had become almost routine by the 1990s—no one was seriously arguing that the ideal of an effective international disease control regime should be abandoned. Even though the IHR revision process was long and contested, there was little dispute over the desirability of having a regime in place; rather, the arguments that did arise were over the politics and practicalities of making the system both effective and politically acceptable. There was general consensus on the need for a revised IHR to deliver benefits to both powerful and weaker states; what remained at issue was how to make the IHR stronger while taking into account the varying views and capacities of all relevant actors. In detailing the chronological progress of the IHR revision negotiations, we reveal how the desire to create a more effective disease control regime grew in the late 1990s and early 2000s, ultimately overcoming concerns around both the politics and the practicalities of the proposed new framework.

To understand the passage of the revised IHR, though, we must see it as being informed not just by outbreak events but also by discursive processes, in particular, by "global health security" rhetoric. In chapter one we show how the IHR revision process was made politically possible through the (re)construction of an association between international (in)security and infectious disease outbreaks, a relationship promoted by scientists, politicians, and both health and security institutions through the 1980s and with increased intensity through the 1990s, when revising the IHR began to be seriously discussed. Chapter two reveals how the rapid and deadly international spread of SARS in 2003 played into the efforts of key public health officials, both within and outside the WHO, to argue that the existing IHR framework was fundamentally broken. The SARS event provided the momentum necessary to finalize the stalled revision process, underscoring the arguments that had already been put forward for the need to change international expectations of how states ought to behave in the event of an

outbreak of potential international significance. As David Heymann, the executive director of the WHO's Infectious Disease Cluster at the time of SARS, has argued, one of the disease's most significant legacies was contributing to a change in international norms regarding national transparency and information sharing (Heymann 2012). SARS gave a new impetus to the ongoing discussions, which culminated in an agreement according to which it would no longer be seen as acceptable or permissible for a government to attempt to cover up an outbreak. All states would henceforth be expected to engage in an open and transparent way with global disease control efforts, even if they did not see such openness as being in their immediate interests. As a result, the balance between sovereignty and health security had shifted, subtly but palpably (Fidler 2003).

Yet, as we examine later in the book, whether the (largely) successful change in international norms embodied in the revised IHR framework will in fact be able to deliver the promise of global health security remains to be seen. The evidence we present in chapters four and five suggests—even at this relatively early stage in the implementation of the new regulations—that most states want to comply with their obligations most of the time but that in some cases material and infrastructural shortfalls remain a significant obstacle to their ability to do so.

As such, one of the book's key contributions is highlighting the relationship between capacity and norm compliance. We show that norm change can be undermined not only by rival discourses or political resistance (the focus of much of the existing norm change literature) but also by the inability of states to behave in the ways expected of them. Indeed, in this case we argue that the inability of some states to comply with some of their obligations under the IHR (as a result, for example, of limitations in their domestic disease surveillance and containment systems) may in fact be a far more serious challenge to the effectiveness of the new global health security regime than political resistance. Too often the "flesh" may be weak even where the "spirit" is willing. As a result of this, we argue that persuasion by norm entrepreneurs and other "norm leaders" (again, the focus of much of the norm emergence literature) may not be a sufficient solution. What is needed is a greater sense of international solidarity—not least political and financial cooperation to support all states in building the required infrastructure. We suggest, in short, that the successful promotion of the new norms that became embodied in the revised IHR was a necessary first step in enhancing global health security but was not, in itself, sufficient: it must also be backed by the necessary resources to assist states in developing their capacity to comply. Efforts to strengthen the health systems of developing states have long been part of international development efforts, and the obvious solution is for wealthier donors to

assist poorer states in building the infrastructure and systems needed to meet their international obligations under the IHR, a simple idea which, naturally, is far from straightforward in practice, especially in a time of financial crisis and economic austerity. Yet this is also a politically sensitive area, and there is, we argue, a risk to the revised IHR if there is not continued international engagement and support for local adaption to the new IHR framework. While, as we argue here, securitizing rhetoric played an important part in generating the political will for revision, it also has its downsides, and it has been seen in some quarters as a "Western" self-interested political maneuver. Although we would argue that this is not entirely fair—and in fact the global "North" and "South" have both been relatively responsive to the concept of global health security—there is a danger that continued failure to deliver the necessary financial and political partnership around IHR compliance may lead some governments to believe that the costs and benefits of global health security are not being equitably apportioned.

Norm Change, Compliance, and State Capacity

As we have already made clear, our focus in this book is on how (and how far) the prevailing norms of global health security—that is to say, the behavior expected of states and other actors in the event of a disease outbreak of international significance—have changed as a result of the negotiation, adoption, and implementation of the IHR (2005). We examine the role of norm entrepreneurs in promoting particular understandings of "appropriate behavior" and ask to what extent these new behavioral expectations will solve the problems they were designed to address—the capacity to detect, report, and contain. As such, our project clearly aligns itself with approaches recognizing the power of ideas and the possibility of norm change, where material developments can both follow and precipitate ideational shifts. As seen in cases such as the abolition of slavery and the principle of noncombatant immunity, apparent agreement on acceptable behavior is often reached long before universal adherence to the norm is achieved (indeed, in both of those cases universal adherence remains elusive, although we would normally expect breaches of such well-established norms to be condemned).

As we have just noted, in the case of the IHR the fact that a government accepts the legitimacy of the behavioral expectations contained in the regulations is not in itself enough (although it is a good start): states must also build the material capacity to carry out the actions required of them, through having the surveillance, detection, and communication structures that are essential to fulfilling their obligations. The positive duties imposed on states by the IHR create extra (material) challenges to compliance. In this book, we argue that despite the

"newness" of the revised IHR, and notwithstanding some continuing noncompliance, real progress has been made in diffusing new expectations of state behavior. The issues around capacity to comply remain far more problematic.

The framework we use to understand the recent changes in the global health security regime sees political cooperation and negotiation as a social process that is informed by both material and ideational factors (Onuf 1989). It is clear, for example, that pathogens are brute "material facts" that cause disease within the human body and which (in some cases) have the potential to kill millions of people. Likewise, some of the capacities that countries need to respond, such as laboratories to diagnose illnesses and medical facilities to treat them, are also material. Yet how we respond to disease outbreaks and whether or not we decide as societies to invest in such items as laboratories and medical facilities, is a product of ideas about the nature and scale of the threat posed by pathogens, what we should collectively do to address that threat, and how those measures should be ranked in relation to other priorities we have as societies. The idea that pathogens are a global threat requiring international cooperation rests on a similar set of ideas and beliefs, ideas and beliefs that are socially constructed.

The approach that best allows us to capture this relationship between the material and the ideational, and which therefore allows us to understand the development of the global health security regime, is social constructivism. Social constructivists argue that the behavior of states within international society is regulated by international norms, whether those norms are "soft" behavioral expectations or "hard" international law,[3] and that in practice the degree of compliance with those norms—even on the part of the most powerful states in the international system—tends to be far higher than rational choice theorists would predict. This is because states generally seek to act in line with established social expectations about how a "good state" ought to act. Of course they will seek to pursue what they see as their interests and may act in deviant ways, but for the most part states seek to uphold and comply with the rules of good conduct in international society. One of the most important reasons for this is that over time states internalize international norms, and compliance eventually becomes natural, even automatic. Said another way, it simply becomes part of their understanding of the way in which a "responsible" state behaves, and if they see themselves as a responsible state (which most states do) then norms affect the way in which they understand their national interests.

In general, constructivists tell us, states are reluctant to undertake actions that cannot be legitimated by reference to the prevailing law, rules, and norms of international society, and they tend to behave in the ways prescribed by international

norms. That said, even constructivists would caution that it is important not to overestimate the extent to which state behavior is determined by norms. Just as individuals do in the case of domestic laws, states sometimes feel able to violate norms with little or no prospect of any "punishment" being imposed. For constructivists, however, such instances of noncompliance do not mean that norms are unimportant, still less that they do not exist. Kratochwil and Ruggie (1986, 767, italics original) draw a useful comparison with domestic laws on drunk driving, asking,

> Does driving while under the influence of alcohol refute the law (norm) against drunk driving? Does it when half the population is implicated? To be sure, the law (norm) is *violated* thereby. But whether or not violations also invalidate or refute a law (norm) will depend upon a host of other factors, not the least of which is how the community assesses the violation and responds to it.

What we find in practice is that where a state is seen to violate the rules of international society, it will usually feel compelled to provide the other members of that society with some justification for its actions. Where a justification for noncompliance with a well-established norm is not offered, or where the one offered is deemed inadequate, constructivists would expect to see other members of international society criticize the behavior of the noncompliant state. The presence or absence of justification and condemnation in cases of noncompliance, therefore, becomes an indication of the existence of a widely shared international norm—an issue to which we return in our examination of the cases of SARS, H5N1, and H1N1 later in this book.

In some cases, noncompliance may be the result of a disagreement over the validity of the norm, the degree or level of compliance expected, or a dispute/uncertainty about its applicability to the circumstances at hand (Percy 2007; Krook and True 2010). In other cases states may simply choose to break the rules, believing that doing so is in their best interests regardless of the consequences of being seen by others as a rule breaker (Betts 2009). As already mentioned, however, in this book we also highlight an additional important dynamic: norm compliance is not only a question of *willingness* to comply with international norms, it is also a question of *capacity* to comply. Even if states acknowledge that they *ought* to behave in particular ways, they may be kept from doing so by an inability to comply—especially when the norm requires states to undertake positive actions (rather than merely refrain from doing something, as with so-called prohibition regimes [Nadelmann 1990]). In the case of the global health security regime, shortcomings in their technological/infrastructural ability to detect, report, and

contain outbreaks occurring on their territory can hinder states' ability to meet their IHR obligations. This is especially problematic given that the IHR revisions require governments to proactively invest in infectious disease surveillance and control infrastructure to an extent that is entirely novel for some states (Katz and Fischer 2010). And regardless of the lack of sanctions generally imposed on noncompliant states, in the case of the global health security regime, the consequences (whether due to lack of willingness or lack of capacity) are potentially extremely serious. Compliance can literally be a matter of life and death.

We find that significant changes in international norms can take place over a relatively short period of time, reflecting some of the social constructivist literature's focus on the ways in which new norms emerge while existing ones can become obsolete or have their meanings modified. Reconciling norm change with the fact that international norms fundamentally affect the identities and interests of states rests on the idea that norms rely on continual reinforcement through social interaction among states and that they can be challenged—and new norms promoted—during these interactions. Thus, to use the standard social constructivist phraseology, agents and structures are "mutually constitutive": as Wendt (1992, 411) puts it, "regular practices produce mutually constituting sovereign identities (agents) and their associated international norms (structures)". Of course, admitting the possibility of norm change does not mean that international society is in a state of constant flux. The system itself may indeed be relatively resistant to change, due to the fact that states have a continuing interest in maintaining order, and also, as Wendt (1992, 413) argues, because once constituted, international society "confronts each of its members as an objective social fact that reinforces certain behaviors and discourages others." The mutually constitutive relationship between agents and structures does, however, allow for the possibility of international norms changing over time as ideas and practices evolve (or are deliberately altered by proponents of new norms).

Material and ideational developments in the international environment can lead to demand for new norms. The invention of a new kind of weapon, for example, might lead to a demand for a new prohibition regime, as emerged in the case of poison gas. But even where there is a new material stimulus to normative development, it is how states perceive and respond to that material change that leads (or does not lead) to opportunities to establish new norms. In terms of our focus in this book, globalization has increased the rapidity of global disease transmission (a material change). This fact, coupled with changes in the ways in which states came to view both their vulnerability to and obligations in the face of cross-border diseases (a security threat, which developed in part because they believed

there had been a manifest failure of existing arrangements to operate effectively) opened up the political space for the norm change that was negotiated via—and ultimately codified within—the revised IHR. As we discuss further in the chapters that follow, the idea of global health security was the crucial discursive tool used by the WHO and others in the early twenty-first century to successfully promote the need to revise the IHR and subsequently to promote the need for states to comply with the new rules.

To structure our analysis of the ways in which the new norms of global health security have been built and disseminated throughout international society, we employ the model of the "norm life cycle" first set out by Martha Finnemore and Kathryn Sikkink in 1998. This model has subsequently been utilized by scholars to examine norm change in a wide range of fields, from Third World debt cancellation (Yanacopulos 2005) to the evolution of migration law (Gurowitz 2008) and from the prohibition of whaling (Bailey 2008) to conflict resolution (Mitchell 2002). Finnemore and Sikkink set out the emergence of new norms as a three-stage process (figure 1). In the first stage, norm entrepreneurs seek to utilize techniques of persuasion to promote an incipient norm. Once a critical mass of states adopt the new norm it is said to have reached a tipping point, following which a norm cascade begins (stage 2), during which more and more states come to adopt the new norm. The third and final stage of the norm life cycle is internalization, where norms achieve a taken-for-granted quality and compliance becomes effectively automatic and often routinized in domestic political arrangements and bureaucratic procedures. At each stage of the norm life cycle, distinct actors with different motivations utilize various mechanisms in order to promote the development of the new norm (figure 2).

The Structure of the Book

This book proceeds in three parts, tracing IHR revision against the stages of the norm life cycle. Yet we do not seek to slavishly apply the norm life cycle model; instead we critically engage with each stage and the processes "expected." Nevertheless, Finnemore and Sikkink's overall framework guides our analysis, and in keeping with that our initial focus is on the first stage of the norm life cycle: norm emergence. In chapter one we examine the ways in which norm entrepreneurs, particularly officials within the WHO secretariat,[4] persistently argued that habitual noncompliance and the limited scope of the IHR had effectively failed to control cross-border disease threats in a globalized world and that emerging and re-emerging diseases would pose immense risks in years to come. At first glance, this rationale for a stronger IHR appears not dissimilar to the ideas that

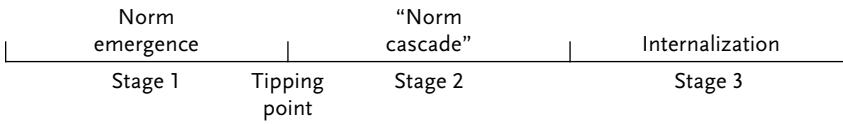


Figure 1. The norm life cycle (From Finnemore and Sikkink 1998: 896. © 1998 by the IO Foundation and the Massachusetts Institute of Technology.)

	Stage 1 *Norm emergence*	*Stage 2* *Norm cascade*	*Stage 3* *Internalization*
Actors	Norm entrepreneurs with organizational platforms	States, international organizations, networks	Law, professions, bureaucracy
Motives	Altruism, empathy, ideational, commitment	Legitimacy, reputation, esteem	Conformity
Dominant mechanisms	Persuasion	Socialization, institutionalization, demonstration	Habit, institutionalization

Figure 2. Stages of norms (From Finnemore and Sikkink 1998: 898. © 1998 by the IO Foundation and the Massachusetts Institute of Technology.)

guided trading states in the mid-1800s during the International Sanitary Conventions—the desire to curtail disease spread while limiting the adverse impacts of any international control measures on travel and trade. But in fact the intentions of the WHO secretariat were radically different. As we reveal, their starting premise was the need to prevent unnecessary harm to individuals, and they saw infectious disease outbreaks as (for the most part) preventable and predictable when science engages politics to deliver collective action to enhance disease surveillance, response, and treatment. There were only two impediments to this view. First, states had to be convinced that the norms being promoted by the WHO secretariat would not exact a disproportionate toll on their trade or other interests (a clear echo of the 1850s). Second, states had to be convinced that it was their responsibility (and in their interests) to consistently deliver on effective outbreak response regardless of their health system capacity and their other political interests. The WHO secretariat's task, then, became one of convincing states of their responsibility to manage the risk of infectious disease spread, the quid pro quo for which was a prohibition on the imposition of unnecessarily harsh travel and trade measures. Reconciling the interests of a state experiencing an outbreak with

those of the rest of the international community was a novel political maneuver for the WHO secretariat and relied on persuading states that they constituted a "community of common fate."

The book then moves on to examine the norm cascade process, charting how a package of new norms came to be accepted by states—a process that occurred gradually over a number of years, but which (as we argue in chapter two) was given added impetus by the experience of the 2003 SARS outbreak and was formally concluded through the adoption of the IHR by the WHA in 2005.

We then trace the early stages of the internalization process, in which states have had to start shifting their approach, away from seeing the IHR as a set of rules that they may or may not follow, to seeing it as a set of rules that states should abide by, informed by the beliefs that this is both what states ought to do and also how their interests are best served. In chapters three and four we focus in detail on state behavior during two major global outbreaks, one that arrived during the IHR revision process (H5N1) and one that occurred two years after the revised IHR had officially entered into force (H1N1). Finally, in chapter five we assess the progress that has so far been made toward full internalization. Here, we examine technical capacity across different regions of the world and the discourse around recent international disease outbreaks to reveal the extent to which norm-driven behavioral justifications and criticisms of both unwillingness and inability to comply have occurred.

Acceptance of the IHR revisions has often been portrayed as a case of states rationally adopting measures that will protect their self interests (e.g., Price-Smith 2009). According to this view, material changes in the global environment (for example, increased cross-border travel and trade), coupled with novel outbreak events such as Ebola and SARS, motivated state commitment to the IHR revisions. However, in examining the IHR revision process from 1995 onward, it becomes clear that we can only appreciate why all states agreed to the onerous demands placed on them (with the IHR requirements being especially demanding for developing states) if we acknowledge that important ideational changes have taken place that made the IHR revisions possible. From our analysis, particularly during the post-SARS norm cascade process, we are convinced that material-based calculations alone could not have brought about the 2005 outcome. Many of the ideas that became central to the 2005 revisions had been in place prior to the outbreak of SARS. The ways in which states interpreted the lessons of SARS—and the ways in which norm entrepreneurs used SARS to forward their case—led to a process of states gradually redefining their interests, a profoundly ideational shift.

The revised IHR includes a number of new (or expanded) normative commitments, including building "core capacity" infrastructure, transparent and timely reporting of a wider range of diseases, putting in place proportionate responses to outbreaks, and the right of the WHO to act on reports from non-state sources. Achieving agreement on these changes was only politically possible in the first place because there was widespread support for, and interest in, a more effective global disease control regime. In turn, that was possible because of shared understandings about disease and security that were becoming more apparent in the 1990s. As such, the evolution of the global health security regime needs to be understood in the light of these broader ideational shifts that were challenging the traditional distinctions between local-global, traditional-human security, and domestic-international health (Elbe 2009).

We question whether the (largely) successful promotion of the norms codified in the revised IHR has promised too much or too little when it comes to delivering on global health security. Although the evidence we present here suggests—even at this early stage in the implementation process—that most states want to comply with their obligations most of the time, material shortfalls remain a significant obstacle. In particular we seek to highlight the relationship between capacity and norm compliance, arguing that the inability of states to comply with their obligations under the IHR (as a result, for example, of limitations in their own domestic surveillance and containment systems) may in fact be a far more serious challenge to the effectiveness of the new global health security regime than potential resistance.

It is too simplistic to portray the global health security narrative as a Western invention (Aldis 2008). There are undoubtedly real and serious health issues at stake here, which is, in part, why the IHR revision process proved successful. But less guaranteed, given the history of infectious disease outbreak cooperation, were the scope of the revised IHR and the reach of the revised IHR into individual state processes of disease outbreak response. To this recent history of the development of the global health security regime we now turn.

CHAPTER ONE

Building Global Health Security

The Drive for IHR Revision

The lengthy process that culminated in the adoption of the revised International Health Regulations in 2005 took place in a context in which infectious diseases were increasingly being viewed in security terms. This securitization phenomenon, post–Cold War, saw a dramatic increase in "security talk" in policy discussions around infectious disease. David Fidler (2007, 42) has argued, "Efforts to approach public health challenges through security concepts have prevailed in a way that constitutes a transformative development for public health governance." Although some have queried whether this is somewhat overstating the case (e.g., Maclean 2008) it is certainly true that in the last decade of the twentieth and the first decade of the twenty-first century there was a burgeoning policy and academic literature on disease as a security issue. Laurie Garrett's *The Coming Plague* (Garrett 1994) and Fidler's *International Law and Infectious Diseases* (Fidler 1999) were unusually early examples, but from 2000 onward there was a rapid growth in the number of scholars within international relations and political science (as well as some from public health) examining various aspects of the relationship between health and security.[1] At the same time, as we show below, influential voices within public health—especially in the United States—were drawing attention to the security dimensions of infectious disease outbreaks. In this chapter, we argue that norm entrepreneurs were keen to capture this new security discourse to promote the reform of what they would come to call the "global health security" regime.

The norm entrepreneurs who we identify in this chapter as promoting IHR revision were ultimately successful in convincing states of the need to change an outdated, and for some almost irrelevant, instrument of infectious disease control. Yet their task was not a straightforward one. They needed to persuade states to commit to a collective security framework rather than the (continued) pursuit

of individual self-interested responses, while at the same time convincing governments that the security threat posed by infectious disease outbreaks was so serious that doing nothing was not an option. As we chart below, striking this careful balance meant achieving high-level political prioritization of cross-border infectious threats while simultaneously encouraging all states—rich as well as poor, powerful as well as weak—to recognize the WHO as the natural body to organize and advise on outbreak response.

In this chapter we identify key individuals within the World Health Organization secretariat who played particularly important norm entrepreneurship roles in developing the concept of global health security and in arguing for changes to the existing global regime. This occurred in three stages. First, they helped make the case for IHR revision. In the mid-1990s, long before the 2003 Severe Acute Respiratory Syndrome outbreak, the WHO secretariat positioned itself as a key advocate for reforming the framework, an effort that culminated in the World Health Assembly's acceptance of the IHR revision agenda. In the second stage, roughly from 1995 to 2000, secretariat officials began to define the specifics of their new vision of disease diplomacy, actively promoting their ideas about what a more effective global health security regime would look like; some of these specifics were retained and some were later jettisoned. Finally, in the third stage, from 2000 up to the SARS outbreak of 2003, the secretariat made significant progress in refining and defining the shape of the norms that would eventually be encapsulated in the 2005 regulations.

Focusing on WHO secretariat officials as norm entrepreneurs rests on the contention that such individuals, formally designated under Article 30 of the WHO constitution as technical and administrative staff, are capable of exercising agency in pursuit of particular political ends. Throughout this chapter we show that they did precisely that, and that while the authority to adopt the IHR revisions rested ultimately with member states, the secretariat played an extremely active role in driving and shaping both the lengthy revision process and the resulting regulations. In playing such an activist role the secretariat was to some extent breaking new ground, but it was also building on the WHO's historical centrality in international disease control efforts. The WHO was created as the United Nations specialized agency for health, with a mandate of promoting "the attainment by all peoples of the highest possible level of health" (WHO 2005, 2).

Headquartered in Geneva, and supported by six regional offices, the WHO was given responsibility under its 1948 constitution for preventing, controlling, and, wherever possible, eradicating infectious disease threats. But even though the WHO's mandate was to serve as the lead technical coordinating agency, the

organization has certainly not been a passive bystander—and the secretariat has always attempted to juggle the priorities of respecting the collective desires of its member states and its own health advocacy ambitions (Chorev 2012). By the mid-1990s, when our story begins, the WHO secretariat was becoming even more explicit in using foreign policy and diplomatic engagement to put forward particular health agendas. The secretariat proactively took diplomatic leadership roles on health initiatives such as the Framework Convention on Tobacco Control, and the political and donor support achieved by the agency for these programs was unprecedented (Lee, Fustukian, and Buse 2002; Taylor 2004; Ricci 2009). From this perspective, the IHR revisions marked just one example of the secretariat's emergence as an ambitious political actor on the international stage, keen to create and shape new directions for global health governance (Smith et al. 2003).

In line with the theoretical approach outlined in the introduction, the ability of the secretariat to engage in norm entrepreneurship is in some ways unsurprising. Previous work in the social constructivist tradition (see, for example, Barnett and Finnemore 2004; Johnstone 2007; Rushton 2008; Kamradt-Scott 2010) has identified the bureaucracies of international organizations as exercising considerable authority, including the ability to promote new international norms. However, unlike proponents of principal-agent analyses, which see such secretariat agency as a result of the exploitation of agency slack (in which bureaucracies can carve out some space for independent action within a "zone of discretion," although always with the proviso that they are liable to be reined in by member states if they overstep the mark), we follow Barnett and Finnemore (2004, 42–43) in putting forth a more sociological account in which bureaucrats, through exercising a variety of forms of authority, are able to bring about changes in the broader organizational environment. We examine this dynamic through the ways in which the WHO secretariat engaged not only in performing technical and administrative functions and operating in the zones of discretion left to them by member states but also in actively "teaching" (Finnemore 1993) governments why they needed to engage with the IHR revision process and how the new global health security regime should look. All of this played out against the backdrop of a global-level securitization of disease—a discourse that became a key enabling condition for the norm entrepreneurship efforts of the secretariat.

Health Security and the Post–Cold War Era

Both the academic and policy discourses have addressed a wide range of aspects of the health-security link (Koblentz 2010), but the most common claims that have been made for treating health as a security issue may be distilled into three

categories (see Feldbaum and Lee 2004, 22–24). The first—and the one that fed most directly into the IHR revision process—was the idea that globalization had brought about a paradigm shift, dramatically increasing the frequency and rapidity of international travel and trade (as well as other processes, such as increased migration and urbanization). The result was a pervasive feeling that pathogens could no longer be contained within state borders (if they ever could) and that a new approach for responding to disease outbreaks was required. As we examine in chapter two, SARS became a timely illustration of the dangers posed by this potential for rapid international spread. The US National Intelligence Council's investigation into the SARS outbreak graphically illustrated the way in which a single "superspreader" infecting fellow guests at a hotel in Hong Kong led to the disease spreading to Singapore, Viet Nam, Ireland, Canada, and the United States within a matter of hours (National Intelligence Council 2003, 10). The WHO's report into SARS highlighted many of the same issues of rapid global travel contributing to an almost uncontrollable spread of the disease (WPRO 2006). In more recent years, pandemic influenza has been increasingly prominent in such discussions, along with emerging threats such as multi-drug-resistant tuberculosis and other antibiotic-resistant disease strains (Kim et al. 2003; Koch 2008; Enemark 2013), all of which have been widely discussed as health security challenges heightened by global travel and trade.

The second common argument on the health-security linkage, which also became relevant during the discussions over the reform of the global health security regime, was that pathogens might be weaponized, either by terrorists or through state-sponsored biological weapons programs. If SARS served as a warning of the threat posed by a natural outbreak, it was the 2001 anthrax letter attacks in the United States, coming hard on the heels of the 9/11 terrorist attacks in New York City and Washington, DC, that heightened policymakers' interest in the issue of bioterrorism. Within the United States, biodefense research budgets were exponentially increased in the wake of the anthrax attacks (Fauci 2003), and at the international level new bodies were created. Most notably, this included the Global Health Security Initiative, which brought together the governments of Canada, France, Germany, Italy, Japan, Mexico, the United Kingdom, and the United States as well as the European Commission to develop "a more coordinated approach to improving the health security of citizens, and to better prepare for and respond to acts of terrorism, in the aftermath of September 11, 2001" and to promote "concerted global action to strengthen the public health response to the threat of international biological, chemical and radio-nuclear terrorism" (Global Health Security Initiative 2001).

A third common argument—less directly relevant for the purposes of this book—was the claim that high burdens of disease can have social, political, economic, and military effects that threaten the stability of states and regions. HIV/AIDS was by far the most common subject of this argument, and indeed the overwhelming view in the literature (especially the international relations literature) in the early 2000s was that the AIDS pandemic had been successfully securitized (Prins 2004; Elbe 2005; McInnes 2006; Fidler 2007). The UN Security Council's resolution on the subject in 2000 was widely seen as a turning point in the securitization of AIDS, although that in itself was dependent on an earlier process of securitization within Washington policy communities (McInnes and Rushton 2013).

While the rise in prominence of these health and security discourses though the 1990s and early 2000s was contemporaneous with the discussions over IHR revision, none of these arguments were in themselves new. Concerns over the impact of international travel were evident during the previous process of revising the IHR when in 1968 Pierre Dorolle, then deputy director general of the WHO, cited the massive increase in air passenger traffic during the 1960s as a significant international health problem and a challenge to the effectiveness of the prevailing (1951) International Sanitary Regulations (Dorolle 1968, cited in Weir and Mykhalovskiy 2010, 113). Indeed, security concerns centring on international traffic and trade as a vector for disease can be traced back much further, at least to the introduction of quarantine in the fourteenth century that we discussed in the introduction (see also Gensini, Yacoub, and Conti 2004). Biological warfare likewise has a long history, from the deliberate contamination of water supplies in antiquity to the more sophisticated attempts to use pathogens as a weapon from World War I onward (Christopher et al. 1997). Even in the case of HIV/AIDS—a condition that was only identified in the early 1980s—the security framing of the disease arrived remarkably soon after its discovery, with a 1987 report from the Central Intelligence Agency (CIA) addressing the security implications of the virus (CIA 1987). Far from being recent bedfellows then, health and security have historically been extremely closely entwined (Price-Smith 2009, 2). Szreter, in fact, has argued that it is the *separation* of health and security rather than their coming together that is relatively new (Szreter 2003).

Yet it is clear that something *did* change in the way in which health was seen as an international issue in the 1990s, and (as we discuss in the next chapter) that process accelerated in the early 2000s. It is, we contend, impossible to understand the norm entrepreneurship that led to the IHR revision process without taking into account this crucial zeitgeist of the securitization of infectious disease. Flu,

for example, had previously been identified as affecting security interests, but as Kamradt-Scott and McInnes (2012, S106) have argued, a resecuritization of influenza occurred during the 1990s, a period during which the disease became "widely-accepted as a security threat." The growing acceptance of the disease-security link allowed the WHO secretariat and others to make a case to governments across that world that they needed to prioritize the revitalization of the global infectious disease control regime. Yet, as we noted earlier, they also needed to persuade governments to respond to this threat in a collective way rather than through a unilateral and isolationist stance.

One of the most influential statements during this period was a 1992 report published by the US Institute of Medicine (IOM) entitled *Emerging Infections: Microbial Threats to Health in the United States* (Lederberg, Shope, and Oaks 1992), which did much to dramatize the threats posed to the United States by infectious diseases, especially Emerging Infectious Diseases (EID) that were being newly identified in humans or that were affecting particular geographical regions for the first time. The IOM report warned that the US government and the wider international community had dropped the ball on health and security and, for the first time in a long time, in the post–Cold War era the US government had the space and inclination to listen to such alternative security messages (ibid., 1–15; Fidler 1996–97). Quite apart from their good timing, the authors of the IOM report also went out of their way to communicate their findings to high-level government and political actors. Joshua Lederberg, one of the authors of the IOM report, had already started to proactively engage government in examining the hazard of "emerging microbes" at a 1989 conference in Washington, DC that he organized along with Stephen Morse (Weir and Mykhalovskiy 2010). At that conference, held over three days in the Hotel Washington, within walking distance of the White House, Lederberg, Morse, and eminent microbiologists and medical historians gathered to communicate to the US government why they needed to engage more seriously with the threat posed by disease (Garrett 1994, 6; see also Smith 2014).

The IOM report's authors were, however, acutely conscious of the need for these threats to be addressed through a more effective global disease surveillance network—clearly not something that the US could achieve alone. The report called on the US government to take the lead in promoting a "comprehensive global infectious disease surveillance system" through the WHA (Lederberg, Shope, and Oaks 1992, 17) and stressed that the active involvement of the WHO was a prerequisite to success:

> The coordination efforts of multilateral international organizations, such as the WHO, are critical to infectious disease surveillance. Without these organizations, programs such as the successful worldwide eradication of smallpox and the interruption of polio transmission in the Americas would be little more than dreams. Any implementation of a global surveillance system for emerging infectious diseases must draw upon the capabilities of such organizations (IOM 1992, 131).

Accordingly, the report recommended using the WHO as the venue for enhancing every nation's capacity to guard against the infectious disease threat.

1994–1995: Gearing Up for IHR Revision

In April 1994, with the IOM paper published and having gained an influential readership, a meeting was convened at the WHO in Geneva to address some of the issues raised in the report. Perhaps unsurprisingly, the assembled experts included several of the individuals who had contributed to the 1992 US IOM report (WHO 1998a, 540). This time participation was sought not just from the US government but also from the "global South." Lederberg reportedly argued at this gathering that "while the book (*Emerging Infections*) was targeted to the United States, 70–80% of issues were of global concern" (ibid.). All present at the Geneva meeting agreed that the WHO must "establish a coordinated international effort . . . to deal with this threat" that proactively engaged all WHO regional offices and WHO country offices (ibid., 454–55). This meeting served as the inspiration for the WHO secretariat, particularly the Communicable Disease Unit, to begin making the argument for revising the 1969 IHR. Their rationale was that if states could prevent outbreaks they must do so, because the risks of doing otherwise affected not just a few economies or health systems but *all* economies and health systems. The framing of the revision process as an imperative that no state could reasonably and responsibly object to was underway—and was inextricable linked to the emerging discourse around the national security implications of cross-border outbreaks.

Long before the publication of the IOM report, even as far back as the 1970s, there had been widespread acknowledgement of serious problems with the existing global disease surveillance and reporting regime (Delon 1975). By the mid-1990s, however, following the IOM report and the more general shift to treating disease as a security issue, the environment was becoming more conducive for re-examining the ways in which the international community responded to such collective action problems.

The WHO was quick to take up the issue on its own internal agenda. In 1994, a midterm review of the WHO's Health Situation and Trend Assessment was conducted for the 1990–95 period. It was determined as part of that review that the organization's headquarters in Geneva should expand and strengthen its global epidemiological surveillance tools to assist governments with developing their own epidemiological capabilities (WHO 1994). Two months later, in January 1995, WHO Director-General Hiroshi Nakajima presented a provisional agenda item to the ninety-fifth session of the Executive Board (EB95/61) titled *Communicable Disease Prevention and Control: New, Emerging, and Re-Emerging Infectious Diseases* (WHO 1995a). The report echoed much of the new security-based discourse, detailing a growing number of novel infectious disease strains (and re-emerging strains) that were the products of urbanization, globalization, and greater interaction between animals and humans, all of which were placing people "at risk of diseases not commonly encountered in the past" (ibid., 1). The director-general's report argued that "new, emerging, and re-emerging diseases are not limited to any region of the world, nor are they restricted to developing or developed countries. Rather, they represent a global threat that will require a coordinated, global response" (ibid., 2). The director-general's recommendations—under the heading of "What Should Be Done?"—were attributed to the April 1994 meeting of international experts, chaired by Lederberg.

The first recommendation was "strengthening of global surveillance of infectious disease" and emphasized the rapid exchange of outbreak information across national, regional, and international levels (ibid., 3). The second recommendation given was the establishment of "national and international infrastructure to recognise, report and respond to new disease threats" (ibid.). Again, laboratories were urged to engage in international information exchange, training, technology transfer, and improved communications between WHO laboratory centers and other labs. The third recommendation was the development of "applied research" such as inexpensive diagnostic tests suitable for "global use" and "evaluation of standards for basic public health action focused on disease prevention." Finally, the director-general called for political will and investment to strengthen the "international capacity for infectious disease prevention and control," such as guidelines for the prevention and control of newly emerging or re-emerging diseases and improved methods of risk communication (ibid.).

Although the WHO secretariat never attempted to conceal the influence of the IOM's report on their thinking (nor did they attempt to hide its contribution to informing the recommendations that the director-general presented to the Executive Board), it appears that the secretariat wanted to ensure that the needs of a

wider group of stakeholders were appropriately considered and, at the same time, avoid the appearance that this was a purely Western- (specifically US-) driven agenda. As such, before the 1994 midterm review meeting, the WHO secretariat encouraged government delegations from developing countries to attend and offer their views. This was believed to be critically important, given that developing countries continued to suffer a higher proportion of infectious disease outbreaks, but the WHO secretariat also seems to have been genuinely interested in ensuring that any new international regime that might emerge reflect a truly "global perspective" (WHO 1998a, 541).

To begin the process of enacting the global plan, the director-general presented a draft resolution to the WHO Executive Board (EB) in the form of EB95/12 (WHO 1995b). In presenting this draft resolution to the Executive Board, which is composed of a small number of member state–elected technical experts to oversee the WHO secretariat's implementation of the WHA's agenda (Lee 2009), it was intended that, if passed, the resolution would form the basis of a draft resolution for the forty-eighth WHA in May 1995. The EB resolution made a number of proposals that ran along three thematic lines, echoing the director-general's January 1995 recommendations: first, member states must build their capacity in surveillance and response at the local, national, and international level (i.e., by training personnel, establishing/strengthening laboratories, and supporting research dedicated to diagnostics and public health response); second, greater collaboration between national and international health agencies—including UN agencies, nongovernment organizations, and research institutes—was needed to "recognise and respond to new, emerging, and re-emerging infectious diseases" (WHO 1995b, 4–5). Finally, the director-general requested that the WHO secretariat be allowed to lead the implementation of new procedures and strategies for assisting states with their response to new, emerging, and re-emerging diseases; to coordinate such responses at the international level with national and international partners; and to "draw up plans for improved national and international surveillance of infectious diseases, including prompt dissemination of surveillance information, and to coordinate their implementation among Member States and with interested agencies and other groups" (ibid.).

Notwithstanding the broad language used in the recommendation, the WHO secretariat proposed some important shifts in outbreak response that were endorsed by the WHO's executive board in February 1995 in a move that paved the way for the ultimate test of the WHO secretariat's influence—persuading governments to agree to revise the 1969 regulations. Through the passage of resolution EB95/12, the WHO secretariat had achieved a measure of international

consensus on the nature of the threat and the action required in response. Moreover, the language had changed—phrases such as "active surveillance," "early detection of outbreaks," and "prompt identification," for example, were new additions to the Executive Board resolution. There was also a clear escalation in the expectations being placed on member states: infectious diseases were presented as urgent threats that required their immediate attention (WHO EB 1995). In addition, the secretariat's role was strengthened by the Executive Board's resolution: by the time the draft resolution was sent to the forth-eighth WHA in May 1995, the WHO secretariat was being asked to "establish strategies enabling rapid national and international action to investigate and to combat infectious disease outbreaks and epidemics" (ibid.) and to improve "programme monitoring and evaluation at national, regional and global levels" (ibid.). On the surface this appears to be a delegation of authority of the type that principal-agent theory could readily explain. Yet, as is clear from the history of the resolution, the secretariat had played a more fundamental (and more political) role than being a mere passive recipient of delegated authority over technical matters; it had played a key part in teaching states about the need for change and that the WHO secretariat was the body best placed to guide the reform process.

Indeed, in reviewing the discussions pertaining to EB95/12 and the draft resolution on revising the International Health Regulations (Document A48/15)—formally proposed by Bahrain, Oman, Qatar, and the United Arab Emirates, with Saudi Arabia and Canada as co-sponsors—it is evident that there must have been widespread government support for an improved global response to infectious diseases (WHO 1995c, 141–49). What is striking about these discussions in hindsight is both the seemingly unanimous agreement on the need for IHR reform as a (indeed *the*) central plank of the attempt to improve the global response to disease outbreaks and also the role of secretariat officials in arguing for reform. In presenting the case for IHR revisions, WHO Assistant Director-General Ralph Henderson argued that the 1994 plague outbreak in India

> revealed the deficiencies that existed in national and international readiness to respond quickly but rationally to cases of infectious disease that posed, or appeared to pose, a threat to public health. Although the International Health Regulations provided a sound basis for responding to such an outbreak, few were really familiar with them. (WHO 1995c, 141)

According to the official records of the WHA, member states concurred with Henderson, noting that the 1994 plague outbreak was just one example of the how quickly diseases could spread without an improved and internationally coordi-

nated response. A second common refrain was that the WHO, given its technical role, remained the most suitable vehicle for coordinating the collection and dissemination of surveillance information gathered from national and international sources (WHO 1995c, 149, 154). The WHO's expertise ("expert authority," in Barnett and Finnemore's words [Barnett and Finnemore 2004, 24–29]) and role as *the* global medical technical agency (bringing with it a significant degree of "moral authority" [ibid., 23]) had been highlighted by the IOM report, and the organization's member states more generally agreed that it was the appropriate forum in which to address the failings of the existing global health security regime. Handing leadership in devising the new regulations to the WHO secretariat would—as the SARS situation later demonstrated (see chapter two)—allow it the opportunity to build on the WHO's authority to secure a role for itself in advising on (and monitoring) appropriate behavior.

In short, the power vested in the WHO over the IHR revision process provided the secretariat with a golden opportunity to engage in norm entrepreneurship and to promote its idea of the ideal global health security regime. Following their discussions and deliberations, the WHA passed both the IHR revision resolution, WHA48.7, and the Executive Board resolution on combating emerging infectious diseases (WHA48.13), in May 1995. Both were adopted with no objections. Resolution WHA48.7 called on the WHO to begin the process of revising the IHR.

The securitization of disease was the ideational backdrop against which these discussions played out, with contemporary events highlighted to demonstrate the material context in which these ideas mattered. As well as the Surat plague outbreak in India, a series of other events in the early- to mid-1990s were repeatedly invoked by the WHO secretariat to demonstrate the need for change and to highlight the organization's capacity to define and manage that change. Those events included the reappearance of cholera in Latin America in 1991, a decade after it had been eradicated; the resurgence of tuberculosis and the emergence of new strains that were resistant to all known forms of treatment; and an outbreak of Ebola haemorrhagic fever (EHF) in Zaire in 1995 (WHO 1995a). David Heymann, who led the department responsible for the IHR revision, later recalled that

> the request from the Assembly came because there were two events that really impacted on WHO's ability to respond to the needs of countries. One of those was the Surat plague outbreak and the other was the Kikwit Ebola outbreak in the former Zaire. It was those two events. They jammed the switchboards at WHO and there was really no system to get the information out to where people could find it even though we were already in an electronic era. (Heymann 2009)

Guénaël Rodier, who was part of the WHO team deployed to Surat and later went on to become director of the WHO Department of Communicable Diseases Surveillance and Response (CSR), concurred:

> Following the plague outbreak in India it was very clear that the IHR were obsolete, and then when emerging infections that were not in the IHR like Ebola occurred in Kikwit, then it was even clearer that the IHR not only were obsolete but needed to be revised to be able to integrate emerging infections. (Rodier 2009)

A number of lessons were drawn from these outbreaks. First, states and nonstate actors turned to the WHO for advice, reinforcing the impression that the organization was seen as, and should remain, central to global disease control efforts. Second, these outbreaks illustrated the fact that the coverage of the existing IHR was inadequate for dealing with the range of disease threats that states and their populations were facing. As we noted in the introduction, since the early 1980s (when smallpox had been removed from the list, following its successful eradication) the IHR had only applied to three diseases—plague, cholera, and yellow fever. While the Surat plague outbreak fell under the regulations, Ebola did not—reaffirming once again the need to expand the scope of the IHR to address the potentially devastating consequences of other emerging and re-emerging infectious diseases.

Adding to concerns over these outbreaks was the discovery in 1991 of stockpiles of biological and chemical weapons during the first Iraq war, raising the specter that serious future disease outbreaks may not always be naturally occurring (Tucker 1999). Russia's admission a year later that the Soviet Union had maintained an offensive biological weapons program throughout the entire duration of the Cold War compounded anxieties even further, as did the March 1995 Aum Shinrikyo gas attack on the Tokyo subway and the subsequent discovery of biological agents at their headquarters in Kamikuishiki. Needless to say, all of these events were fresh in the minds of government representatives as they met in Geneva at the WHA in May 1995 and reached a new consensus over the need to revise the outdated and largely ineffective IHR.

But if the primary aim of the revision process was to expand the scope of the IHR to make them suitable for a world facing new disease threats, an important secondary aim was to address the ongoing problem regarding the habitual noncompliance of many states with the existing reporting requirements. The system (as it then existed) relied on member states voluntarily reporting outbreaks of notifiable diseases occurring within their territories. And yet, in many cases, they were not doing so. The fear of other states implementing economically damag-

ing trade and travel sanctions because of a reported disease event was frequently cited as one of the reasons why governments so often failed to report. Cash and Narasimhan (2000), for example, revealed how the economic losses resulting from trade restrictions imposed as a result of the cholera and plague outbreaks in Peru and India, respectively, served as significant disincentives for states to report disease outbreaks. This problem was recognized as a major stumbling block to an effective regime, and addressing it as part of the revision process was going to be key to achieving the IHR's overall objective of balancing the need to limit the international spread of diseases on the one hand and the desire to avoid unnecessarily disrupting international travel and trade on the other.

Striking this balance between effective disease control and freedom of travel and trade had been central to every precursor of the IHR (2005), from the International Sanitary Conventions of the nineteenth century onward, and it was seen as no less important to any new set of regulations. Indeed, given the centrality of a globalized economy and international free trade to contemporary international relations, the importance of successfully striking this balance in the new regulations was arguably even greater. The closely linked problems of the limited scope of the IHR, noncompliance with its reporting requirements, and the regular imposition of disproportionate restrictions by third-party states were the most widely cited problems with the existing arrangements. The key question was whether the attraction of a properly functioning global health security regime was powerful enough to overcome states' reasons/excuses for noncompliance.

The WHO secretariat sought to further expose the "weakness" of the existing system by repeatedly referring to two shortcomings in the 1969 IHR (e.g., WHO 2002a, 3). One of these shortcomings was that there was nothing in the existing regulations stipulating how the WHO and the affected country were to collaborate and cooperate in the containment of disease. The fact that states and the WHO were both moving toward a formal role for the WHO in disease containment (rather than it being a mere recipient of outbreak reports) was a significantly new development from the previously state-centric (and border control–focused) global infectious disease response regime. The second flaw presented was that the previous regulations did not provide a guide to the containment measures that a state should adopt in the event of an outbreak. Now it began to be argued that states had a responsibility to their neighbors to have procedures in place to contain the spread of disease.

As the emphasis of the global health security regime shifted away from quarantine and border controls toward the containment of outbreaks at the source (e.g., Andrus et al. 2010), it started to become apparent that ideas about the

responsibilities of both states and the WHO to contain disease outbreaks were dramatically shifting. This, we argue, was a crucial (normative) move by the WHO secretariat, acting as a norm entrepreneur: the vision being promoted of a new global health security regime was not predicated on old-fashioned quarantine measures but on new networks of information sharing and capacity building to enable the containment of outbreaks *prior* to their international spread. This (re)definition of health security fundamentally shifted the role of states from independent, disconnected actors to being members of a "hub and spokes" model which required a central manager to disseminate information and manage the global response to events in real time. The WHO, perhaps unsurprisingly, was put forward as the appropriate organization to serve in this hub position.

In the remainder of this chapter we follow the ways in which this model came to be promoted, from the early years of the revision process (starting with the 1995 WHA resolution) to the SARS outbreak of 2003. In particular, we trace the gradual development of the new norms that came to be proposed as solutions to these problems and the activities of the norm entrepreneurs (both within and outside the WHO secretariat) who sought to advance them.

1995–2000: Tentative First Steps

On the face of it, given the widespread support within both the EB and the WHA for the revision of the IHR, the task facing the WHO secretariat in moving the revision process forward would not appear to have been a difficult one. There was, it seemed, a general acceptance of the need for change. Yet the solutions to the problems posed by the failures of the existing IHR were not self-evident, and the issues remained highly politicized. It was clear from an early stage that the negotiation of the new IHR would not be a simple task. WHO Director-General Nakajima recognized that he needed to find someone who understood both the politics and the practicalities of disease outbreaks. In October 1995, he appointed David Heymann to lead the newly created WHO Program on Emerging and other Communicable Diseases. Heymann, a US national, gained his reputation as a medical epidemiologist while working in India for two years on the WHO Smallpox Eradication Program and some 13 years in sub-Saharan Africa with the US Centers for Disease Control and Prevention (CDC). After joining the WHO in 1988 "on loan" from the CDC, Heymann became chief of research activities in the WHO Program on AIDS—a position he held until his appointment as director of the new emerging diseases program in 1995. A key part of Heymann's new remit was to oversee the IHR revision process. He assembled a small project team, headed by Lindsay Martinez, to commence that work. Marti-

nez's own background was in veterinary pathology and malaria, and the team was drawn from a variety of WHO departments. Their appointed task was to coordinate the revision process among the organization's member states.

The way in which this small team saw its role is an important part of the norm entrepreneurship story. Although formally created in response to a request from member states, the project team rapidly developed a clear vision of the key obstacles that it was attempting to overcome and the broad outlines of some potential solutions. Heymann spelled out the vision thus:

> What we wanted to achieve was a world on the alert and able to detect and respond to infectious disease events of international importance within 24 hours. That was the vision, understanding that it was very difficult for countries to report infectious diseases because they knew they could be stigmatized and suffer great economic loss as well as experience negative impacts on human health. And so the second part of the vision was changing the norms of reporting so that it became "expected and respected" to report outbreaks despite the economic consequences that could occur. (Kamradt-Scott 2010, 77)

The normative aspect of the team's work lay in redefining "appropriate" state behavior during a disease outbreak and framing the rationale for this behavior in security terms. At the same time, Heymann defined a two-step strategy for the WHO secretariat—to reveal how insecure the world was in the face of infectious disease outbreaks and, in turn, to advise on particular cooperative actions that would mitigate the risk. Yet even with the broad support for the revision process, the secretariat team still faced challenges, including securing the resources necessary for the team to carry out its work. Heymann was forced to seek external funding from the Canadian government and the UK Department for International Development (DFID) (Kamradt-Scott 2010). Furthermore, despite the revision mandate that member states had handed the WHO secretariat in the two 1995 WHA resolutions, there was little else to suggest that IHR revision was an issue that member states were prioritizing in any meaningful sense. Engaging governments in the process of reform and convincing them of the need for substantial behavioral change would prove to be a continual challenge to the team's progress in the years that followed.

In December 1995 the WHO held an initial informal consultation on the IHR revision process, bringing together relevant staff from the WHO with academic experts and government officials drawn from a range of member states (WHO 1996, 16–20). While that meeting's purpose was explicitly *not* to draft new regulations (ibid., 4), the discussions *were* intended to provide a basis for the revision

process (Heymann, quoted in Fidler 1996–97, 851), and following this consultation the early outlines of some incipient international norms began to become apparent. The first provisional draft of a revised IHR, which picked up on many of the recommendations from the 1995 informal consultation and gave the first real glimpse of the changes that the secretariat was then proposing, was circulated to WHO member states in January 1998 (WHO 1998b, 234). In his 1999 book *International Law and Infectious Diseases,* David Fidler provided a comprehensive analysis of that early draft, focusing on the major changes that were being proposed based on the IHR's overall objectives of maximum security against disease with minimum interference with travel and trade (Fidler 1999, 71–80). In line with these objectives, Fidler identified clear evidence of attempts to address the major perceived faults in the existing regime. While the measures proposed by the WHO secretariat team to address these problems in the 1998 draft were not identical to those that were eventually agreed on in 2005, the broad outlines of what they would later propose—and the new norms of global health security that they promoted through the early 2000s—were beginning to become apparent.

With respect to the move toward a significantly expanded outbreak reporting requirement, Fidler noted two particular areas of development in the 1998 draft. The first was a shift from a list of specified diseases to "syndromic reporting" in which states would be required to report outbreaks of various syndromes (acute hemorrhagic fever syndrome; acute respiratory syndrome; acute diarrheal syndrome; acute jaundice syndrome; acute neurological syndrome; other notifiable syndromes) where they occurred in clusters "of urgent international public health importance" (see Fidler 1999, 72). This proposal constituted a huge broadening of the scope of the IHR in two ways: first, that states would not necessarily need to know precisely what the infectious agent they were reporting was, merely the symptoms present; and second, a recognition that a fixed list (particularly one that included only three diseases) was not a suitable way of dealing with future EID. In line with this thinking, in 1998 the WHO began a trial of syndromic reporting to determine whether or not it was a workable concept in practice. This draft also introduced the concept of "urgent international public health importance" and the idea that states should be required to make a decision about whether or not an outbreak fell into that category to determine whether it should be reported to the WHO. This was another significant shift away from the "fixed menu" approach of the previous IHR, in which only the specified diseases were notifiable.

A further suggested change in relation to states' duty to report outbreaks was in the draft's proposal that the WHO be authorized to receive information from nonstate sources—an idea that later became a major issue in the revision process

(see chapter two). In putting forth this proposal, the 1998 draft, in Fidler's words (1999, 74), reflected "the belief that the concept of 'national' epidemiological information has no place in today's world and that new information technologies shatter the government monopoly on public health information," a conviction that was also reflected in the published writings of some of the key members of the secretariat team (Grein et al. 2000; Heymann et al. 2001).

In relation to the second goal of the IHR—minimum interference with international trade and traffic—Fidler identified two further noteworthy changes. The first was the move away from specified maximum measures (which would be impractical given the far broader scope of the draft, since many of those measures applied specifically to those diseases that were notifiable under the 1969 IHR) toward an emphasis on scientific risk assessment, evidence-based responses, and "expert consensus opinion" (Fidler 1999, p.76). As Fidler went on to note, however, these proposals left significant scope for future arguments over, for example, the nature of expert consensus opinion. The second change, designed to overcome precisely this problem, was the proposal for a new dispute settlement process based on an arbitration committee that would reach a judgment in cases where states were disputing the legitimacy of particular control measures—with that judgement being backed up by some degree of enforcement via the WHA (ibid, 77). In these proposals, therefore, some important elements of what was eventually adopted in 2005 were already evident: that the travel and trade restrictions put in place by states should not be unnecessarily restrictive, that they should be in accordance with expert scientific opinion, and that states should be accountable to an international body and would be required to justify their actions if a dispute arose over their legitimacy. These are all issues to which we later return.

Certainly at the time Fidler was in no doubt about the momentous nature of the changes being proposed in the 1998 provisional draft. He concluded his analysis thus:

> Whether the significant changes made in the IHR Provisional Draft intended to shore up the IHR's fundamental purpose of ensuring maximum security against disease with minimum interference with world traffic survive remains to be seen. While the IHR Provisional Draft leaves many questions unanswered, WHO has proposed far-reaching changes to the nature of international law on infectious disease control. Syndrome reporting, reliance on non-governmental sources of surveillance and disease information, and the dispute settlement mechanism all represent unprecedented initiatives in the long history of international law on infectious disease control. (ibid., 79)

Although much of the provisional draft did not in fact survive, embodied in these wide-ranging changes that the WHO was proposing were the direct antecedents of what states eventually adopted in 2005. While the details changed over subsequent years—in some cases significantly—the general principles underpinning the new norms of global health security were already taking a discernible form and deviating from the prior outbreak response expectations of both states and the WHO.

In the end, however, the secretariat's provisional draft was not submitted to the executive board in 1999 as had originally been planned, the explanation being that there was a need for a longer evaluation of syndromic reporting (WHO 1998b, 234). It had initially been hoped, as reflected in the 1998 draft, that syndromic reporting would help overcome the lack of compliance with the IHR, but it soon became clear that the system was unmanageable on a global scale, and the trial was terminated (Fidler 2005). Even before these results had become apparent and the trial was prematurely concluded, however, the IHR revision process had begun to lose traction. Regular progress reports did continue to appear in the *Weekly Epidemiological Record* (for example, WHO 1999a, 1999b), and further drafts were produced and consultations held. Even so, following the syndromic reporting trial's collapse and especially following Gro Harlem Brundtland's appointment as director-general in 1998, there was a feeling among the secretariat team responsible for the IHR revision process that it was no longer particularly high on the organization's agenda, let alone those of member states. As Johan Giesecke, who took over as the IHR revision project manager between 1999 and 2000, observed, "I felt that the interest in the Secretariat, high up, was very mild, and the resources were almost non-existent . . . the Tobacco Convention was the big thing at the time, which got all the resources . . . so there was very little interest in the technical bits of the IHR" (Kamradt-Scott 2010, 79). Mike Ryan, who was brought in to head up the operational side of the WHO's outbreak alert and response operations, agreed with this view, noting that "the Organization was increasingly becoming orientated towards global policy, normative function, and health systems development (Kamradt-Scott 2010, 79)."

2000–2003: The New Norms Come into Focus

In early 2000 there were some changes in key personnel and organizational structure within the CSR department, with Guénaël Rodier replacing Lindsay Martinez as director and Max Hardiman replacing Johan Giesecke, who had been coordinating the IHR revision process over the previous year as the IHR revision project team leader. The following year there were further changes as the IHR

team was merged with another team, headed by Mike Ryan, that had been developing the WHO's disease outbreak alert and response systems. At this point, according to Rodier (Kamradt-Scott 2010, 80), "they forgot about the previous text in a way. In effect, we started from scratch." Indeed, this was a significant turning point in the IHR revision process largely because the WHO secretariat abandoned its attempt to simply update the former 1969 IHR framework and chose instead to substantively revise the entire regime based on the new concepts and methods it had been developing and experimenting with.

While the IHR process was not progressing as some hoped, during this period there *were* nevertheless other significant developments, particularly around the WHO's disease surveillance operations and its use of nonstate sources of outbreak information, as had been proposed in the 1998 provisional draft. Even though member states had not at that time formally agreed to the WHO's use of such information, the Global Outbreak Alert and Response Network (GOARN), a collaborative venture between a number of national and nonstate surveillance institutions and networks, was established in April 2000 under the management of Mike Ryan (WHO 2000, 2010a). Its operation was subsequently formally endorsed by the WHA in May 2001 via Resolution WHA54.14, *Global Health Security: Epidemic Alert and Response* (WHA 2001). This resolution proved to be an important moment in the IHR revision process because it marked the formal acceptance by member states of the principle that the WHO could legitimately act on the basis of outbreak reports received from nonstate sources. Indeed, in passing this one resolution the organization's member states—with the notable exception of the representative from China—expressed their unreserved support for the organization's identification of infectious disease outbreaks as a security threat and the development of an international network that could be operationalized anywhere to assist a country with containing such outbreaks (WHO 2001a). GOARN had initially attracted particularly strong support among low-income countries habitually affected by disease outbreaks but, following the September 2001 anthrax attacks in the United States, the "network of networks" also began to get widespread support among high- and middle-income countries concerned about bioterrorist attacks (Heymann 2002). With virtually unfettered access to almost every country worldwide and a wealth of international technical expertise to draw on, GOARN offered a powerful demonstration of the fact that the WHO secretariat was in a unique position to coordinate what was now being widely described as "global health security" (Davies 2008).

The WHO's experience with operating GOARN fed directly into its broader attempts to transform the global health security regime. In February 2001, the

WHO secretariat published a new report in which it explicitly outlined how the IHR would be adapted. The report noted,

> Based on experience gained from the operation of WHO's global outbreak alert and response network, it is therefore proposed that the revision of the International Health Regulations should cover:
> (1) maintenance of a reliable system to prevent the extension of public health risks through the application of updated and broader routine public health measures for transport of persons and goods; and
> (2) reporting of potential public health risks (by both countries and the WHO network), evaluating the information in collaboration with the Member State concerned to establish whether it is of urgent international importance and, if this is the case, ensuring that appropriate international public health measures are recommended by WHO. (WHO 2001b, 2)

To facilitate this objective, Guénaël Rodier decided to merge the GOARN and IHR revision teams:

> The first thing was just to start fresh, and having Max Hardiman's team based with Mike Ryan's team trying to understand the operations and moving away from the old IHR was so important, because there were too many old concepts that did not work with what we were looking to do. We were developing new approaches to deal with emerging infections, and that really came to the fore in early 2000. We then introduced all of the concepts in a relatively fresh text soon after that. (Kamradt-Scott 2010, 80)

By mid-2001, following the approval of resolution WHA54.14 on global health security and the merging of the IHR and GOARN teams into one WHO unit, the IHR revision process was beginning to move forward again. Sensing that the entire process could be endangered unless the political momentum from the 2001 WHA resolution was quickly seized on, the WHO secretariat set a new deadline of May 2004 for the revised framework's completion (WHO 2002b). Critically, although several inter-related events such as the September 11, 2001, terrorist attacks in the United States, the revision of the Biological and Toxic Weapons Convention, the second Iraq War, and the launch of the "War against Terror" served to distract both governments and the WHO alike, by 2002 the secretariat had released a discussion paper on the proposed changes to the IHR. That paper, entitled *Global Crises—Global Solutions* (WHO 2002a), once again set out the major shortcomings in the 1969 IHR and outlined a number of proposed alterations to the regulations that would make significant changes in the behavior expected

of states in the event of an outbreak. These changes would, the document stressed, "require extensive consultation before presentation to the World Health Assembly and ultimate decisions by Member States" (ibid., 4). Ten proposals were outlined:

1. The reporting of all public health emergencies of international concern.
2. Each country would need a focal point for the IHR renewal process.
3. Each country would need to have the capacity to quickly report and analyse national disease risks and to determine their potential to spread internationally and to affect other Member States.
4. Member States would then have the option of making confidential, provisional notifications to WHO. This option is not available within the existing IHR, which automatically list notified cases of cholera, plague or yellow fever in the *Weekly Epidemiological Record* (WER).
5. Information other than official notifications would be used by WHO to help identify and control public health emergencies of international concern. There would be an obligation on Member States to respond to requests from the Organization to verify the reliability of such information.
6. The revised IHR would attempt to offset the economic losses associated with public health emergencies of international concern by issuing recommendations that in effect establish a template for the measures required for the protection of other Member States.
7. There would be an obligation on WHO to rapidly assist Member States in assessing and controlling outbreaks.
8. There would be a transparent process within WHO to issue recommendations.
9. The revised IHR would contain a non-exhaustive list of key measures that could be used in a WHO recommendation.
10. A permanent IHR review body would need to be established to build continuity within the IHR process. (ibid., 4–10)

The document explained the rationale for each of these proposals and the impact they would have. These recommendations included many of the most important changes that eventually made it into the text adopted in 2005, but more importantly for our purposes, they formed the basis of many of the new norms of global health security on which this book focuses.

Some of the report's recommendations focused on capacity issues (for both states and the WHO itself)—a seemingly innocuous bureaucratic detail but crucial to the behavioral changes expected of states (as we explore in chapter five). For example, each country was to establish a focal point (recommendation 2) and

improve its capacity to conduct routine public health surveillance as well as analyze and report on this information (recommendation 3), and the WHO would establish new procedures and guidelines for the receipt of reports (recommendation 4), the issuing of recommendations (numbers 6, 8, and 9), and the ongoing review of the IHR's effectiveness (recommendation 10).

Some of the other recommendations, however, contained more explicit ideas about the behavior expected of states and the WHO in the event of an outbreak (in other words, they proposed new international norms). These include some noteworthy new concepts and ideas that make many of these norms qualitatively new—and in the view of David Fidler (2005, 326), "radically" different—from those under the previous regime. Recommendation 1, for example, proposed a dramatic widening of the scope of diseases to be reported, introducing a new concept of a "public health emergency of international concern," which replaced the prevailing list of notifiable diseases and the "syndromic reporting" approach included in the 1998 draft. This implied an expectation that states would continually monitor and assess public health events occurring within their territories and would report to the WHO all of those they deemed to be of international concern. Also new was the provision in recommendation 5 that the WHO would be officially empowered to receive reports of outbreaks from non-official (i.e., nongovernment) sources and, crucially, that governments would be expected, even obligated, to respond to the WHO's requests for further information pursuant to such reports. Further obligations were imposed on the WHO under recommendation 7, which proposed giving the organization a far clearer and more active mandate in the event of public health emergencies which would, the report suggested, help convince other states that the outbreak was under control, thereby avoiding the need for them to implement unnecessary control measures.

Comparing the content of the 1969 IHR to the recommendations contained in the 2002 report shows types of behavior that are radically different being demanded of states: no longer would governments merely be required to "mechanically" report cases of specified diseases. Under the WHO's proposals they would now be expected to proactively establish new (or reinforce existing) surveillance infrastructures and processes to ensure rapid identification of any outbreak; states would have to promptly assess whether or not an outbreak qualified as an emergency of international concern and report (or not) accordingly; and governments would have to respond when challenged by the WHO over an alleged instance of nonreporting. Further, and related to the above, the rights and duties granted to the WHO were also completely new. The WHO secretariat would be empowered

to directly confront member states about reports of an outbreak obtained from unofficial sources; offer to send an investigative team to verify any outbreak and/or the ability of the government to control an outbreak; and importantly, to make any rejection of technical assistance public, thereby effectively "naming and shaming" the government concerned.

These proposals are explicitly presented in the report as offering a solution to the challenges posed by a world of emerging and re-emerging diseases, the need for the rapid identification and communication of public health risks, and the disincentives to report that previously hampered compliance with the 1969 IHR. The report makes no attempt to hide the extent to which the proposals entailed a new expectation to report a broader category of outbreaks promptly and openly to WHO headquarters, nor the extent to which member states would be required to make changes to their domestic arrangements and infrastructure. In discussing the effects that the proposals would have on member states, the report noted that developing states in particular would need to dramatically strengthen their disease surveillance systems to include certain "core requirements"; would need the capacity to rapidly assess disease outbreaks and determine whether or not they constitute a Public Health Emergency of International Concern (PHEIC); would need to cooperate more closely with the WHO; and would need to commit to an obligation to respond to the WHO's inquiries about events that the state had not reported.

It was also clear (not least through the GOARN experience) that allowing nonstate actors to report outbreaks to the WHO secretariat would affect the ways in which the WHO would interact with its member states in future—and this would be further impacted by the fact that, under the new proposals, states would be expected to abide by the WHO's recommendations on how to respond to an outbreak occurring in another state. Throughout *Global Crises—Global Solutions*, the justification for such dramatic changes in the expectations of states, not to mention the broader role of the WHO in guiding governments in appropriate outbreak response behavior, was the scope and nature of the global health security threat posed by infectious diseases and the inability of the current system to adequately respond to such threats.

In short, the proposals reflected a significant shift in thinking about *how* outbreaks could best be addressed in a globalized world, *who* would be responsible for containing outbreaks, and *when* member states should seek assistance from the WHO. Under the 1969 IHR, the fundamental purpose was to safeguard uninfected zones from disease importation and from the impact of the trade and travel quarantine measures necessary for disease control. What was being

proposed in 2002 was based on a radically different premise about disease containment and about the role of states, the WHO, and nonstate actors in that endeavor. Rather than focusing on protection measures at borders to prevent the ingress of disease, the 2002 report suggested that disease outbreaks could be contained where they occurred—"at source"—and that governments had a duty to do their utmost to facilitate this containment. In turn, unaffected member states would have a duty to refrain from implementing measures that punished or unduly affected those states that had done their duty and complied with the reporting and containment obligations. Importantly, the degree of transparency and cooperation being articulated in the 2002 report was very different from previous cooperative arrangements. Of particular note, the new approach allowed the WHO to exercise significant powers of persuasion over states by recommending appropriate responses, the implication being that states would need to justify any deviation from those recommendations. While further details were added to these proposals between 2002 and the finalization of the text in 2005, the novel idea that states would abide by the maximum measures proposed by the WHO (save where they could demonstrate a clear scientific justification for going beyond them) was already becoming clear.

In line with the (by this time well established) discourse on globalization, disease, and national security, in the report the WHO secretariat was explicitly arguing that states could not hope to rely on the antiquated notion of "impregnable" borders to keep their population and economy safe. Security against health threats could only be achieved through cooperative networks of knowledge and response. Although in hindsight (post-SARS and post–IHR revision) these ideas seem obvious, at the time they were novel—and only politically possible because of the links the WHO secretariat was highlighting between outbreak detection, outbreak containment, and the collective security of states.

Conclusion

While the new norms of global health security examined in this book first began to emerge in 1998 and were more clearly enunciated in the 2002 report, how those norms would be operationalized was still being discussed and tested by the WHO secretariat. Added to this, even though there had been a surge in interest in the security implications of infectious disease, the IHR revision process continued to suffer from a lack of momentum. There was still limited progress on the revision process proper (as distinct from the more substantial progress that had been made on some related issues—around GOARN, for example).

Nevertheless, in the period covered in this chapter some important progress *had* been made in developing and promoting new norms of global health security, and the WHO secretariat team, acting as a norm entrepreneur and demonstrating a clear ability to exercise agency in shaping the agenda, had taken the leading role. The problems with the existing IHR framework had been identified, and the need for change had been formally agreed to by the WHO's member states. Moreover, states and the WHO were progressing with discussions around appropriate roles and duties, even while there were no clear answers as to how different health systems and an overstretched WHO headquarters would accommodate the expanded responsibilities they entailed.

At first glance, given the widespread acceptance of the need for change from as early as 1994–95, it might appear strange that convincing member states to engage seriously in the process proved to be such a problem for the secretariat. Notwithstanding the passage of the 1995 resolution to amend the IHR, a continuing lack of political (and financial) commitment beset these early years of the revision process. Persuading states of the need for a revitalised collective response required the secretariat team to continually make the case for the revision process, framing the issues in terms of national security in an attempt to achieve high-level prioritization. But despite the rhetorical support of both the member states and the upper echelons of the WHO bureaucracy, the IHR revision effort was underresourced and, for much of the period examined in this chapter, did not get the attention or support from member states that might have been expected. In 2001 there was an uptick in member state interest, as evidenced by that year's WHA resolution on global health security, but—as we shall see in the next chapter—it took a major shock to the international system to provide the push needed for real change to happen.

In terms of the norm life cycle framework, in the years examined in this chapter, we saw the gradual formulation of new normative expectations and the early efforts of norm entrepreneurs (especially secretariat officials) to promote these to states, attempting to "teach" them why they had a vital interest in fundamental reform. Working from the apparent shortcomings of the existing regime, the broad outlines of a set of new norms began to become apparent in the late 1990s and were further honed in the early 2000s, as evidenced by the WHO's 2002 report. Yet by this stage, not all states had been persuaded that the new norms necessarily provided an appropriate and effective solution to the infectious disease problem, or that they were compatible with their existing normative commitments—not least with the norm of state sovereignty. Discussions continued, and the WHO secretariat's norm entrepreneurship efforts were far from complete. As we shall

see in the next chapter, SARS provided a graphic illustration of the secretariat's case that an international public health emergency could not only affect human and animal health in countries great distances apart but also seriously impact the stability of national economies. For the WHO secretariat, SARS was an opportunity to remind states of what they had been warning since the 1990s. The human tragedy and political fallout of the crisis imparted the sense of urgency that had been lacking in the revision process (Whelan 2008) and provided the WHO secretariat with an even firmer basis on which to persuade states of the need to adopt new norms of global health security.

CHAPTER TWO

From Tipping Point to Cascade

SARS and the IHR Revision Process

We identified in chapter one that the 1995 World Health Assembly's unanimous agreement to revise the 1969 International Health Regulations was a pivotal moment in disease diplomacy, setting in motion a process that led to the development of new international norms designed to achieve greater global health security. There was general acceptance that the low level of compliance with the 1969 IHR notification requirements was a product of outdated science and political resistance. The 1969 IHR were irrelevant to the emerging diseases that now threatened international trade and travel (Weir and Mykhalovskiy 2010, 120). As a result, states were increasingly taking disease reporting and response measures into their own hands during outbreaks. The application of international sanctions in particular was viewed with much concern as a measure that further eroded states' already fragile willingness to report outbreaks. As the international response to the plague outbreak in India revealed, governments could hardly be blamed for their reluctance to report outbreaks when such openness could spell economic and social disaster (Cash and Narasimhan 2000). Yet, as the WHO secretariat continually stressed, such reporting was crucial to the global system designed to protect populations from outbreaks. As will be seen in this chapter, states were also being made cognizant—not least by the WHO—that a lack of transparency in the event of an outbreak could facilitate the rapid global spread of an outbreak and endanger populations far from the disease's source. As a result, there was a gradually growing recognition, in developing and developed states alike, of the need to find ways to overcome the existing counterproductive incentive structures and to breathe new life into the IHR in the interests of promoting global health security.

However, as we saw in chapter one, despite unanimous agreement in the 1995 WHA to revise the 1969 IHR, developing a new legal framework to cut through

the Gordian knot of states' perceived interests and entrenched behaviors was difficult. Some governments viewed the changes proposed by the secretariat with political indifference (Kamradt-Scott 2010), while others viewed them as too radical a departure from the original IHR, particularly in terms of their proposed expansion to include all disease outbreaks of international importance (Weir and Mykhalovskiy 2010, 121). Despite the fact that the WHO secretariat continued to work on the IHR revisions, the process had reached a "virtual standstill" in the late 1990s (Kamradt-Scott 2010, 80)—although developments in the early 2000s, including initiatives such as the Global Outbreak Alert and Response Network, gave rise to some hope for progress.

This chapter identifies the Severe Acute Respiratory Syndrome outbreak of 2003 as crucial in creating a sense of urgency that amplified the pre-existing security framing deployed by the WHO secretariat and helped cut through the earlier indifference and opposition. SARS was a salutary lesson for the international community in two respects. First, it demonstrated the rationale for expanding the reporting obligations of *all* states to include *any* disease outbreak of international importance (Mack 2006; Whelan 2008). The absence of a formal obligation to report any outbreak that had the potential for international spread meant that no government was technically obliged to report SARS. Given its rapid spread, high mortality rate, and lack of a known cure, this was a frightening wake-up call for governments, not least those in the "developed" world (Heymann and Rodier 2004a).

The second lesson of the SARS experience was that designating outbreaks as "domestic matters" did not relinquish the state from its responsibility to engage with the international community to facilitate disease control as well as to uphold economic and consumer confidence in travel and trade responses. As David Fidler (2004) has argued, one of the harshest lessons learned by the Chinese government during SARS was that states were now expected to perform differently; a general (although not yet legally formalized) feeling had emerged among states that outbreak information was to be shared and that when a government failed to live up to that expectation, other governments could legitimately institute travel and trade measures to contain the outbreak *in place of the affected state*. As Andrew Price-Smith (2009, 143–44) argues, it was no coincidence that China, widely perceived to be the greatest obstacle to the international cooperative response to SARS, suffered the greatest economic and political costs, in no small part as a result of the government's attempts to conceal the outbreak. The adoption of the revised IHR in 2005 represented the formal acceptance by states of new behavioral expectations (in other words, new international norms) that most had already

adhered to—without any formal requirement to do so—during SARS. Crucially, as we argue in this chapter, unanimous acceptance by states of these new expectations was only possible because of what the world had collectively experienced in 2003 and because of the extent to which that experience aligned with the arguments made over the previous decade about the potential security threat posed by infectious disease outbreaks.

In norm life cycle terms, the focus of this chapter is on the ways in which the 2003 SARS outbreak triggered a tipping point that led to a norm cascade, including the WHA's adoption of the new IHR. The chapter proceeds in three sections. The first examines why it was that SARS brought political urgency to the task of improving international disease responses. The second part explores why the 2003 SARS outbreak gave rise to (or laid bare) new and widely shared expectations of state behavior during such outbreaks. Affected and unaffected states alike engaged in discussions over the advice of the WHO, the behavior of China, and the epidemiology of SARS. The SARS case made it abundantly clear that major outbreaks could no longer be solely domestic concerns. Furthermore, domestic and international political fortunes rose and fell according to how well governments understood the newly emerging expectations being placed on them. In the final part of the chapter, we explore the completion of the IHR revisions between 2004 and 2005 and illustrate how the necessary state support was intimately tied to the experience of SARS. Indeed, in the immediate aftermath of SARS it was agreed to convene an Inter-Governmental Working Group (the IGWG) on the Revision of the IHR, and during the sessions held by this working group SARS was the example most often cited to highlight the issues norm entrepreneurs both within and outside the WHO had been referring to for almost a decade. SARS served as the trigger event that propelled the new norms from emergence to cascade and gave momentum to the legal institutionalization of those norms (Finnemore and Sikkink 1998, 900) in the form of the revised IHR.

The SARS Outbreak and Norm Change

As we saw in the last chapter, while the stalemate on the IHR revisions continued, there had been incremental advances on the principle that disease outbreaks needed to be reported and responded to promptly, seen through the creation of GOARN in 2000 and the WHA's resolution on global health security in 2001. Yet, the challenge that remained was crossing the threshold from persuading states that prompt disease reporting and verification was a good idea in principle (which, arguably, had largely been achieved) to states agreeing to change their own

behavior in cases where they felt that their interests were directly at stake. Although statements on the need to revise the IHR suggested that many states accepted the need for expanded reporting obligations, in practice they could, and sometimes did, still resist attempts by the WHO to acquire further information about an outbreak. States may have been persuaded by the WHO secretariat's arguments that the disease outbreak response mechanism needed to change, but governments were not yet ready to fully commit themselves to those changes.

Martha Finnemore and Kathryn Sikkink argue that norm emergence "tips" into cascade at the point where "a critical mass of relevant state actors adopt the norm" (ibid., 895). Critical mass occurs, according to Finnemore and Sikkink, when more than a third of states agree to a norm or when a "critical group" of states that could compromise the norm agree to it (ibid., 901). The tipping point leads to "contagion," where more and more states adopt the norm, as it becomes clear that resistance will "cost" an actor (politically, socially, or economically) more than compliance will. But what triggers that adoption by a "critical group of states" (Risse and Sikkink 1999, 7)? At what point do some actors suddenly come to hold new expectations of themselves and each other? Here we argue that the SARS outbreak may be plausibly identified as the trigger that precipitated this tipping point. Clearly, exogenous shocks can have a strong impact on how governments view the world, how they understand their roles and interests, and how they respond to similar events in the future. Events such as SARS can thus *trigger* a tipping point in the development of new norms.

Crises can thereby be a powerful tool for norm entrepreneurs who are attempting to encourage their audience to think differently about desirable behavior within their community (Finnemore and Sikkink 1998, 888). Indeed, it is not unusual for norm entrepreneurs to use such unanticipated events (either during or afterward) as a demonstration of the need for new forms of behavior (Widmaer, Blyth, and Seabrooke 2007, 748). However, a change in ideas about appropriate behavior is still required before we can talk about a genuine tipping point having been reached. Thus material events and ideas are closely linked.

We outlined in chapter one the foundational work laid down by the WHO secretariat in promoting new expectations around state behavior in the event of an outbreak. We argue here that this work was crucial in shaping the reaction to the exogenous shock of SARS: because of the ways in which the outbreak was interpreted and constructed by norm entrepreneurs and by their audience and the way in which it resonated with the previous arguments of norm entrepreneurs, SARS served as a spark for the widespread acceptance of the new norms. The 2004–5 period, in which the IHR revisions were rapidly advanced and finally agreed to

by all WHO member states, was a textbook case of how legal institutionalization "sets the stage for a norm cascade and the norm's rapid spread" (Percy 2007, 388). Prior resistance, or indeed apathy, among some states to the IHR revisions diminished after the SARS outbreak, because SARS both demonstrated the severity of the problem and, in relation to the expectation that states promptly and openly report outbreaks, served to clarify "what, exactly, the norm is and what constitutes violation" (Finnemore and Sikkink 1998, 900). SARS increased awareness of the shortfalls in the existing IHR, and in the immediate aftermath a crucial tipping point was reached that became increasingly apparent in the 2004 and 2005 IGWG meetings. It was in the context of these meetings that states and the WHO worked together to revise the IHR in order to clearly enunciate their respective obligations in the face of future outbreak events.

SARS: Timeline of a Trigger Event

The first known SARS case was a male, traveling on business, who arrived in Foshan, Guangdong Province, China, on November 16, 2002, exhibiting symptoms of atypical pneumonia (Liu 2004, 1; WPRO 2006, 3). Four of the hospital staff that cared for that man later began to display similar symptoms, leading some to suspect that they had contracted the same illness. The Chinese central government in Beijing was informed of the outbreak by provincial health authorities in November (Liu 2004), and the disease continued to spread within Guangdong Province throughout December 2002. It was not until January 2003, however, that reports of the outbreak were detected by international surveillance systems such as the Global Public Health Intelligence Network (GPHIN) and ProMED-mail (PMM) (Madoff and Woodall 2005; Brownstein, Freifeld, and Madoff 2009). Both issued reports in early January 2003 of an "unusual" pneumonia outbreak in southern mainland China. The WHO secretariat in Geneva, acting on the GPHIN alert, issued a formal request for further information on the outbreak from the Chinese authorities, but to no avail (Schnur 2006, 36). By late January, there were reports of a "second-wave" of cases, in which infections had increased exponentially. The Guangdong Health Bureau then invited the Chinese Center for Disease Control and Prevention (China-CDC) to investigate their cases of "atypical pneumonia" and to advise on prevention and control measures (WPRO 2006, 4). That investigation was reportedly completed within a few days, but the Chinese authorities declined to publicly release the findings until February 11, 2003 (Liu 2004, 2). In the interim, Guangdong health authorities publicly maintained that the outbreak was atypical pneumonia with 305 cases and five confirmed deaths (WPRO 2006, 5).

The WHO secretariat in Geneva—having received an alert from GPHIN via unofficial sources that the Chinese health authorities did not in fact believe the outbreak to be atypical pneumonia—asked the WHO China Office to obtain direct confirmation from the Ministry of Health in order to clarify rumors about the precise nature of the outbreak (Schnur 2006, 36). The Ministry of Health again maintained that it was seasonal atypical pneumonia. A WHO-led international investigation team was allowed into China on February 23, 2003, but was denied permission to travel to Guangdong, where the majority of outbreaks were allegedly occurring.

In late February, cases of severe respiratory infection began to appear in Hong Kong and Viet Nam. The index case[1] for Hong Kong was a doctor who had been treating patients suffering from atypical pneumonia in Guangdong province and who had traveled to Hong Kong to attend his nephew's wedding. After becoming sick overnight in his hotel, he was admitted to a hospital on February 22, 2003, where he promptly alerted health authorities to the nature of his illness (Fidler 2004, 76). Meanwhile, an American businessman who had stayed at the same hotel—on the same floor—as the doctor had already traveled to Hanoi, fallen ill, and been admitted to a hospital with an undefined pneumonia. A WHO epidemiologist based in Hanoi, Carlo Urbani, who later died as a result of his own exposure to SARS, diagnosed the illness as a new syndrome on February 28, 2003, alerting the WHO to the gravity of the illness and the possibility that this was a novel outbreak. By March 10, more than 20 hospital staff who had been directly or indirectly involved in treating the American patient had also become infected (ibid., 77; WPRO 2006). On March 1, a female who had also stayed on the same floor as the doctor from Guangdong in the Hong Kong hotel was hospitalized in Singapore. It is suspected that prior to her hospitalization she spread the virus to a further 22 people.

Meanwhile, the WHO secretariat in Geneva was receiving unofficial reports that the "mysterious illness" had spread in China and had reached the capital, Beijing. The Chinese government, however, continued to report that the "atypical pneumonia" outbreak was under control (WHO 2003). Even as Chinese officials were denying the existence of any unusual disease, the first case arrived in Toronto, Canada, on February 26, 2003, initiating a localized epidemic before the index case passed away one week later. Five of the deceased's family members were then hospitalized with the illness (WPRO 2006, 9–10).

The novelty of the virus and its rapid global spread led the WHO secretariat to issue a range of temporary recommendations that included global health alerts, travel advice, and medical counsel specifically relating to the disease. On March 12,

2003, the organization's first global health alert identified the outbreak as occurring in the Chinese province of Guangdong and in Hong Kong and Viet Nam. But it was the Singapore government's urgent request to the WHO secretariat in Geneva to assist with isolating a physician en route from New York to Singapore who was suspected of carrying the disease that led the WHO director-general, Gro Harlem Brundtland, to issue her second alert on March 15 (Fidler 2004). That alert was issued in the form of an emergency travel advisory—an act that brought serious trade and travel ramifications—and stated that the justification for the alert was the fact that the rapid spread of what was now being called Severe Acute Respiratory Syndrome had been facilitated by air travel (ibid., 78–79; Schnur 2006, 37; WPRO 2006, 16). The Singapore case certainly informed the decision to issue the travel advisory, but Brundtland also cited the wider picture of the rapid spread of the outbreak across the world within a short period of time: in the three days since the first alert on March 12, the WHO had received reports of possible SARS outbreaks in a further seven countries, including Germany, Indonesia, the Philippines, Singapore, Thailand, the United Kingdom and the United States. From that point onward, in cooperation with its regional counterpart, the Western Pacific Regional Office (WPRO),[2] the WHO secretariat in Geneva assumed a leading role in advising governments, the global media, and the medical community as SARS spread across 27 countries in the months that followed (Heymann 2005a, 94). Alerts detailing the epidemiology of the virus were released by the secretariat on a regular basis, approximately every 48 hours.

On March 27, 2003, another international travel alert was issued, specifically mentioning Hong Kong, Singapore, Viet Nam, and Canada (Fidler 2004, 85). The glaring omission in this alert was China, reflecting the tense nature of the WHO's relationship with the country that probably had the largest number of SARS cases.[3] Of particular concern was the WHO secretariat's realization during discussions with the Chinese health ministry that the Chinese government was not using the case definitions required for identifying SARS cases, nor had a directive been issued requiring provincial authorities to notify central authorities of suspected SARS cases (Schnur 2006, 38; Saich 2006, 79). These events within China led Director-General Brundtland to issue a specific travel advisory for Guangdong province and Hong Kong on April 2, 2003, stating that "non-essential travel [to these destinations] should be postponed" (WHO 2003).

Two key factors, specific to China, led to Brundtland taking this dramatic course of action: the Chinese government's failure to contain the spread of the disease and its continued insistence that the majority of its hospital cases were atypical pneumonia (Fidler 2004; Heymann and Rodier 2004a). China's Ministry

of Health had reported in March that there had been 305 infections and 5 deaths, mainly in Guangdong, contradicting estimates by the WHO office in China based on direct communication with the Guangdong health authorities. The WHO estimate suggested that in the same period as covered in the health ministry's report—between November 16, 2002, and February 28, 2003—there had been at least 792 infections (a third of them healthcare workers) and at least 31 deaths in Beijing, Shanxi Province, and Guangdong. The Chinese government's continued reference to their cases as atypical pneumonia further frustrated the secretariat's efforts to accurately ascertain the extent of virus spread and advise neighboring governments accordingly (WPRO 2006, 23). The director-general's travel advisory, therefore, could be interpreted as a last resort: the final available means for "reducing the incidence of infections and deaths" (Zacher and Keefe 2011, 66). However, the alert was also issued with strict geographic definitions in order to limit as far as possible the wider economic costs that SARS was inflicting upon cooperative states (ibid.).

After the April 2 travel advisory was issued, China allowed a WHO-led team to travel to Guangdong province between April 3 and 8. However, denials that the disease had reached epidemic proportions in Beijing continued. On April 3, the mayor of Beijing, Meng Xuenong, and the minister of health, Zhang Wenkang, gave a press conference stating that there were only 12 SARS cases in Beijing and that none of the infections were locally transmitted (Liu 2004, 50). A senior doctor at a Beijing military hospital, Jiang Yangyong directly contacted media outlets on April 4 to dispute the information given in the press conference the previous day (Saich 2006). Jiang wrote an open letter stating that he knew of at least 60 SARS patients and "numerous" deaths in Beijing military hospitals,[4] where the majority of SARS cases were being isolated (Eckholm 2006, 123–24). In response to this letter, the WHO increased its demands for access to Beijing's public and military hospitals. The mayor of Beijing revised his estimates but still insisted there were no more than 37 cases of SARS in the capital. In response, the WHO representative in China, Henk Bekedam, repeated the WHO secretariat's doubts about the government's release of data. In a highly charged news conference on April 16, Dr. Bekedam stated, "we have clearly told the Government the international community does not trust their figures" (WPRO 2006, 80). At the same WHO China Office press conference, Dr. Schnur was asked the potential number of cases in Beijing, to which he replied that (contrary to the 37 cases being reported by the mayor) a more realistic figure was between 100 and 200 (ibid.). Schnur's comments were widely reported on the Internet, and even China's state-controlled media could not hide the story (Eckholm 2006).

The next day, April 17, 2003, a Politburo meeting of senior Chinese party leaders was held to discuss the response. The Politburo agreed to publicly admit to mistakes in handling the outbreak up to that point (Saich 2006, 81). On April 20 the Vice-Minister of Health, Gao Quiang, gave a public press conference to "declare war on SARS" (WPRO 2006, 80) and acknowledged that "work had been lacking and that the fragmented jurisdiction over medical facilities in the capital had meant that accurate information had not been collected" (Saich 2006, 82). After the press conference, it was announced that the minister of public health, Zhang Wenkang, and the mayor of Beijing, Meng Xuenong, had been sacked for their mishandling of the crisis. Vice-Premier Wu Yi was placed in charge of the Ministry of Health and by April 23 had established a purpose-built central command center and allocated a budget of two billion yuan (approximately US$240 million at 2003 exchange rates) to respond to the crisis. On the same day, the authorities disclosed 295 previously unreported SARS cases in Beijing (WPRO 2006, 80). Joint WHO–Ministry of Health missions were established to visit provinces to review data and provide advice on infection control. These efforts were directed toward two principal audiences—first, an increasingly panicked and distrustful citizenry that needed their faith in the government restored and second, the international community.

The government recognized they could only begin to mend their damaged external reputation if they (re)gained the trust of the international community in their response to SARS, so the central authorities went to great lengths to demonstrate their compliance with the WHO's recommendations (WPRO 2006, 83; Price-Smith 2009, 145). Evidencing this renewed focus and commitment to transparency, by May 2003 the authorities in Beijing Province alone had reported more than 2,000 suspected or confirmed SARS cases, with an average of 100 new infections being reported every day (WPRO 2006, 32).

Beijing and Shanxi provinces in China as well as Toronto, Canada, were added to the travel advisory on April 23, 2003. A travel advisory for Taiwan was issued on May 22 and lifted on June 17, whereas the Philippines and Viet Nam were added to the WHO's global health alert, but no travel advisory for either country was ever issued by Director-General Brundtland.[5] On July 5, 2003, after approximately 8,400 infections and 774 deaths, the WHO declared that the SARS virus had been contained (Heymann 2005b, 16–17).

SARS as a Shock to the System: From Trigger to Tipping Point

The unanticipated arrival of SARS, followed by the international community's reaction, was "a good example of an 'exogenous shock' " for two principal reasons

(Price-Smith 2009, 155). First, SARS "undermined the Galenic mythology (still prevalent) that infectious disease is primarily a concern solely for the developing countries . . . developed countries realized that they too were vulnerable to the proliferation of debilitating and lethal pathogens" (ibid.). The SARS outbreak also revealed how impractical it was for states to rely solely on quarantine and isolation practices for outbreak response. Even sophisticated public health systems such as those in Canada and Singapore struggled to contain and respond to the outbreak (Heymann and Rodier 2004a, 194). Furthermore, SARS illustrated what the WHO secretariat had been arguing for some time—that states had good reason to be interested in one another's outbreak response behavior. Indeed, against the background of the securitization of emerging infectious diseases throughout the 1990s, it was now abundantly clear that revising the IHR was not an exercise to benefit only those states who faced frequent infectious disease outbreaks. Both weak and strong public health systems alike had been unable to prevent SARS's entry and spread (Price-Smith 2009, 154).

Second, the international community's reaction to China's lack of transparent and prompt reporting of SARS cases was the first concrete sign of significant changes occurring in collective ideas about appropriate behavior. There was no legal obligation for states to report SARS cases under the IHR 1969, and indeed the constitutional basis for the WHO director-general issuing travel advisories was the subject of intense debate (Fidler 2004; Cortell and Peterson 2006; WPRO 2006). Nonetheless, during the event it became clear that there was a widespread expectation that states would openly disclose SARS cases and that the WHO secretariat should be empowered to recommend appropriate travel and trade measures. This latter expectation grew partly out of pragmatism—states saw that the WHO's alert after the Viet Nam and Hong Kong outbreaks possibly saved thousands of lives, partly out of fear—if SARS had been a more efficient pathogen, many more could have died as a result of China's failure to report early and transparently (Fidler 2004, 134–35). But the expectation also grew out of recognition that there was an alternative to this situation, one that required states to commit to international rules that would prescribe their domestic behavior (Percy 2007, 389). To put it another way, states' perception of the norm of sovereignty, and particularly of its relationship to outbreak reporting and response, was rapidly recalibrated during the SARS crisis. The old habit of treating an infectious disease outbreak as a domestic matter, subject to domestic rules and norms, did not work (Zacher and Keefe 2011). SARS was the trigger for a critical mass of states, persuading them to cease being apathetic (or even resistant) to a set of new collective behavioral expectations concerning infectious disease outbreaks.

Not surprisingly, norm entrepreneurs within the WHO secretariat were keen to use SARS as evidence of the need for governments to heed their advice. SARS not only bolstered awareness of the need for behavioral changes, but it also gave states a strong incentive to engage seriously in the IHR revision process and seek to institutionalize these behavioral changes (Finnemore and Sikkink 1998, 896). The catalytic effect of SARS was specifically noted by David Heymann, who observed,

> I believe that delays came because of a lack of feeling the urgency of the revision process among the Member States. And I don't think they felt urgency until the SARS outbreak occurred. We were working with Member States trying to increase attention to the revision, publishing occasional documents in the *Weekly Epidemiological Record* and discussing it at the World Health Assembly. But they really never engaged in earnest until after the SARS outbreak. (Kamradt-Scott 2010, 78–79)

The IHR revision team deliberately used the SARS experience to reveal both the weaknesses and strengths of the global health security regime as it stood in 2003, a further example of the phenomenon discussed in chapter one, in which the secretariat as a norm entrepreneur played an active part in constructing its own role rather than being a mere passive recipient of authority delegated to it by the WHO's member states. The key weakness identified by David Heymann and Guénaël Rodier in a co-authored paper published in 2004 was states' lack of willingness to report early and verify local outbreaks of SARS. The travel alerts issued by the director-general were an attempt to ensure trade and travel was not unnecessarily adversely affected, but at the same time, they were also deployed in response to the failure by particular states to diagnose outbreaks of the disease and contain it quickly to prevent international spread (Heymann and Rodier 2004b, 174). According to Heymann, the WHO's travel advisories were also intended to introduce a sense of reasonableness into states' assessments of whether or not they should advise their citizens against travel to affected areas:

> Before we started making our recommendations there were many countries that had made advisories that weren't based on anything more than insurance concerns. One government for example recommended no travel to Viet Nam. They also recommended that government employees' families living in that country be returned home. These recommendations were made because the government could not ensure return flights should their citizens abroad become ill. (Kamradt-Scott 2010, 78–79)

Especially in the early stages of the outbreak, the SARS episode also revealed resistance from some governments to a change in behavioral expectations. The Chinese government's initial failure to cooperate with the WHO in disease verification and response has been identified as the crucial enabler for the international spread of the disease (Price-Smith 2009). Some have noted that China was condemned for its actions (or inactions) even though it broke no international rules and indeed have suggested that the (effectively unmandated) actions of the WHO were more surprising than China's initial instinct to treat the disease outbreak as a domestic matter (Cortell and Peterson 2006). By and large, however, the international community did not share this view. Indeed, the widespread support for the WHO's actions during the SARS period serves as evidence of how far a critical mass of states had moved toward accepting new understandings of roles and responsibilities in the event of infectious disease outbreaks—even if it meant complying with requirements not yet formally institutionalized. For the Chinese government, SARS proved a revelation in terms of how to handle both its domestic and international audiences (Huang 2010). The dismissal of the minister of health and the Beijing mayor and the public admission that mistakes had been made were highly unusual acknowledgments by the Chinese authorities of political and bureaucratic failure. The accompanying expression of "deep concern," along with an admission by Premier Wen Jiabao that China's collapsed rural health system would struggle if SARS spread to outer provinces, were both novel and unprecedented (Kaufman 2006, 57).

Indeed, it is worth noting that even though the Chinese government was obstructionist over a period of months and provincial authorities in Canada complained that the travel alerts placed them under unnecessary economic stress (Price-Smith 2009, 145), no government refused outright to cooperate or communicate with the WHO during the SARS outbreak (Fidler 2004; Kamradt-Scott 2010). As Heymann noted, "countries did not refuse to report or collaborate on the grounds that SARS (and most other infectious diseases) was not covered by the International Health Regulations (1969)" (Heymann 2006, 352). Even when the authorities did their utmost within China to conceal the extent of the outbreak, it was never based on an explicit rejection of the WHO's authority to seek more information. In fact, there was little open criticism of the role that the WHO played. Although the 1969 IHR failed to illicit comprehensive compliance with the reporting obligations, during SARS (with the sole exception of China) "despite being under no international legal obligation to report SARS cases to WHO, virtually all countries afflicted by SARS notified WHO of cases rapidly, continuously, and transparently" (Fidler 2004, 133).

The SARS experience gave WHO staff the opportunity to exercise an unusual degree of agency—not just in attempting to persuade states but also in directly influencing events, often on the basis of highly political judgments. For example, the WHO secretariat was in a position to "reward" states for good behavior. The decision not to issue travel advisories against Singapore and Viet Nam, for example, was based on political considerations as well as science. While there was a low public health risk in making this decision in both cases,[6] there was also a conscious decision to *reward* states who demonstrated full disclosure by not issuing alerts that were recognized to have the potential to produce adverse trade and travel consequences (WPRO 2006, viii–ix). Likewise, travel advisories were promptly removed when the secretariat deemed that a country had a measure of control over the outbreak (Zacher and Keefe 2011, 61).

Furthermore, when the WHO secretariat actively praised states that openly collaborated with the organization, this acclaim bolstered governments' international and domestic political legitimacy. As several administrations (such as those in China, Singapore, and Hong Kong) learned, domestic audiences judged the appropriateness of their government's response to a great extent through the judgments made by the WHO and the international community. The WHO secretariat's alerts in particular frequently entered the domestic political discourse and became benchmarks for evaluating governments' responses (Huang 2003). Governments sought WHO approval as a way to win the confidence of their citizens, in the process further legitimizing the organization's coordination and communication efforts and cementing the relationship between outbreak disclosure and minimal interference in travel and trade (Heymann and Rodier 2004a, 194). When countries couldn't meet the WHO's requests for outbreak information, embarrassment and awkwardness settled on the state and not the WHO (Zacher and Keefe 2011, 60–61). All of this revealed the elevated *political* status of the WHO during the crisis. At a time when there was no framework in place for the WHO to manage and advise states on the SARS outbreak, states nevertheless turned to the WHO for advice and information. This gave the WHO considerable political influence in determining which states had (and which had not) enacted an "appropriate" response to the SARS outbreak. Once again, the secretariat was serving a key function in defining and monitoring appropriate state behavior.

Global Health Security and SARS

Why was SARS such an effective trigger for state support for the new norms of global health security and, by extension, the IHR revision process? Part of

the reason was that the event was interpreted in a social context in which the securitization of emerging infectious diseases over the previous decade had allowed for particular messages, such as those being put forward by the WHO secretariat, to be heard by states, their citizens, and the media. Security provided the frame within which the SARS outbreak was understood and discussed, and in turn SARS legitimized the security rhetoric. SARS provided a stark illustration of the potential dangers posed to states by a global failure to respond adequately to a rapidly transmissible disease outbreak. The arguments we examined in chapter one that typified the securitization of infectious disease, in particular those around the globalization of the disease threat, were readily apparent during the SARS episode. As we show in this section, security-based arguments were central to the reasons put forward for IHR revision around the time of SARS. Crucially, this was "security" of a particular kind—one that stressed the interconnectedness of states and sought to construct the world as a "community of common fate" via the concept of global health security, a phrase that became increasingly common through the early years of the twenty-first century and which was rapidly and successfully linked with the IHR revision process.

While the securitization of health was an important backdrop to the normative changes then underway (both indirectly as a background condition and directly via key statements such as the Institute of Medicine report), it is certainly not self-evident that the construction of infectious disease as a national security issue would necessarily lead to states taking a more cooperative approach. Indeed, as Stefan Elbe (2010) has argued in relation to the stockpiling of antiviral medications, constructing disease as an issue of national security could actually lead states to reassert their sovereignty and to see each other as rivals for defensive resources rather than as partners in the global fight against disease. What the WHO secretariat did, however, was to carefully frame infectious disease as a particular *kind* of security threat that required a particular kind of cooperative and—most crucially for progress through the norm life cycle—institutionalized international response. The term "global (public) health security" was used by the secretariat to encapsulate this argument (WHO 2007a), and while its precise definition has remained elusive (Aldis 2008; Rushton 2011), it has been widely adopted by states (e.g., in the Oslo Ministerial Declaration 2007—see Amorim et al. 2007), as well as the WHO, as not only a way of identifying the threat posed by pathogens in a globalized world but also as a way of promoting the need for a collective global response. As we saw in chapter one, in 2001 the WHO secretariat reported to the WHA in *Global Health Security—Epidemic Alert and Response* (WHO 2001c). That

report set out the familiar security arguments around infectious disease clearly, including noting in paragraph two that

> increased population movements, whether through tourism or migration or as a result of disasters; growth in international trade in food and biological products; social and environmental changes linked with urbanization, deforestation and alterations in climate; and changes in methods of food processing, distribution and consumer habits have reaffirmed that infectious disease events in one country are potentially a concern for the entire world.

The report stressed the need for global cooperation to ensure global health security (ibid., paragraph 5). The resolution passed by the World Health Assembly in response to the secretariat's report (WHA 2001) echoed the same arguments about the impact of globalization and the fact that "any upsurge in cases of infectious disease in a given country is potentially of concern for the international community" (ibid. preamble, clause 5).

The WHO's 2002 report *Global Crises—Global Solutions* explicitly set security considerations in the context of the IHR revisions, as in its opening statement:

> The phenomenon of globalization in the twenty-first century has altered the traditional distinction between national and international health. Very few, if any, urgent public health risks are solely within the purview of national authorities. One of the obvious consequences of globalization is the increased risk of international spread of infectious diseases. People and goods are crossing national borders in massive numbers unparalleled in human history. While some countries may still opt for extreme protectionism, importation of diseases is always difficult to prevent. The cross-border impact of infectious diseases is better addressed through multilateral efforts. (WHO 2002a, 1)

The principle underlying such statements is abundantly clear: that the security of all states is threatened by public health emergencies of international concern, and that a global collective security response is the only effective way for states to ensure their security. Collective action is necessary and legitimate because it will bring benefits for all. There could scarcely have been a clearer illustration of these claims than the SARS outbreak of 2003.

In addition to making such security arguments in official WHO reports and publications, during the years in which the revision process was ongoing key members of the secretariat's IHR revision team—not least those individuals discussed in chapter one—published a number of articles related to the IHR, the SARS outbreak, and disease surveillance more broadly. These articles again

showed the willingness of key members of the secretariat team to assert the WHO's authority and expertise and to lead the debate, arguing explicitly that infectious diseases should be interpreted as a global security threat that could only be managed through global cooperation via IHR revision (e.g., WHO 2002a; Heymann 2003). Success and failure during the SARS outbreak came to be interpreted through this security lens throughout the remainder of the IHR revision process (Whelan 2008).

The IHR Revision Process—Reaching the Tipping Point

During 2004 and 2005, the drafting process required diplomatic skill and persuasion that evoked the entrepreneurial spirit of the earlier stages of the norm life cycle. As this section will reveal, although the precise behavior expected of states during an outbreak like SARS continued to be contested, there was a gradual convergence of expectations, and not disputed during this period was the need for a revised IHR. The existence of a critical mass of states accepting the new norms of global health security was formally shown with the WHA's passing of the revised IHR in May 2005. But, as has already been made clear, this was the culmination of a process of ideational change that had begun much earlier. By the end of the SARS outbreak in mid-2003, two widely held beliefs were already apparent: that responsible states do not conceal outbreak events; and that the international community should apply appropriate (but not disproportionate) trade and travel measures when these events arise. The precise formulation of the international legal rules required to realize these two aims, however, was the subject of intense debate over the 2004–5 drafting period. We now examine some of the key normative changes that were eventually codified in the IHR 2005, linking these with the experience of SARS and the post-SARS IHR revision process.

Notification within 24 Hours

In May 2003, during the SARS outbreak, the WHA unanimously passed resolution WHA56.28, which called for completion of the IHR revision process and for draft regulations to be in place and ready for adoption by the fifty-eighth meeting of the WHA in May 2005. In the same resolution, it was noted that the 1969 IHR were inadequate and that this was demonstrated during the SARS crisis, as the existing regulations did not include specific actions required of member states and the WHO to contain the outbreak (WHA 2003). Notably, states agreed even prior to the agreement on the new IHR to

> establish immediately a national standing task force or equivalent group and, within it, to designate an official or officials having operational responsibilities and accessible at all times by telephone or electronic communication, to ensure the speed, particularly during emergencies, of both reporting to WHO and consultation with national authorities when urgent decisions must be made. (ibid., paragraph 3)

The collective expectation for member states to promptly report an outbreak situation to the WHO was articulated and affirmed by all states in 2003, but the attachment of a specific time frame that would detail precisely *how* promptly governments were to diagnose and report an outbreak was a novel departure from the traditional reporting relationship between member states and the WHO. As WHA56.28 stated, the SARS situation exemplified the fact that an effective government response depended on accurate and up-to-date knowledge of the situation in other countries. The sooner this knowledge was shared, the more effective the containment of the outbreak (Heymann and Rodier 2004b). The attachment of a specific reporting time line (allowing 24 hours for a state to report a suspected outbreak) was one of the most important changes introduced in the IHR revisions (WHO 2004a). Even if it was not necessarily expected that governments would always succeed in meeting this deadline in practice (a problem we return to later in the book), for the first time there was an agreed-upon benchmark against which performance could be judged.

In a working paper provided for regional consultations in early 2004, the 24-hour timeline only applied to the optimum time that a state should take to assess a potential Public Health Emergency of International Concern (PHEIC) (ibid., Annex 1, 3a). States were asked to notify the WHO immediately if the outbreak was deemed to be a possible PHEIC, but there was initially no specific time frame attached to this notification stage. During the regional consultation process, it was suggested that a 24-hour time frame be attached to the notification requirement in the proposed draft (WHO 2004b, 10). Even though various concerns were raised about the capacity of some states to meet such a requirement (ibid., 6; WHO 2004c, 8, 2004d, 4–5, 2004e, 5), this suggestion was ultimately retained.

By September 2004, the 24-hour time line was included under Article 5 (Notification) of the draft text (WHO 2004f, 2004g, 6). The 24-hour time period was agreed to primarily because, as well as making a more rapid global response possible, placing an emphasis on the timeliness of reporting would assist states in other respects. First, the explicit reporting time frame would assist states in enhancing their own risk communication strategies and would necessitate budget allocation toward ministries of health to build effective early warning surveillance

capacity that could meet this reporting time limit (WHO 2004c, 8, 2004b, 6, 10, 2004h, 5–6, 9). It was already clear during the regional consultations that an implementation period would also need to be incorporated into the revised IHR, given that many governments did not have the necessary infrastructure in place to meet a 24-hour reporting deadline nor the ability to rapidly acquire it (WHO 2004c, 2004d, 2004e). However, it is of note that in the regional consultations there was no suggestion of a retreat from the timely reporting expectation, implying that states had already come to see this as a reasonable behavioral expectation. The primary focus of debate was over the practicalities—in particular the assistance that would be required for states to meet the expectation (WHO 2004g, 2004i). The second crucial, but often overlooked, obligation was the one being placed on the WHO secretariat. The 24-hour time frame also required the WHO to be responsive to states' requests for assistance and necessitated the WHO being given the capacity to provide such assistance (WHO 2004h, 14, 2004b, 6). Ergo, states saw the revised IHR as not just placing expectations on themselves but also on the WHO (ibid.).

Because of the broad consensus over the desirability of the 24-hour reporting expectation, by 2005 (what had now become) Article 6 had undergone little change and the obligation for states, enshrined in the final text of the IHR (2005), is clear:

> Each State Party shall notify WHO, by the most efficient means of communication available, by way of the National IHR Focal Point, and within 24 hours of assessment of public health information, of all events which may constitute a public health emergency of international concern within its territory in accordance with the decision instrument. (WHA 2005, Article 6.1)

Expanding the Range of Notifiable Events

If the expected speed of reporting was one significant change, the scope of the new reporting expectations was another key departure from the 1969 IHR. As already noted, states were not formally required to report SARS cases, and there was no explicit mandate in place for the WHO to demand the level of reporting that it in practice requested governments to undertake (Kamradt-Scott 2010). The threat posed by newly emerging and re-emerging diseases had been central to much of the discourse surrounding IHR revision, but it should be recalled that the scope of the revised IHR had been a sticking point for those states engaged in developing the 1998 draft and that, as discussed in chapter one, the proposal for a system based on "syndromic reporting" was abandoned after an extensive

trial. Not surprisingly, therefore, during the 2004 negotiations, the range of diseases to be covered by the revised IHR was again the subject of much discussion.

The intention with the proposed definition of a PHEIC (WHA 2005, Annex 2) was that it would be broad in both scope and application. In the January 2004 draft, a PHEIC was to be defined on a case-by-case basis, with a decision instrument being used to guide states in deciding whether or not an outbreak required notification of the WHO (WHO 2004a).[7] These loose PHEIC criteria were revised after a number of individual submissions were made by governments arguing that the regulations should also include a list of specific diseases where notification should always be made (WHO 2004g). This request came largely out of a desire by states to have easily applicable reporting parameters in place for a number of diseases that occur regularly in some countries and which had been responded to by the WHO under the GOARN framework between 1998 and 2003 (WHO 2004b, 2004d).

One other concern that arose as a consequence of the expanded scope of the IHR was about how responses to chemical or radiological events would be managed in coordination with existing international instruments and bodies that have responsibility for such issues (WHO 2004i, paragraph 6, 2004j). In October 2004, after the conclusion of consultations with regional offices and member states, the IHR IGWG justified the inclusion of such events within the revised framework thus:

> The release of chemical or radionuclear agents often manifests itself at the outset through symptoms or signs, sometimes even before their cause is known. The ability of the international community, in particular through WHO's coordination, to obtain a reliable assessment of, and response to, potentially grave health threats would be impaired if the scope of the Regulations were limited to diseases that were already identified as being caused by infectious agents only. (WHO 2004g, 1)

As such, the decision was made that Article 12 (which became Article 14 by time the revised IHR was passed by the WHA in 2005) should detail the WHO's specific coordination activities in the event of a PHEIC and how the organization would work with other relevant agencies in sharing notification and response duties (ibid., 2).

Aside from these worries over the applicability of the IHR to non-natural public health events, the broader category of infectious diseases to be reported also raised other concerns. There was unease about the potential for confusion in using the PHEIC Annex; inevitable delays in reporting according to the PHEIC criteria; trivial notifications; the political implications of reporting an outbreak when

TABLE 1
Events that may constitute a PHEIC

Event detected by surveillance system				
A case of the following diseases is unusual or unexpected and may have serious public health impact and thus shall be notified: —Smallpox —Poliomyelitis due to wild-type poliovirus —Human influenza caused by a new subtype —Severe acute respiratory syndrome (SARS)	OR	Any event of potential international public health concern, including those of unknown causes or sources and those involving other events or diseases than those listed in the box on the left and the box on the right, shall lead to utilization of the algorithm.	OR	An event involving the following diseases shall always lead to utilization of the algorithm, because they have demonstrated the ability to cause serious public health impact and to spread rapidly internationally: —Cholera —Pneumonic plague —Yellow fever —Viral haemorrhagic fevers (Ebola, Lassa, Marburg) —West Nile fever —Other diseases that are of special national or regional concern, e.g. dengue fever, Rift Valley fever, and meningococcal disease

Source: WHA 2005, Resolution 58.3, Annex 2.

a neighboring state had not yet done so; and that the vast differences in surveillance and laboratory capacity among regions, let alone all 192 states expected to adopt the IHR, could lead to some countries being (unjustly) trusted more than others when it came to outbreak reporting (WHO 2004e, 19–22, 2004h, 5–7). In response to these issues, the IGWG did not retreat from the broader scope, noting that "extending the scope to cover unknown or unforeseeable public health threats was one of the main reasons for revising the Regulations" (WHO 2004g, 1). Instead, an ad hoc expert group of members (nominated by member states) from each of the WHO regions was created to review the Annex and to consider how the section may be refined to address member states' various concerns (WHO2004f, 2005). The resulting decision instrument that guides PHEIC assessments, Annex 2, was adapted in late 2004 and adjusted further in 2005, to include three categories of outbreaks to be reported (table 1).

In addition, concerns about differing interpretations of the reporting process and notification requirements led the IGWG to detail the specific actions to be taken in PHEIC assessments in the September 2004 draft (in comparison to the earlier January 2004 draft). To start, more precise instructions concerning sur-

veillance, notification, verification, determination of a PHEIC, response to a PHEIC, and the WHO's role, were shifted from "Annexes" and incorporated into the Articles that detail states' and the WHO's specific responsibilities (WHO 2004a, 2004f—note changes to Articles 1, 4, 5, 6, 8, 10, 11, 12). The variations in health system capacity were addressed via the introduction of an implementation time frame for meeting the core capacity requirements of the IHR in assessment, notification, and response. During the final stages of the IGWG negotiations it was decided that five years, with the possibility of two two-year extensions available by request to the director-general, would be granted (following WHA approval) to those states which self-identified as being likely to struggle with developing the capacity needed for IHR compliance by June 2007 (WHA 2005, Annex 1).

There is no evidence in the reports of the 2004 WHO regional consultations or in the individual government submissions submitted to the WHO in the same year of any serious objection to broadening the scope of the IHR per se (WHO 2004b, 2004c, 2004d, 2004e, 2004h, 2004i). States did raise concerns about the *implications* of expanding the 1969 IHR, with some arguing that the revised regulations should simply adopt an expanded (fixed) list of diseases, while other states argued for no fixed list whatsoever (WHO 2004g). Annex 2, with the three disease list categories (table 1), was the resulting compromise (WHO 2005). But despite the worries of a number of states that they may not be able to meet the demands of the revised IHR, no state dissented from the need for an expanded range of notifiable diseases.

The WHO's Use of Non-state Reporting

A third crucial development to result from the IHR revision process was the acceptance of the WHO's right to receive informal (i.e., nongovernment) outbreak reports and, having received such reports, to use them to press governments for further information (WHA 2005, Article 9). Such use of informal reports was a particularly contentious aspect of the WHO's response to SARS because of the ways in which these reports informed the WHO's actions during the outbreak (Fidler 2004; Zacher and Keefe 2011). For example, as discussed above, receipt of independent reports concerning the discrepancy in the Chinese government's reports of SARS cases versus what was being witnessed by individuals in hospitals (and then reported directly to WHO) informed the director-general's decision to issue travel alerts concerning China (Fidler 2004, 117–18). This particular action—issuing alerts based on information that did not come from governments—gave the WHO the ability to "name and shame" states in a way that was unprecedented

and was also a highly politically risky strategy for the organization (Davies and Youde 2013, 133).

Under the revised IHR, the WHO secretariat is explicitly allowed to receive information from nongovernment sources and use it as a basis to obtain government verification of an outbreak (WHA 2005, Articles 9, 11). Some have interpreted this as a significant erosion of sovereign authority over outbreak response (Mack 2006), while others have argued that the significance of Articles 9 and 11 is minimal when the revision instrument is viewed as a whole (Smith 2010). There is a degree of truth to both positions. Formalizing the WHO's use of unofficial reports was a major departure from the global health security regime's traditional reliance on governments alone for outbreak information and updates. But the use of this power is constrained by a number of features within the new IHR. For one, the WHO is under a strict obligation not to release any information without prior consultation with the state concerned (WHA 2005, Article 11). However, if the director-general believes a potential PHEIC has not been identified, reported, or verified by the state and there is significant risk of international spread, she or he may convene an Emergency Committee that can advise on whether there is a potential or actual PHEIC that could pose a risk to international trade and travel (ibid., Articles 12, 48, 49). Once that process has been followed, the director-general is empowered to make the final determination as to whether or not to release details of the outbreak (ibid., Article 49). As such, there are real limits on the extent to which the WHO can use informal reports "against" recalcitrant member states (Cortell and Peterson 2006). Indeed, the introduction of such a detailed process explicitly spelled out in the regulations may even restrict the director-general's capacity to publicly announce an outbreak, which was arguably the intention of introducing the Emergency Committee as a limitation on the ability of the director-general to act independently in issuing travel alerts (WHO 2004g).

The non-state reporting function also provides an opportunity for the secretariat to confidentiality engage a state in bilateral dialogue long before making news of an outbreak public is required (Article 9). These new powers assist the organization in providing advice on the determination of a PHEIC (Article 10) and, if the dialogue fails, the director-general can use the authority to convene an Emergency Committee (Article 48). In turn, the threat of convening an Emergency Committee might persuade a state to cooperate with the WHO discreetly and directly.

Another factor to consider, in addition to the reporting relationship between the WHO and the state, are the relationships between states. Because the IHR

revisions clearly articulate the requirement for early reporting and for early WHO advice and assistance (with the option for confidential handling of the reports), states have to consider the wider regional and international ramifications of failing to meet their obligations under the revised IHR reporting process. The decision to allow the WHO to receive informal reports does not just benefit the WHO, it also benefits states that are concerned that their neighbors may not fully disclose outbreak events, and thus Article 9 is a safety net for states as much as it provides the WHO with the power to encourage (and if that fails to "name and shame") them into cooperating (WHO 2007b). Even if the state in question is not concerned about domestic criticism of its outbreak response, there are few states that could entirely disregard the reputational impact of willfully failing to report (and thereby endangering other states, especially those within their own region). In the case of the informal reporting mechanism, then, the significance of its inclusion is not just that the WHO may receive these reports but that other states will *expect* to be informed of an outbreak that may potentially threaten their interests. If this does not happen, the revised IHR provides clear guidance on establishing who is at fault.

Additional Health Measures

The expectation that states should not conceal outbreaks (even in the absence of any formal requirement to report them) was, we have argued here, already recognizable as an emerging international norm during the SARS crisis. But key to fully establishing the legitimacy of this expectation in the context of the revised IHR was the notion of reciprocity, raised in discussions about the unduly harsh trade and travel measures applied to India in 1994 for "doing the right thing" and promptly reporting the suspected plague outbreak in Surat (Cash and Narasimhan 2000). The idea that trade and travel restrictions in response to an outbreak of international concern should not be unjustifiably harsh was again stressed in the aftermath of SARS (Heymann and Rodier 2004a). Those promoting IHR revision argued that SARS demonstrated the need for governments to be able to report disease outbreaks without fear of unduly damaging economic repercussions (ibid.). Thus, in return for prompt reporting, governments should be rewarded with a promise that their export industries, tourism, and citizens would not be subject to disproportionate measures (WHO 2004a; WHA 2005, Article 43).

The need for responsive but proportionate trade and travel measures in the event of a PHEIC was discussed long before SARS. Cash and Narasimhan (2000) argued that expanding the scope of the IHR could actually lead to the increased use of reactive trade and travel restrictions and in turn result in a revised IHR

being plagued by the same lack of compliance with reporting as its 1969 predecessor. After SARS, however, it was reiterated that "a clearly reasoned, well-planned, and effectively managed and publicized response to such threats is important in mitigating the damage to the economy, and to public confidence in the government" (WPRO 2006, 245). A clear example of how the idea of reciprocity was promoted by the WHO secretariat is illustrated by their response to Singapore's handling of SARS. Between March and May 2003, Singapore had 238 probable SARS cases, including 8 imported cases and 33 deaths, with 90 percent of transmissions occurring within hospitals and households (Goh et al. 2006, 301). The government promptly engaged in a public communication campaign, despite its economy being heavily reliant on international travel and trade, and regularly updated the WHO about cases as they were diagnosed. In turn, the WHO secretariat decided not to list Singapore on the travel advisory list (they were on the alert list). As a result, the Singaporean government did not face the same political predicament or travel sanctions as similarly affected countries because the international community—led by the WHO secretariat—*trusted* the government's response (WPRO 2006, 245; Price-Smith and Huang 2009). Such reciprocal arrangements may not always be possible when the disease is more intimately connected with a trading commodity (such as poultry in the case of H5N1, as chapter three demonstrates), but nonetheless the strong expectation attached to the revised IHR was that politically-motivated and/or unjustifiably severe travel and trade restrictions should for the most part be avoidable when states adhere to the IHR practice of "detect, assess, notify and report."

The key issues in the drafting process that led to the formalization of this reciprocal arrangement in the IHR (2005) regarded the process, scope, and authority of the WHO director-general to issue recommendations. The freedom with which the director-general issued recommendations that advised against traveling to certain SARS-affected areas throughout the 2003 outbreak was flagged as a concern during the mid-2004 consultations with member states. In particular, it was claimed that there had been a lack of transparency in the development and issuing of the travel advisories, and member states argued that institutionalizing this process would be crucial, given the dramatically expanded reporting obligations under the revised IHR. As SARS demonstrated, advisories played a crucial role in "coordinating and orientating the international response to events and public health threats" (WHO 2004g, 3–4). But travel advisories did not just have technical implications for public health—they also had profound economic consequences (ibid., 4). As with the expanded capability of the WHO to use unofficial sources of information to persuade governments to report, the revised text brought

an overall expansion of the secretariat's authority, but with certain limitations. Specifically, the director-general was to defer to a committee process before issuing any directive on trade and travel measures, with states refusing to grant the director-general sole discretion over what temporary recommendations could be issued in response to potential PHEIC alerts,[8] as originally mooted in the January 2004 draft (WHO 2004a, 20 [Article 45], 46–49 [Annex 10]). The compromise reached between the time of the January 2004 working paper and the final 2005 IHR text was that the director-general could issue recommendations, but they would be grounded in the scientific advice received from the appropriate consultative committee (influenza, biological, radio-nuclear, chemical, etc.) (WHO 2004g, 4).

The arguments advanced by some governments against handing broad discretion to the director-general were two-fold. On one hand, governments expressed concern that giving the WHO leadership the authority to make judgments about what constituted appropriate trade and travel measures would directly compete with, and potentially impinge on, existing international legal arrangements such as the (legally binding) measures under the World Trade Organization's (WTO's) Agreement on Sanitary and Phytosanitary (SPS) Measures (WHO 2004j).[9] According to this view, the WHO should not curtail states' options to act where governments saw those actions as justified under the terms of the WTO arrangements. The second line of argument was based on the explicit assertion of national sovereignty—namely, that it would be incompatible with the norm of sovereignty for an international organization such as the WHO to judge the suitability of additional health-related measures that (sovereign) governments wished to utilize in responding to a PHEIC (WHO 2004g, 3).

This defense of states' right to institute trade and travel restrictions seemed—on the surface at least—to threaten the delicate balance between health security and free travel and trade that lay at the heart of IHR renewal. In the end, however, it did not do so for two crucial reasons. First, there was little opposition to the idea that the WHO director-general should be able to issue "technical" recommendations on travel in the event that a government was not cooperating with the IHR notification process and when there was scientific opinion that supported such advice. This reassured governments that the director-general's power would be subject to due process and that any response recommended by the WHO would be proportionate and based on sound, impartial scientific evidence. Second, member states themselves made significant—and new—concessions, in particular agreeing to limits on the conditions under which they could apply their own additional trade and travel measures, over and above any recommendations issued

by the director-general (WHA 2005, Article 43). It was agreed that governments would be required to provide "scientific justification" for any measures taken that diverged from the WHO director-general's recommendations (WHO 2004g, 3–4; WHA 2005, Articles 15, 17, 35, 43, 65). And, as Article 43 of the IHR 2005, Additional Health Measures, sets out, any such steps must satisfy a number of criteria: "Such measures shall not be more restrictive of international traffic and not more invasive or intrusive to persons than reasonably available alternatives that would achieve the appropriate level of health protection" (WHA 2005, Article 43.1).

SARS, IHR Revision, and the Norm Cascade

The rapidity with which the new IHR was drafted and agreed on between 2004 and 2005, after a decade of stalemate, demonstrated that the SARS incident had increased both the sense of urgency to reform the global health security regime and that it had given rise to new, shared understandings of acceptable state behavior. The challenge was to define and capture these emergent norms in ways that were acceptable to all of the WHO's member states, which was no easy task. Yet, as Mary Whelan, chair of the IHR negotiations throughout 2004 and 2005, has argued, one of the most unusual features of the IHR negotiations was "the absolute common sense of purpose" (Whelan 2008, 16). The SARS outbreak engendered this sense of shared purpose and provided the impetus for states to move toward institutionalizing a new global health security regime via a significantly revised and updated IHR. As such, the adoption of the new IHR is an unusually clear example of the norm cascade process. The classic hallmarks of the norm life cycle identified by Finnemore and Sikkink (1998) were all in evidence—norm entrepreneurs (i.e., the WHO secretariat) acting as the "agents of socialization," a critical mass of states emerging to pressure other states to "adopt new policies and laws and to ratify treaties," and the critical mass of states agreeing to a new set of regulations that sought to institutionalize their commitment to the new norms (ibid., 902).

But in order to claim that the revised IHR heralded a change in international norms, we are required to defend it against a variety of counter-arguments. These include the view that the revisions were no more than technical changes to an existing document and do not constitute convincing evidence of substantial ideational change. Andrew Price-Smith (2009, 155), for example, argues that "it was not the global sharing of norms that led to the containment of SARS; rather, it was the sovereign state's concern for its material (primarily economic) interests that impelled states to take action to control SARS" and agree to the IHR revisions. For Price-Smith and others (e.g., Smith 2010), the IHR revisions are no

more than an updated tool to assist states in their responses to future outbreaks, and we should not hold out too much hope for a radical change in state behavior as a result of their adoption: "the sovereign state remains very capable of obfuscation through the non-reporting of disease data, and through other means of thwarting international efforts to address the spread of contagion" (Price-Smith 2009, 154).

Others have argued that post-SARS, the pendulum has swung back. Citing affected states' actions during the early stage of the avian influenza outbreak in East Asia, as discussed in the next chapter, it has been argued that there was again a marked change in reporting outbreaks, but that this time countries were reasserting sovereign control over what is reported and when (Ricci 2009; Stevenson and Cooper 2009). According to some, the "teeth" needed to give the IHR revisions bite and to significantly change state behavior have remained absent due to there being "no mechanism for enforcing rules, or for punishing those who contravene them" (Stevenson and Cooper 2009, 1387). Hoffman suggests that the very effectiveness of the IHR revisions in "preventing deadly epidemics and responding to outbreaks, their *raison d'etre,* has been called into question" once the structural weaknesses of the new rules are closely examined (Hoffman 2010, 514). The revised IHR, according to these critics, are fundamentally flawed because the framework has insufficient "carrots" and even fewer "sticks" to ensure compliance and that new ideas about appropriate behavior are not enough to change real-world state actions. Material interests, such critics argue, will always trump any collective incentive to report outbreaks (Price-Smith 2009; Smith 2010). In other words, most governments will continue to try and "get away" with minimal adherence to the IHR, avoiding their duties wherever they can. The IHR norms will only be adhered to instrumentally. In the traditional theoretical terminology, states' reactions to outbreak events will be steeped in a "logic of consequences" rather than a "logic of appropriateness" (March and Olsen 1998).

Moreover, even the term *rules* may be stretching the nature of the obligations that member states took on under the 2005 IHR, which, like their 1969 predecessor, do not have the status of a treaty (Tucker 2005, 346; Zacher and Keefe 2011, 71). The IHR—as "regulations"—do not attract the same level of legal compulsion for compliance that a formal treaty or convention would require. They are instead categorized as "soft" law. This, it can be argued, undermines the notion that the WHO secretariat can exert substantial political pressure on member states to ensure their behavior complies with the object and purpose of the IHR (Tucker 2005), raising the specter of the same problems that plagued the 1969 framework recurring.

Our response to these various lines of criticism rests in part on a theoretical defense of constructivism and in part on the empirical facts of the cases in question (SARS, IHR revision, and, as discussed in the next chapter, H5N1). First, we do not deny that perceived self-interest dominated some states' responses to SARS (China being the clearest example). However, what was really remarkable was the way in which self-interest during this event underwent redefinition (Fidler 2004). In particular, what was vital was the extent to which the WHO secretariat sought to explain to states why they should see cooperation as within their interests and influenced and engineered the definition of an "appropriate" state response. When tracing a nascent norm cascade—how the new behavioral standard is being interpreted and accepted by those in the community to which it applies—the defining feature is whether (normative) "contagion" is occurring in line with the vision set out by the norm entrepreneur (Finnemore and Sikkink 1998, 902). Here, evidence of states' desire to conform and the degree of priority that states attach to the norm are good markers for tracing whether a norm is likely to factor into the self-interest calculation of a government. During the SARS outbreak and the IHR revision process over 2004 and 2005, we saw more and more governments adopting a new understanding of how new norms, rules, and procedures would serve their interests—norms, rules and procedures that the WHO secretariat had been gradually developing and promoting since the mid-1990s, well before SARS. Although the details were still being resolved, no state wanted to be seen as the deal breaker in 2004 and 2005. This, more than anything, suggests that states saw the norms as both legitimate expectations and as bringing benefits in terms of their own interests (ibid., 903).

This leads us to the claim that there is no guarantee that states will comply with the IHR in future, particularly given the lack of an enforcement mechanism (Price-Smith 2009; Hoffman 2010; Smith 2010). This view rests on an assumption that what defines self-interest does not change. Again, this seems not to be borne out by the SARS situation. As David Byrne argues,

> The response to SARS demonstrated some of the positive features of a globalized society: the advantages of rapid information and communications technologies for emergency response, and the willingness of the international community to form a united front against a common threat. (Byrne 2005, 6)

As noted above, what was remarkable about SARS was the degree to which states complied with the WHO's requests to report cases, despite the fact that there was no historical precedent nor any formal obligation on them to do so (Zacher and Keefe 2011, 62). This occurred because of the realization during and after SARS that

> the most important incentive for compliance is that the IHR revisions have been drafted by the Member States for their own mutual benefit. Since infectious diseases potentially threaten every country, it is in every country's best interest to collaborate internationally. (Byrne 2005, 10)

Of note here is a subtle shift in perceptions of what states are responsible for achieving in terms of their, and their neighbors', health security. For many key states, global cooperation on disease control was no longer a secondary concern—it had become a primary concern, and states slow in catching on to this were heavily criticized for placing populations around the world at risk. This was a remarkable change in states' expectations of each other, especially striking if we compare SARS with the outbreaks of the 1990s.

Of course, identifying the revised IHR as the formal acceptance by states of a new set of international norms does not imply our (or social constructivism's) expectation that we will see a perfect record of compliance during all future outbreaks. Rather, we argue that the formal adoption of these norms make it harder for states to breach the revised IHRs and, once states have fully internalized the new norms, compliance will be even more likely. When breaches do occur, because they will be out of step with the prescribed response detailed in the revised IHR instrument, states can be asked to provide an explanation for their actions. Moreover, they can be asked in a way that they could not be asked under the 1969 IHR. This bodes well, we argue, for most states complying most of the time.

Although the revised IHR clearly draw on previous arrangements for disease surveillance and control—not least the 1969 regulations—the degree to which the 2005 version differs from its predecessors adds weight to the claim that this framework entails significant new behavioral expectations of states as well as the WHO. If the IHR revisions had only resulted in the WHO being given the role of a technical "clearinghouse" for outbreak information (Smith 2010), then sceptics might have been right to portray the revision process as an insufficient signifier of meaningful ideational change. But the scope of the revisions, their application, and the progress made to date in their implementation do not support the idea that states see them as just an "updated list of reportable diseases" (Price-Smith 2009, 156). Rather, the (relative) success of the response to SARS resulted in states arguing very clearly—and at times, even forcefully—that the wide-ranging IHR revisions were necessary (Byrne 2005). States engaged seriously in the negotiation process as witnessed, for example, in the lengthy discussions over the definition of a PHEIC, the reporting timeframe, and the conditions attached to states retaining

sovereign jurisdiction over additional health measures. Ultimately, states knowingly agreed to subject all domestic outbreak situations to international standards and an organization (WHO) that had the power to define the "appropriateness" of their capacities and responses.

Conclusion

The IHR (2005) represent a major change in the global disease outbreak surveillance and control regime, and they involve a number of significant changes to the behavior expected of states. These changes incorporate notable normative changes, as compared to what was expected of both states and the WHO prior to 2005. Thanks in no small part to the efforts of norm entrepreneurs within the WHO, many of these ideas were in circulation prior to 2003, as evidenced by the agreement to revise the IHR in 1995, the creation of GOARN in 2000, and the passing of the WHA global health security resolution in 2001. In fact, SARS showed how socialized many states already were to the notion of a collective outbreak response, as shown by the vast majority of states complying with the WHO's requests for information and recommendations concerning SARS, despite the lack of any formal obligation to do so. The opprobrium heaped on China was striking because it highlighted the degree to which states had come to expect new forms of behavior from one another.

Through the SARS outbreak and its aftermath, norm entrepreneurs explicitly linked the new norms with states' individual and collective security. The progress made with this argument can perhaps most clearly be seen through the actions of China and its changing attitude toward the IHR revision process. As Finnemore and Sikkink note, the real moment that characterizes the tipping point into a cascade is when norm breakers become norm followers (Finnemore and Sikkink 1998, 902). During the IHR negotiations, even the most reluctant of states agreed to the new expectations, and few states wanted to bear the political costs of being a "norm breaker." Deeply embedded in the negotiations was the quid pro quo of the expanded reporting requirement in return for guarantees of proportionate trade and travel measures—a balance that had been at the heart of disease diplomacy from the 1850s but which had never been entirely successfully achieved in practice. As the 2004 drafting process revealed, states were under no illusions about the seriousness of their task; the process was intense (and intensely political) because they knew they were agreeing to substantial intrusions into their affairs in an area that was traditionally under the sole remit of the sovereign state (WHO 2004g). The 2005 IHR was far more than just an expanded list of diseases

that they had to report. As the Southeast Asia regional consultation on the revision of the IHR noted,

> There is strong consensus that IHR needs to be revised to provide an effective basis for preventing international spread of infectious diseases. The present regulations were issued 35 years ago, in 1969. Increasing globalization and the emergence of new diseases such as SARS have highlighted the importance of establishing a more effective basis for coordinating the response to international threats to human health. (WHO 2004e, 11)

There remains plenty of scope for states to shirk their responsibilities under the revised IHR, as they did with the previous framework. However, states knew they would be more vulnerable to scrutiny and criticism than previously. The shared experience of SARS, which triggered a revitalized collective engagement in the drafting and adoption of the IHR revisions and brought about a tipping point in the emergence of new global health security norms, proved a seminal experience that shaped states' sense of obligation to the new norms of global health security (Haas 2000, 62; Brunnée and Toope 2010, 100). In the next chapter, we step back from discussing the process of revising and adopting the IHR to examine a regional case that shows how the new expectations were being understood as the Asian region was subjected to another disease crisis—the H5N1 avian influenza outbreak.

H5N1 in Asia

Tracking Government Behavior

A new outbreak of H5N1 avian influenza affecting humans was first detected in East Asia in 2004, when the International Health Regulations revisions were still under negotiation. Yet, as we saw with Severe Acute Respiratory Syndrome, the pending status of the IHR did not preclude a widespread expectation that states affected by H5N1 outbreaks should adhere to the reporting and verification requirements being developed under the revised IHR framework. As Dr. Lee Jong-wook, then World Health Organization director-general, said in 2004,

> With SARS, we learned that only by working together can we control emerging global public health threats. Now, we confront another threat to human health [Avian Influenza] and we must reaffirm existing collaboration and form new ones. At the international level, WHO, FAO and OIE stand together in close working relationship to provide the necessary guidance to Member States. (WHO-FAO 2004)

Cases of H5N1 are still being reported at the time of writing as the virus continues to mutate. This outbreak has spanned much of the period under examination in this book—from the IHR negotiations through to their adoption and the implementation period. As such, H5N1 provides an excellent example for investigating how states were viewing the ramifications of agreeing to the revised IHR and the degree to which the adoption of the IHR (2005) affected their responses to H5N1 over time. In this chapter, we provide a detailed examination of how a region that was struggling to contain a disease outbreak was simultaneously seeking to engage with the new reporting expectations of the IHR. We shift from the global interaction often discussed in the context of the norm life cycle, specifically Stage 2 (norm cascade), to examine how Asian states came to support the IHR revisions and how they interpreted their commitments to this instrument in light of the H5N1 experience.

Finnemore and Sikkink propose socialization as "the dominant mechanism of a norm cascade through which norm leaders persuade others to adhere" (Finnemore and Sikkink 1998, 902). What is less understood, they argue, is *why* socialization works. How are states persuaded that one type of action is legitimate over the possibility of others? Achieving this understanding is essential before any progress toward the internalization stage of the norm life cycle—the final stage in which conformity to the norm becomes habitual and achieves a "taken-for-granted" status—can be made (ibid., 904). If there is to be pushback, rejection, or abandonment of the norm, it is during the second stage of the life cycle that the incipient norm is most vulnerable (Percy 2007). Finnemore and Sikkink argue that the drivers of norm cascades are legitimation, conformity, and esteem. We briefly touched on these motivations in the previous chapter in the context of the IHR revisions, noting how both states and the WHO collectively referred to the SARS experience to demonstrate their understanding of what was necessary and what types of behavior were acceptable and legitimate; these understandings then fed into the revised IHR. But how did states see these behavioral expectations translating into practice? The arrival of H5N1 as the IHR negotiations were being conducted represents an opportunity to explore the degree to which affected governments understood and accepted the revised instrument's new standards of state and WHO behavior. We contend that while much of the literature has foregrounded the case of SARS, it was not the only disease event that fed into the IHR revision process. Indeed, if SARS were the trigger for the norm cascade, H5N1's arrival during the cascade process served to test states' and the WHO's commitment to and understanding of the new norms of global health security.

The H5N1 outbreak is thus a crucial chapter in the story of the changes to the global health security regime. During the WHO Western Pacific Regional Office consultation on the IHR revisions, held in the region most affected by the H5N1 virus, government representatives repeatedly noted that an expanded IHR would assist member states' responses to H5N1 (WHO 2004h). In this regard, as David Heymann (2006) has argued, there was already evidence at the beginning of the H5N1 outbreak that many East Asian states were well disposed to the proposed changes to the IHR. Heymann (ibid., 352) further notes that the diplomatic initiatives within the region (which we discuss below), as well as their collaboration with the WHO, suggested that a substantive change in perception had taken place within the Western Pacific region, toward the benefits of outbreak transparency—one where there was a belief that transparency "prevailed over the financial and political costs" of failing to declare H5N1 infections in poultry and humans. However, alternative views to Heymann's have also been posited, regarding the

impact of H5N1 on affected states' commitment to the revised IHR. Indeed, while Heymann (ibid.) points to the relative speed with which affected states sought the WHO's assistance and advice, others point to growing assertions of sovereignty to avoid the international rules stipulating the speed of outbreak response and virus handling (Stevenson and Cooper 2009), which ostensibly challenged the revised IHR's aim of balancing the shared risks and obligations arising from disease outbreaks.

Both characterizations, we contend, are in some ways problematic. The IHR revisions were not finalized until 2005 and did not enter into force until 2007 (with a five-year grace period for low- and middle-income countries to meet core surveillance and response requirements detailed in the IHR; see chapter four). This means that it is impossible to consider states' response to H5N1 as a single event. Rather, we need to trace how their responses altered over time and how those changes related (at first) to the ongoing negotiations and (later) to the IHR implementation process. As such, in this chapter we give emphasis to the way in which the Asian region, as the origin of the H5N1 outbreak, framed their responses and their expectations of each other according to what was simultaneously being enshrined in the revised IHR.

This chapter proceeds in four sections. First, we briefly chart the early years of the H5N1 outbreak, from the pathogen's initial (re)emergence in late 2003 through the peak of transmissions in 2006, focusing specifically on cases of human infection. Second, we examine the regional and international responses put in place to assist affected states and the degree to which those responses were framed with the revised IHR in mind. Third, we examine existing analyses of the reporting performance of affected states. The dominant view among commentators has been that H5N1 revealed that the post-SARS claim of a new normative environment (e.g., Fidler 2004) was exaggerated. Indeed, as we explore below, it has been argued H5N1 brought a reassertion of sovereignty and a rejection of the shared expectations embodied in the revised IHR, such as prompt and open reporting of outbreak events. In the fourth section, we challenge this argument and make the case that affected states overwhelmingly sought to report H5N1 cases openly and transparently and did so because reporting was an easily identifiable benchmark that states were publicly expected to meet. Individual instances of delayed reporting did occur, but the overall trend over time was toward more compliance, not less. Furthermore, we show that while some governments—best exemplified by the virus-sharing dispute instigated by Indonesia—*did* question the benefits of the enhanced reporting requirements under the revised IHR, these arguments made little headway and did not appear to affect the general report-

ing trend. We conclude that although the H5N1 situation highlighted several challenges facing governments in meeting the expanded disease reporting and response requirements, this did not equate to regional resistance or abandonment of the revised IHR. States still accepted the principle that global health security was strengthened through collectively abiding by the revised IHR rather than, as they had in the past, pursuing their own individual outbreak responses.

The Early Years of H5N1

The H5N1 avian influenza outbreak was first identified in poultry in East Asia in December 2003. The first cases of human infection occurred in 2004, with nearly all of them resulting from direct contact with poultry.[1] The concern with H5N1 in the early days—a concern that persists at the time of writing—is that it "remains one of the influenza viruses with pandemic potential, because it continues to circulate widely in some poultry populations, most humans likely have no immunity to it, and it can cause severe disease and death in humans" (WHO 2011a).

From 2003 to 2014, the highest cumulative totals of human infections (and deaths) were in Indonesia, Egypt, and Viet Nam (WHO 2011b; table 2). The disease appeared to peak in 2006, when the highest number of human cases appeared (most occurring in Indonesia). By 2010, Indonesia, Egypt, Viet Nam, and China were the only countries continuing to experience human cases (WHO

TABLE 2
H5N1 human infection cases, 2003–2014

Country	Cases	Deaths
Azerbaijan	8	5
Bangladesh	7	1
Cambodia	47	33
Canada	1	1
China	45	30
Djibouti	1	0
Egypt	173	63
Indonesia	195	163
Iraq	3	2
Lao PDR	2	2
Myanmar	1	0
Nigeria	1	1
Pakistan	3	1
Thailand	25	17
Turkey	12	4
Vietnam	125	62
Total	650	386

Source: WHO 2014c. *Cumulative Number of Confirmed Human Cases for Avian Influenza A(H5N1) Reported to WHO, 2003–2014.*

2011b). The first country to report an H5N1 poultry outbreak was South Korea, in December 2003. In the same month, Thailand raised the alarm when the H5N1 virus strain was detected in ailing tigers and leopards in the Bangkok Zoo (later traced to infected poultry being fed to the animals). Retrospective analysis in 2006 revealed that the first possible H5N1 poultry and human cases may have emerged from China in November 2003 (WHO 2011c). These cases were most likely originally mistaken for SARS (Schnur 2006; WHO 2011c). In early January 2004, Viet Nam reported its first poultry outbreak of H5N1, followed in the same month by Japan, Hong Kong, Cambodia, and Lao People's Democratic Republic (PDR). The following month, Indonesia reported its first cases of H5N1-infected poultry at the same time as the People's Republic of China (WHO 2011c).

In late January 2004, Viet Nam reported its first laboratory-confirmed case of human H5N1 infection. By February, fears emerged that the disease had already achieved human-to-human transmission when a cluster of cases in one family was identified (ibid.). In the same month, Thailand reported its first two human infections (directly from poultry). By the end of 2004, Thailand and Viet Nam had confirmed five and six human infection cases, respectively. In January 2005, Viet Nam became the state most severely affected by H5N1 (ibid., 4). In July 2005, Indonesia confirmed its first human case of H5N1 (ibid., 5). At the end of 2005, Cambodia and China confirmed their first human infection cases, Thailand confirmed its nineteenth human case, Viet Nam its sixty-fifth, and Indonesia its twentieth (ibid., 5–7). By the end of 2006, Indonesia had recorded the highest human caseload of H5N1 infections, with 74 cases and 45 deaths (ibid.). To get a sense of how seriously the potential threat was viewed, it is worth noting that the fatality rate for humans infected with the H5N1 virus was 73 percent in 2004, 63 percent in 2005, and 43 percent in 2006. Moreover, 90 percent of cases occurred in people under 40 years of age (WHO 2006). By 2008, the virus had spread to wild birds and domestic poultry across the Middle East, North Africa, West Africa, Eastern and Western Europe, and South Asia. Within Asia, Myanmar (where the first known human case was reported in December 2007), Japan, and the Republic of Korea also reported seasonal outbreaks in poultry. In the same year, the WHO calculated the H5N1 human infection case fatality rate at 60 percent although it reported no sustained, successful local transmission of the virus between humans (WHO 2011c).

Regional and International Support to H5N1-Affected States

As the rate of human H5N1 infections rose between 2004 and 2006, the international community's focus shifted to two issues. First, the WHO led the charge

in encouraging governments to view H5N1 as an outbreak that they should report—as they had SARS. This occurred despite the acknowledged fact that the IHR (1969) did not apply to H5N1, the IHR revision process was ongoing, and even once adopted, the revised IHR would not come into force until 2007. Second, based on the impact that H5N1 was having on the poultry industry in particular, the WHO and other international institutions made the case that a proportionate trade response to the outbreak required states to protect their own poultry populations and poultry exports but that affected states would need to be assisted by the international community through the provision of financial help and containment resources. As a joint statement by the Food and Agriculture Organization (FAO), the World Organization for Animal Health (OIE), and the WHO noted,

> Avian influenza is an economic disaster for the poultry industry as well as small poultry farmers . . . The focus of FAO, OIE and WHO activities is to avert a human and animal pandemic. "We have a brief window of opportunity before us to eliminate that threat," said Dr. Jacques Diouf, FAO Director-General. "Farmers in affected areas urgently need to kill infected and exposed animals and require support to compensate for such losses. This will represent a huge cost, especially to struggling economies and small farmers. *The international community has a stake in the success of these efforts and poorer nations will need help*," Dr. Diouf said. (WHO-FAO 2004, emphasis added)

The position adopted by the regional institution with member states most affected by the outbreak—the Association of South East Asian Nations (ASEAN)[2]—was similar to but more explicit than that of the FAO, OIE, and WHO. ASEAN also maintained that member states had a duty to report cases and put measures in place to contain the disease, but in return they stressed that their members had a reasonable expectation that they would not be penalized for reporting and that in instances where trade restrictions were deemed necessary on scientific grounds, governments should receive international assistance as a quid pro quo for their cooperation.

The ASEAN position on H5N1 was particularly significant for two reasons. First, as already stated, many of its member states were among those most affected by the H5N1 outbreak; and second, the ASEAN secretariat proved to be quite proactive in promoting the need for shared outbreak communication among its members, despite the lack of any formal requirement to do so (Pitsuwan 2011). For example, in collaboration with the WHO South East Asian Regional Office (SEARO) and WPRO, the ASEAN secretariat developed the joint 2005 *Asia Pacific Strategy for Emerging Diseases* (APSED), which included H5N1 under its program

(WPRO 2005; see below) and, from the outset of the outbreak, invited WHO representatives to attend high-level ASEAN ministry meetings organized to discuss the collective response to H5N1. The first such meeting was the ASEAN+3 (China, Japan, and South Korea) Health Ministers Meeting on Avian Influenza in Bangkok, Thailand, in November 2004. At this meeting, the *Joint Ministerial Statement on Prevention and Control of Avian Influenza* was adopted, which committed governments and the WHO to the following:

> We commit ourselves, in view of the changing circumstances to facilitate prompt and open exchange of information on avian influenza between nations and with concerned international agencies with the view to ensure transparency, facilitate consultation and fair application of health-related measures of international concern especially during outbreaks . . .
>
> We request WHO, in collaboration with relevant international organizations, to facilitate global and regional collaboration to make available the resources required to combat this public health threat, especially for developing countries without sufficient resources. (ASEAN+3 2004)

Regional collaboration was further deepened when ASEAN members agreed in October 2004 to establish an ASEAN Highly Pathogenic Avian Influenza (HPAI) Taskforce to assist member states in developing containment measures to control the disease in the domestic, industry, and wildlife animal sectors. ASEAN+3 also supported the ASEAN HPAI Taskforce and agreed to provide expertise and assistance (ASEAN 2006). Within one year, in September 2005, the HPAI Taskforce received member state endorsement of the Regional Framework for Control and Eradication of Highly Pathogenic Avian Influenza. China, as a member of the ASEAN+3 consortium, subsequently agreed to host the International Pledging Conference on Avian and Human Influenza in Beijing on January 17 and 18, 2006. Prior to the Conference, the HPAI Taskforce estimated that US$1 billion would be required for the whole region to implement the HPAI Work Plan. The conference received US$2 billion in pledges (ASEAN 2006; Cheng 2006). Multiple bilateral and multilateral funding partnerships developed from the Beijing pledging conference, with major donors including the European Union (EU), World Bank, Asian Development Bank, US Centers for Disease Control and Prevention, China Center for Disease Control and Prevention, Japan-ASEAN Integration Fund, Australian Agency for International Development (AusAID), and Public Health Agency of Canada (Cheng 2006; Wilesmore et al 2010).

In terms of commitment to mitigating the threat of emerging infectious diseases, ASEAN was one of the few regional institutions that sought to collectively

address its weakness in outbreak surveillance and response immediately post-SARS and with the cooperation of the WHO (WPRO 2005, 5; Chan et al. 2010). The two WHO regional offices within the Asia Pacific region, the WPRO and the SEARO, proposed a "biregional strategy for strengthening capacity for communicable disease surveillance and response" (WPRO 2005, 2), which was passed by the respective WHO regions' member states in 2005 (SEARO 2005; WPRO 2005). This strategy, APSED, developed five programs[3] that governments were to fulfil in the first phase (2005–10) in order to meet the broader requirements of the revised IHR (2005) and to ensure that national surveillance and response led to "timely and transparent sharing of information" across the two regions (WPRO 2005). ASEAN's engagement in APSED also meant that its member states—the majority of which continued to be affected by H5N1 poultry and human outbreaks[4]—had a third party that could assist with interpreting their reporting obligations to the region and to the wider international community. ASEAN itself adopted additional public health initiatives in response to the SARS and H5N1 outbreaks, implementing (on the advice of the ASEAN Expert Group on Communicable Diseases) the ASEAN+3 Emerging Infectious Diseases (EID) Programme. Of note, within these multiple international and regional initiatives, there was no evidence of dissent from the new norms of global health security nor any attempt to use poor capacity as a justification for failure to meet the revised IHR's requirements.

Back in Geneva, in 2006, with human H5N1 cases at their peak, the fifty-ninth World Health Assembly unanimously passed resolution WHA59.2. This resolution urged all member states to implement, on a voluntary basis, the IHR (2005) in response to the threat posed by avian influenza (WHA 2006). As David Fidler and Lawrence Gostin (2008, 246) argue, resolution WHA59.2 demonstrated the degree to which all states appreciated the risk presented by (and their vulnerability to) the outbreak, but it also revealed a deep political commitment to the revisions, which—while they had now been formally adopted by member states—were not formally to come into force until June 2007. The H5N1 outbreak thus became the first outbreak to be linked to the reporting and response behavior expected of states under the now-completed IHR (2005). States had publicly committed to this instrument, and the expectations of them, especially H5N1-affected states, were now clearer than ever before.

Nonetheless, ASEAN's calls for a more muted set of trade responses against those states that complied with their obligations to report H5N1 cases did not prevent a drastic effect on poultry export industries across the region (Peiris, de Jong, and Guan 2007; Ear 2010; Vu 2010; Huang 2010). Thailand, China, and

Indonesia in particular possessed poultry export industries that had been tremendously affected by the H5N1 virus (Elci 2006, 108–9), and as early as 2005 it had been estimated that the cost of H5N1 outbreaks to the region would be US$10 billion (ibid., 108). Major costs included the direct loss of poultry through culling, trade bans, cessation of poultry production due to the bans and the continued spread of H5N1, and government expenditures for equipment, compensation to farmers, and the creation of task forces to tackle the outbreak.

Domestically, concerns about the economic impact of reporting outbreaks in poultry failed to dissipate but instead grew as disputes regarding compensation for poultry farmers became political crises in Viet Nam, Thailand, and Indonesia (Scoones and Forster 2010). Despite the commitment to assist with this compensation, WHO and World Bank officials have noted that securing government *and* donor commitment to farmer compensation was one of the most challenging tasks they ever encountered.[5] Meanwhile, a number of countries—even some of those states affected by the H5N1 virus—put in place restrictive trade measures on affected poultry-exporting states, citing their right to do so under the WTO Sanitary and Phytosanitary (SPS) provisions (as in the case of China's halt of poultry imports from Thailand in 2005 and 2006 [Safman 2010]). Importantly, however, it was observed that several countries implemented measures such as import bans as soon as news emerged of a localized outbreak—irrespective of whether the outbreak was caused by a low- or high-pathogenic virus (Moore and Morgan 2006). Accordingly, questions over the scientific justification for these measures were raised, with the FAO querying their "arbitrary" nature and their motive (FAO 2005).

How may we interpret these events, given that at the same time, there was active diplomacy to promote economic and trade incentives for those states that sought to respond to the H5N1 outbreak according to IHR protocols? First, as the statements by the WHO and ASEAN discussed above indicated, there was an acknowledgment that the lack of clarity over what constituted reasonable trade, travel, and quarantine measures under the revised IHR would likely affect governments' sense of obligation to the emerging norms, particularly given that the IHR negotiations were still ongoing during the early years of the H5N1 outbreaks. Indeed, through the IHR consultations and negotiations, H5N1 was often referred to alongside SARS to promote the necessity not only for the revised IHR to include specific reference to proportionate travel and trade measures but also the need for the WHO to have the ability to adjudicate on whether or not such measures were scientifically justified in order to protect public health (WHO 2004b, 2004h, 2004j).

Second, it was already becoming clear that the WHO's attempts to limit trade restrictions could conflict with pre-existing, legally codified rules under the WTO—rules that explicitly *permit* states to apply trade sanctions when disease outbreaks (such as H5N1) occur *on economic and public health grounds* (Mackey and Liang 2012). In the specific context of H5N1, reference to the justifiability of restrictions on poultry trade under the WTO SPS allowed a concomitant expectation to grow—namely, that if such sanctions were legally permissible, then in return the international community had responsibilities toward those states that were subjected to sanctions as a result of complying with the new global health security norms. In fact, what was quite remarkable during the H5N1 outbreak, particularly during the early stages, was the strength of the discourse on the need for the international community to reward prompt and open reporting behavior with reciprocal aid. ASEAN, with the assistance of China and the WHO, were aggressive in their campaign for funds to assist affected states, not just during the immediate containment phase but also for the longer-term task of bolstering technical capacity in public health systems, veterinary services, and the poultry trade. For example, the need to rapidly overhaul industry handling of poultry meat to abide by the WTO SPS standards and lift trade sanctions on poultry exports placed governments under significant time constraints, constraints that nevertheless had to be met to alleviate the political, economic, and social burdens posed by the outbreak (Elci 2006). The FAO, the OIE, and the WHO coordinated with the World Bank in developing targeted national action plans to address these burdens, and in January 2006 the Beijing-hosted International Ministerial and Pledging Conference on Avian and Pandemic Influenza saw

> partnerships set up on the occasion of this global response [that] were unprecedented, robust, and flexible. They not only opened up avenues for the control of the A(H5N1) virus, but they also prepared the world for the A(H1N1) pandemic 2009, and, in general, they strengthened animal and human health systems, increasing their short and long-term capacity to prevent and respond to serious crises. (Vandersmissen in Wilsmore et al. 2010, 4)

Nonetheless, this view has been critiqued with the counter-argument that crucial international investment in compensation to the poultry sector and assistance in the reform of poultry farming practices were underfunded and under-prioritized in the vital early stages of the outbreak (Elci 2006; Scoones and Forster 2010). We concur with this view. However, as we discuss below, in spite of this failure by the international community, affected states did not abandon their commitment to the norms embodied in the revised IHR. Moreover, this initial underwhelming

response from the international community sheds some light on why states such as Indonesia later pushed back on their virus-sharing obligations, an objection arguably related to their earlier experience of affected states not being given adequate assistance to prepare for the inevitable economic losses that they would suffer as a result of H5N1 (Aldis 2008).

Reporting H5N1—Explaining State Performance

As with the 2003 SARS outbreak, the primary focus was initially on whether states were transparently reporting outbreaks to allow neighboring states, the region, and the international community as a whole to prepare (Heymann 2006; Lee and Fidler 2007). During the early years of H5N1, the reporting behavior of affected states tended to fall into one of three categories: those that routinely reported (e.g., Viet Nam, Lao PDR, and Cambodia), those that did so more erratically (e.g. China, Thailand), and those that explicitly challenged their reporting obligations (e.g., Indonesia). The overall view in the literature has been that the reassertion of national (especially economic) interests was the primary cause of this variation (Enemark 2007; Stevenson and Cooper 2009).

Viet Nam, Lao PDR (Laos), and Cambodia were presented as examples of states embracing the need to engage in the global health security framework to ensure greater effectiveness in identifying, containing, and preventing outbreaks (de Sa et al. 2010). While the poultry industries of these countries were affected by H5N1, those industries primarily served their domestic markets. Some note that of these three states, Viet Nam had the greatest potential to waver in terms of full disclosure because of the political ramifications arising from significant poultry livestock losses that were intended for a largely domestic market (Vu 2010). To further compound Viet Nam's woes, it had been attempting to enter the international poultry market, and the H5N1 outbreak posed a significant setback to those plans (Herrington 2010). But the overwhelming characterization of these governments' compliance with the norm of outbreak transparency has been positive. Even the reporting delays exhibited by Viet Nam in the early years of the outbreak—on average, a lag of between 5 and 14 days between outbreak and public announcement—have been generally seen as a capacity issue rather than as evidence of political interference or obfuscation (Vu 2010). The same has been suggested of Cambodia and Laos: when delays in reporting suspected cases occurred, it was generally seen as an inevitable result of capacity failures rather than as evidence of a conspiratorial intent to deceive either the international community or domestic audiences (Boltz et al. 2006; Herrington 2010; Coker et al 2011).

At the same time, other governments *were* criticized for their failure to report outbreaks promptly and transparently. These states were claimed by some to be using poor health system infrastructure as an excuse for what were in fact politically and economically motivated attempts at subterfuge. For example, China's retrospective release of information in 2006 and 2007 for outbreaks in 2003 and 2004 was met with some suspicion, with analysts asking whether these delays were the product of technical incapacity, bureaucratic difficulties, or attempts at obfuscation (Chanlett-Avery et al. 2006, 10). Thailand and Indonesia were regularly criticized for "substantial" lags in their reporting of poultry and human cases, with revelations in both instances that the governments knew of the possible cause but delayed the release of laboratory findings—though it has been harder to verify the precise time lag between knowledge of the outbreak and communication of the outbreak (Butler 2005, 2006; Sipress 2009). Thailand in particular came under attack in the early stages of the outbreak. The presence of large poultry producers in Thailand was identified as the possible cause of its initial secrecy (Forster 2010; Safman 2010). Likewise, it has been suggested that Indonesia's attempt to enter the poultry export market, combined with its large domestic consumption needs, may have contributed to pressure being exerted on the government to delay reporting at various junctures in the early years of the outbreak (2004–5) (Forster 2010).

During the peak of the outbreak in 2006, it has been argued that a third group of governments, led by Indonesia, actively challenged the entire premise of a prompt and transparent reporting norm. Though the issue of virus sharing did not come under the auspices of the IHR (1969 or 2005 version), several analysts saw Indonesia's refusal to share H5N1 virus samples as part of a broader bid to challenge its obligations under the revised IHR (Stevenson and Cooper 2009; Smith 2012). Major concerns arose when the then health minister for Indonesia, Dr. Siti Fadillah Supari, proposed in late 2006 that from January 1, 2007, the government would refuse to continue sharing samples of the H5N1 virus with the WHO's Global Influenza Surveillance Network (GISN). Prior to this, it had been a long-standing practice since the creation of the GISN in 1952 for governments to share their influenza virus strains with all WHO collaborating laboratories (located in selected national laboratories) to allow them to assist with the production of vaccines and monitoring of virus strain mutation. Indonesia's refusal to continue sharing strains via the GISN raised concerns about the potential for governments to claim "viral sovereignty" as a way of reasserting their control in the face of increasingly intrusive global health governance frameworks

(including the revised IHR) (Holbrooke and Garrett 2008; Stevenson and Cooper 2009, 1386–87).

The Indonesian Ministry of Health argued that it withheld the virus samples because it viewed the practice of virus sharing as unjust when the country supplying the samples could not be guaranteed equitable access to the vaccine and antiviral treatments that were subsequently developed on the basis of those samples. Many of these drugs, which were primarily manufactured by companies based in the developed world, had been created using virus samples provided freely by low-income countries such as Indonesia (Sedyaningsih et al. 2008). Some 18 months later, in June 2008 (and a year after the IHR [2005] had entered into force), Dr. Supari questioned whether the government should regularly report suspected H5N1 human infections to the WHO until a positive result was confirmed by laboratory tests (Branswell 2008). Dr. Supari's suggestion was seen as a significant escalation of the virus-sharing dispute and as a significant challenge to the revised IHR. Supari's actions concerning virus samples and her musings on the IHR reporting obligations gained support from other states in the "developed South"—and particularly in Asia—sparking discussions about "developing countries [being] increasingly suspicious" of the global health security initiative that inspired the IHR revisions (Aldis 2008, 372).

Taken together, these events during the H5N1 epidemic have prompted a number of analysts to call into question the optimism expressed immediately after the SARS outbreak. Even some of those who had been among the earlier heralds of a new era of global health governance started to question that new era's staying power in the face of sovereign reassertion of self-interest (Fidler 2010a). It was suggested that the arrival of a "post-Wesphalian era had in any case been 'overstated'" (Price-Smith 2009, 154), that shared expectations around appropriate outbreak response may not be sufficient to induce states to change their behavior, and that powerful countervailing interests will likely override IHR compliance whenever material interests trump adherence to international norms (ibid.).

Two principal sets of explanations were offered to explain this apparent backlash. The first was concern that the securitized rhetoric attached to emerging infectious diseases since the 1990s (as discussed in chapter one) had been accepted so readily that governments were coming to view it as legitimate to (re)assert their sovereign right to determine their own responses to outbreaks. When disease was associated with great economic losses—as was the case for Indonesia and other H5N1-affected states—governments were, according to this argument, encouraged by securitization to view outbreaks through a security lens and as a result to privilege unilateral action over multilateral cooperation (Calain 2007; Forster 2010;

on costs see Coker et al. 2011). This affected not only the state with H5N1 cases but also those unaffected countries wishing to prepare themselves for the arrival of a possible global pandemic. As Stefan Elbe explained,

> As fear about the threat of a possible human H5N1 pandemic spread across the world, many governments scrambled to stockpile anti-viral medications and vaccines, albeit in a context where there was insufficient global supply to meet such a rapid surge in demand. Realizing that they were the likely "losers" in this international race, some developing countries began to openly question the benefits of maintaining existing forms of international health cooperation. (Elbe 2010, 476)

The second explanation is that there was a backlash against the WHO for overstepping its mandate during the 2003 SARS crisis (Cortell and Peterson 2006). In other words, post-Westphalianism itself prompted a counter-reaction: the "WHO illustrated during the SARS crisis what leadership in global health looks like in a post-Westphalian world," H5N1 reaffirmed that this had the potential to not just be an anomaly, and this prompted some governments to respond by defending their sovereign independence from what they now viewed as a sustained attack (Stevenson and Cooper 2009, 1390). According to this line of thinking, the assertion of "viral sovereignty" during H5N1, predominantly led by Indonesia but with the tacit support of others in the region (Fidler 2010b), could be understood as a (potentially predictable) statement that governments were willing to question both their reporting obligations and the legitimate role of the WHO (Smith 2012).

Meanwhile, it has also been argued that the significance of the WHA resolutions in support of the global health security regime has been overstated. For example, resolution WHA59.2 only called on governments to "voluntarily" comply with the revised IHR in their response to H5N1 (WHA 2006), and regardless of the phrase adopted, WHA resolutions are not legally binding on governments (Irwin 2010, 9). From this perspective, the cooperation seen during the SARS crisis was a product of exceptional circumstances, and outside that context states would revert to type and seek to control outbreak news and manage their own response to outbreak events (Smith 2010). In sum, the variation in states' responses to their reporting requirements and their other obligations under the IHR was seen by many as proof that what we see as the new norms of global health security were ephemeral and would not factor into states' calculations of their political or economic interests in the longer term.

We propose that there are at least three problems with such rationalist-based understandings of state behavior—and their relationship to the IHR revision process—in this period. First, the positive news from the H5N1 experience was

that, for the most part, states supplied the WHO with reports of their H5N1 cases even though there was no formal requirement to do so during the early part of this outbreak, suggesting (as we did in relation to SARS in chapter two) that states had accepted (or were coming to accept) what would later be codified in the revised IHR as legitimate expectations. Second, even where states did not report in a timely fashion, their justifications for this failure were generally based on arguments concerning capacity and reciprocity, rather than denying the existence of the reporting norm or their obligation to uphold that norm. In other words, states seemed to feel more comfortable highlighting their poor health system capacity than openly rejecting their obligation to comply with the reporting requirements. Third, as we noted in the introduction to this book, norms are counter-factually valid: cases of noncompliance do not mean that the norm does not exist. In the case of H5N1, we argue here, the evidence suggests that states generally *did* recognize the validity of the new norms and for the most part sought to comply with expectations on reporting and response.

Checkel (2001) points out that contention over a norm's applicability to a particular event or context often occurs at the precise moment that interests are being redefined to accommodate the norm. In the case of H5N1, given the variety of political and technical capacity differences within each state affected by outbreaks between 2004 and 2008, a more accurate test of commitment, and therefore a better measure of the progress of the socialization process, is to assess overall reporting trends over time, incorporating early reports of H5N1 human cases (2004–5), the peak period of cases (2005–6), and the second wave of cases (2007–8). The predicted trend would be that there are more reporting delays in the early years of the outbreak, with states' performance improving as they gather knowledge and resources specific to H5N1 outbreak surveillance. If any government does not improve on its reporting performance over time, then poor capacity becomes less of an excuse, possibly indicating that reporting delays are the product of political choice and the exploitation of perceived loopholes in what the revised IHR demands of states (i.e., Chayes and Chayes 1993; Legro 1997).

When we compare H5N1-affected states' confirmed reports to the WHO against the number of H5N1 events being reported within the country and subsequently confirmed by government sources (traced and reported by Internet surveillance programs such as ProMED-mail [PMM]), we see high levels of reporting compliance. Between 2004 and 2010, Davies (2012) reveals how H5N1-affected states in the Asian region dramatically improved their reporting timelines between the first report of suspect cases and confirmed cases being forwarded to the WHO. Indeed, even at the height of the virus-sharing dispute between Indonesia and the

WHO secretariat in 2007–8, Indonesia appeared to report more often to WHO than not (it failed to report 5 out of 21 cases in 2007 and 3 out of 13 cases in 2008) (ibid., 604). In Viet Nam, at the peak of its H5N1 human cases in 2005, there were approximately nine cases that the government did not appear to pass on to the WHO. By 2007, during their second wave of H5N1 human cases, the reporting situation had improved, with only one case apparently not forwarded to the WHO (ibid., 604–5). Thailand and China, both suspected of rejecting their reporting obligations, in practice showed a steady reporting relationship with the WHO. Importantly, the trends identified above are derived from biweekly analysis. If we look at the cumulative H5N1 caseload across the region for the same period, do we see correlation between reporting and the actual H5N1 incidence in the region? Davies (ibid., 602) argues that the WHO's cumulative case reports of H5N1 for the same period appeared to correlate with the peaks and troughs of individual countries' reporting trends. In short, countries' reporting to the WHO appears to reflect what they were actually experiencing. Furthermore, reporting performance improved steadily, with the gap between official and unofficial reports decreasing even as the rates of H5N1 cases started to drop from their 2005–6 peak (ibid.).

Thus, we do not concur with the view that notification delays throughout East Asia reflected a tacit rejection of the revised IHR obligations. There are two clear problems with such arguments. First, it is problematic to interpret intermittent reporting delays in the early years of the outbreak as politically motivated, particularly when virus strain detection was "challenging" in rural developing country environments and *all* countries (not just China, Indonesia, and Thailand) experienced reporting delays (Peiris et al. 2007, 243–67). Second, in spite of some countries still having to adjust their outbreak responses while dealing with weak public health infrastructure, all affected states have shown gradual improvement in their reporting performance, suggesting a commitment to transparency. While, as we go on to argue, it would be naive to deny that some reporting delays were rooted in broader political and economic concerns, on the evidence presented here, governments do seem to have been generally committed to improving their reporting performance. In short, this was a measurable benchmark that they were aware of, understood, and for the most part sought to meet.

Our second argument is that too much weight has been given to the Indonesia virus-sharing case as evidence of states starting to re-assert their sovereign right to reject their obligations under the revised IHR (Aldis 2008; Stevenson and Cooper 2009; Smith 2010). For one, it does not appear that Supari's comments regarding the possibility of Indonesia ceasing reporting were acted on in practice. The health minister's comments were made once in an interview, a year before

she stepped down from her ministerial responsibilities. Beyond this, there is no other clear evidence that Indonesia resisted reporting H5N1 cases to the WHO. Indeed, within the article authored by the Ministry of Health detailing their reasons for withholding virus samples, they explicitly noted that they would continue to report all H5N1 cases (Sedyaningsih et al. 2008, 486). As discussed above, Indonesia maintained a strong reporting relationship with the WHO during the early phase of the outbreak. Reporting discrepancies did emerge from 2007, and it was a trend that continued throughout 2008, 2009, and 2010 (Davies 2012). Yet, both the WHO office in Indonesia (which reports cases to WHO secretariat in Geneva) and the Indonesian Health Ministry have argued that such discrepancies were the product of the WHO secretariat being informed but choosing not to publish the information.[6] A less official line, expressed in a separate interview, was that during the dispute the WHO office staff in Indonesia were always promptly informed but requested that the WHO secretariat in Geneva not immediately publish all outbreak events online.[7] What is remarkable about this second explanation is that it suggests that the Indonesian ministry still sought to inform the WHO of outbreaks even at the height of the dispute and that ministry officials appeared to trust WHO officials sufficiently to continue passing on information that they did not want publicized.

Nonetheless, while Indonesia may have broadly accepted and complied with the reporting norm, the virus-sharing dispute is evidence of a more general discontent with the global health security regime, in particular with the apportionment of costs and benefits under that regime (Rushton 2011). Concern about what benefits the global health security regime provides for developing countries was evidenced in Indonesia's stance and reflected the broader concerns raised by others (Calain 2007; Aldis 2008; Rushton 2011) that relatively few benefits derive from the IHR for those states that "risk all" by reporting outbreaks, the vast majority of which will be developing countries. In essence, from the perspective of such states, the IHR can be seen as having expanded reporting duties without offering any guaranteed reciprocal rights of assistance for those states facing the economic repercussions of dutifully providing the world with early outbreak alerts (Lancet 2007). The IHR does seek to limit the economic damage by ensuring that any trade and travel restrictions are proportionate, but it does not introduce a promise of positive financial assistance to affected states. H5N1 also showed that the WHO and associated agencies struggled to articulate what states should do to abide by the revised IHR when competing international legal mechanisms (such as the WTO SPS Agreement) applied. The result was that in the case of H5N1, the WHO emphasized the international community's

obligation to meet crises such as H5N1 with increased donor commitments to compensate countries and make them technically compliant with the WTO SPS (Hoffman 2010), but this was not an expectation that had been formally captured within the IHR rules and procedures.

While we maintain from our evidence concerning reporting patterns that governments did not generally renege on their obligation to respond to the H5N1 outbreak promptly and transparently, individual instances of reporting delay did occur that may not be solely ascribed to weak health systems (Davies 2012). Some governments did appear to equivocate at first on the full disclosure of their outbreak, based on uncertainty that the benefit of prompt and transparent reporting would be matched by the political and economic payoff that the WHO sought to promote (WHO 2007b; Enemark 2007; Vu 2011). Belief in the idea of global health security relied on the notion that there was a collective international benefit from effective national outbreak response. At the very least, this seems to have been a belief in need of some bolstering. Too often, affected states quickly found that international approval of their prompt reporting was followed by the bittersweet realization that reporting did compromise specimen control, antiviral purchasing power, and the poultry trade (Elbe 2010; Davies 2012). This ran directly contrary to the reciprocal promise of global health security being promoted in relation to the revised IHR. As argued in chapter two, after SARS and the adoption of the IHR revisions, there was great emphasis placed on the benefit of reporting early and transparently for all states facing a possible Public Health Emergency of International Concern (WHO 2007a, 2007b). The attendant benefits of prompt reporting, a proportionate response from other countries, were perhaps somewhat taken for granted. Norm entrepreneurs often went so far as to argue that the benefit of reporting early could outweigh the potential costs, both economically and politically (Heymann 2006). Unfortunately, this simply was not the case during H5N1. Yet still the H5N1 experience did not deter affected states from their commitment to the revised IHR.

Conclusion

During the early stages of the H5N1 outbreak in Asia, regional and domestic engagement in the revised IHR and the new norms of global health security was underpinned by two conditions. First, governments' reporting performance was subject to international (and domestic) scrutiny. Prompt and transparent reporting was an easily identifiable benchmark that states had to meet to demonstrate their capacity to handle the crisis. At the regional level there is no evidence that states perceived this expectation as anything but legitimate, and the reporting

trend over the five years of the epidemic seems to demonstrate their general acceptance of the need to fulfil the revised IHR protocols, both before and after their coming into force. But this expectation only made political sense to governments if the reason for promoting the norm—greater global health security—would also benefit these states (see chapter five). This required the international community to step up to the plate with assistance in dealing with the economic fallout of issuing early alerts that were not just of potential concern to human populations but also affected an important trading commodity, namely poultry. As such, concerns about compensation for poultry loss only grew so strong in the region because of states' continued commitment to the revised IHR. If global health security was the logic for a revised IHR, then states needed to see it leading to a mutually beneficial relationship that addressed both social values and material interests (Ruggie 1998).

The H5N1 case illustrates that affected states readily appreciated their responsibility in terms of transparent outbreak reporting; and the international community—led by the WHO and ASEAN—viewed themselves as having a clear role in promoting the advantages of the new norms of global health security. Within Asia, commitment to the global health security regime resulted in high-level regional political engagement. Globally, the SARS experience had emphatically proven the need for institutionalized outbreak reporting behavior, and consensus on this point was reaffirmed with the WHA 2006 resolution calling on states to respond to the H5N1 as an IHR emergency. But it was less clear how the revised IHR would benefit reporting governments in practice. Investment in capacity strengthening took longer than anticipated and did not match the rapidity of H5N1 spread. In spite of these difficulties, states remained committed to the revised IHR during H5N1 and steadily improved their detection and reporting capacity as the H5N1 outbreak continued in peaks and troughs. The H5N1 case revealed flaws and loopholes in the revised IHR settlement, but they did not affect shared normative commitments. Indeed, the Asian region sought to use their H5N1 experience to highlight the international community's responsibility to assist—and benefits from assisting—states in meeting their IHR core capacities. This effort would prove vital for the events that unfolded in 2009.

CHAPTER FOUR

Swine Flu

The First Test of the IHR (2005)

In the previous chapter, we examined the reporting behavior of states, especially East Asian states, during the H5N1 outbreak. Although we argued that there was evidence of widespread compliance with the then-emerging norms of global health security, the fact that the majority of H5N1 cases occurred before the IHR (2005) entered into force in 2007 meant that this was a difficult stage at which to gauge the degree to which the new norms had gained widespread international acceptance.

We now move on to examine the first real test of the new regulations. That test arrived much sooner than many had anticipated and from a somewhat unexpected source. Less than two years after the revised IHR's official entry into force, the international community was confronted with its first major Public Health Emergency of International Concern. The culprit, however, was not the much-feared H5N1 avian influenza that had by this time become endemic throughout much of Asia, the Middle East, and parts of Europe, but was instead a novel strain of H1N1 influenza—a virus usually found in pigs—that is believed to have first emerged in La Gloria, a small rural village in Veracruz, Mexico, in March 2009. From this remote location, the virus spread worldwide within a matter of weeks, carried by international travellers to the furthest corners of the globe. Somewhat ironically, as the pathogen began to spread among Mexican villagers almost unnoticed by the outside world, the WHO secretariat in Geneva was planning a simulation exercise to test the revised IHR. Following confirmation that the causative agent of the cases of respiratory illness then being detected was not only a novel strain of H1N1 but also had achieved effective human-to-human transmission, the planned simulation was shelved as real-life events overtook the WHO and its member states.

We argue in this chapter that despite the fact that the IHR (2005) were now officially in force, the new norms of global health security were still in the second stage of the norm life cycle: the "norm cascade." As we set out in the introduction, during this phase, states are gradually being socialized to the new norms. The H1N1 experience provided the first opportunity to clarify, in the words of Finnemore and Sikkink, "what, exactly, the norm is and what constitutes violation" (Finnemore and Sikkink 1998, 900). As Finnemore and Sikkink argue,

> In the context of international politics, socialization involves diplomatic praise or censure, either bilateral or multilateral, which is reinforced by material sanctions and incentives. States, however, are not the only agents of socialization. Networks of norm entrepreneurs and international organizations also act as agents of socialization by pressuring targeted actors to adopt new policies and laws and to ratify treaties and by monitoring compliance with international standards. (ibid., 902)

These are precisely the issues that we address in this chapter. First, we revisit the 2009 pandemic and the role that the WHO played in assisting countries in containing the threat; our focus then shifts to explore the actions of member states, examining the extent to which governments complied with the provisions of the IHR (2005) and, perhaps most importantly, where countries failed to comply. We give particular attention to the rationale provided by those governments who contravened the regulations to justify their actions and the responses of norm leaders to those explanations. Finally, the chapter concludes by discussing what responses to the 2009 H1N1 pandemic suggest about the progress of the new norms of global health security through the norm life cycle.

Our primary concern in this chapter, therefore, is the extent to which states understood the new standards of behavior specified under the revised IHR as legitimate behavioral expectations. Did states knowingly violate the new rules and procedures? Crucially, how did other World Health Assembly member states and "norm leaders," particularly in the WHO secretariat, react to such violations? We argue that the record of state behavior, and equally of state condemnations, during this period suggest that the norm cascade process was relatively advanced. Most states acted according to the new norms most of the time, and when they did not, they were generally subject to criticism from a range of other international actors and usually felt compelled to provide some kind of justification for their actions. Of course, the socialization process did not end with the 2009 H1N1 pandemic, as we will discuss in more depth in the next chapter, but this first global test of the IHR framework since its adoption revealed a promising picture of progressive internalization of IHR compliance at the national level.

The 2009 Influenza A (H1N1) Pandemic: Timeline of Events

The precise origins of the influenza A (H1N1) virus that precipitated the 2009 influenza pandemic remain a mystery. Speculation has emerged that the virus may have been circulating for months, and possibly years, before it achieved effective human-to-human transmission (Girard et al. 2010). What *is* known is that the virus was first detected in early-to-mid March 2009 when the Mexican Ministry of Health began to identify unusually high numbers of individuals experiencing influenza-like illness at a time when seasonal outbreaks would normally be expected to be declining. Although a small number of cases were initially identified via Mexico's national influenza surveillance system, it was at first unclear whether a new pathogen was responsible or whether it was simply an aberration. Nonetheless, the Mexican Directorate General of Epidemiology ordered that surveillance for acute respiratory diseases be heightened, and between April 1 and 10, 2009, a series of nongovernmental and government-based sources began to detect an outbreak of influenza-like illness in La Gloria, Veracruz, that had reportedly affected a large proportion of the local inhabitants (WHO 2009a; Brown 2009; Shkabatur 2011). It was later determined that while samples collected from patients identified the presence of an influenza A virus, the subtype of the virus was unknown. As a result, under an agreement between the United States, Mexico, and Canada, clinical specimens were sent to the US CDC in Atlanta and the National Microbiology Laboratory of the Public Health Agency of Canada for testing. Confirmation that these samples were of a novel strain of influenza A (H1N1) came in late April, but by this time the virus had not only spread to Mexico City but also internationally to the United States and Canada (WHO 2009a).

In fact, by late March 2009 the virus had already infected two young children living in neighboring San Diego County and Imperial County in southern California. Clinical specimens were collected from these children and also sent to the CDC for testing. On April 15 and 17 respectively, the CDC confirmed that the children had indeed been infected with a novel strain of influenza A. Moreover, they found that the virus contained genetic markers that suggested the pathogen was of swine origin. Critically, however, the children concerned had not come into contact with one another or with pigs, indicating that the virus had achieved at least limited human-to-human transmission. This revelation led the CDC to notify the WHO under the IHR (2005), alerting the organization on April 18 to the fact that it possessed laboratory confirmation that a new influenza virus with pandemic potential may have emerged (WHO 2009a; PAHO 2009a).

Meanwhile, within Mexico it was clear that the situation was rapidly becoming worse. By mid-April 2009, the Mexican health authorities had recorded several clusters of young and previously healthy adults contracting severe pneumonia (WHO 2009b). In response, on April 17 the Ministry of Health placed the Mexican national influenza surveillance network on high alert and began issuing regular reports to the WHO on new cases of severe influenza-like illness. Acting on news of the US CDC laboratory results, on April 24 the Mexican government activated the country's National Pandemic Preparedness and Response Plan and temporarily closed schools, child-care centers, restaurants, and universities throughout Mexico City in an attempt to limit the spread of the virus (WHO 2009c); even so, by late April the health authorities had obtained reports of infection rates around 50 percent in some areas (WHO 2009b), with over 1,300 suspected cases and approximately 84 probable deaths (PAHO 2009b).

Confronted with this reality, the director-general of the WHO, Dr. Margaret Chan, convened the inaugural meeting of the Emergency Committee under the IHR (2005) framework on April 25, 2009. Based on the advice of this committee, the director-general declared that the situation constituted a PHEIC and urged all member states to "intensify surveillance for unusual outbreaks of influenza-like illnesses and severe pneumonia" (WHO 2009d). Within two days, as further epidemiological information came to light, the Emergency Committee recommended that the WHO's pandemic alert level be raised from Phase 3 (limited human-to-human transmission) to Phase 4 (community-level outbreaks). These alert levels, which corresponded with specific WHO guidelines on pandemic influenza preparedness that described a series of pandemic "phases," were designed to prompt governments to intensify their efforts. After raising the alert status, the director-general issued a second statement, stressing that while countries should implement measures to mitigate the spread of the virus, all measures should nonetheless "conform with the purpose and scope of the International Health Regulations" and that travel restrictions, in particular, were not advised (WHO 2009e). As will be discussed in greater detail below, following the decision by some countries to impose trade restrictions on pigs and pork products on account of the pandemic being described as "Swine Flu," the WHO also issued separate statements advising that there was "no risk of infection from this virus from consumption of well-cooked pork and pork products" (WHO 2009f).

On April 29, 2009, the alert status was raised again, from Pandemic Phase 4 to Phase 5 (sustained community transmission) following laboratory confirmation that localized outbreaks were occurring in at least nine countries (WHO 2009g). The WHO secretariat continued to collect epidemiological data and re-

ports, hold daily press briefings, and issued daily, and sometimes twice-daily, updates and global alerts that contained medical advice and recommendations. By May 12 the WHO had obtained official confirmation of over 5,251 cases of influenza A (H1N1) in 30 countries. Over 95 percent of those cases were located in the Americas, but the disease had also spread to 15 European countries and at least 5 countries in Oceania. Some 61 H1N1-related fatalities had been confirmed, but it was also apparent that in the majority of cases the virus caused only mild illness that was more akin to seasonal flu (WHO 2009a).

In light of this emerging epidemiological picture, criticisms began to emerge in early May 2009 that the WHO had acted prematurely in declaring Phase 5. According to the WHO's own pandemic influenza guidance document, the latest version of which had only been officially released a few months previously, the declaration of Phase 5 "is a strong signal that a pandemic is imminent" (WHO 2009h, 25). In early May, when asked by a CNN reporter to explain the decision to declare Phase 5 in light of the fact that the WHO had previously maintained that a pandemic entailed large numbers of human fatalities and severe illness, the response of the organization was to remove this information from its website (Cohen 2009). These actions understandably raised questions and created such unease among governments that the director-general convened an urgent High-Level Consultation just prior to the start of the 2009 WHA in mid-May to review the decisions made by the Emergency Committee to this point, to review the latest epidemiological data, and to discuss the WHO secretariat's response (WHO 2009i). Despite this, the director-general was actively lobbied throughout the sixty-second WHA to revise the organization's processes for declaring a pandemic (SooHoo 2010). Indeed, although the proposal was later overturned, the political pressure became so intense that on May 22, Dr. Keiji Fukuda, then director of the WHO Influenza Programme, announced that the organization was going to revise its definition of a pandemic to include a severity assessment (McNeil 2009; Doshi 2011).

By June 1, 2009, 64 countries had reported at least 1 laboratory-confirmed human case of H1N1 (WHO 2009c). Given the demands from member states for further clarity, the director-general convened the IHR Emergency Committee for a third time on June 5 to seek advice on the proposal to alter the WHO's definition of a pandemic and on whether the situation warranted declaration of a full-scale pandemic. The Emergency Committee agreed that further announcements should make reference to issues of severity but that the current status of Phase 5 should remain unchanged (WHO 2009j). Within a week, however, confronted with over 28,100 laboratory-confirmed cases, 144 H1N1-related deaths,

and sustained community-level outbreaks throughout multiple countries, the Emergency Committee altered its advice and recommended that the director-general raise the global alert status to Phase 6 (full-scale pandemic). The WHO director-general duly declared the first influenza pandemic of the twenty-first century on June 11, 2009 (WHO 2009k).

Between July 2009 and August 2010 the global situation continued to rapidly evolve, as more and more countries reported populations affected by the virus. By July 1, 2009, the WHO had received official confirmation of 77,201 H1N1 cases and 332 H1N1-related deaths (WHO 2009l). By the end of that same month, the numbers had more than doubled, to 162,380 infections and 1,154 fatalities (WHO 2009m); and by the end of September 2009, the number of cases had reached 343,298 cases and 4,108 deaths (WHO 2009n). By November 2009, the pandemic had affected over 622,482 people and caused at least 7,826 deaths (WHO 20090). In December 2009, the WHO ceased reporting the number of new infections and concentrated on reporting only human H1N1-related fatalities that, by December 30, had reached over 12,220 (WHO 2009p) and by March 2010 stood at 16,931 (WHO 2009q). By August 10, 2010, when the WHO director-general officially announced that the international community had entered the "post-pandemic period," the total number of H1N1-related deaths officially reported to the WHO was 18,449 (WHO 2009r, 2009s).

Although politically sensitive, the WHO's formal declaration of a pandemic had little demonstrable impact on global H1N1 response and containment efforts. The outbreak had been declared a PHEIC from an early stage (April 2009), and those governments that had developed national pandemic preparedness plans, for example, had already implemented them. As much as possible, healthcare workforces had been mobilized, public notices had been issued, and various public health measures had been instituted. Prior to the June 11 pandemic announcement, the WHO had already been engaged in discussions with vaccine manufacturers about the need to produce pandemic-specific vaccines, although it was reluctant to recommend that vaccine manufacturers immediately cease seasonal influenza vaccine production and convert to producing an H1N1-specific vaccine (WHO 2009t). This reluctance persisted to the extent that by mid-July, the WHO Strategic Advisory Group of Experts (SAGE) on Immunization was still advising that it "did not consider that there was a need to recommend a 'switch' from seasonal to pandemic vaccine production" given that the majority of seasonal vaccine production for the northern hemisphere's influenza season was almost complete and was therefore unlikely to impinge on production of the pandemic vaccine (WHO 2009u).

Taking note of member states' earlier concerns about the seriousness of the disease and the decision to raise the global alert status, from June 2009 onward the WHO secretariat regularly issued detailed updates, meticulously describing the extent and severity of the H1N1 virus. On June 11, as the WHO director-general announced that the global alert status had been raised to Phase 6, Dr. Chan stated that she expected the pandemic to be of "moderate severity," based on the epidemiological data that had been collected to date (WHO 2009t). This message was reiterated in the organization's *Weekly Epidemiological Record* in late June 2009, which expanded on the director-general's statement by providing detailed data on infection and case fatality rates, summarizing the findings by noting that

> globally, most cases have been mild, although severe disease has been reported both among known groups at higher risk of adverse outcomes following influenza and in previously healthy adults, leading WHO to classify the severity of this pandemic to date as "moderate." (WHO 2009k, 253)

Later, in the global alerts that were published on the organization's website, the WHO secretariat went to considerable lengths to describe the epidemiological situation across multiple countries, comparing the spread and impact of the virus region by region and even within countries and affected territories (see, for example, WHO 20090, 2009p). These efforts not only informed the international community of the rapidly evolving situation but also undoubtedly served to help justify the WHO's early response efforts.

In January 2010, however, the WHO director-general was forced for a second time to defend her organization's handling of the H1N1 crisis. In late 2009, a Danish newspaper alleged that members of the IHR Emergency Committee that advised the director-general received financial support from pharmaceutical manufacturers. The accusation, which implied that the director-general may have been improperly influenced into declaring a PHEIC, prompted the WHO to publicly release the names of the scientists and public health experts serving on the Emergency Committee and occasioned the director-general to issue a strongly worded statement refuting the allegations, reaffirming that "The world is going through a real pandemic. The description of it as a fake is wrong and irresponsible" (WHO 2010b). That statement, however, proved insufficient to dispel public disquiet and member states' concerns, and both the Council of Europe and the *British Medical Journal* subsequently launched inquiries into whether the WHO secretariat's decision to declare a pandemic had been influenced by commercial interests. As will be discussed further in the next chapter, in April 2010, before these

groups published their findings, the WHO director-general announced the creation of an independent review committee to examine the organization's management of the 2009 H1N1 pandemic and appointed Dr. Harvey Fineberg from the US Institute of Medicine to oversee the process. Ultimately, none of the investigations found that the WHO secretariat had engaged in inappropriate conduct, although the WHO director-general accepted the need to review the organization's policies and procedures in light of the criticisms that emerged during the H1N1 pandemic (WHO 2011d).

Politically, therefore, the H1N1 pandemic was not a resounding success for the WHO secretariat. Its handling of the event was heavily criticized from several directions, particularly over a perceived lack of openness and transparency in the organization's decision-making processes. There is little question that these criticisms adversely affected the WHO's credibility, requiring the director-general to intervene and defend the organization on more than a few occasions. In the remainder of this chapter, the focus shifts to examine the extent to which member states complied with the new IHR norms during the pandemic, where noncompliance with those norms occurred, the ways in which noncompliant states attempted to justify their actions, and the reactions of other states and norm leaders. These events provide some interesting insights into the respect that the revised IHR were commanding by 2009 and the remaining areas of norm contestation.

State Behavior during H1N1

It is important to be clear from the outset that the vast majority of governments did adhere to the new norms of global health security—as codified in the IHR (2005)—throughout the 2009 H1N1 pandemic. For example, of those countries that possessed the technical capacity to detect and report outbreaks of the virus via public health infrastructure (such as influenza surveillance networks and the laboratory capacity necessary to isolate and identify influenza strains), very few failed to report transparently and openly. As detailed below, it is true that a large number of countries—particularly in Africa—did not report any H1N1 cases, but in the vast majority of instances this has been attributed to a lack of technical capacity rather than intentional noncompliance. This issue of state capacity and compliance is one to which we return in more detail in chapter five. Likewise, in general states refrained from imposing disproportionate travel and trade restrictions. Approximately 90 percent of countries broadly adhered to the WHO's recommendations in this regard. Again, it is true that not every country behaved as expected and, as we discuss in this section, a small number of countries intentionally

contravened both the letter and the spirit of the IHR (2005) by implementing measures that exceeded the WHO's recommendations without scientific justification. Here again, state behavior reveals the norm cascade to be a work in progress, with some states ready and willing to abide by their new obligations, while elsewhere we find either a lack of technical ability to comply, uncertainty about how to apply the emergent norms, or (more rarely) outright resistance.

Following the entry into force of the IHR (2005) on June 15, 2007, WHO member states were given five years to build, strengthen, and maintain certain "core capacities" for disease detection, verification, and response. In exceptional circumstances, provision was made for governments to apply for up to an additional four years to complete the process via two-year extensions, but these extensions would be granted only once approval had been obtained from the WHA. Any country that had not met the core capacity requirements or had not been granted an extension by the June 2012 deadline would be deemed to be in breach of their IHR obligations. Even so, in a survey conducted by the WHO prior to the June 2012 target date, only 58 percent of countries indicated that they had developed national implementation plans to meet their IHR core capacity requirements, and only 10 percent of countries indicated that they were already fully compliant (WHO 2011e).

Given these survey results, it is reasonable to assume that at the time of the 2009 influenza A (H1N1) pandemic, relatively few countries were fully compliant with their IHR core capacity obligations. Indeed, they were not all expected to be fully compliant. Yet the outbreak of H5N1 (see chapter three) and the wider securitization of health, as discussed in chapter one, *had* inspired considerable international investment in pandemic preparedness. In fact, according to a joint report by the United Nations System Influenza Coordinator (UNSIC) and the World Bank, between 2005 and 2009 some US$4.3 billion had been allocated to strengthening public health response efforts, enhancing disease surveillance capabilities, and boosting global production capacity for influenza vaccines and antiviral medications. Moreover, approximately 50 percent of these funds had already been disbursed prior to the 2009 pandemic (UNSIC and World Bank 2010). This substantial injection of resources into strengthening global pandemic preparedness had a demonstrable impact on building surveillance capacity in areas such as Southeast Asia, South America, and Africa as well as providing equipment and training to support local laboratory capacity in central Asia, western and northern Africa, and the Middle East (see, for example, Sanchez et al. 2011). Even though these funds were not directed explicitly toward ensuring that countries met their IHR core capacity requirements, the investment in global pandemic preparedness

throughout this period nonetheless generated a range of technical outbreak surveillance and verification benefits that assisted some countries in moving toward their IHR responsibilities.

In Mexico, for example, throughout 2008 the Ministry of Health had expanded the number of influenza sentinel sites (where data on influenza-like illnesses is collected on a weekly basis) from 380 to 520 locations and also increased the number of national influenza testing facilities (WHO 2009c). These developments arguably assisted the government in detecting the initial outbreaks of influenza A (H1N1) in March 2009 and also allowed the government to meet their IHR obligations regarding detecting a potential PHEIC (Zhang et al. 2013). In contrast to China's behavior in the initial stages of the 2003 SARS outbreak (discussed in chapter two), the Mexican government then demonstrated its willingness to rapidly report the outbreak by notifying the Pan American Health Organization (PAHO), the Americas regional office of the WHO, as soon as it was apparent that a potential PHEIC was under way. To the Mexican government's credit, these actions were taken in full knowledge of the potential economic consequences; and indeed, by the end of April 2009 Mexico's finance minister indicated that his government expected the economic cost to the country to be between 0.3 and 0.5 percent of GDP (Anon. 2009).

Worldwide, like Mexico, the majority of governments consistently and voluntarily reported to the WHO secretariat both the number of suspected and confirmed cases of human H1N1 infection and the number of influenza-related deaths in their respective territories. Mexico and the United States were the first to report, but within just two weeks, another seven countries had also officially confirmed human H1N1 cases (WHO 2009g). By July 1, 2009, 120 "countries, territories, and communities"[1] had officially reported laboratory-confirmed cases of H1N1 to the WHO (WHO 2009l), and by December 27 the number of governments reporting had risen to 208 (WHO 2009p).

It must be equally acknowledged, however, that a significant proportion of states, particularly in the African region, were struggling to meet their IHR obligations. This was perhaps most acutely felt in relation to the technical capacity to detect and confirm (via laboratory analysis) cases of H1N1, which for many low-income countries was proving impossible. Although the majority of regions had recorded at least one human case of H1N1 as early as May 2009, the first laboratory-confirmed case of H1N1 in Africa was not reported until June 19, by South Africa (WHO 2009v). A small number of other African countries, such as Côte d'Ivoire, soon joined South Africa in regularly reporting H1N1 cases (WHO 2009w); however, by the conclusion of the pandemic in August 2010, whereas every other

region of the world had reported well over 1,000 laboratory-confirmed H1N1 fatalities, the entire continent of Africa had officially confirmed only 168 H1N1-related deaths (WHO 2009r).

Although, as we explore in greater depth in chapter five, technical capacity may have significantly affected state compliance with the 24-hour reporting expectation, what was particularly notable about the H1N1 case was that there were no apparent instances of governments contesting the expectation that they should report. Nor, importantly, is there any evidence of countries explicitly refusing to report for political reasons. The global perception of a significant health (and security) crisis may well have played a part in encouraging states to comply, but even so, coming so soon after the formal entry into force of the IHR (2005), the level of compliance with the norm was encouraging, suggesting significant progress in the norm cascade. Yet, as we have already made clear, the obligation to report disease events was only one of a number of behavioral expectations embedded within the IHR, and in some respects it was perhaps the least controversial. There was widespread recognition, especially post-SARS, that open reporting, an idea that few states were contesting, was crucial to global health security. In addition, H1N1—a genuinely global pandemic that affected almost every country in the world—was a somewhat "easy" case when compared to some other diseases like cholera or plague; the stigma attached to countries suffering from cases of H1N1 was scarcely a significant political consideration at all.

More politically contentious were the emerging expectations around travel and trade restrictions. Even here, however, the majority of countries complied with the IHR (2005) provisions on "additional health measures." The imposition of unwarranted and unjustified travel and trade restrictions on countries that reported outbreaks of disease was, as we noted previously, one of the weaknesses of the former IHR framework that the 2005 revisions attempted to correct. During the 2009 H1N1 crisis, approximately 85 percent of countries adhered to the WHO's recommendations and guidelines (see below), implementing measures to contain and/or control the spread of the disease that were, if not identical to the measures recommended by the WHO, at least consistent with the principles the organization advocated. The overall levels of compliance with the new norms around travel and trade restrictions were, therefore, encouraging.

Nevertheless, at the very beginning of the crisis a small proportion of countries, approximately 35 of the WHO's 196 member states (i.e., slightly over 15 percent), *did* impose international trade and travel restrictions that seemed to contravene the behavioral expectations encapsulated in the IHR (2005).[2] While roughly half of those countries later amended their behavior and fell into line

with the majority of the international community, a small subset of countries maintained their opposition to the WHO's guidelines and advice, choosing instead to retain various measures that contravened the IHR (2005), allegedly to protect their respective populations. Such uncertainty, and even disputes, over the applicability of emerging norms are characteristic of norm cascade processes. Ironically in this case, as will be explored in greater detail below, some of the excessive measures that countries imposed may have been unwittingly precipitated by the WHO's own actions—the actions of one of the key norm leaders.

Historically, influenza pandemics have often become associated with the country where the virus was first believed to have emerged. The 1918 influenza pandemic, for instance, was erroneously named the Spanish Flu on account of the fact that Spain was the first country to acknowledge a national epidemic (Beveridge 1977, 42). This pattern was repeated in the examples of the 1957, 1968, and 1977 influenza pandemics that became known as the Asian Flu, Hong Kong Flu, and Russian Flu pandemics, respectively. In an effort to lower the risk that the 2009 outbreak would become known as the Mexican Flu, and in an attempt to avoid the economic damage that would inevitably be visited on Mexico if such an association did emerge, the WHO secretariat initially labelled the outbreak Swine Flu to reflect the fact that the H1N1 virus responsible possessed genetic markers that suggested an association with pigs. It soon became apparent, however, that this terminology brought about a host of unintended consequences. In late April 2009, to take one example, the Egyptian government ordered the mass culling of all pigs throughout the country (estimated to be between 250,000 to 400,000) as a "preventative measure," even though there had been no recorded human cases of H1N1 in Egypt, nor indeed any reported outbreaks of H1N1 in pigs worldwide (Katz and Fischer 2010). Within days the Iraqi government had followed Egypt's lead and ordered the culling of three boars in a Baghdad zoo (Karadesh 2009). In addition, around 20 other countries, including Russia, the Philippines, Indonesia, Bahrain, and China, imposed import bans on all live pigs, pork, and pork products, citing concern over the risk that H1N1 may be introduced into human populations (Lynn 2009; WTO 2009; Katz and Fischer 2010).

Although the WHO had used the "swine flu" label, these actions by states directly contravened the secretariat's explicit advice. The day after its initial statement that trade and travel restrictions were not recommended, the WHO secretariat expanded on this advice, unequivocally stating on April 27, 2009, that "There is also no risk of infection from this virus from consumption of well-cooked

pork and pork products" (WHO 2009f). On April 30, noting that some governments still appeared to be ignoring this guidance, the FAO, the OIE, and the WHO issued a joint statement stipulating that pork and pork products were safe. The statement was re-issued on May 7 to further reinforce the message that trade bans against pork and pork products were unjustified (WHO 2009x). Nonetheless, several countries persisted in applying live pig and pork import bans, with the result that official complaints were formally lodged with the WTO in late June 2009 (WTO 2009).

In the same way, whereas the majority of countries adhered to the WHO's advice on travel restrictions, within days of the announcement that a novel influenza strain had emerged in Mexico, a small number of countries instituted various travel-related measures that contravened the IHR (2005). Indeed, despite the fact that the WHO had advised as early as April 26, 2009, that trade and travel restrictions were not recommended (WHO 2009y), China, Argentina, Peru, Cuba, and Ecuador instituted temporary bans on all flights from Mexico (Gostin 2009; Hodge 2010). While some countries, such as Sudan, applied a complete ban on all travelers arriving from Mexico (BBC 2009a), other countries, such as China and Singapore, sought to be more discriminating, opting instead to quarantine tourists—namely, Mexican, American, and Canadian citizens—based on their nationality but irrespective of their potential exposure to the H1N1 virus (Katz and Fischer 2010).

H1N1 and Cascading Norms

The 2009 H1N1 pandemic presented the inaugural test of the IHR (2005) and therefore was the first opportunity to examine the progress of the new norms of global health security through the norm life cycle after the new rules came into force in 2007. As is somewhat inevitable for norms still emerging from the second stage of the norm life cycle, not every government behaved in accordance with them. While we saw a relatively good record of outbreak reporting (at least in those cases where states had the technical capacity to detect and report), from the number of instances in which states imposed excessive (according to WHO advice) trade embargoes on pork or pork products or applied unnecessary (again, according to WHO advice) travel restrictions, it must be concluded that uncertainties remained for a number of governments. Whether these uncertainties were about the applicability of the new norms, about precisely what was required of them, or about how the new international norms could be reconciled with their existing domestic commitments (norm localization) is a subject to which we return in chapter five.

Compliant state behavior is, however, only one aspect of a norm cascade. Another, as Finnemore and Sikkink's (1998) work points out, is the attempt by norm leaders to actively socialize more states into the new norms via discourses of praise or criticism. What states and other international actors say as well as what they do, therefore, can give us clues as to the extent to which new norms have become widely accepted.

Understandably, the countries most affected by the pork import bans and travel restrictions during the 2009 H1N1 pandemic—most notably Mexico, the United States, and Canada—were swift to denounce them. Invoking the principles enshrined within the IHR (2005) that additional health measures needed to be substantiated by sound scientific evidence, Canada's minister for international trade observed in early May 2009 that governments should "make decisions that are scientifically based . . . We would expect those countries, which have gone ahead with the ban or were thinking about it, would stop and have a look at scientific guidelines and would recognise that the meat itself is not a problem" (MacInnis 2009). On May 7, the Canadian trade minister was joined by the United States trade representative and the Mexican secretary for the economy in issuing a joint statement collectively condemning the trade bans, noting that they lacked "scientific justification" and were "inconsistent with . . . international obligations" (US Mission 2009). Likewise, the Chinese government's actions in quarantining 79 Mexican citizens without scientific cause and later imposing pork import bans provoked a strong admonition from the Mexican government and prompted the WHO to formally request the public health rationale for the Chinese actions under the IHR (2005) (Fidler 2009).

The fact that such condemnations would come from the states adversely affected by the travel and trade restrictions could perhaps have been predicted, even expected. It is important to note, however, that even countries that were not large pork exporters and that did not have citizens forcibly quarantined joined with Mexico, the United States, and Canada in denouncing the apparently excessive trade and travel restrictions. This was apparent in the context of the WTO Committee on Sanitary and Phytosanitary Measures meeting of June 2010, where other member states (notably Australia, Brazil, Chile, the Dominican Republic, Japan, and New Zealand) resoundingly criticized the governments that had instituted pork import bans, simultaneously praising those countries that based their decisions on science (WTO 2011). In effect, these governments formed a "coalition of condemnation," denouncing those member states that contravened the expectation that countries would not impose restrictions more draconian than those recommended by the WHO, without sound scientific justification. These statements

were intended to send a clear message to those countries seen to have breached the new norms that their actions were internationally unacceptable and to socialize them into acceptance of the new "rules of the game."

It seems strange—given their previous strong normative stance concerning the need for reporting outbreaks without fear of trade and travel bans—that the WHO secretariat generally refrained from publicly "naming and shaming" countries that contravened the IHR (2005) throughout the 2009 H1N1 pandemic. However, as chapter five reveals, the WHO secretariat ended up pursuing (by default) a more deliberative strategy to address these violations. WHO Director-General Chan received WHA approval in 2010 to create an IHR Review Committee to examine the WHO's institutional response and the reactions of states to the H1N1 outbreak. The committee's report included a detailed critique of states that has since allowed the WHO to highlight the findings of this independent review concerning IHR compliance. Meanwhile, in the immediate crisis, other United Nations agencies were not as restrained as the WHO. In late April 2009, for example, a representative of the FAO condemned the Egyptian government, labelling the slaughter of the pig population "a real mistake" and saying "There is no reason to do that" (Stewart 2009). In early May 2009, a spokesperson for the UN Human Rights Council stated that the practice of quarantining individuals on the basis of nationality alone was "unacceptable and [a] clear-cut case of discrimination" (AFP 2009a). Later, in the context of the WTO SPS meeting on H1N1 trade restrictions, the WTO secretariat stressed the fact that it had joined with several other international organizations in issuing joint statements to the effect that "there was no justification for measures to restrict trade" (WTO 2011). The fact that these agencies demonstrated a willingness to openly criticize states' actions, particularly given that criticism of a similar nature in the past has often resulted in the organizations themselves being censured, further speaks to the level of support the new norms had obtained and the extent to which "norm contagion" had progressed throughout the international community.

For their part, many of those states that were noncompliant recognized that their actions required at least some form of justification, suggesting that they knew they may have breached widely held behavioral expectations. For instance, on May 4, 2009, the Chinese government issued a statement proclaiming that they were not intentionally discriminating against Mexican citizens (BBC 2009b). In June the Chinese health minister formally apologized to his Mexican counterpart, expressing remorse for not having discussed his country's containment strategy earlier and praising the Mexican government for its transparency throughout the pandemic (AFP 2009b). When later challenged to explain their actions

in the WTO, the Chinese government sought to justify them on the basis of "its huge population, its susceptibility to the disease through human-to-human transmission, the fact that China was the world's biggest producer of pork and that pork was the most consumed meat product in the country" (WTO 2011, 4). A representative from the Iraqi zoo, when questioned about its decision to slaughter three wild boars, admitted that its actions were not based on science but rather were designed "to break a barrier of fear" among visitors (Karadesh 2009). The Philippines, which had banned pork imports from the United States, Mexico, and Canada on April 25 as a "precautionary measure" (Joshi 2009), lifted the ban less than a week later for the United States and Mexico, although it sought to justify the continued ban on Canadian products on the basis that there had been a suspected case of swine-to-human H1N1 (Ager 2009).

Having said this, a small number of governments did remain staunchly unapologetic, even antagonistic, to the suggestion that their actions were inappropriate and irresponsible. The clearest illustration of this was Russia's chief veterinary officer, Nikolai Vlasov, when he stated that he not only agreed with Russia's ban on pork imports but also that "Health officials should stick to their own business and not promote the world pork trade" (Budrys 2009). Elsewhere, a small number of countries, including North Korea, Egypt, Indonesia, Ukraine, and Ghana, failed at the time to provide any justification or explanation whatsoever for their actions in applying excessive trade measures. Taking note of the fact that many of the countries that had imposed the pork import bans are predominantly Muslim, speculation emerged that the restrictions were in fact religiously motivated (Audi 2009). Indonesia and Ghana later confirmed in WTO hearings that they instituted the bans over concerns that the virus would be introduced into their population, to protect their industries, or because they lacked the means to conduct appropriate risk assessments (WTO 2011).

Notwithstanding these instances of seemingly unrepentant noncompliant behavior, it is important to reiterate that the majority of countries fully complied with the IHR provisions relating to additional health measures throughout the H1N1 pandemic. For the most part, the WHO's recommendations on travel and trade restrictions were adhered to, and governments were quick to indicate that their actions were based on sound scientific evidence and also to identify areas where uncertainty remained. The fact that the majority of governments appeared willing to risk potential domestic criticism for not responding more forcibly to the pandemic threat by imposing stringent trade and travel measures adds further weight to the argument that those countries recognized their international responsibilities and the types of actions which were now seen as appropriate. In the event,

the few instances of excessive travel and trade restrictions did not appear to discourage states from reporting, as had often been the case prior to the 2005 IHR revisions. The fact that affected countries and territories willingly reported cases, despite the risk that economic repercussions may have arisen from doing so, testifies to the level of commitment most governments had invested in the need to dramatically improve the operation of the global health security regime.

Conclusion

The emergence and global spread of a novel strain of influenza A (H1N1) from a small rural village in Veracruz, Mexico, in March 2009 surprised many who had been expecting the next influenza pandemic to emerge from somewhere in Asia. As pandemics go, however, the 2009 H1N1 pandemic was a comparatively mild event. Fortunately, in the wake of experiences such as the 2003 Severe Acute Respiratory Syndrome outbreak, the world was much better prepared to respond—a new international agreement in the form of the revised International Health Regulations had been finalized, numerous governments had developed (and in a number of instances, also exercised) national pandemic preparedness plans, and the international community had committed more than US$4.3 billion to strengthening global pandemic preparedness.

Equally, however, the single case of the H1N1 pandemic cannot in itself offer definitive proof of the status of the new norms of global health security. Nor can it be assumed that states in general would prove so willing to comply with the new norms in a future pandemic, particularly if the next pandemic involved a demonstrably more virulent pathogen. Despite these caveats, the H1N1 case can give us some important indicative information about the progress of the new norms of global health security through the norm life cycle.

Most states complied with the new norms most of the time and saw the smooth functioning of the global health security system as being within their interests. The securitization of disease over the preceding two decades no doubt played a part in this—states had widely come to see disease as a threat to their fundamental interests, and the experience of SARS had reinforced the need for global cooperation to contain and control future disease events. No states publicly questioned the desirability of the IHR arrangements, and where governments did not abide by these rules in practice, they generally sought to provide some justification for their actions.

Some of the problems that remained, however, were capacity problems linked to the ability of states to demonstrate IHR compliance and acceptance. A small (but worryingly high, from a global health security perspective) number of countries,

especially in Africa, failed to report any cases of influenza A (H1N1). This capacity failure highlights the significant challenge for some countries to meet the core principle of the IHR to identify and alert the international community to—and, wherever possible, contain—a potential PHEIC, and as a result it potentially undermines the future effectiveness of the global health security regime as a whole. It could also lead to questions about a government's transparency and commitment to the IHR and the extent to which it has internalized and adopted the global health security norms, when in fact this may not be a fair or accurate interpretation of the failure to promptly report. This is a theme that we explore in much greater depth in the next chapter, including the responsibility of the international community to assist with this internalization process.

CHAPTER FIVE

Post-H1N1

The IHR Review Process, State Capacity, and Political Will

The 2009 H1N1 influenza pandemic was the first formal test of the revised International Health Regulations (2005) framework and provided useful insights into the progress of the new global health security norms through the norm life cycle. While many public health professionals had anticipated, even predicted, that the next influenza pandemic would develop in Asia, the emergence of a novel strain from Mexico and its rapid worldwide dissemination caught the international community off guard. In response, the World Health Organization launched a high-profile global campaign encouraging countries to conduct surveillance, report identified cases, and implement various public health measures to contain the disease, while also discouraging countries from taking measures that would unnecessarily impede international travel and trade. Fortunately, the majority of countries complied with WHO guidelines and advice; however, as we saw in the previous chapter, some countries were unable to comply with the recommendations due to various technical and logistical challenges, and a small percentage of governments intentionally violated the rules on additional health measures by banning the importation of live pigs, pork, and pork products, slaughtering livestock, canceling international flights, or quarantining citizens of countries that had reported cases of H1N1 influenza.

A central claim of this book is that the norms underpinning the global health security regime began to emerge well before the formal entry into force of the IHR (2005). Indeed, as we explored in chapters two and three, the 2003 Severe Acute Respiratory Syndrome outbreak and the international spread of H5N1 demonstrated that a process of changing expectations about appropriate state behavior was already under way before the adoption of the revised IHR in May 2005. By the time of H1N1, the behavioral expectations that emerged among states during both the SARS and H5N1 outbreaks were complemented by (and codified in) the

formal rules set out in the IHR (2005), which entered into force in mid-June 2007. As such, H1N1 provided us with the first opportunity to evaluate the degree to which all actors engaged in responding to this Public Health Emergency of International Concern understood and delivered on the formal commitment they had made to the new norms of global health security.

In this chapter we identify how norm leaders, the WHO secretariat in particular, adapted to the task of reinforcing and re-promoting the norms in order to strengthen them and to improve the effectiveness of the global response to future outbreaks. This chapter examines the process of "lesson learning" that took place in the aftermath of the 2009 H1N1 pandemic and examines how those lessons have played into the socialization process. The chapter unfolds in three parts. First, it examines the outcomes and recommendations of the IHR Review Committee that was established in the wake of the 2009 H1N1 pandemic. In this section, particular attention is given to exploring the "lessons learned" that the independent assessment committee identified, especially those relating to outbreak reporting and the application of trade and travel sanctions. The chapter then goes on to examine the two key compliance challenges that the IHR implementation process continued to face—both of which were highlighted in the Review Committee's report and continued to pose problems in the years that followed—a lack of political will and a lack of technical capacity. We note that most discussion, understandably, has focused on what developing states need to do concerning both political and technical shortfalls. However, we also address the less-critiqued role of developed states, especially their willingness to invest in and assist developing states in overcoming resourcing shortfalls. We explain why political will at the donor level is central to the building of IHR core capacity and requires a greater degree of commitment from high-income countries than is currently in evidence. Finally, we look at the ways in which, in this constrained donor environment, the WHO secretariat has encouraged governments to build their IHR core capacities through regular reference to the concept of global health security—one of the foundational ideational building blocks on which the IHR revision process was constructed.

Although, as we saw in the previous chapter, the IHR Review Committee came about in no small part as a response to the critics of the WHO's handling of the H1N1 pandemic, we argue that the secretariat has in fact been able to use the opportunity afforded by the committee's recommendations to strengthen the new norms of global health security. They have done so by reiterating the link between the new norms and "good state behavior" in international society. The committee's findings served to reinforce the importance of IHR compliance (and thereby

compliance with the new norms of global health security) as a part of the identity of "good states" (Finnemore and Sikkink 1998, 902). Said another way, what we find during this period is a further round of norm entrepreneurship that builds on the ideational changes that had previously occurred, with the WHO secretariat (in particular) now able to use the shared experience of H1N1 (albeit a pandemic that ultimately proved much milder than many had feared) to further promote both norm socialization and, ultimately, norm internalization.

The IHR Review Committee: Findings and Implications

The new norms of global health security—critical to the successful functioning of the global health security regime—lie at the heart of the revised IHR (2005). It was no surprise, then, that the issue of compliance with these norms emerged as a key focus for the WHO in the aftermath of the 2009 H1N1 pandemic. At the same time, however, as we saw in the previous chapter, the WHO secretariat was facing severe criticism of its own role in the handling of that pandemic. In response, Director-General Margaret Chan announced at the Executive Board meeting of January 2010 her intention to establish an independent IHR Review Committee. The committee's task would be to evaluate the functioning of the IHR (2005) and the WHO's management of the H1N1 pandemic and to provide recommendations on how future events could be better managed.

The Review Committee held a series of four hearings between April 2010 and May 2011 and invited submissions from all interested member states, nongovernmental organizations, industry, the media, international organizations, and chairs of various WHO committees. The committee also enjoyed full access to all relevant WHO records, documents, and staff, to inform their findings. In May 2011, the committee published its final report at the sixty-fourth World Health Assembly. That report made 15 key recommendations addressing various perceived and actual shortfalls in the WHO secretariat's management of the 2009 pandemic, and the director-general announced that she would instruct the secretariat to incorporate as many of the recommendations as possible into future practices and operating procedures (WHO 2011d).

Following the release of the committee's final report, much of the attention naturally focused on its findings in relation to the more controversial elements of the WHO's response to H1N1, such as the lack of a severity index for declaring a pandemic (Doshi 2011). Importantly, however, it is clear that the independent members of the IHR Review Committee viewed state compliance with the IHR provisions (an issue of more direct relevance to our focus in this book) as the most important issue. Indeed, the first four recommendations of the Committee's

final report sought to address the risk of future noncompliance with the norms of global health security by urging the WHO secretariat to undertake a variety of new activities (many of which relate directly to norm entrepreneurship). These included mobilizing international support to accelerate the implementation of the IHR core capacities (recommendation 1); enhancing information and communication capacities (recommendation 2); to "energetically seek to obtain the public-health rationale and relevant scientific information" for travel and trade measures that exceeded WHO recommendations (recommendation 3); and encouraging governments to ensure that National IHR Focal Points (NFPs) were appropriately resourced to allow for prompt reporting and communication with the WHO (recommendation 4) (WHO 2011e, 13–14).

The inclusion of these particular recommendations—and their prominence in being listed as the first 4 of the 15 recommendations—reflects the fact that the IHR Review Committee was deeply concerned about the consequences of noncompliance for future global health security. But it was clear that their concerns related not only to the willingness of states to comply with the regulations but also to the practical impediments to them doing so. The committee noted in relation to the IHR core capacities, a crucial element in countries' ability to meet their reporting obligations, that "Although the IHR have stimulated capacity building for surveillance and response, there is wide variation in the degree of fulfilment" (ibid., 66). The committee went on to observe that "nearly half of State Parties have neither assessed surveillance and response capacities nor planned for improvements. Many have not even reported on their status. It seems clear from reports that many countries will not meet the 2012 deadline for building core capacities" (ibid., 67). As a consequence of this finding, the IHR Review Committee urged that implementation of the IHR core capacities be accelerated and suggested that the WHO secretariat could help stimulate this process by mobilizing relevant agencies and organizations interested in providing technical assistance and/or resources to assist low-income countries in meeting their core capacity obligations (ibid., 13).

The committee's fourth recommendation—to ensure that NFPs were given sufficient authority and resources to perform their duties—was similarly designed to enhance the bureaucratic efficiency of disease reporting and verification processes. The IHR (2005) requirement for each member state to establish an NFP was intended to help improve the level, speed, and quality of communication between governments and the WHO secretariat, particularly in relation to verifying the existence (or not) of a disease event. The IHR Review Committee had noted, however, that while the majority of countries had now established an NFP,

many had not sufficiently imbued them with the requisite technical ability and political authority to liaise with the WHO secretariat as and when required. Accordingly, this was impinging on those countries' ability to meet their IHR-mandated duty to report.

At the same time, the report's second recommendation, which focused on the fact that they believed the communication processes and procedures between the WHO and its member states to be too onerous, reflected the committee's concerns over the possibility of political interference undermining prompt and accurate reporting. On the government side, for example, the committee observed that "Many countries have intricate clearance processes, and notification appears to have a high threshold in some countries, which may imply a risk of political interference in the epidemiological assessment" (ibid., 70). Political interference was also identified as a risk in relation to the WHO secretariat, with the committee noting, "Although WHO has a broad mandate to share urgent information on public-health events, WHO usually obtains agreement first from the affected States Party. The process of consulting with States Parties may delay posting" (ibid., 72). To overcome this perceived risk, the committee recommended that the secretariat enhance the WHO Event Information Site (EIS), an Internet-based communication tool that countries are able to access 24/7, to ensure a more rapid, readily accessible, and authoritative source of information.

The IHR committee's third recommendation, to reinforce evidence-based decisions on international travel and trade, was also aimed at tackling the reluctance displayed by some states to comply with the norm that they should avoid imposing unduly restrictive travel and trade measures—an expectation the Committee concluded was "a cornerstone of the IHR" (ibid., 81). In this case the committee suggested that the WHO secretariat "energetically" pursue the public health rationale from any country that imposed additional health measures, such as those that some countries put in place during the 2009 H1N1 influenza pandemic (ibid., 14). The committee remarked that

> although several countries, but not all, provided a rationale upon request by WHO, it appears that no country that implemented additional measures (i.e. measures that significantly disrupted international travel or trade by more than 24 hours) complied with their obligations under Article 43 to proactively inform WHO and provide the rationale for such measures. (ibid., 80)

In a statement to the IHR Review Committee, the International Air Transport Association (IATA) even argued that the IHR (2005) required modification due to an inherent "flaw" that permitted countries to contravene the additional health

measures provisions. While the IHR Review Committee did not go so far as to recommend that the text of the IHR be amended, the committee did suggest that any country that imposed additional health measures in the future should be identified on the EIS, because they believed that "In the absence of sanctions for IHR noncompliance, this increased transparency would mitigate concerns about the adoption of measures that significantly interfere with international traffic" (ibid., 81).

Taking these recommendations together, what the committee highlighted in their report and what their recommendations sought to address were *both* the lack of political will *and* the lack of capacity on the part of some states to comply with the new norms. Although not binding on the WHO secretariat, in each of these recommendations the IHR Review Committee was suggesting that the secretariat perform the task of assisting and encouraging states to comply more fully with the IHR in the future. This recommendation is one that we return to in more detail in our concluding chapter.

In response to the committee's recommendations, member states passed resolution WHA64.1, *Implementation of the International Health Regulations (2005)*, on May 20, 2011—but not before some additional clarification and information were requested. Indeed, while the official line was that delegates "warmly received" the IHR Review Committee's report (WHO 2011f, 2), some countries, including the United States and Canada, openly questioned a number of the recommendations, particularly with regard to the financial costs associated with implementing the committee's proposals (Anon. 2011). Countries differed in their opinions about whether the timeline for full compliance with the IHR obligations should be extended as well as on the nature and extent of any additional financial resources to support countries in building and strengthening their core capacities (Anon. 2011; Molenaar 2011). The WHA resolution that was eventually adopted imposed minimal obligations on governments, only urging them to support the implementation of the committee's recommendations while charging the WHO director-general with reporting on progress to the sixty-sixth WHA in May 2013 and with continuing to assist member states by offering technical support to carry out the IHR Review Committee's recommendations (WHA 2011).

At the least, the resolution showed that states generally accepted the recommendations of the Review Committee, which had largely advised strengthening the capacity of the WHO secretariat to provide greater guidance on meeting IHR core capacity requirements and "real time" advice on IHR compliance during outbreaks. However, it was less clear that the discussion on the resolution at the WHA showed a true willingness on the part of all states to take the (sometimes diffi-

cult and costly) measures required to ensure that all WHO member states could meet their IHR obligations. In passing resolution WHA64.1 in the form they did, member states failed to agree on new measures to facilitate the implementation of the IHR (2005) in those countries with weak health systems and constrained health budgets. With less than 12 months to go before the deadline for states to meet the IHR core capacity requirements, governments were still debating the nature and extent of technical assistance programs. What was not on the table was a major increase in financial assistance from high-income countries to help their less wealthy counterparts build the necessary infrastructure. This suggests that despite H1N1's status as the first influenza pandemic of the twenty-first century and a health issue of significant international concern, and despite the history of treating flu as a security issue, the necessary political (and associated financial) commitment to ensuring that all member states would be in a position to fully comply with the IHR's reporting obligations by the 2012 deadline remained elusive. Of course, the global financial crisis may partly explain why proposals for new funds to strengthen health systems in low-income countries received such a lukewarm response. But this reluctance to invest in assisting states to realize their IHR core capacity requirements undermined (and continues to undermine) the message that compliance with the IHR depends on: namely, that it is a priority concern in terms of both national and global health security.

In the following sections of this chapter, we look at the major obstacles to compliance identified by the IHR Review Committee, arising from the H1N1 case, that continued (and still continue) to undermine the strength of the new norms: the intentional failure to comply with IHR obligations displayed by a (relatively small) number of member states around both outbreak reporting and the additional health measures rules (as discussed in chapter four); and the (much more widespread) problem of a lack of (technical, human, and legal) capacity to comply, particularly with the procedures and time scales set out for disease surveillance, detection, and reporting. In each section, we look at the remaining obstacles and the discussions about how to overcome them. On the surface, it might appear that only the former is genuinely a norm internalization issue and that the latter problem simply relates to issues of resources and capability rather than questions about normative appropriateness. However, the issues of capacity and willingness to comply are increasingly related in ways that are highly politically charged and that relate directly to questions about both who the primary beneficiaries of attempts to create an effective global health security regime are and also who is being asked to bear the costs.

Refusing to Comply

As discussed in chapter four, there continue to be question marks about some countries' willingness to comply with the revised IHR when it "comes to the crunch" of real-life disease outbreaks. Agreeing to a set of international regulations is one thing, but the disincentives to report disease outbreaks have not been entirely overcome. Furthermore, as was seen in the H1N1 case, aside from outbreak reporting, some governments saw noncompliance with other aspects of the new regime (in particular the imposition of travel and trade restrictions, above and beyond those recommended by the WHO, and without scientific justification) as being within their interests. In the absence of any form of genuine enforcement power, the prospects for compliance ultimately become an issue of norm internalization, coupled with mechanisms such as peer pressure and moral shaming. In this environment, as Krook and True (2010, 122) have argued, norms are internalized within two particular contexts: the "pure" environment, where internalization is led by those who construct(ed) the norm and/or know the ideal version of its implementation; and the "pragmatist," where implementation depends on what is acceptable in the broader political environment. Importantly though, whether shepherded by the purist or the pragmatist, by the time international norms reach the internalization phase, it is inevitable that they will undergo divergent practices of local internalization (ibid., 123).

As repeatedly demonstrated by past outbreaks, epidemics, and pandemics, there are risks associated with transparently reporting disease outbreaks, particularly in terms of economic and reputational damage. While the revisions to the IHR were designed to alter the cost-benefit calculation, losses arising from transparency—even when reactions by other countries are kept in check and remain proportionate—will inevitably occur. This is simply because (legitimate and reasonable) measures that can harm a country's economic interests may still be required to control an outbreak. Added to this, certain disease outbreaks (e.g., polio, cholera, plague) can still have a detrimental impact on a country's reputation and standing, even if no other government responds with disproportionate trade and travel measures.

Notwithstanding the attempts by the proponents of securitization to make the case that global health security rests on the integrity of the global surveillance "net," until every member state fully internalizes and bureaucratizes the new norms, and possibly even afterward, instances of noncompliance are likely to occur, often for domestic reasons. This is especially the case when a state perceives its fundamental interests to be better served by not complying. At this stage, few

states have internalized the norms to the degree that they automatically comply without weighing the costs and benefits. This may even be true for states where capacity is not a determining factor in IHR compliance. Although it is hoped that the downsides of deliberate noncompliance—such as those experienced by the Chinese government in the context of the 2003 SARS outbreak—are now perceived to be too high, it is entirely conceivable that in some circumstances a small minority of governments may decide, for example, that the benefits of secrecy outweigh those of full disclosure or that it is politically expedient for them to exceed the health measures being recommended by the WHO.

In this environment, the agency of individuals *within states* becomes critical to further facilitating the socialization process and deterring political backsliding. As Hawkins (2003, 350) argues,

> Norm internalization requires additional steps beyond ratification or legislation. States must put the norm into practice in systematic ways through lasting bureaucratic policies, sustained activity, and consistent judicial rulings. Internalization can be a lengthy process that involves a widespread change of attitudes by a variety of domestic actors such that the norm is no longer politically contested.

Put another way, the question of whether or not to comply with a particular norm must eventually be taken out of the melee of political negotiation and contestation (whether domestic or international). In order for norm internalization to succeed, compliance must become routinized, which necessitates that the debate over conformity with the norm be transcended, or at the very least depoliticized. Two factors are critical here: that actors are regularly challenged by material events and/or presented with opportunities whereby they learn to decide to comply; and that bureaucratic structures and procedures are put in place to carry out the work (ibid., 350, 358–61).

Fortunately, in the case of outbreak reporting many governments have already made considerable progress down the path to full internalization as a result of regular exposure to disease events. Even before the revised IHR's formal entry into force in June 2007, states were actively participating in various outbreak reporting and verification activities via their participation in the Global Public Health Intelligence Network and the Global Outbreak Alert and Response Network. Indeed, between 2002 and 2007 the WHO secretariat verified more than 1,100 outbreak events worldwide (WHO 2007a, x). This obviously provided governments with multiple opportunities to assess the impact and benefits of prompt disease reporting, which helped to reconfigure states' perceived interests so much so that, as demonstrated by the level of reporting throughout the 2009 H1N1

pandemic, it would appear that (with the obvious exception of those states that lacked the technical capacity to detect and report) compliance with the norm is generally very high.

Added to this—and further substantiating the idea that states' interests have been re-shaped—most governments have also gone to great lengths to establish the bureaucratic structures to facilitate their compliance with the IHR reporting requirements. The clearest example of this can be found in the creation of National Focal Points, which serve as the central liaison in the exchange of disease outbreak information between individual governments and the WHO secretariat based in Geneva. Prior to the June 2012 deadline for IHR core capacities to be in place, some 186 member states (of the 196 State Parties to the revised IHR)[1] had already established an NFP (WHO 2012, 5). In addition, following the IHR Review Committee's recommendation to facilitate the rapid exchange of information about disease-related events, the WHO secretariat implemented a program of assistance whereby every member state that had established an NFP also obtained access to the Internet-based EIS communication tool to report and verify events (ibid.). In terms of outbreak reporting, then, there are remaining challenges but some evidence to suggest that in most states, internalization processes are well under way.

In some respects, socializing states to the idea that they should not respond disproportionately to outbreaks occurring elsewhere is a more difficult task, especially given the domestic political (and media) pressure governments frequently find themselves under to do whatever is thought to be necessary to protect their respective populations and industries. Aside from such pressures, while ideally such decisions are made on the basis of sound scientific evidence and medical advice (as the IHR requires), the reality is that until such time as the causative agent (i.e., pathogen), its epidemiological impact (such as the overall infection and case fatality rates), and appropriate control measures (i.e., vaccines, antivirals, antibiotics, quarantine, social distancing, etc.) are known, the decision-making process about how to respond takes place in a situation of uncertainty. Accordingly, public officials charged with responsibility for protecting their populations are confronted with a dilemma: if they respond slowly or do not take sufficient steps to protect their citizens, people may become very ill or die, and significant political costs may result. This creates an imperative to be seen as "doing something." Conversely, if administrations respond forcefully and swiftly, taking all available measures—even if those actions are not based on sound scientific evidence and even if they are later found to be an over-reaction—they may be in breach of their IHR obligations. Yet the (domestic) political costs of this latter course of action

may be lower. From a policymaker's point of view, therefore, in the short term it may be better to over-react than under-react, notwithstanding the international commitment to proportionate response.

There is little question that the risks associated with either over- or under-reacting are considered at length by policymakers, particularly when there is ambiguity about the nature and extent of the disease threat. This dynamic was clearly at play in both the H5N1 and H1N1 case studies examined in chapters three and four. In their seminal work on compliance, *The New Sovereignty*, Chayes and Chayes (1995) identify ambiguity as one of the key barriers to compliance with international norms (and international law). Whereas their framework for analysis largely focuses on the problems associated with the ambiguity that arises from the lack of specificity in the text or language of a treaty that allows governments scope to apply different interpretations of compliance (ibid., 10–11), we contend that ambiguity in the (material) facts of the matter can have an equally significant impact on compliance. Indeed, norm compliance is arguably made even more fraught when governments are confronted by a rapidly changing, unpredictable, and unquantifiable event that they see as presenting a risk to their national security and to the health of their population.

It is partly for these reasons that we see a possible divergence between the prospects for successful internalization of the new norms around disease reporting and those around travel and trade restrictions. This is not to suggest that the idea of a proportionate response has not already achieved some degree of internalization among some states, nor that universal internalization can never occur at some point in the future. In fact, given the actions of some governments during the 2009 H1N1 pandemic—notably, the countries that joined with governments affected by the pork import bans in the WTO to condemn the actions of member states that applied trade sanctions—there is clear evidence to suggest that a small number of states have already made progress toward internalizing this norm. Equally though, we acknowledge that the prospect of widespread internalization of the rules regarding additional health measures faces larger hurdles than those regarding reporting. This difference is due to a variety of factors.

First, as noted above, the pervasive uncertainty that accompanies the emergence of PHEICs usually precludes the notion that a predetermined, very specific list of travel and trade measures can be developed in advance (as we saw in chapter two, precisely this conclusion was reached during the revision process). The IHR (2005) *does* outline a number of potential measures that can be applied,[2] but this list is not exhaustive nor, importantly, was it ever intended to be. The fact that each disease outbreak is potentially different, with varied epidemiology, infection,

morbidity, and mortality rates and requiring diverse control measures, means that each outbreak obliges governments to be flexible in how they respond.

In fact, the very nature of PHEICs effectively discounts the normalization of response; they are, by their very definition, exceptional events that warrant a specific, vigorous public health response. Unlike reporting, which has to a reasonable degree already been routinized and bureaucratized (thereby dramatically reducing political contestation over the question of [non]compliance), the character of PHEICs as exceptional events impedes the normalization of response. What this means in practice is that whereas compliance with the IHR reporting requirements has the potential to be transformed into a technical procedure—one in which reporting outbreaks becomes accepted as the "cost of doing business" in a highly interconnected, globalized world—it may not be possible to bureaucratize outbreak response in the same way, due to the fact that each PHEIC necessitates that very specialized (political as well as scientific) judgments be made about how best to react.

As we witnessed in the context of the 2009 H1N1 pandemic, claims of uncertainty surrounding the mode of transmission and risk of infection emerged as one of the primary rationales that countries used in attempting to justify control measures that exceeded, and even directly contravened, WHO advice. Governments argued, for instance, that the application of pork import bans were caused by concerns about the risk of human infection from consuming pork (Lynn 2009; WTO 2009; Katz and Fischer 2010). This line of reasoning, which completely ignored the scientific consensus and evidence to the contrary, was most clearly demonstrated in the context of the WTO, where the Chinese government was asked to explain its actions. Chinese officials responded that the bans were justified because "China was the world's biggest producer of pork and that pork was the most consumed meat product in the country" (WTO 2011, 4).

The case of H1N1 also raises another significant issue related to uncertainty, which is that very little ambiguity may be required to encourage governments to "play it safe" by instituting more stringent measures than are actually required. The Philippines government, for instance, admitted it had initially banned pork imports from the United States, Mexico, and Canada as a "precautionary measure" prior to lifting the restrictions a few weeks later (Joshi 2009). Indonesia similarly instituted pork import bans against a range of countries that included Mexico, the United States, Canada, France, Spain, New Zealand, and Israel, only lifting them in mid-February 2010 after considerable international criticism (Ekawati 2010). When later confronted in the WTO about the bans, Indonesia provided little justification other than its "commitment to protect its territory and industries

from the virus" (WTO 2011, 4). Likewise, while some governments such as Ghana reportedly instituted pork-related trade bans in part because "most of these countries did not have the capacity to do a proper risk analysis of the pandemic," they also acknowledged that a key reason was "to stem public concern" (ibid., 5). These actions arguably reflected the need for governments to be seen as responding to the threat; as Kerr (2009, 9) observed, "The nature of the disease . . . left politicians with few opportunities to be 'seen to be doing something' to protect their citizens."

A second factor is that governments may not yet be fully convinced that noncompliance with the norm threatens both collective and, by extension, national interest—a problem that would need to be addressed through norm entrepreneurship, given that there is no enforcement mechanism in place. The securitization discourse, so deliberately attached to the rationale for revising the IHR, may account for some of the complexity at play here. The securitization of disease does not just prioritize a "global" response but also necessitates a national-level response, one that may assist states in justifying noncompliance with the IHR (2005).

This dynamic has been observed in the context of both the H5N1 outbreaks (with initial poultry trade bans) and the H1N1 pandemic. During the recent H1N1 pandemic, China reacted to the announcement of a new influenza virus in Mexico by quarantining Mexican tourists. When challenged about this decision, China responded to the Mexican government's condemnation by drawing on broader social responsibility norms, stating that "China understands Mexico's concern for its citizens in China, but we hope Mexico could focus on the bigger picture of fighting against the epidemic . . . and deal with the issue in an objective and calm way" (Ramzy 2009). Later, when confronted in the WTO about the trade import bans it had applied, the Chinese government drew on arguments that suggested that its unique characteristics called into question the applicability of the norm, noting that it had applied the trade sanctions because of "its huge population, its susceptibility to the disease through human-to-human transmission," and the fact that pork "was the most consumed meat product in the country" (WTO 2011, 4).

Although such measures have been repeatedly demonstrated to be largely ineffectual, they nevertheless reflect the political imperative for governments to be seen as "doing something" in order to protect their domestic constituencies. Repeating and demonstrating the case that the proportionate response norm is vital to the functioning of the global health security regime is, in our view, a crucial ongoing task for the WHO secretariat. In the absence of "sticks" to punish noncompliance, the promise of security represents a vital "carrot" for encourag-

ing norm adherence and—more fundamentally—for encouraging states to redefine their perceived interests. But building the case for the proportionate response norm requires the majority of states to behave in accordance with this norm in practice and over time.

The role of the WHO secretariat in providing rapid, informative, evidence-based information on how to appropriately respond to disease outbreaks will be absolutely critical to avoiding any doubt over appropriate measures and to promoting internalization of the norm among the organization's member states. At present it remains unclear to what extent the WHO secretariat has been able to link the global health security discourse with appropriate state action in the event of an outbreak. In other words, much of the attention has been on states proactively responding to outbreak events (by reporting) and rather less of the attention has been on the quid pro quo of states *not* taking action which disproportionately punishes states who report outbreak events. Clear, rapid guidance on what constitutes compliance will be essential in the context of each PHEIC. Without such clarity, governments, confronted with a situation where there is ambiguity and a perceived threat to national interests, will understandably react so as to protect their own perceived human, economic, political, and/or social interests. Where an information void exists, or is allowed to exist, states will select policies in light of other interests and expectations, some of which—as we have discussed—may be interpreted as being at odds with responding proportionately to a disease outbreak. Although it has been observed that "an actor considering non-compliance must consider the extent to which flouting an agreement in one area may jeopardize that actor's standing in a web of regimes" (Danish 1997, 799–800), we suggest that this factor is less likely to be decisive in an environment where there is heightened uncertainty and a sense of imminent threat.

Since, for compliant states, their national health security will essentially be reliant on the WHO's advice, the accuracy of that advice is crucial to building the necessary trust to persuade governments that they can safely delegate the decision on appropriate measures to the WHO. And not only will the WHO be required to demonstrate its ability to provide rapid, authoritative, and instructive guidance on how best to respond to a particular disease outbreak as soon as it is identified as a potential or actual PHEIC, but it will have to do so repeatedly, with every successive event—promoting a "pure" environment of norm internalization (Krook and True 2010). One false move by the WHO, in either failing to provide information and guidance in a timely fashion or in making recommendations that later prove to be incorrect or based on unsubstantiated evidence, could undermine member states' faith in the entire global health security regime. When looking

back at the SARS experience, the WHO's voice was heard because it had spent a decade building a narrative around *timely* outbreak reporting. As we have noted previously, the WHO secretariat has accrued an increased level of agency but has not yet appeared to use its power, outside of crises, to forward the message about proportionate travel and trade measures with nearly the same degree of determination. Yet, the global health security regime depends on this balance for collective health security.

Finally, how other governments and the WHO secretariat respond to instances of noncompliance will also prove a critical factor in determining the long-term prospects for norm internalization. The lack of an enforcement or punishment mechanism to compel member states to comply with WHO advice has been recognized as an inherent weakness of the revised IHR (Fidler and Gostin 2006; WHO 2011e). To date, it would appear that the WHO secretariat has been prepared to defer to the WTO Sanitary and Phytosanitary Committee on instances of noncompliance. While understandable to some extent, given that neither the WHO secretariat nor the IHR (2005) possess the means to sanction member states because of their behavior, could this create the impression of a normative hierarchy? Through this deferral process, the WHO IHR framework is effectively treated as a secondary obligation to the WTO SPS framework.

In chapter three we saw some of the complications that arose from this. During the initial stage of the H5N1 outbreak, states were able to legitimately refer to the precautionary principle in the WTO SPS measures that, in turn, allowed them to suspend poultry trade. The WHO, FAO, and OIE requested states to end this practice, given that there were no scientific grounds for suspending poultry trade. However, the financial and political damage of these acts in 2004 and 2005 *did* harm H5N1-affected states and, for some, also their initial faith in the strength of the proportionate response recommendation of the WHO secretariat. At this stage, with the IHR instrument likely to remain as it is, the best prospects for achieving adherence to the principle of proportionate response is a two-pronged strategy where the WHO secretariat takes a proactive role in exercising the "name and shame" provisions within the revised IHR and also recommends immediate referral of noncompliant states to the WTO SPS Committee, in effect encouraging Krook and True's (2010) "pragmatist" environment. However, using this function in emergencies is more likely to be "understood" by states if the WHO secretariat routinely reminds them that it has this role under the IHR in its regional workshops, communications, and meetings on IHR compliance.

Struggling to Comply

As we have already noted, for a number of low-income countries around the world, technical capacity—not only in terms of physical infrastructure but also human resources and legal/administrative frameworks—remains a first-order challenge to becoming compliant with the IHR (2005) framework and the new norms of global health security. Indeed, since the formal creation of GOARN in April 2000, several debates have focused on these technical capacity issues. In such discussions it has not been the norms themselves that have been questioned; rather it has been the ability or more accurately, the inability, of some countries to comply with them. The difficulties facing low-income countries have been particularly prominent, and for more than a decade a variety of policymakers, health practitioners, and academics have highlighted the need to support low-income countries in strengthening local and national disease surveillance and verification capacities (see, for example, Filder and Gostin 2006; Kimball et al. 2008; Wilson, Brownstein, and Fidler 2010).

As Rodier et al. (2007, 1447) observed, this need is emphasized because the success of the entire IHR framework "will rely on the capacity and performance of national public health systems, anchored by strong national public health institutes." It has also been recognized that one of the critical areas of importance is addressing human resource needs (Katz, Fernandez, and McNabb, 2010). However, while the IHR (2005) agreement encouraged high-income countries to assist their resource-poor peers in strengthening disease surveillance and reporting infrastructure, the majority of new resources allocated to date have in fact been geared toward tackling specific disease threats, such as pandemic influenza (UNSIC and World Bank 2010) or malaria (McCoy et al. 2009). Recent research has suggested that, although much work (including additional research) remains to be done, disease-specific investment can yield greater benefits to the performance and capacity of health systems (Hafner and Shiffman 2013; Zhang et al. 2013), but IHR core capacities—such as laboratory diagnosis and generic disease surveillance capacity—do not seem to be beneficiaries of these single-disease funds (Hoffman 2010).

Because of these challenges, in 2010 and again in 2011 the WHO secretariat conducted a survey of its member states in order to assess their progress in achieving the IHR core capacity requirements ahead of the June 15, 2012, deadline. Based on the results obtained from these surveys (which have become known as the IHR Monitoring Tool), it is apparent that notable progress was made in building and strengthening some IHR core capacities over this two-year period. Equally though,

the results revealed some disturbing trends, and it was clear that well before the mid-2012 deadline for compliance, a number of countries were not going to meet their obligations.

As part of the monitoring process, in 2010 governments were issued with a formal request to assess their performance in implementing the IHR (2005) agreement against 20 "global indicators." A further eight indicators were also made available for those countries that wanted to undertake more "comprehensive" monitoring (WHO 2011g, 26–28). Of the 194 member states that were surveyed, some 128 countries (or 66 percent) responded. Of these, only 74 governments indicated that they had put in place national plans to develop and maintain the IHR core capacity requirements, and only 13 countries indicated that they were already fully compliant. Perhaps most importantly, however, these results also revealed that 25 governments that responded to the survey were not only noncompliant, but they had no plans to develop the IHR core capacity infrastructure and become compliant prior to the mid-2012 deadline (WHO 2011e).

In 2011, the IHR Monitoring Tool survey was repeated, with governments again being asked to self-evaluate their progress against the 20 global indicators that included 8 core capacity requirements, their arrangements at points of entry such as seaports and airports, and their ability to respond to 4 specific types of hazard. Some 152 official responses were received by the WHO secretariat, representing 78 percent of the organization's 194 member states. The findings, which were presented to the sixty-fifth WHA in May 2012, revealed a very mixed picture. While it was clear that, globally, considerable progress had been made in areas such as disease surveillance and response capacity for zoonotic (animal-related) events, when viewed region by region, it was apparent that huge disparities remained and that a significant proportion of countries were not going to meet the eight core capacities necessary to be IHR compliant by the 2012 deadline. In relation to preparedness—which has been described as the development of various research-informed national-, intermediate-, and community-level multisectoral plans to respond to hazards (WHO 2011e, 12)—whereas countries in the WHO Western Pacific region achieved an average score of 70 (out of 100), across African countries the average score was 35. Similarly, in legislation, policy, and financing, while European countries recorded an average of 72, in Africa the average score was 33. Even in relation to specific hazards such as the capacity to respond to radiation events, where European countries achieved an average score of 77, the average mark for countries in the Eastern Mediterranean region was 35 and in Africa it was as low as 24 (WHO 2012).

The report on the 2011 survey results presented at the sixty-fifth WHA in May 2012 did not, however, come as much of a surprise. Indeed, throughout the assembly, a number of member states took the floor to indicate that, while they remained firmly committed to building and strengthening disease surveillance and outbreak response capabilities, they nevertheless would fail to meet their IHR obligations by the deadline, which was then less than a month away. Whereas some member states such as the Maldives (on behalf of all South East Asian Regional Office member states) subsequently announced that they would be seeking the extensions permissible under the IHR (2005), other governments (e.g., Bangladesh) criticized the original timeline as "unrealistic," while others acknowledged that it represented "an important mid-term step" (Kamradt-Scott 2012, 14). To prevent time lines from slipping, however, it was decided that member states seeking extensions would be required to submit an implementation plan that outlined how they would meet their IHR commitments before the next deadline of mid-2014.

Further reinforcing the inability of the international community to fully comply with the IHR (2005) norms, by April 2013 some 110 member states had requested additional extensions in order to build their IHR core capacity (WHO 2013a). By December that same year, the number had increased to 118 (out of 196 States Parties to the IHR [2005]) (WHO 2014a). This unexpectedly large number can be interpreted in two ways. First, that member states are not taking their commitment to build capacity seriously—a conclusion that, it could be argued, would be indicative of a lack of political will. The second reading is that most states face immense challenges when it comes to building the core capacities, especially when domestic health systems are fragmented, inadequately funded, and understaffed.

According to figures from 2014, nearly two-thirds of the States Parties that reported their IHR implementation progress performed best in surveillance (with a global average score of 79 percent), response (81 percent), and zoonotic events (81 percent), while performance was much lower in relation to human resources (with a global average of 60 percent) and the capacity to respond to chemical events (56 percent) and radiological events (54 percent) (WHO 2014a, 21). Although 186 member states have now appointed National IHR Focal Points, assessments of the functionality of NFPs, echoing the earlier findings of the IHR Review Committee, have revealed that they tend to "recognize the value of engaging with government sectors outside the health ministry, [but] they lack the convening power needed to establish solid and reliable linkages" (Hardiman and WHO Dept. of Global Capacities 2012, 1042). In other words, NFPs'

recognition of the need to engage with others exists, but they are still vulnerable to political interference and/or marginalization.

At the sixty-sixth WHA in May 2013, it was disclosed that the majority of countries struggling to meet their IHR obligations were located in two regions, the Asia-Pacific and Africa, an observation that was repeated the following year at the sixty-seventh WHA. Unsurprisingly, given the diverse economic, social, and political circumstances across these two regions, the challenges that countries confront are equally diverse and multifaceted. Among Pacific Island countries and territories, for instance, Kool et al. (2012) have identified that limited health infrastructure, the geographical isolation of the islands, infrequent transportation, and inadequate communication systems have hampered countries' abilities to meet their IHR obligations. In addition, when outbreaks do occur, public health workers within these locations must divide their time among multiple, competing functions and priorities (i.e., clinical, administrative, policy, etc.) due to their very limited numbers (ibid., 671). Similarly, recent studies reveal that while considerable progress has been made in some parts of Asia (specifically Southeast Asia) in building and strengthening disease surveillance systems and laboratory capacity (Wertheim et al. 2010; Coker et al. 2011), the challenges the region confronts remain "formidable" and range from inadequate numbers of trained healthcare workers and epidemiologists to insufficient monitoring and poor communication systems (Dhillon et al. 2012, 857). Because Asia has been identified as a "hotzone" for emerging infectious diseases (Jones et al. 2008), and is home to one-quarter of the world's population and approximately 40 percent of the global poor (Dhillon et al. 2012), these concerns are not to be dismissed lightly.

Meanwhile, many African countries face a number of related challenges. In West Africa, for example, Najjar-Pellet et al. (2013) have highlighted that in addition to inadequate clinical laboratory services, some of the other key challenges that countries such as Mali, Senegal, and Burkina Faso (among others) confront include a lack of appropriately trained specialists, insufficient quality control management systems, and a dearth of effective coordination—especially regarding policies and governance frameworks. Likewise, following a survey of national health laboratories across the continent conducted by Frean et al. (2012, 191), it was concluded that

> in many African countries, reliable confirmation of suspected infectious diseases is hampered by a lack of standardized diagnostic methods and by a shortage of funds, staff and laboratory supplies for national public health laboratories, despite

> the critical role played by these laboratories as part of a functional infrastructure for disease surveillance.

In addition, Ope et al. (2013, 2) have observed that many East African countries generally "lack incentives and resources to invest in cross-border interventions," and although several notable developments in the form of subregional cooperation have emerged (see below), the challenges that many African countries face are vast. Despite the fact that measures have been taken to address a number of these shortfalls, with the assistance of the WHO and various overseas development agencies, the challenges these particular countries confront are far from unique and speak directly to the inability of many member states to meet their IHR commitments. In such contexts, where technical capacity is low or even entirely absent, the level of political will to comply or not comply with the IHR reporting obligations is arguably almost immaterial.

Although in some respects these survey results were not surprising, they nevertheless give great cause for concern. The results confirm what many had long suspected—that those countries that lacked the necessary capacities prior to the IHR negotiations being concluded were still struggling to meet their new obligations under the revised framework agreement. Admittedly, the self-imposed (and universally agreed-on) June 2012 deadline did create some momentum and resulted in the allocation of additional financial and technical support to assist low-income countries in building the requisite core capacities, particularly in disease surveillance. But a five-year period, even with a permissible extension of another four years, was ultimately far too short a time period, especially since, as Wilson, Brownstein, and Fidler (2010, 506–7) observed prior to the June 2012 deadline, "no coordinated, adequately funded global health initiative is underway to deliver assistance to such countries to implement the IHR (2005)." It should have come as no surprise, therefore, that 118 countries, or 60 percent of the 196 States Parties, applied for (and successfully obtained) the first 2-year extension allowable under the IHR (2005) and that only 42 States Parties specified that they did not require an extension (WHO 2014a, 3; WHO 2014b, 4). Importantly, this leaves some 36 States Parties unaccounted for.

Indeed by 2014, only around 21 percent of WHO member states had indicated that they were fully compliant with the IHR (2005) (Fischer and Katz 2013; WHO 2014b). The majority of these are high-income countries such as Canada, the United States, Australia, Saudi Arabia, Finland, and New Zealand, which were already in possession of advanced healthcare systems and highly-skilled personnel (see WHO 2013b). Of the remaining countries that have yet to meet their IHR

obligations, approximately 60 percent have submitted an implementation plan to the WHO secretariat indicating how they intend to become fully compliant by the next deadline (WHO 2014a). These figures suggest that around three-quarters of the WHO's 196 States Parties to the IHR (2005) currently recognize the importance of the global health security norms and either already have, or at the very least are intending to develop, the requisite core capacities to comply. Even if a more pessimistic view is adopted about the intentions of those countries that have only submitted implementation plans—namely, that a such a plan can be discarded in future with minimal consequence—the mere fact that these countries *have* submitted a plan speaks to the fact that they felt an *obligation* to outline how they intend to meet their IHR (2005) commitments. Again, therefore, these figures provide an indication that governments are generally cognizant of the global health security norms and are at the very least prepared to make an outward display of attempting to meet their international obligations.

On the other hand, the remaining countries (approximately 18 percent of the WHO's member states), which have at the time of writing yet to indicate how they intend to become compliant, arguably present a more disturbing picture. Two possible explanations again present themselves. The first is that those 36 governments who have yet to submit an implementation plan are *unwilling* to do so, presumably because they object to all or part of the IHR (2005) framework and the global health security norms contained within. The second scenario is that those governments have been *unable* to do so, and a host of reasons may account for this (i.e., ongoing conflict or civil unrest, insufficient technical expertise or capacity, etc). Of these two options, our view is that the latter is more likely than the former principally due to the fact that WHO member states unanimously adopted the IHR (2005) in May 2005. A survey of the data submitted to the WHO secretariat ahead of the sixty-seventh WHA in May 2014 indicated that the majority of the countries yet to supply information on their progress were located in Africa and would be categorized as resource-poor (see WHO 2013b, 2014a, 2014b).

Having said this, there is clear evidence to suggest that the global health security norms are having a discernable impact, even within resource-poor settings. For example, studies conducted by Gresham et al. (2011) and Bond et al. (2013) have attributed the emergence of a number of subregional disease surveillance networks throughout Asia and Africa to a shared understanding and expectation among countries that "responsible" neighbors conduct regular disease outbreak surveillance, align governance arrangements to share information and epidemiological data, and coordinate disease outbreak control measures as part of their IHR obligations. Various initiatives, some of which admittedly preceded IHR

(2005) finalization, have subsequently united countries in hitherto unforeseen ways. These initiatives include, but are not limited to, the East African Integrated Disease Surveillance Network (EAIDSNet), which has linked officials in Tanzania, Kenya, Uganda, Rwanda, and Burundi; the Mekong Delta Basin Surveillance network (MDBS) that connects health professionals from Cambodia, Laos, Myanmar, Thailand, Viet Nam, and two provinces of the People's Republic of China (Yunnan and Kwangsi); and the South African Centre for Disease Surveillance (SACIDS), which brings together medical, veterinary, and agricultural specialists from the Democratic Republic of Congo, Mozambique, South Africa, Zambia, and Tanzania. In addition, new education and training initiatives, such as the Central African Field Epidemiology and Laboratory Training Program by the governments of Cameroon, the Democratic Republic of Congo, and the Central African Republic have been launched to address identified deficits in epidemiology and public health laboratory services (Andze et al. 2011). While significant human, financial, and infrastructure challenges certainly remain, through their very existence, these networks speak to the level of commitment both within and among countries surrounding the global health security norms, even in countries that identify themselves as resource-poor.

Perhaps most critically, however, even if every request for a further extension is granted, it is highly likely that many low-income countries will still find it difficult to meet their IHR obligations. This is principally because the capacities required under the IHR (2005) demand significant long-term financial and human investment. High-income countries are fully aware of these challenges, and the United States, Canada, and the European Union have taken steps directed at different regions (e.g., the EU and US in Asia and Africa; Canada in Asia) to help address the identified shortfalls. As significant as this support has been, the funding has been narrowly focused on addressing particular core capacities (e.g., early warning surveillance) as opposed to others (e.g., laboratory diagnostics and risk communication). Moreover, since the 2008 financial crisis, all global public health funding is facing a notable downturn (Leach-Kemon et al. 2012). In recognition of these trends, in 2013 the WHO Executive Board agreed to create an IHR contingency fund in the WHO 2014–15 budget to assist member states in meeting their IHR core capacities, but the pledged donations and operating budget remain unclear (WHO 2013b).

Furthermore, it must be acknowledged that finances alone will be insufficient to fully implement the IHR (2005). Member states, even the most resource-poor, still have steps that can and must be taken. While technical capacity building such as developing and/or strengthening disease surveillance systems can require con-

siderable financial and human capital, they are also falling behind on tasks that are comparatively low cost, such as amending legal/governance arrangements to enable rapid information sharing with the WHO (see Katz et al. 2012). In this regard, while additional and substantive human, financial, and technical assistance from high-income countries is desperately needed to aid the governments not yet compliant with the IHR (2005), ensuring compliance is not the responsibility of high-income countries alone. All governments adopted the IHR (2005) framework, and accordingly every member state has a responsibility to do what it can to meet its obligations.

It is clear to see from the above analysis that the new norms of global health security have been internalized to different degrees and that both political will and capacity constraints have the potential to undermine compliance in the short term and institutionalization in the longer term. But it may be the case that the relationship among state capacity, political will, and compliance is in fact more complex than this scenario suggests. In particular, it is necessary to ask the question of whether a lack of capacity could in itself be suggestive of a lack of political will, and if so, where that lack of will is located—"who is to blame?"—for the inability of some states to meet their reporting requirements. As we suggested in chapter one, asking such questions necessarily raises sensitive political issues about the apportionment of costs, benefits, and obligations in the global health security regime.

WHO Director General Chan argued in 2013, in reference to the volume of requests for extensions, that the core capacity requirements of the IHR were realistic for every state and that those states seeking extensions must provide detailed planning—in consultation with WHO headquarters—on how they would meet the IHR core capacities during their two-year extension. Further, she said, these plans must include

(1) a clear and specific identification of those capacity elements that are missing or inadequate;
(2) a description of the activities and progress made in establishing those capacities up until that date;
(3) a set of proposed actions that will be undertaken and a specified time frame to ensure the capacities are present; and
(4) an estimation of the technical support and financial resources required to implement these activities; the proportion of these resources that will be invested from national budgets; and the extent of any external support required. (WHO 2013a, 10–11)

If they failed to submit such detailed plans when requesting extensions, these states, Chan warned, would be failing to fulfil their national and international responsibilities in outbreak prevention and containment (ibid., 10).

Yet, it can also be reasonably argued that the culpability rests not just with those states that are failing to implement their IHR core capacity requirements but also with the wealthier states that have failed to provide their counterparts with the requisite assistance—assistance that, crucially, was always recognized as necessary (and which was again highlighted in the IHR Review Committee's report). For this reason, we argue, some of the fault should thereby also attach to high-income countries that have to a great extent, as shown in chapter one, driven the prioritization of infectious disease threats on the global agenda partly as a result of their own security concerns, concerns that may not be equally shared in other parts of the world. Not only does this lack of solidarity undermine the effectiveness of the global health security regime, it also risks raising political tensions and generating divisions.

The power of the "security" label, and particularly of the "global health security" concept that has been promoted alongside the revised IHR, may have been significant in norm building, but, as we have already noted, it also brings potential dangers. The prioritization of infectious diseases of international concern (which is inherent in the global health security regime) may not accord with the priorities of many of the developing countries on whom the regime's success relies. This difference seems to have the potential to create tensions between the developing and developed world, bringing at least the possibility of North-South disputes that could manifest in ways that are counter-productive for global responses to infectious diseases. One possibility is that the countries in the developing world that do not possess the required disease surveillance and reporting infrastructure (often, as we have already noted, as a result of serious resource constraints) could be viewed and treated as obstacles to global health security and indeed as sources of security threat. If such a view were to take hold, the reputations of countries that lack the ability to successfully contain an outbreak could be even more severely damaged. Here we see the potentially coercive power of international norms. While much of the discussion in the literature—and indeed in this volume so far—has viewed international norms around disease control as contributing positively to global well-being, it is also true that international norms can be used in a more forceful manner, to bring behavior into line with the preferences and expectations of the most powerful states in the international system. Another possibility is the emergence of a view that the norm threshold has been set too high. If the functioning of the global health security regime rests on

every state fulfilling their obligations, then every state potentially has the ability to disrupt the functioning of the system as a whole—effectively setting in motion a process of norm disengagement (Zahar 2012).

There is a suspicion in some quarters that the vision of global health security that underpins the IHR may really be about the protection of Western states from exogenous disease threats (see Davies 2008; Rushton 2011). This leads to important questions about the appropriate apportionment of rights and responsibilities. As we have seen, the tasks states are obliged to complete to comply with the duty to report PHEICs are significant. Far more is required of national health authorities than was the case under the previous IHR. The necessity for many governments, and particularly those in the developing world, to make significant investments in their domestic disease surveillance infrastructure was well known during the negotiation of the IHR revisions. But while such investments may well be essential to the effective functioning of the global health security regime, they may not reflect domestic health priorities.

On the other hand, even if it is true that the global health security regime is primarily geared toward protecting high-income countries, does this mean that it is less valuable? As both developed and developing states have agreed in the WHA since the 1990s, there is nothing unjust about the aim of limiting the international spread of infectious diseases. Indeed, it is an important task for global health governance. The political problem, however, is the widespread perception that costs and benefits are not being equitably shared and that the opportunity to engage in an open debate about the appropriate prioritization of various activities is being denied. In the absence of the resources required to adequately address all global health problems, choices are inevitably made. At their most stark, these choices may come down to funding one priority at the expense of others (Hoffman 2010, 516). Many developing countries lack the basic health infrastructure necessary to deal with everyday threats, let alone respond to global health emergencies. It is no wonder, then, that some of them are coming to resent the emphasis being placed on a small number of diseases that seem to be of particular concern to high-income countries. There is a pressing need for a far more explicit recognition of the primary beneficiaries of the global health security regime and of who is bearing the greatest costs.

Conclusion

In this chapter we have highlighted the lessons that were learned following the revised IHR's first formal test after its entry into force in June 2007 and the challenges that remain for the universal adoption and internalization of the new norms

of global health security. The IHR Review Committee, established in the wake of the 2009 H1N1 pandemic, provided a number of insights and important recommendations for advancing the global health security regime. Key among their concerns was the lack of technical ability of some countries to report disease outbreaks, so the committee recommended that the WHO secretariat institute an assistance program to help countries build the requisite capacities. Likewise, the IHR Review Committee identified several concerns related to the decision of some member states to apply unwarranted trade and travel sanctions that contravened both sound scientific advice and the revised IHR framework and recommended that the WHO secretariat exercise its "name and shame" powers more readily to bring such states into line.

Following on from this analysis, we argued that whereas the majority of governments have acknowledged the benefit of prompt reporting—as evidenced by the H1N1 experience—the proportionate response norm is still quite underdeveloped by comparison. The key challenge for ensuring a proportionate response to future outbreaks depends on trust that normalization of reporting outbreaks will correspondingly normalize scientifically based trade and travel responses. Unless all of the norms of global health security can be sufficiently internalized and routinized in the behavior of most states, most of the time, the creep toward habitual noncompliance threatens to undermine the IHR (2005), just as it did the framework's 1969 predecessor.

Yet, as we have also emphasized, addressing the remaining obstacles to internalization is a political project as much as it is a practical one, requiring concerted effort and engagement at multiple levels: at the global level, from the WHO, national donors, and other international organizations; at the regional level, where we have seen regional networks and groupings playing a critical part in fostering IHR compliance; and at the national level, where states must demonstrate the political will to uphold the norms that underpin the global health security regime and, so far as possible, play their part in putting the necessary infrastructure and procedures in place.

Conclusion

This book has explored the background, drafting, adoption, and implementation of the revised International Health Regulations as an example of international "disease diplomacy." Much of the previous analysis of the IHR revision process has been from a legal or public health perspective. In this volume, we focused on the international political processes that characterized the remaking of the global health security regime. These included the securitization of disease, in particular the discussions around the concept of "global health security" that enabled (and in some ways constrained) political support for the IHR revision process; the delicate balancing of a political and economic quid pro quo at the heart of the regulations; the promotion of new behavioral expectations (norms) and the gradual falling into line of states; and the politics regarding the practical impediments to states fulfilling their IHR (2005) obligations. Underlying our analysis was the contention that this remaking of the global health security regime was (and will continue to be) a highly *political* process, not merely a technical fix to an ineffective international legal instrument.

The conceptual framework that we adopted was based upon the Finnemore and Sikkink (1998) norm life cycle, and following this framework we critically evaluated how the passage of the revised IHR (and the new norms embodied therein) reflected the three stages of norm emergence, norm socialization, and norm internalization. As we outlined in the introduction, we used the norm life cycle framework not because we believe it explains everything about the adoption of this instrument but rather because the three-stage framework allowed us to chart the promotion of new expectations of state behavior during disease outbreaks that first began to emerge during the 1990s, were bolstered by the 2003 SARS outbreak, and were formally accepted by states with the passage of the IHR revisions in 2005. The norm life cycle framework also gave us a lens through which to

examine some of the post-2005 challenges to these new norms as the processes of socialization and internalization roll on.

In this concluding chapter, we briefly rehearse some of the key arguments of the book before moving on to discuss three issues that have emerged from our analysis: the role of the WHO secretariat in promoting new norms and the impact that the securitization of disease had on those efforts; the impact of capacity limitations on the ability of some states to internalize the new norms and comply with them during future outbreaks; and the prospects for the future of the global health security regime.

International Norms and the IHR

In chapter one we explored the ways in which the narrative of globalization, beginning in the 1990s, challenged perceptions of global health, leading to increased collaboration among political, security, and medical/scientific actors as infectious diseases increasingly came to be viewed as national and international security threats. In the context of these discussions, the pressing need to change the ways in which states responded to outbreaks began to be vociferously expressed by norm entrepreneurs—including those from national-level institutions (especially in the United States) and international organizations such as the WHO. Events such as the 1994 plague outbreak in India, as well as the emergence of new information technologies that made it possible for the WHO to be alerted to outbreaks irrespective of whether or not a government formally notified the organization, led to a consensus among member states in 1995 about the need to revise the outdated 1969 IHR. The agreed purpose of those revisions was threefold: to update an outdated list of diseases that states were expected to report and respond to; to demand more from states in terms of their risk assessment and containment efforts; and to create a system that would maximize international information flows in relation to a Public Health Emergency of International Concern while simultaneously requiring states not to put in place measures that unduly hampered international travel and trade. This was the bargain that lay at the heart of the new regime: states would be expected to promptly and openly report outbreaks, but in turn reporting states had a legitimate expectation that they would not be unfairly victimized.

While the initial decision to revise the IHR came about relatively swiftly, agreeing precisely *how* to improve the instrument was a protracted process. Limited progress was made through the late 1990s and early 2000s, but events in 2003 propelled what had been, until then, a largely WHO-led discussion to a much higher position on the international agenda. The 2003 Severe Acute Respiratory Syndrome outbreak, indeed, proved to be a landmark in the development of the

global health security regime—and even today it remains a touchstone in discussions over the threat posed by diseases and the problem of state nonreporting of outbreaks. SARS had monumental importance for three reasons.

First, the experience resonated deeply with the scenarios that the WHO and others had been describing (as justification for the IHR revision process as well as examples of public health disasters) for a number of years. SARS was a frightening example of the type of rapidly-spreading deadly pathogen the public had been warned to expect in the twenty-first century's globalized world. And, as the WHO secretariat and others had been arguing, secrecy was no longer an option. There were no winners when a government tried to cover up an outbreak. The longer the Chinese government refused to divulge details and refused the WHO access to affected areas, the more the disease spread. The WHO was forced to "step in" and remonstrate with China—a public humiliation for the Chinese government both at home and abroad. As a result of China's actions, human health, travel, and trade were profoundly affected across the region and far beyond. Even states without SARS cases were economically affected by the global impact on trade and travel during the couple of months when infections peaked. In short, SARS was a textbook example of the threat that diseases pose and a clear illustration of the need for states to learn to behave differently when it came to prompt and transparent outbreak reporting.

Second, however, the SARS incident showed that behavioral expectations had already begun to change—a shift that China was slow to appreciate (Fidler 2004). During the SARS outbreak, it was clear who states trusted and who they looked to for advice, and it was equally clear who they viewed as "rogue" actors who were endangering their fellow states. The WHO, often an undervalued organization, was seen by governments, the public, and the media as a player that could offer impartial and expert advice to guide states and individuals on appropriate conduct during the outbreak.

Third, and crucial to the story we traced throughout this book, SARS served as a trigger for a revitalized commitment to revising the IHR, giving momentum to the process and setting in motion a norm cascade. The adoption of the revised IHR only two years later would not have been possible without the fear and panic that SARS induced. But this quick passage, plus the desire for unity in the face of the global health security threat, meant that a number of implementation questions were left unanswered, as would later become obvious in the cases of H5N1 and H1N1.

In chapter three we argued that H5N1, which arrived and peaked during the IHR revision process, was an early test of the collective will of states to abide by

the new behavioral expectations, even prior to the formal adoption of the IHR in 2005, and long before the new regulations' entry into force in 2007. If ever there was a moment for states to contest the new norms of global health security or to argue that the revised IHR demanded too much of them, the H5N1 period was it. What we found in practice, however, was that the vast majority of H5N1-affected states reported outbreaks in a timely and comprehensive fashion, even though at that stage they were under no international legal obligation to do so. In short, we saw evidence of a relatively well-developed (although still not universally respected) collective behavioral expectation. However, we also saw early indications of a degree of dissonance between agreeing in principle that a norm should apply and being able to meet the technical requirements of fulfilling that norm in practice. In the case of H5N1, we saw significant capacity limitations in some countries' public health and veterinary health systems that affected their responses to H5N1 in various ways. Being able to detect, confirm, and report outbreaks in a timely manner requires sophisticated surveillance and laboratory infrastructure that many developing states simply did not possess (and in some cases will not acquire for many years to come). Similarly, the poultry industries of a number of states did not meet the WTO standards for exporting, which in turn permitted other states to apply harsh trade restrictions—which they had not implemented prior to H5N1—and to be able to justify doing so (i.e., to argue that they had acted appropriately). These actions were lawful, but they challenged the spirit of the emerging norms of global health security, in particular the attempt to strike a balance, ensuring that states that reported promptly and openly would not be punished by disproportionate trade or travel measures.

Many of these issues continued into the H1N1 outbreak period in 2009, which we examined in chapter four. In this case, we had the opportunity to examine the extent to which states had been successfully socialized into a collective response to the outbreak, informed by the revised IHR that had, by this time, been in force for two years. We found a mixed picture and evidence that the new norms were at different stages in various states. Most governments routinely complied with the IHR (2005) reporting commitments, informing the WHO of cases in a timely fashion. Indeed it would be reasonable to say that, in the H1N1 case at least, the pre-IHR (2005) stigma often thought to apply to countries that reported an outbreak did not seem to apply. Moreover, there seemed to be a general agreement on the collective benefits of prompt and transparent reporting. As with H5N1, however, there were significant technical barriers in some regions, particularly Africa, where cases of H1N1 were suspected but neither reported nor verified. Here, we saw a failure to comply with the reporting expectations under the IHR not be-

cause states rejected their obligation to do so, but because they did not have the capacity to detect in order to report. As we noted, unlike some other international norms, those embodied in the revised IHR require states to make material investments—possibly years in advance—in their domestic structures and procedures, an issue to which we return below.

In addition to some instances of nonreporting, there were cases of states imposing seemingly disproportionate travel and trade responses, seen most clearly in the inflicting of scientifically unjustified pork import bans and the quarantining of travelers with Mexican citizenship. As with H5N1, therefore, some states did not respect the reciprocity principle that underlays the revised IHR and gave in to ways of acting that suited their perceived short-term political interests. Importantly, however, these countries were in a small minority of noncompliant states, and they were subjected to criticism for their actions. These cases of noncompliance, however, suggest both a continuing task for norm entrepreneurs in encouraging states to abide by the new norms and respond proportionately, as well as a need to be alert to the danger of noncompliance becoming more widespread in the future. Indeed, were this to occur, there is little doubt that it would undermine the reciprocal "spirit" of the IHR and potentially adversely affect the willingness of currently compliant states to report outbreaks promptly and openly, a problem that bedeviled the IHR (1969). The reaction of states and organizations such as the WHO to the actions of noncompliant governments is thus crucial in this respect. Reiterating the norms and criticizing those who fail to abide by them is an important part of socialization and one that needs to be carried out on an ongoing basis—regardless of the identity of the noncompliant state—to ensure norm internalization.

In chapter five we examined the aftermath of H1N1, in particular the recommendations of the IHR commission that reviewed the WHO and member states' actions during the pandemic. In line with some of the key recommendations of that commission, we discussed the ongoing efforts to address IHR core capacity deficiencies and noted the extent to which developing states have struggled to get the necessary donor focus and attention. Contra most recent arguments around IHR noncompliance, we believe that the international community, both the WHO and donor states, need to be identified as at least partially responsible for the ongoing problems with capacity and compliance. But this is not to let the governments of developing countries off the hook entirely: they must also demonstrate the political will to uphold the norms that underpin the global health security regime and, as far as possible, play their part in putting the necessary infrastructure and procedures in place. Again, these are issues to which we return below.

The WHO Secretariat, Norm Entrepreneurship, and Securitization

There is, then, an important continuing role to be played by norm entrepreneurs both within and outside the WHO in driving the socialization and internalization processes forward and ensuring that the revised IHR and the new norms of global health security do not fall into disrepair in the way that their predecessors did. As we have already noted, achieving this will require ongoing rhetorical support for the norms (including criticizing states who do not comply) as well as practical measures (including building core capacities in those states that do not yet have them). The need for norm entrepreneurship did not end with the adoption of the revised IHR in 2005: norm leaders remain crucial in order to progress through stages two and three of the norm life cycle.

It is clear from our discussion in the early chapters of this book that WHO secretariat officials served a vital purpose in the following: making a case for the need to revise the IHR; developing proposals to overcome the problems faced by the IHR (1969) (some of which—as with syndromic reporting—fell by the wayside, but many of which found their way into the final text of the IHR); and persuading states to adopt the new norms. The secretariat activism we traced both echoes and adds to the existing literature on the ability of international organization bureaucracies to exercise agency (Barnett and Finnemore 2004), specifically their potential to act as norm entrepreneurs (Johnstone 2007; Rushton 2008; Kamradt-Scott 2010). In fulfilling this role, secretariat officials utilized a number of resources available to them, including various forms of authority (technical, rational-legal, and moral [Barnett and Finnemore 2004]) and the ready-made "organizational platform" (Finnemore and Sikkink 1998) of the WHO that provided them with the opportunity to engage with member states, formally propose solutions to the problems they had identified, and use a variety of communication channels to attempt to persuade states of the need to adopt the reforms they were promoting.

What we also saw in this case, however, was a deliberate and, it seems, highly effective use of security rhetoric as part of the persuasion process. The global health security discourse was pivotal in attracting political support for the IHR revision agenda in the first place, remained essential to its adoption and implementation, and was readily attached to events such as the SARS (chapter two), H5N1 (chapter three), and H1N1 pandemics (chapter four). This discourse did not by any means originate in the WHO; as we set out in chapter one, the idea that disease posed a national and international security threat was a far broader development and was particularly well established in the United States. Yet the

secretariat picked up this discourse and used it, from the earliest stages of the revision process to the post-adoption period of urging states to implement and comply with the new regulations. Throughout this book we have seen numerous examples of the ways in which global health security–based arguments were used to encourage states to realize that the "rules of the game had changed" and to act in accordance with the new norms of global health security. The behavior of individual states—both negative examples such as China in the early stages of the SARS outbreak and positive ones such as Mexico during H1N1—was explicitly related to the security of others and of the international community as a whole. Official publications were used to highlight the security imperatives around IHR implementation, seen most clearly in the 2007 World Health Report, *A Safer Future: Global Public Health Security in the 21st Century* (WHO 2007a).

In each case, the emphasis was very much on collective security and the benefits of cooperation; in the words of David Heymann (2006, 350) "global solidarity above national sovereignty." The revised IHR were intended to deliver security for all, not just one state or one group of people, and at the same time to balance this with the desire to avoid unnecessarily hampering global travel and trade. The shared (in)security argument was an important strategy in persuading states to accept the new obligations and demands that placed collective health security above the alternative approach of a "cordon sanitaire" around particular states or regions. In constructivist terms, the collective security narrative pushed states to reconceptualize their interests in ways that favored cooperation over isolationism; this change was amply demonstrated by the significant shift in emphasis under the IHR (2005) from border control to containment-at-source.

The extent to which states perceive this global solidarity to be borne out in practice, however, remains an issue, and it is here that some of the potentially troubling side-effects of securitization emerge (e.g., Elbe 2010; Davies 2008; Rushton 2011). Political tensions over the degree of priority given to infectious disease outbreaks compared to other health issues are already becoming apparent. Disagreement over the apportionment of the costs and benefits of the global health security regime has arisen (as seen, for example, in the case of the Indonesia H5N1 virus-sharing dispute). As a result, there has been pushback about the concept of global health security, with some arguing that rather than delivering on its original promise of solidarity, capacity enrichment, and burden sharing, it is in fact delivering a system primarily oriented toward the protection of "the West," with the greatest costs of implementation being paid by those least able to afford them.

Interestingly, given the intertwined nature of norm entrepreneurship and security discourses throughout the IHR revision process, post-H1N1 the WHO

secretariat has seemingly become less willing to use such rhetoric. In addition to the pushback from some states in the developing world, the "false alarm" perception attached to the WHO's H1N1 response has also undoubtedly been a factor in this change. But, arguably, the more circumspect message currently being put forth by some of the key norm entrepreneurs has led some to deprioritize the global health security regime and risks undermining the political momentum that is vital to the success of the internalization phase. We contend that the WHO secretariat is best placed to make the argument to all states that their vital interests are best served by implementing and complying with the IHR and that there is now a window of opportunity for making that argument.

At the same time, it is important that the "collective" aspect of the security discourse continues to be prominent, and we think that there has been too little recognition of the obligation that high-income states committed to on signing the IHR revisions. Realistically, it was always apparent that as well as implementing the new regulations themselves, wealthier states would have to assist others in meeting their IHR core capacities; indeed, the need for such support was explicitly identified by low-income countries throughout the Inter-Governmental Working Group meetings. Developing states have too often been expected to "go it alone" in capacity building, and failing to do so in relation to the IHR (2005) core capacities will lead to progressive undermining of the regime. Many of those governments have had difficulty in convincing their own local institutions, let alone donor states, of the need for financial investment. While much discussion has rightly focused on what low-income countries need to do to address their obligations, there has been far less discussion of what high-income countries need to do to make global health security an attainable reality. As we now go on to discuss, building capacity is a vital part of internalizing the IHR—and crucial to prospects for the future effectiveness of the global health security regime.

Capacity, Internalization, and Compliance: Future Prospects for the Global Health Security Regime

It is still early days in the development of the new global health security regime (Price-Smith 2009; Zacher and Keefe 2011). We have seen dramatic changes in the past decade. The engagement of high-level political and security communities with an area that had previously been primarily treated as a technical concern has been a major cause of that change, but it has also meant that the new system is taking time to settle. Prior to 2005, the IHR had not been substantially revised since 1969. There had been little political significance attached to this instrument until the early 1990s, and even then attention waxed and waned until

SARS hit. The recent developments are in many ways significant and unprecedented, making it difficult to predict the future with any degree of confidence.

The IHR (2005) embody norms pertaining to "appropriate outbreak response" which, in theory at least, provide the basis for a far more effective global system for detecting and containing disease outbreaks. Much, of course, depends on the willingness of states to live up to those behavioral expectations. Early indications are relatively promising, suggesting that the revised IHR have achieved a remarkable degree of acceptance in a relatively short period of time. As we have argued, states have for the most part accepted the new norms of global health security as being legitimate behavioral expectations. This acceptance has translated into the great strides we have observed in recent outbreaks, in terms of states' willingness to comply with the IHR rules, especially regarding timely and transparent reporting of cases in their territory.

Norm compliance is generally seen as being contingent on states' willingness to comply—in particular on their perception of behavioral expectations as shared and legitimate (e.g., Risse, Ropp, and Sikkink 2013; Betts and Orchard 2014) and their redefinition of their interests to incorporate norm following. What happens when states are persuaded to adopt a norm but lack the material capacity to comply as a result of weaknesses in their domestic institutions and infrastructure (which may be termed "involuntary non-compliance" [Borzel and Risse 2014]) is less understood. Yet as the story we have traced in this book makes clear, it is precisely these issues that are central to the future of IHR compliance, and the practical issues of putting in place the necessary infrastructure and systems to enable detection and reporting of outbreaks remains problematic. As we have suggested previously, some of the responsibility for this rests with those states that have no plan for implementation of the IHR (2005) core capacities, perhaps suggesting a lack of serious engagement with the process. But some of the fault must also be attached to the wider international community; if global health security relies on the integrity of the global surveillance "net," more needs to be done to address the current holes in that net. The implications of this lack of reporting capacity could also undermine compliance with some of the other norms of global health security embodied in the IHR (2005).

As we have repeatedly noted, the IHR rest on a delicate balance: open reporting in return for a guarantee of no disproportionate travel and trade restrictions. The lack of ability of some states to detect and report could upset that balance, fostering distrust. We saw in the H1N1 case, for example, that many states in Africa reported no cases, despite strong indications that the virus was indeed circulating in their populations. Capacity problems certainly go a long way to explaining

the lack of reporting in those cases, and in the H1N1 case (a global pandemic, but in the event a relatively mild one) other states were able to take a relatively sanguine view. Will this always apply during future outbreaks? If a particular state or a particular set of states become known for not having the ability to detect and report outbreaks, how will others respond? Will they exercise restraint in line with the IHR "bargain"? Or will they adopt a precautionary approach, implementing stringent travel and trade restrictions in order to be "on the safe side" in the face of an unknown level of threat? This is a potentially significant problem for the future, but even with the best intentions, many countries will continue to struggle to meet the highly technical and expensive requirements of the revised IHR without a dramatic upscale in international aid dedicated to this task. The 2008 financial crisis has further imperiled global health aid and, by extension, progress on the revised IHR.

International norms are by their very nature collective ideas, and they rely on that collectivity—the notion of states as forming a cohesive international society—in order to function effectively. When a number of states cannot meet the IHR core capacity requirements and cannot attract the help they need to do so, the entire ethos of the global health security regime is undermined. This, for us, is the challenge facing norm leaders: how to maintain the regime's political purchase when the security discourse used to establish it is increasingly met with antipathy post-H1N1 and with a lack of financial support to institutionalize the necessary capacities in the domestic structures of the poorest states. Thus, one of the key lessons we draw from the norm-building process examined in this book is that recognizing appropriate behavioral standards and "wanting to do the right thing" are not the same as having the ability to conform to those standards. As we put it in the introduction, the flesh may be weak even where the spirit is wiling. What does this mean for the norm life cycle? Can we talk about states internalizing norms if they do not have the technical capacity to comply with them? In other words, is it effective enough to have *wanted* to comply?

We agree that willingness to comply (i.e., a reconceptualization of interests in light of the norm) is a vital part of embedding new norms, but the scope of commitment and compliance remains a big portion of the normative battle (Risse, Ropp, and Sikkink 2013, 286). The new norms of global health security are not unique in that respect. However, for some time to come, the best that some states will be able to do to demonstrate their acceptance of their duties is to point to the reasons for their failure to comply. If progress is made in capacity building over time, then it may be that their actual ability to comply can eventually catch up. But there are dangers inherent in such a delay. As constructivists argue, norms

need to be constantly reinforced through social interactions. In the longer term, high levels of noncompliance—even if it is "involuntary non-compliance"—could have a detrimental effect on the overall stability of the regime. "If others are not complying, then why should I?" could become a common refrain.

Future "material" events could dramatically affect normative pull, just as SARS did in 2003. The IHR (2005) have already faced some significant tests (e.g., H5N1 and H1N1) but could yet face far sterner tests in the years to come. A pathogen with a significantly higher mortality rate, for example, could challenge states' willingness to avoid unnecessarily stringent travel and trade restrictions. Would they be happy to bet their security on the WHO's scientific advice, or would they prefer to "play it safe" and deal with the political consequences later? The fact that the progress made to date in the socialization process is relatively encouraging does not mean that future compliance is ensured, nor that the regime could not subsequently be tested beyond its capacity to survive. Based on precedent, we see some positive signs. Many states have institutionalized IHR compliance, for example, through the creation of National Focal Points and amending national legal frameworks to facilitate prompt reporting. Even where internalization is less advanced, based on the records of state behavior during the outbreaks examined in this book, there is good reason to hope that the majority of states will continue to perceive the downsides of breaching the IHR as greater than the downsides of compliance. This in itself is a significant development compared to where we were in 1995. But that calculation is not yet secure, and the new norms (as with all new norms) will take time to attain a "taken-for-granted" quality.

Finally, the fortunes of the WHO as an institution will have a significant impact on the future success of the global health security regime. Throughout this book we have stressed the role of the WHO secretariat in promoting the new norms of global health security. This role did not appear out of thin air. To a great extent, the secretariat created the role for itself, persuading states of the need for change and positioning itself as an actor able to guide that process of change. As we noted above, the WHO secretariat needs to continue in this norm leadership role, encouraging states to implement and comply with the new norms.

But the WHO is not just a norm leader—it is also itself responsible for implementing key parts of the IHR. Among other functions, it is the central global hub for receiving and disseminating outbreak information; it monitors nonstate sources and seeks state confirmation of cases that have not been officially reported by governments; and it is responsible for recommending appropriate travel and trade measures in the event of an outbreak. On the surface these seem like purely technical and bureaucratic tasks, but each in its way is highly political. As we saw

in the H1N1 pandemic, the WHO's actions during major global health emergencies are closely scrutinized, and the organization itself can face tough questions if it is perceived to have gotten something wrong. Responses to PHEICs often take place in conditions of considerable uncertainty, and the WHO's credibility could be severely undermined by either over- or under-reacting. Plus, this difficult task must be carried out within the context of ongoing and highly politicized discussions over the reform of the WHO and severe constraints on the organization's operating budget. The potential for future problems in the WHO's ability to deliver is clear for all to see.

Nevertheless, while the backlash against the WHO post-H1N1 was damaging, it also illustrated the extent to which countries continue to look to the WHO for guidance when confronted by a cross-border disease outbreak (or even rumor of an outbreak). States are sometimes reluctant to take it upon themselves to decide the most appropriate course of action, based on the information before them. The WHO has a vital purpose to serve in fulfilling this function. What it does not have is any real way to compel states to comply with the IHR (2005), so the potential remains that some states will risk noncompliance, with potentially serious consequences for others. Have we gone far enough in disease diplomacy to ensure that we will always know about disease outbreaks without delay? To consign to the past the significant harm to international travel and trade when rumors of a disease outbreak materialize? Not yet, perhaps. But do states believe they should work toward a global health security regime that achieves this? We would argue that for the most part, they do. The trick will be ensuring that momentum at this crucial juncture is not lost.

Introduction

1. The six quarantinable dieases were cholera, typhoid, yellow fever, plague, smallpox, and typhus.

2. There was one case in 1970 when WHO Director-General Marcolino Gomes Candau took the unusual and unprecedented step of publicly reporting a severe cholera outbreak in Guinea, which had never had a cholera outbreak prior to this event. The director-general took this action despite the government refusing to notify WHO or provide details of the outbreak (Fidler 2004, 64). There was little outcry about the director-general's action against a poor, underdeveloped state, but it is noteworthy that no other director-general repeated Candau's actions in spite of many instances where similar action would have been justified in the years that followed (ibid.).

3. Finnemore (2000) examines the extent to which the "legal" nature of international law makes it more effective than nonlegal norms.

4. The secretariat is the bureaucracy of the WHO, composed of technical and administrative personnel. They are employed to give effect to the policies and procedures adopted by the World Health Assembly.

Chapter 1 • Building Global Health Security

1. Scholars such as Stefan Elbe (2005, 2009, 2010); Christian Enemark (2007); David Fidler (2003, 2007); Colin McInnes and Kelley Lee (2006); and Andrew Price-Smith (2001, 2009), among others, made particularly noteworthy interventions in the field.

Chapter 2 • From Tipping Point to Cascade

1. "Index case" refers to the first patient to display symptoms and be diagnosed with an illness relevant to epidemiological investigation.

2. A vital relationship, as the first affected and most affected countries—China, Hong Kong, Singapore, and Viet Nam—were all member states of the WPRO region.

3. In a later WPRO publication detailing efforts to detect and contain SARS, the early failures of the Chinese government are unsparingly highlighted. China was "at the epicentre of the escalating epidemic . . . and the country was ill prepared to respond. China failed to issue a warning as the virus spread across the country and outside its borders" (WPRO 2006, 73).

4. The choice of military hospitals to house SARS cases was made, it seems, in part because military hospitals are not subject to the same full reporting disclosure procedures (to the central Ministry of Health) as provincially administered hospitals.

5. During SARS, travel alerts or a "list of areas" were provided to inform travelers of the presence of the outbreak in a country and to give information on areas where the disease was spreading locally. Travel advisories or "recommendations" were issued to warn that all nonessential travel to a designated area (announced by the WHO director-general's office) should be postponed until the alert was lifted (WHO 2003).

6. Viet Nam's SARS cases rapidly diminished by the end of March. Singapore's cases were increasing, but there was no doubt about the effectiveness of the public health response.

7. Two of four questions had to be answered affirmatively for a notification to be sent to the WHO:

1. Is the public health impact of the event serious?
2. Is the event unusual or unexpected?
3. Is there a significant risk of international spread?
4. Is there a significant risk of trade or travel restrictions? (WHA2005, Annex 2, 46–48)

8. Under the IHR (2005) Temporary Recommendations are defined as: health measures to be implemented by the State Party experiencing the public health emergency of international concern, or by other States Parties, regarding persons, baggage, cargo, containers, conveyances, goods and/or postal parcels to prevent or reduce the international spread of disease and avoid unnecessary interference with international trade (WHA 2005, 9).

9. The WTO Agreement on Sanitary and Phytosanitary measures (SPS Agreement) concerns specific measures that a country may take to protect human, animal, and plant health, particularly if the threat may affect food safety. States are allowed to implement measures that will prevent trade if they can provide scientific evidence to justify the introduction of trade barrier measures that will protect humans, animals, and plants. States can challenge trade barriers and argue that they are inconsistent with the SPS Agreement. Such challenges come before the WTO Appellate Body, which may order the removal of a ban or authorize retaliatory sanctions by the affected state. As we show in chapter three, the SPS Agreement was invoked by a number of states to ban poultry exports from Southeast Asia during the H5N1 outbreak, on the grounds that until the extent of the strain's virulence was identified and spread among poultry was minimized, trade barriers were justifiable.

Chapter 3 • H5N1 in Asia

1. There have been isolated cases of suspected human transmission, in Viet Nam (2004) and Indonesia (2006). The case in north Sumatra, Indonesia, in May 2006 was the largest suspected human-to-human transfer cluster (8 cases, 7 deaths) and has been linked to the first dispute between the WHO and the Indonesian government regarding release of the virus sequence data (Roos 2008; Sipress 2009, 38, 126).

2. Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam.

3. (1) Early warning surveillance and response; (2) Laboratory strengthening; (3) Infection control; (4) Risk Communication; and (5) Enhanced regional and international collaboration.

4. Cambodia, Laos, Indonesia, Malaysia (suspect poultry cases in 2005 and 2006), Myanmar (suspect poultry and human cases in 2006 and 2007), the Philippines (suspect poultry cases in 2006 and 2007), Thailand, and Viet Nam.

5. World Bank official, interview (2011) with Sara E. Davies, October 4, 2011, Hanoi, Viet Nam.

6. Anonymous official, World Health Organization Country Office interview (2011) with Sara E. Davies, November 14, 2011, Jakarta, Indonesia.

7. Anonymous official, World Health Organization Country Office interview (2011) with Sara E. Davies, November 14, 2011, Jakarta, Indonesia.

Chapter 4 • Swine Flu

1. In their figures, the WHO secretariat used this formulation to avoid political controversy over whether particular disputed territories or areas were classified as "countries."

2. Estimates vary on the total number of countries that imposed pork import bans following the announcement of the H1N1 influenza pandemic, with most accounts identifying over 30 countries (i.e., approximately 15% of the WHO's 196 member states). According to the Office of the United States Trade Representative (USTR 2010), more than 30 countries imposed pork import bans against the United States. We have therefore estimated the total to be closer to 35 countries.

Chapter 5 • Post-H1N1

1. There are 194 member states of the WHO but 196 States Parties (or signatories) to the IHR (2005). The two additional States Parties to the revised IHR are Liechtenstein and the Holy See.

2. Article 18 and Part V (Articles 23–34) of the revised IHR (WHA 2005) outline the general types of measures that the WHO and member states can apply in addition to principles regarding their application.

This page intentionally left blank

AFP (Associated French Press). 2009a. "UN Condemns Flu Quarantine Based on Nationality." France 24, May 8." www.france24.com/en/20090508-un-hcr-quarantine-swine-h1n1-influenza-discrimination-hong-kong-hotel.

AFP (Associated French Press). 2009b. "China Apologises to Mexico for Tough H1N1 Flu Stand." Channelnewsasia.com, July 4. www.channelnewsasia.com/stories/afp_asiapacific/view/440320/1/.html.

Ager, M. 2009. "Import Ban on Pork Lifted, Except Canada." Inquirer.net, May 4. http://newsinfo.inquirer.net/breakingnews/nation/view/20090504-203022/Import-ban-on-pork-lifted-except-Canada.

Aldis, William. 2008. "Health Security as a Public Health Concept: A Critical Analysis." *Health Policy and Planning*, 23: 369–375.

Amorim, Ceslo, Philippe Douste-Blazy, Hasan Wirayuda, Jonas Gahr Store, Cheikh Tidiane Gadio, Nkosazana Dlamini-Zuma, and Nitya Pibulsonggram. 2007. "Oslo Ministerial Declaration—Global Health: A Pressing Foreign Policy Issue." *Lancet*, 369: 1373–1378.

Andrus, Jon Kim, Ximena Aguilera, Otavio Oliva, and Sylvain Aldighier. 2010. "Global Health Security and the International Health Regulations." *BMC Public Health*, 10: S2.

Andze, GO, A Namsenmo, BK Illunga, D Kazambu, D Delissaint, C Kuaban, F Mbopi-Keou, et al. 2011. Central African Field Epidemiology and Laboratory Training Program: Building and Strengthening Regional Workforce Capacity in Public Health. *Pan African Medical Journal*, 10(Supp 1): 4.

Anonymous. 2009. "The Butcher's Bill: Recession May Dampen the Economic Cost of a Swine-flu Epidemic." *The Economist*, April 30. www.economist.com/node/13576491.

Anonymous. 2011. "Day Two at the 64th WHA: Highlights from the Second Day at the 64th World Health Assembly, Geneva, 17.05.11." *Global Health Watch*, May 18. www.ghwatch.org/who-watch/WHA64/DayTwo.

ASEAN. 2006. "ASEAN Response to Combat Avian Influenza, ASEAN Secretariat, April." www.asean.org/communities/asean-socio-cultural-community/item/asean-response-to-combat-avian-influenza-by-asean-secretariat.

ASEAN+3 Joint Statement. 2004. "Joint Ministerial Statement on Avian Influenza, Bangkok, Thailand." www.searo.who.int/en/Section10/Section1027/Section1802_7735.htm.

Audi, N. 2009. "Culling Pigs in Flu Fight, Egypt Angers Herders and Dismays U.N." *New York Times Online*, April 30. www.nytimes.com/2009/05/01/health/01egypt.html.

Bailey, Jennifer. 2008. "Arrested Development: The Fight to End Commercial Whaling as a Case of Failed Norm Change." *European Journal of International Relations*, 14: 289–318.

Barnett, Michael, and Martha Finnemore. 2004. *Rules for the World: International Organizations in Global Politics* (Ithaca: Cornell University Press).

BBC (British Broadcasting Corporation). 2009a. "The World Response to Flu Crisis." *BBC World Service*, May 5. http://news.bbc.co.uk/1/hi/world/americas/8022516.stm.

BBC (British Broadcasting Corporation). 2009b. "China Denies Flu Discrimination." *BBC World Service*, 4 May. http://news.bbc.co.uk/1/hi/world/asia-pacific/8032157.stm.

Beigbeder, Yves. 1998. *The World Health Organization* (The Hague, Netherlands: Kluwer Law).

Betts, Alexander. 2009. *Protection by Persuasion: International Cooperation in the Refugee Regime* (Ithaca: Cornell University Press).

Betts, Alexander, and Phil Orchard, eds. 2014. *Implementation and World Politics: How International Norms Change Practice* (Oxford: Oxford University Press).

Beveridge, William. 1977. *Influenza: The Last Great Plague: An Unfinished Story of Discovery* (London: Heinemann).

Boltz, David, Bounlom Douangngeun, Settha Sinthasak, Phouvong Phommachanh, Scott Rolston, Honglin Chen, Yi Guan, et al. 2006. "H5N1 Influenza Viruses in Lao People's Democratic Republic." *Emerging Infectious Diseases*, 12: 1593–1595.

Bond, Katherine, Sarah Macfarlane, Charlanne Burke, Kumnuan Ungchusak, and Suwit Wibulpolprasert. 2013. "The Evolution and Expansion of Regional Disease Surveillance Networks and Their Role in Mitigating the Threat of Infectious Disease Outbreaks." *Emerging Health Threats Journal*, 6: 1–10.

Borzel, Tania, and Thomas Risse. 2014. "Human Rights in Areas of Limited Statehood: The New Agenda," in *Implementation and World Politics: How International Norms Change Practice*, ed. Alexander Betts and Phil Orchard (Oxford: Oxford University Press), 64–84.

Branswell, Helen. 2008. "WHO Says Indonesia Has Given Assurances It Will Report Bird Flu Cases." *Canadian Press*, June 12. www.breitbart.com/article.php?id=cp_g2sggmmp636&show_article=1.

Brown, D. 2009. "System Set Up after SARS Epidemic Was Slow to Alert Global Authorities." *Washington Post*, April 30. www.washingtonpost.com/wp-dyn/content/article/2009/04/29/AR2009042904911.html.

Brownstein, John, Clark Freifeld and Lawrence Madoff. 2009. "Digital Disease Detection—Harnessing the Web for Public Health Surveillance." *New England Journal of Medicine*, 360: 2153–2157.

Brunnée, Jutta, and Stephen J. Toope. 2010. *Legitimacy and Legality in International Law: An Interactional Account* (Cambridge: Cambridge University Press).

Budrys, A. "Russia Says Extends Pork Import Ban to Canada, Spain." 2009. *Reuters*, May 4. www.reuters.com/article/2009/05/04/us-flu-russia-idUSTRE5431PB20090504.

Butler, Declan. 2005. "'Refusal to Share' Leaves Agency Struggling to Monitor Bird Flu." *Nature*, 435: 131.

Butler, Declan. 2006. "Pandemic 'Dry Run' Is Cause for Concern." *Nature*, 441: 554–555.

Byrne, David. 2005. "How Globalisation Is Good for Your Health: The Revision of the International Health Regulations." Paper presented at annual conference for International Bar Association, Prague, September 28.

Calain, Philippe. 2007. "Exploring the International Arena of Global Health Surveillance." *Health Policy and Planning*, 22: 2–12.

Cash, Richard, and Vasant Narasimhan. 2000. "Impediments to Global Surveillance of Infectious Diseases: Consequences of Open Reporting in a Global Economy." *Bulletin of the World Health Organization*, 78: 1358–1367.

Chan, Emily, Timothy Brewer, Lawrence Madoff, Marjorie Pollack, Amy Sonricker, Mikaela Keller, Clark Freifeld, et al. 2010. "Global Capacity for Emerging Infectious Disease Detection." *PNAS*, 107: 21701–21706.

Chanlett-Avery, Emma, Nicolas Cook, Kerry Dumbaugh, Thomas Lum, Mark E. Manyin, Jim Nichol, Jeremy M. Sharp, et al. 2006. "International Efforts to Control the Spread of the Avian Influenza (H5N1) Virus: Affected Countries' Responses." Washington, DC: Congressional Research Service, Library of Congress. https://wikileaks.org/wiki/CRS:_International_Efforts_to_Control_the_Spread_of_the_Avian_Influenza_%28H5N1%29_Virus:_Affected_Countries%27_Responses,_August_24,_2006.

Chayes, Abram, and Antonio Handler Chayes. 1993. "On Compliance." *International Organization*, 47: 175–205.

Chayes, Abram, and Antonia Handler Chayes. 1995. *The New Sovereignty: Compliance with International Regulatory Agreements* (Cambridge, MA: Harvard University Press).

Checkel, Jeffrey. 2001. "Why Comply? Social Learning and European Identity Change." *International Organization*, 55: 553–588.

Cheng, Margaret Chan. 2006. "Cash Boost for Avian Influenza Exceeds Expectations." *Lancet*, 367: 289.

Chorev, Nitsan. 2012. *The World Health Organization between North and South* (Ithaca: Cornell University Press).

Christopher, George, Theodore Cieslak, Julie Pavlin, and Edward Eitzen, Jr. 1997. "Biological Warfare. A Historical Perspective." *JAMA*, 278: 412–417.

CIA. 1987. Sub-Saharan Africa: Implications of the AIDS Pandemic, SNIE 70/1–87 (Washington, DC: US Government).

Cohen, E. 2009. "When a Pandemic Isn't a Pandemic." *CNN*, May 4. http://edition.cnn.com/2009/HEALTH/05/04/swine.flu.pandemic/index.html.

Coker, Richard, Benjamin Hunter, James Rudge, Marco Liverani, and Piya Hanvoravongchai. 2011. "Emerging Infectious Diseases in Southeast Asia: Regional Challenges to Control." *Lancet*, 377: 599–605.

Collier, Stephen, and Andrew Lakoff. 2008. "The Problem of Securing Health," in *Biosecurity Interventions: Global Health and Security in Question*, ed. Andrew Lakoff and Stephen Collier (New York: Colombia University Press), 7–32.

Cortell, Andrew, and Susan Peterson. 2006. "Dutiful Agents, Rogue Actors, or Both? Staffing, Voting Rules, and Slack in the WHO and WTO," in *Delegation Under Anarchy: States, International Organizations, and Principal-Agent Theory*, ed. Darren Hawkins, David Lake, Daniel Nielson, and Michael Tierney (Cambridge: Cambridge University Press).

Danish, K. 1997. "Book Review: Management v. Enforcement." *Virginia Journal of International Law*, 37: 789–810.

Davies, Sara. 2008. "Securitizing Infectious Disease." *International Affairs*, 84: 295–313.

Davies, Sara E. 2012. "The International Politics of Disease Reporting: Towards Post-Westphalianism?" *International Politics*, 49: 591–613.

Davies, Sara E., and Jeremy Youde. 2013. "The IHR (2005), Disease Surveillance, and the Individual in Global Health Politics." *International Journal of Human Rights*, 17: 133–151.

Delich, S., and A. O. Carter. 1994. "Public Health Surveillance: Historical Origins, Methods and Evaluation." *Bulletin of the World Health Organization*, 72: 285–304.

Delon, P. J. 1975. *The International Health Regulations: A Practical Guide* (Geneva: World Health Organization).

de Sa, Joia, Sandra Mournier-Jack, Chau Darapheak, Ly Khunbun Narann, Rattanaxay Phetsourvanh, Nyphonh Chanthakoummane, Sok Touch, et al. 2010. "Responding to Pandemic Influenza in Cambodia and Lao PDR: Challenges in Moving from Strategy to Operation." *Southeast Asian Journal of Tropical Medicine and Public Health*, 41: 1104–1115.

Dhillon, Preet, Panniyammakal Jeemon, Narendra Arora, Prashant Mathur, Mahesh Maskey, Ratna Sukina, and Dorairaj Prabhakaran. 2012. "Status of Epidemiology in the WHO South-East Asia Region: Burden of Disease, Determinants of Health and Epidemiological Research, Workforce and Training Capacity." *International Journal of Epidemiology*, 41: 847–860.

Dorolle, Pierre. 1968. "Old Plagues in the Jet Age: International Aspects of Present and Future Control of Communicable Diseases." *British Medical Journal*, 4: 789–792.

Doshi, Peter. 2011. "The Elusive Definition of Pandemic Influenza." *Bulletin of the World Health Organization*, 89: 532–538.

Ear, Sophal. 2010. "Cambodia's Patient Zero: Global and National Responses to Highly Pathogenic Avian Influenza," in *Avian Influenza: Science, Policy and Politics*, ed. Ian Scoones (London: Earthscan), 65–92.

Eckholm, Erik. 2006. "SARS in Beijing: The Unravelling of a Cover-Up," in *SARS in China*, ed. Arthur Kleinman and James L. Watson (Stanford: Stanford University Press), 122–132.

Ekawati, Arti. 2010. "Indonesia Lifts Ban on Swine, Pork Imports." *JakartaGlobe*, February 14. www.thejakartaglobe.com/business/indonesia-lifts-ban-on-swine-pork-imports/358627.

Elbe, Stefan. 2005. "Aids, Security, Biopolitics." *International Relations*, 19: 403–419.

Elbe, Stefan. 2009. *Virus Alert: Security, Governmentality and the AIDS Pandemic* (New York: Columbia University Press).

Elbe, Stefan. 2010. "Haggling over Viruses: The Downside Risks of Securitizing Infectious Disease." *Health Policy and Planning*, 25: 476–485.

Elci, Ceyhun. 2006. "The Impact of HPAI of the H5N1 Strain on Economies of Affected Countries." Paper presented at International Conference on Human and Economic Resources, Izmir, Turkey, May 24–26. http://eco.ieu.edu.tr/wp-content/proceedings/2006/0610.pdf.

Enemark, Christian. 2007. *Disease and Security: Natural Plagues and Biological Weapons in East Asia* (London: Routledge).

Enemark, Christian. 2013. "Drug-Resistant Tuberculosis: Security, Ethics and Global Health." *Global Society*, 27: 159–177.

FAO. 2005. "Banning Poultry Imports Should Be Based on Established Rules." *FAO Newsroom*, October 27. www.fao.org/newsroom/en/news/2005/1000104/index.html.

FAO, WHO, World Bank, and World Organization for Animal Health. 2005. Avian Influenza and Human Pandemic influenza, Summary report, Meeting held in

Geneva, Switzerland, November 7–9, 2005. http://apps.who.int/iris/bitstream/10665/69216/1/AVIAN_INFLUENZA_sum_report_Nov_05_meeting.pdf.

Fauci, Anthony. 2003. "Biodefence on the Research Agenda." *Nature*, 421: 787.

Feldbaum, Harley, and Kelley Lee. 2004. "Public Health and Security," in *Health, Foreign Policy and Security: Towards a Conceptual Framework for Research and Policy*, ed. Alan Ingram (London: Nuffield Trust), 19–28.

Fidler, David. 1996–97. "Return of the Fourth Horseman: Emerging Infectious Diseases and International Law." *Minnesota Law Review*, 81: 771–868.

Fidler, David. 1997. "The Role of International Law in the Control of Emerging Infectious Diseases." *Bulletin de L'Institut Pasteur*, 95: 57–72.

Fidler, David. 1999. *International Law and Infectious Diseases* (Oxford: Clarendon Press).

Fidler, David. 2003. "Public Health and National Security in the Global Age: Infectious Diseases, Bioterrorism, and Realpolitik." *George Washington International Law Review*, 35: 787–856.

Fidler, David. 2004. *SARS, Governance and the Globalization of Disease* (Basingstoke: Palgrave Macmillan).

Fidler, David. 2005. "From International Sanitary Conventions to Global Health Security: The New International Health Regulations." *Chinese Journal of International Law*, 4: 325–392.

Fidler, David. 2007. "A pathology of Public Health Securitism: Approaching Pandemics as Security Threats," in *Governing Global Health: Challenge, Response, Innovation*, ed. Andrew Cooper, John Kirton, and Ted Schrecker (Aldershot: Ashgate), 41–65.

Fidler, David. 2009. "H1N1 after Action Review: Learning from the Unexpected, the Success and the Fear." *Future Microbiology*, 4: 767–769.

Fidler, David. 2010a. "Negotiating Equitable Access to Influenza Vaccines: Global Health Diplomacy and the Controversies Surrounding Avian Influenza H5N1 and Pandemic Influenza H1N1." *Public Library of Sciences Medicine, Policy Forum*, 7: 1–4. doi/10.1371/journal.pmed.1000247.

Fidler, David. 2010b. *The Challenges of Global Health Governance* (New York: Council on Foreign Relations). www.cfr.org/global-governance/challenges-global-health-governance/p22202.

Fidler, David, and Lawrence Gostin. 2006. "The New International Health Regulations: An Historic Development for International Law and Public Health." *Journal of Law, Medicine & Ethics*, 34: 85–94.

Fidler, David, and Lawrence Gostin. 2008. *Biosecurity in the Global Age: Biological Weapons, Public Health and the Rule of Law* (Stanford: Stanford University Press).

Finnemore, Martha. 1993. "International Organizations as Teachers of Norms: The United Nations Educational, Scientific, and Cutural Organization and Science Policy." *International Organization*, 47: 565–597.

Finnemore, Martha. 2000. "Are Legal Norms Distinctive?," *International Law and Politics*, 32: 699–705.

Finnemore, Martha, and Kathryn Sikkink. 1998. "International Norm Dynamics and Political Change." *International Organization*, 52: 887–917.

Fischer, Julie, and Rebecca Katz. 2013. "Moving Forward to 2014: Global IHR (2005) Implementation." *Biosecurity and Bioterrorism*, 11: 153–156.

Forster, Paul. 2010. "On a Wing and a Prayer: Avian Influenza in Indonesia," in *Avian Influenza: Science, Policy and Politics*, ed. Ian Scoones (London: Earthscan), 131–168.

Frean, John, Olga Perovic, Vivian Fensham, Kerrigan McCarthy, Anne von Gottberg, Linda de Gouveia, Bhavani Poonsamy, et al. 2012. "External Quality Assessment of National Public Health Laboratories in Africa, 2002–2009." *Bulletin of the World Health Organization*, 90: 191–199.

Garrett, Laurie. 1994. *The Coming Plague: Newly Emergent Diseases in a World out of Balance* (New York: Farrar, Straus & Giroux).

Garrett, Laurie. 1996. "The Return of Infectious Disease." *Foreign Affairs*, 75: 66–79.

Gensini, Gian, Magdi Yacoub, and Andrea Conti. 2004. "The Concept of Quarantine in History: From Plague to SARS." *Journal of Infection*, 49: 257–261.

Girard, Mark, John Tam, Olga Assossou, and Marie Paule Kieny. 2010. "The 2009 A (H1N1) Influenza Virus Pandemic: A Review." *Vaccine*, 28: 4895–4902.

Global Health Security Initiative. 2001. "Ministerial Statement, Ottawa, November 2001." www.ghsi.ca/english/statementottawanov2001.asp.

Goh, Kee-Tai, Jeffery Cutter, Bee-Hoon Heng, Stefan Ma, Benjamin Koh, Cynthia Kwok, Cheong-Mui Toh, et al. 2006. "Epidemiology and Control of SARS in Singapore." *Annals Academy of Medicine*, 35: 301–316.

Goodman, Neville. 1952. *International Health Organizations and Their Work* (Philadelphia: Blackiston).

Gostin, Lawrence. 2009. "Influenza A (H1N1) and Pandemic Preparedness under the Rule of International Law." *JAMA*, 301: 2376–2378.

Grein, Thomas, Kande-Bure Kamara, Guénaël Rodier, Aileen Plant, Patrick Bovier, Michael Ryan, Takaaki Ohyama, et al. 2000. "Rumors of Disease in the Global Village: Outbreak Verification." *Emerging Infectious Diseases*, 6: 97–102.

Gresham, Louise, Leslie Pray, Suwit Wibulpolprasert, and Beverly Trayner. 2011. "Public-Private Partnerships in Trust-based Public Health Social Networking: Connecting Organizations for Regional Disease Surveillance (CORDS)." *Journal of Commercial Biotechnology*, 17: 241–247.

Gurowitz, Amy. 2008. "Policy Hypocrisy or Political Compromise? Assessing the Morality of US Policy toward Undocumented Migrants," in *Moral Limit and Possibility in World Politics,* ed. Richard M. Price (Cambridge: Cambridge University Press), 138–164.

Haas, Peter. 2000. "Choosing to Comply: Theorizing from International Relations and Comparative Politics," in *Commitment and Compliance*, ed. Dinah Shelton (Oxford: Oxford University Press).

Hafner, Tamara, and Jeremy Shiffman. 2013. "The Emergence of Global Attention to Health Systems Strengthening." *Health Policy and Planning*, 28: 41–50.

Hardiman, Maxwell, and World Health Organization Department of Global Capacities, Alert and Response. 2012. "World Health Organization Perspective on Implementation of International Health Regulations." *Emerging Infectious Diseases*, 18: 1041–1046.

Hawkins, Darren. 2003. "Universal Jurisdiction for Human Rights: From Legal Principle to Limited Reality." *Global Governance*, 9: 347–365.

Herrington, Jonathan. 2010. "Securitization of Infectious Diseases in Vietnam: The Cases of HIV and Avian Influenza." *Health Policy and Planning*, 25: 467–475.

Heymann, David. 2002. "The Microbial Threat in Fragile Times: Balancing Known and Unknown Risks." *Bulletin of the World Health Organization*, 80: 179.

Heymann, David. 2003. "The Evolving Infectious Disease Threat: Implications for National and Global Security." *Journal of Human Development*, 4: 191–207.

Heymann, David. 2005a. "The International Response to the Outbreak of SARS, 2003," in *SARS: A Case Study in Emerging Infections*, ed. Angela McLean, Robert May, John Pattison, and Robin Weiss (Oxford: Oxford University Press), 92–95.

Heymann, David. 2005b. "SARS: A Global Perspective," in *Severe Acute Respiratory Syndrome*, ed. Malik Peiris, Larry J Anderson, Albert DME Osterhaus, Klaus Stohr, and Kwok-yung Yuen (Malden, MA: Blackwell Publishing), 13–20.

Heymann, David. 2006. "SARS And Emerging Infectious Diseases: A Challenge to Place Global Solidarity above National Sovereignty." *Annals Academy of Medicine Singapore*, 35: 350–353.

Heymann, David. 2012. "The Legacy of SARS 10 Years On." Chatham House Expert Comment, November 13. www.chathamhouse.org/media/comment/view/187187.

Heymann, David, and Guénaël Rodier. 2004a. "SARS: A Global Response to an International Threat." *Brown Journal of World Affairs*, 10: 185–197.

Heymann, David, and Guénaël Rodier. 2004b. "Global Surveillance, National Surveillance, and SARS." *Emerging Infectious Diseases*, 10: 173–175.

Heymann, David, Guénaël Rodier, and the WHO Operational Support Team to the Global Outbreak Alert and Response Network. 2001. "Hot Spots in a Wired World: WHO Surveillance of Emerging and Re-Emerging Infectious Diseases." *Lancet Infectious Diseases*, 1: 345–353.

Hodge, James. 2010. "Global Legal Triage in Response to the 2009 H1N2 Outbreak." *Minnesota Journal of Law*, 11: 599–628.

Hoffman, Steven. 2010. "The Evolution, Etiology and Eventualities of the Global Health Security Regime." *Health Policy and Planning*, 25: 510–522.

Holbrooke, Richard, and Laurie Garrett. 2008. "'Sovereignty' That Risks Global Health." *Jakarta Post*, August 21. www.thejakartapost.com/news/2008/08/21/039sovereignty039-risks-global-health.html.

Howard-Jones, Norman. 1978. *International Public Health between the Two World Wars—The Organizational Problems* (Geneva: World Health Organization).

Huang, Yanzhong. 2003. "The Politics of China's SARS Crisis." *Harvard Asia Quarterly*, 7: 9–16.

Huang, Yanzhong. 2010. "Pursuing Health as Foreign Policy: The Case of China." *Indiana Journal of Global Legal Studies*, 17: 105–146.

IOM (Institute of Medicine). 1992. *Emerging Infections: Microbial Threats to Health in the United States* (Washington, DC: National Academies Press).

Irwin, Rachel. 2010. "Indonesia, H5N1, and Global Health Diplomacy." *Global Health Governance*, 3: 1–21.

Johnstone, Ian. 2007. "The Secretary-General as Norm Entrepreneur," in *Secretary or General? The UN Secretary-General in World Affairs*, ed. Simon Chesterman (Cambridge: Cambridge University Press): 123–138.

Jones, Kate, Nikkita Patel, Marc Levy, Adam Storeygard, Deborah Balk, John Gittleman, and Peter Daszak. 2008. "Global Trends in Emerging Infectious Diseases." *Nature*, 451: 990–993. doi:10.1038/nature06536.

Joshi, Mohit. 2009. "Philippines Bans Pork Imports from Mexico." *TopNews.in*, April 25. www.topnews.in/philippines-bans-pork-imports-mexico-us-2156861.

Kamradt-Scott, Adam. 2010. "The WHO Secretariat, Norm Entrepreneurship and Global Disease Outbreak Control." *Journal of International Organization Studies*, 1: 72–89.

Kamradt-Scott, Adam. 2012. "Global Health Security under Threat? Progress in Implementing the IHR 2005." *Health Diplomacy Monitor*, 3: 13–15.

Kamradt-Scott, Adam, and Colin McInnes. 2012. "The Framing of Pandemic Influenza as a Security Threat and Its Impact on Public Policy." *Global Public Health*, 7: S95-S110.

Karadesh, Jomana. 2009. "Wild Boars Killed in Iraq Over Swine Flu Fears." CNN.com, May 3. http://edition.cnn.com/2009/WORLD/meast/05/03/iraq.boars/.

Katz, Rebecca, Jose Fernandez, and Scott McNabb. 2010. "Disease Surveillance, Capacity Building and Implementation of the International Health Regulations (IHR[2005])." *BMC Public Health*, 10: S1. doi:10.1186/1471-2458-10-S1-S1.

Katz, Rebecca, and Julie Fischer. 2010. "The Revised International Health Regulations: A Framework for Global Pandemic Response." *Global Health Governance*, 3: 1–18.

Katz, Rebecca, Vibhuti Haté, Sarah Kornblet, and Julie Fischer. 2012. "Costing Framework for International Health Regulations (2005)." *Emerging Infectious Diseases*, 18: 1121–1127.

Kaufman, Joan. 2006. "SARS and China's Health-Care Response: Better to Be Both Red and Expert!," in *SARS in China: Prelude to Pandemic?*, ed. Arthur Kleinman and James Watson. (Stanford: Stanford University Press): 53–70.

Kerr, William. 2009. "Political Precaution, Pandemics and Protectionism." *Estey Centre Journal of International Law and Trade Policy*, 10: 1–14.

Kim, Jim Yong, Aaron Shakow, Arachu Castro, Chris Vanderwarker, and Paul Farmer. 2003. "Tuberculosis control," in *Global Public Goods for Health: Health Economic and Public Health Perspectives*, ed. Richard Smith, Robert Beaglehole, David Woodward, and Nick Drager. (Oxford: Oxford University Press): 54–72.

Kimball, Ann Marie, Melinda Moore, Howard French, Yuzo Arima, Kumnuan Ungchusak, Suwit Wibulpolprasert, Terence Taylor, et al. 2008. "Regional Infectious Disease Surveillance Networks and Their Potential to Facilitate the Implementation of the International Health Regulations." *Medical Clinics of North America*, 92: 1459–1471.

Koblentz, Gregory. 2010. "Biosecurity Reconsidered: Calibrating Biological Threats and Responses." *International Security*, 34: 96–132.

Koblentz, Gregory. 2011. "Predicting Peril or the Peril of Prediction? Assessing the Risk of CBRN Terrorism." *Terrorism and Political Violence*, 23: 501–520.

Koch, Eric. 2008. "Disease as Security Threat: Critical Reflections on the Global TB Emergency," in *Biosecurity Interventions: Global Health and Security in Question*, ed. Andrew Lakoff and Stephen Collier (New York: Colombia University Press): 121–146.

Kool, Jacob, Beverley Paterson, Boris Pavlin, David Durrheim, Jennie Musto, and Anthony Kolbe. 2012. "Pacific-wide Simplified Syndromic Surveillance for Early Warning of Outbreaks." *Global Public Health*, 7: 670–681.

Kratochwil, Friedrich, and John Ruggie. 1986. "International Organization: A State of the Art on the Art of the State." *International Organization*, 40: 753–775.

Krook, Mona, and Jacqui True. 2010. "Rethinking the Life Cycles of International Norms: The United Nations and the Global Promotion of Gender Equality." *European Journal of International Relations*, 18: 103–127.

Lancet. 2007. "International Health Regulations: The Challenges Ahead." *Lancet*, 369: 1763.

Leach-Kemon, Katherine, David Chou, Matthew Schneider, Annette Tardif, Joseph Dieleman, Benjamin Brooks, Michael Hanlon, et al. 2012. "The Global Financial Crisis Has Led to a Slowdown in Growth of Funding to Improve Health in Many Developing Countries." *Health Affairs*, 31: 228–235.

Lederberg, Joshua, Robert Shope, and Stanley Oaks, Jr., eds. 1992. *Emerging Infections: Microbial Threats to Health in the United States* (Washington, DC: Institute of Medicine / National Academies Press).

Lee, Kelley. 2009. *The World Health Organization (WHO)* (Abingdon: Routledge).

Lee, Kelley, and David Fidler. 2007. "Avian and Pandemic Influenza: Progress and Problems with Global Health Governance." *Global Public Health*, 2: 215–234.

Lee, Kelley, Suzanne Fustukian, and Kent Buse. 2002. "An Introduction to Global Health Policy," in *Health Policy in a Globalising World*, ed. Kelley Lee, Kent Buse, and Suzanne Fustukian (Cambridge: Cambridge University Press): 3–17.

Legro, Jeffrey. 1997. "Which Norms Matter? Revisiting the "Failure" of Internationalism." *International Organization*, 51: 31–63.

Liu, Chenglin. 2004. *Chinese Law on SARS* (Buffalo, NY: William S. Hein).

Lynn, Jonathan. 2009. "Swine Flu Alert Prompts Pork Import Bans." *Reuters*, April 27. www.reuters.com/article/2009/04/27/idUSN27533817.

MacInnis, Laura. 2009. "Mexico Says Pork Import Bans Unjustified, Illegal." *Reuters*, May 5. http://uk.reuters.com/article/2009/05/05/idUKL5956461.

Mack, Eric. 2006. "The World Health Organization's New International Health Regulations: Incursion on State Sovereignty and Ill-Fated Response to Global Health Issues." *Chicago Journal of International Law*, 7: 365–377.

Mackey, Tim, and Bryan Liang. 2012. "Lessons from SARS and H1N1/A: Employing a WHO-WTO Forum to Promote Optimal Economic–Public Health Pandemic Response." *Journal of Public Health Policy*, 33: 119–130. doi:10.1057/jphp.2011.51.

Maclean, Sandra. 2008. "Microbes, Mad Cows and Militaries: Exploring the Links between Health and Security." *Security Dialogue*, 39: 475–494.

Madoff, Lawrence, and John Woodall. 2005. "The Internet and the Global Monitoring of Emerging Diseases: Lessons from the First 10 Years of ProMED-mail." *Archives of Medical Research*, 36: 724–730.

March, James, and Johan Olsen. 1998. "The Institutional Dynamics of International Political Orders." *International Organization*, 52: 943–969.

McCoy, David, Gayatri Kembhavi, Jinesh Patel, and Akish Luintel. 2009. "The Bill & Melinda Gates Foundation's Grant-making Programme for Global Health." *Lancet*, 373: 1645–1653.

McInnes, Colin. 2006. "HIV/AIDS and Security." *International Affairs*, 82: 315–326.

McInnes, Colin, Adam Kamradt-Scott, Kelley Lee, Anne Roemer-Mahler, Simon Rushton, and Owain David Williams. 2014. *The Transformation of Global Health Governance* (Basingstoke: Palgrave Macmillan).

McInnes, Colin, and Kelley Lee. 2006. "Health, security and foreign policy." *Review of International Studies*, 32: 5–23.

McInnes, Colin, and Simon Rushton. 2013. "HIV/AIDS and Securitization Theory." *European Journal of International Relations*, 19: 115–138.

McNeil, Denise. 2009. "W.H.O. to Rewrite Its Pandemic Rules." *New York Times*, May 23, A9. www.nytimes.com/2009/05/23/health/policy/23who.html.

Mitchell, Sara. 2002. "A Kantian System? Democracy and Third-Party Conflict Resolution." *American Journal of Political Science*, 46: 749–759.

Molenaar, Bente. 2011. "General Support for the IHR Review Committee Report." *Health Diplomacy Monitor*, 2: 20–21.

Moore, Toby, and Nancy Morgan. 2006. *Avian Influenza: Trade Issues. CAST Commentary, QTA2006-2* (Ames, Iowa: US Department of Agriculture).

Nadelmann, Ethan. 1990. "Global Prohibition Regimes: The Evolution of Norms in International Society." *International Organization*, 44: 479–526.

Najjar-Pellet, J., J. Machuron, F. Bougoudogo, J. Sakande, I. Sow, C. Paquet, and C. Longuet. 2013. Clinical Laboratory Networks Contribute to Strengthening Disease Surveillance: The RESAOLAB Project in West Africa. *Emerging Health Threats*, 6: 10.3402/ehtj.v6i0.19960.

National Intelligence Council. 2003. *SARS: Down but Still a Threat*. ICA 2003–09 (Washington, DC: Central Intelligence Agency). www.fas.org/irp/nic/sars.pdf.

Onuf, Nicholas. 1989. *World of Our Making: Rules and Rule in Social Theory and International Relations* (Columbia, SC: University of South Carolina Press).

Ope, Maurice, Stanley Sonoiya, James Kariuki, Leonard Mboera, Ramana Gandham, Miriam Schneidman, and Mwihaki Kimura. 2013. "Regional Initiatives in Support of Surveillance in East Africa: The East Africa Integrated Disease Surveillance Network (EAIDSNet) Experience." *Emerging Health Threats Journal*, 6: 1–7.

PAHO. 2009a. "Influenza Cases by a New Sub-type: Regional Update." *Pan American Health Organization*, April 26. http://new.paho.org/hq/dmdocuments/2009/epi-alerts-2009-04-26-6pm-swine-flu.pdf.

PAHO. 2009b. "Influenza Cases by a New Sub-type: Regional Update." *Pan American Health Organization*, April 28. http://new.paho.org/hq/dmdocuments/2009/epi_alerts_2009_04_28_13h_swine_flu.pdf.

Peiris, Malik, Menno de Jong, and Yi Guan. 2007. "Avian Influenza Virus (H5N1): A Threat to Human Health." *Clinical Microbiology Reviews*, 20: 243–267.

Percy, Sarah. 2007. "Mercenaries: Strong Norm, Weak Law." *International Organization*, 61: 367–397.

Pitsuwan, Surin. 2011. "Challenges in Infection in ASEAN." *Lancet*, 377: 619–621.

Porter, Dorothy. 1999. *Health, Civilization and the State: A History of Public Health from Ancient to Modern Times* (London: Routledge).

Price-Smith, Andrew. 2001. *The Health of Nations: Infectious Disease, Environmental Change, and Their Effects on National Security and Development* (Cambridge, MA: MIT Press).

Price-Smith, Andrew. 2009. *Contagion and Chaos: Disease, Ecology and National Security in the Era of Globalization* (Cambridge, MA: MIT Press).

Price-Smith, Andrew, and Yanzhong Huang. 2009. "Epidemic of Fear: SARS and the Political Economy of Contagion," in *Innovation in Global Health Governance: Critical Cases*, ed. Andrew Cooper and John Kirton (Surrey: Ashgate): 23–48.

Prins, Gwyn. 2004. "AIDS and Global Security." *International Affairs*, 80: 931–952.

Ramzy, Austin. 2009. "China and Swine Flu: Are Mexicans Being Singled Out?" *Time*, May 4. www.time.com/time/world/article/0,8599,1895659,00.html.

Ricci, James. 2009. "Global Health Governance and the State: Premature Claims of a Post-International Framework." *Global Health Governance*, 3: 1–18.

Risse, Thomas, Stephen C. Ropp, and Kathryn Sikkink, eds. 2013. *The Persistent Power of Human Rights: From Commitment to Compliance* (Cambridge: Cambridge University Press).

Risse, Thomas, and Kathryn Sikkink. 1999. "The Socialization of International Human Rights Norms into Domestic Practices: Introduction," in *The Power of Human Rights: International Norms and Domestic Change*, ed. Thomas Risse, Stephen Ropp, and Kathryn Sikkink (Cambridge: Cambridge University Press): 1–38.

Rodier, Guénaël, Allison Greenspan, James Hughes, and David Heymann. 2007. "Global Public Health Security." *Emerging Infectious Diseases*, 13: 1447–1452.

Roos, Robert. 2008. "Indonesia Details Reasons for Withholding H5N1 Viruses." *Center for Infectious Disease Research and Policy*, July 15. www.cidrap.umn.edu/news-perspective/2008/07/indonesia-details-reasons-withholding-h5n1-viruses.

Ruggie, John Gerald. 1998. "What Makes the World Hang Together? Neo-utilitarianism and the Social Constructivist Challenge." *International Organization*, 52: 855–885.

Rushton, Simon. 2008. "The UN Secretary-General and Norm Entrepreneurship: Boutros Boutros-Ghali and Democracy Promotion." *Global Governance*, 14: 95–110.

Rushton, Simon. 2011. "Global Health Security: Security for Whom? Security from What?" *Political Studies*, 59: 779–796.

Safman, Rachel. 2010. "Avian Influenza Control in Thailand: Balancing the Interests of Different Poultry Producers," in *Avian Influenza: Science, Policy and Politics*, ed. Ian Scoones (London: Earthscan): 169–206.

Saich, Tony. 2006. "Is SARS China's Chernobyl or Much Ado about Nothing?," in *SARS in China*, ed. Arthur Kleinman and James L. Watson (Stanford: Stanford University Press): 71–104.

Sanchez, Jose, Matthew Johns, Ronald Burke, Kelly Vest, Mark Fukuda, In-Kyu Yoon, Chanthap Lon, et al. 2011. "Capacity-Building Efforts by the AFHSC-GEIS Program." *BMC Public Health*, 11: S4.

Schnur, Alan. 2006. "The Role of the World Health Organization in Combating SARS, Focusing on the Efforts in China," in *SARS in China*, ed. Arthur Kleinman and James L. Watson (Stanford: Stanford University Press): 31–52.

Scoones, Ian, and Paul Forster. 2010. "Unpacking the International Response to Avian Influenza: Actors, Networks and Narratives," in *Avian Influenza: Science, Policy and Politics*, ed. Ian Scoones (London: Earthscan): 19–64.

SEARO. 2005. *Asia Pacific Strategy for Emerging Diseases*, SEA/RC58/R5, September 10.

Sedyaningsih, Endang R., Siti Isfandari, Triono Soendoro, and Siti Fadilah Supari. 2008. "Towards Mutual Trust, Transparency and Equity in Virus Sharing Mechanism: The Avian Influenza Case of Indonesia." *Annals Academy of Medicine Singapore*, 37: 482–488.

Shkabatur, Jennifer. 2011. "A Global Panopticon? The Changing Role of International Organizations in the Information Age." *Michigan Journal of International Law*, 33: 159–214.

Sipress, Alan. 2009. *The Fatal Strain: On the Trail of Avian Flu and the Coming Pandemic* (New York: Viking).

Smith, Frank L. 2010. "Look but Don't Touch: Overemphasis on Surveillance in Analysis of Outbreak Response." *Global Health Governance*, 3: 1–15.

Smith, Frank L. 2012. "Insights into Surveillance from the Influenza Virus and Benefit Sharing Controversy." *Global Change, Peace and Security*, 24: 71–81.

Smith, Frank L. 2014. *American Biodefense: How Dangerous Ideas about Biological Weapons Shape National Security* (Ithaca: Cornell University Press).

Smith, Richard, Robert Beaglehole, David Woodward, and Nick Drager. 2003. *Global Public Goods for Health: Health Economic and Public Health Perspectives* (Oxford: Oxford University Press).

SooHoo, Christine. 2010. "WHO to Revise Definition of Pandemic Phases amidst 2009 H1N1 Pandemic." *Biosecurity and Bioterrorism*, 7: 117–118.

Stevenson, Michael, and Andrew F. Cooper. 2009. "Overcoming Constraints of State Sovereignty: Global Health Governance in Asia." *Third World Quarterly*, 30: 1379–1394.

Stewart, Phil. 2009. "UN Agency Slams Egypt Order to Cull All Pigs." *Reuters*, April 29. www.reuters.com/article/2009/04/29/idUSLT11250.

Stock, P. G. 1945. "The International Sanitary Convention of 1944." *Proceedings of the Royal Society of Medicine*, 38: 309–316.

Szreter, Simon. 2003. "Health and Security in Historical Perspective," in *Global Health Challenges for Human Security*, ed. Lincoln Chen, Jennifer Leaning, and Vasant Narasimhan (Cambridge, MA: Harvard University Press): 31–52.

Taylor, Allyn. 2004. "Governing the Globalization of Public Health." *Journal of Law, Medicine and Ethics*, 32: 500–508.

Tucker, Jonathan B. 1999. "From Arms Race to Abolition: The Evolving Norm against Biological and Chemical Warfare," in *The New Terror: Facing the Threat of Biological and Chemical Weapons*, ed. Sidney Drell, Abraham Sofaer, and George Wilson (Stanford: Hoover Institution Press): 159–226.

Tucker, Jonathan B. 2005. "Updating the International Health Regulations." *Biosecurity and Bioterrorism*, 3: 338–347.

UN General Assembly. 2009. *Global Health and Foreign Policy: Strategic Opportunities and Challenges, Note by the Secretary-General*. A/64/36. September 23. www.who.int/trade/foreignpolicy/FPGH.pdf.

UNSIC and World Bank. 2010. *Animal and Pandemic Influenza: A Framework for Sustaining Momentum. Fifth Global Progress Report, July 2010* (Bangkok: UNSIC and World Bank).

US Mission to the UN and Other International Organizations in Geneva. 2009. "Statement by Trade Ministers of the United States, Canada and Mexico." May 7. http://geneva.usmission.gov/2009/05/07/porktradeh1n1/.

US Trade Representative (USTR). 2010. "Keeping markets open: successes in reducing sanitary and phytosanitary barriers to American exports." www.ustr.gov/about-us/press-office/fact-sheets/2010/march/keeping-markets-open-successes-reducing-sanitary-and-ph.

Vu, Tuong. 2010. "Power, Politics and Accountability: Vietnam's Response to Avian Influenza," in *Avian Influenza: Science, Policy and Politics*, ed. Ian Scoones (London: Earthscan): 93–130.

Vu, Tuong. 2011. "Epidemics as Politics with Case Studies from Malaysia, Thailand and Vietnam." *Global Health Governance*, 4: 1–22.

Weir, Lorna, and Eric Mykhalovskiy. 2010. *Global Public Health Vigilance: Creating a World on Alert* (New York: Routledge).

Wendt, Alexander. 1992. "Anarchy Is What States Make of It: The Social Construction of Power Politics." *International Organization*, 46: 391–425.

Wertheim, Heiman, Pilaipan Puthavathana, Ngoc My Nghiem, H. Rogier van Doorn, Trung Vu Nguyen, Hung Viet Pham, Dect Subekti, et al. 2010. "Laboratory Capacity Building in Asia for Infectious Disease Research: Experiences from the South East Asia Infectious Disease Clinical Research Network (SEAICRN)." *PLoS Medicine*, 7: e1000231. doi:10.1371/journal.pmed.1000231.

WHA. 1995a. *Revision and Updating of the International Health Regulations*. Resolution WHA48.7, Forty-eighth World Health Assembly, May 12.

WHA. 1995b. *Communicable Disease Prevention and Control: New, Emerging, and Re-Emerging Infectious Diseases*. Resolution WHA48.13, Forty-eighth World Health Assembly, May 12.

WHA. 2001. *Global Health Security: Epidemic Alert and Response*. Resolution WHA54.14, Fifty-fourth World Health Assembly, May 21. http://apps.who.int/gb/archive/pdf_files/WHA54/ea54r14.pdf.

WHA. 2003. *Revision of the International Health Regulations*. Resolution WHA56.28, Fifty-sixth World Health Assembly, May 28. http://apps.who.int/gb/archive/pdf_files/WHA56/ea56r28.pdf.

WHA. 2005. *Revision of the International Health Regulations (2005)*. Resolution WHA58.3, Fifty-eighth World Health Assembly, May 23. Accessed May 6, 2014. www.who.int/csr/ihr/WHA58-en.pdf.

WHA. 2006. *Application of the International Health Regulations (2005)*. Resolution WHA59.2, Fifty-ninth World Health Assembly, May 26. http://apps.who.int/gb/ebwha/pdf_files/WHA59-REC1/e/WHA59_2006_REC1-en.pdf.

WHA. 2011. *Implementation of the International Health Regulations (2005)*. Resolution WHA64.1, Sixty-fourth World Health Assembly, May 20. http://apps.who.int/gb/ebwha/pdf_files/WHA64-REC1/A64_REC1-en.pdf.

Whelan, Mary. 2008. *Negotiating the International Health Regulations*. Global Health Programme Working Paper No. 1 (Geneva: Graduate Institute).

WHO. 1983. *The International Health Regulations (1969)*, third edition (Geneva: World Health Organization).

WHO. 1994. *Health Situation and Trend Assessment: Orientation Document for Programme Review*. Executive Board of the World Health Organization, Ninety-fifth Session. EB/INF.DOC/.3.

WHO. 1995a. *Communicable Disease Prevention and Control: New, Emerging, and Re-Emerging Infectious Diseases*. Report by the Director-General. Executive Board of the World Health Organization, Ninety-fifth Session. EB95/61. January 12.

WHO. 1995b. *Communicable Diseases Prevention and Control: New, Emerging and Re-Emerging Infectious Diseases*. Executive Board of the World Health Organization, Ninety-fifth Session, Provisional agenda item 9.1. EB95/12. October 31, 1994.

WHO. 1995c. *Provisional Summary Record of the Tenth Meeting, Committee A, Section Five*. Forty-eighth World Health Assembly. A48/A/SR/10.

WHO. 1996. *The International Response to Epidemics and Applications of the International Health Regulations*. Report of an Informal Consultation, Geneva, Switzerland, 11–14 December 1995. WHO/EMC/IHR/19.1. http://whqlibdoc.who.int/hq/1996/WHO_EMC_IHR_96.1.pdf.

WHO. 1998a. "Emerging Infectious Diseases: Memorandum from a WHO Meeting." *Bulletin of the World Health Organization*, 76: 539–544.
WHO. 1998b. "Revision of the International Health Regulations: Progress Report, July 1998." *Weekly Epidemiological Record*, 73: 233–240.
WHO. 1999a. "Revision of the International Health Regulations: Progress Report, January 1999." *Weekly Epidemiological Record*, 74: 25–27.
WHO. 1999b. "Revision of the International Health Regulations: Progress Report, July 1999." *Weekly Epidemiological Record*, 74: 252–253.
WHO. 2000. *Global Outbreak Alert and Response*. Report of a WHO meeting. WHO /CDS/CSR/2000/3 (Geneva: World Health Organization).
WHO. 2001a. *Provisional Summary Record of the Eighth Meeting, Committee A, Fifty-fourth World Health Assembly*. A54/A/SR/8.
WHO. 2001b. *Global Health Security—Epidemic Alert and Response: Revision of the International Health Regulations*. Executive Board of the World Health Organization, 107th Session. Agenda item 3.3. EB107/INF.DOC./7, January 16. http://apps.who.int /gb/archive/pdf_files/EB107/eeid7.pdf.
WHO. 2001c. *Global Health Security—Epidemic Alert and Response*. Report by the Secretariat. Fifty-fourth World Health Assembly, Provisional agenda item 13.2. A54/9, April 2. http://apps.who.int/gb/archive/pdf_files/WHA54/ea549.pdf.
WHO. 2002a. *Global Crises—Global Solutions: Managing Public Health Emergencies of International Concerns through the Revised International Health Regulations* (Geneva: World Health Organization).
WHO. 2002b. "Revision of the International Health Regulations: Progress Report, May 2002." *Weekly Epidemiological Record*, 77: 158–159.
WHO. 2003. "Update 95: SARS—Chronology of a Serial Killer, Global Alert and Response, July 7, 2003." www.who.int/csr/don/2003_07_04/en/.
WHO. 2004a. *International Health Regulations: Working paper for Regional Consultations*. Intergovernmental Working Group on the Revision of the International Health Regulations, IGWG/IHR/Working paper/12.2003, January 12. www.who.int /csr/resources/publications/IGWG_IHR_WP12_03-en.pdf.
WHO. 2004b. *Regional Consultation on the Revised International Health Regulations*. Harare-Zimbabwe, June 1–3, 2004. www.who.int/ihr/revisionprocess/harareenglish2004_09_14.pdf.
WHO. 2004c. *Report of the Consultation Meeting of the Revised International Health Regulations (IHR) for South American Countries, Rio de Janeiro, Brazil—April 5–7*. www.who.int/ihr/revisionprocess/brazil2004_09_6.pdf?ua=1.
WHO. 2004d. *European Regional Consultation on Revision of the International Health Regulations, Copenhagen, Denmark, 9–11 June*. www.who.int/ihr/revisionprocess /eucomments2004_08_31.pdf?ua=1.
WHO. 2004e. *Second Regional Consultation on the Proposed Revised International Health Regulations, WHO-SEARO, 29 June–1 July 2004*. www.who.int/ihr/revisionprocess /searo2004_09_27.pdf?ua=1.
WHO. 2004f. *Review and Approval of Proposed Amendments to the International Health Regulations: Draft Revision*. Intergovernmental Working Group on the Revision of the International Health Regulations, Provisional agenda item 3, A/IHR/IGWG/3, September 30. http://apps.who.int/gb/ghs/pdf/A_IHR_IGWG_3-en.pdf.

WHO. 2004g. *Review and Approval of Proposed Amendments to the International Health Regulations: Explanatory Notes*. Intergovernmental Working Group on the Revision of the International Health Regulations, Provisional agenda item 3, A/IHR/IGWG/4, October 7. http://apps.who.int/gb/ghs/pdf/A_IHR_IGWG_4-en.pdf.

WHO. 2004h. *Report: Consultation on the Revision of the International Health Regulations (IHR) in the Western Pacific Region. Manila, Philippines. 28–30 April 2004*. www.who.int/ihr/revisionprocess/wpro2004_09_10.pdf?ua=1.

WHO. 2004i. *Summary Report of Regional Consultations*. Intergovernmental Working Group on the Revision of the International Health Regulations, Provisional agenda item 2, A/IHR/IGWG/2, September 14. http://apps.who.int/gb/ghs/pdf/IHR_IGWG_2-en.pdf.

WHO. 2004j. *Review and Approval of Proposed Amendments to the International Health Regulations: Relations with Other International Instruments*. Intergovernmental Working Group on the Revision of the International Health Regulations, Provisional agenda item 3, A/IHR/IGWG/INF.DOC./1, September 30. http://apps.who.int/gb/ghs/pdf/A_IHR_IGWG_ID1-en.pdf.

WHO. 2005. *Decision Instrument for the Assessment and Notification of Events That May Constitute a Public Health Emergency of International Concern: Report of the Ad Hoc Expert Group on Annex 2*. Intergovernmental Working Group on the Revision of the International Health Regulations, Agenda item 2, A/IHR/IGWG/2/INF.DOC./4, February 22. http://apps.who.int/gb/ghs/pdf/IHR_IGWG2_ID4-en.pdf.

WHO. 2006. "Epidemiology of WHO-Confirmed Human Cases of Avian A(H5N1) Infection." *Weekly Epidemiological Record*, 81: 249–260.

WHO. 2007a. *The World Health Report 2007. A Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization).

WHO. 2007b. "New Rules on International Public Health Security." *Bulletin of the World Health Organization*, 85: 428–430.

WHO. 2009a. "New Influenza A(H1N1) Virus Infections: Global Surveillance Summary, May 2009." *Weekly Epidemiological Record*, 84: 173–178.

WHO. 2009b. "WHO Ad Hoc Scientific Teleconference on the Current Influenza A(H1N1) Situation." April 29, 2009. www.who.int/csr/resources/publications/swineflu/TC Report2009_05_04.pdf.

WHO. 2009c. "Human Infection with New Influenza A (H1N1) Virus: Mexico, Update, March–May 2009." *Weekly Epidemiological Record*, 84: 213–248.

WHO. 2009d. "Swine Influenza." Statement by WHO Director-General, Dr Margaret Chan. April 25, 2009. www.who.int/mediacentre/news/statements/2009/h1n1_20090425/en/index.html.

WHO. 2009e. "Swine Influenza." Statement by WHO Director-General, Dr Margaret Chan. April 27, 2009. www.who.int/mediacentre/news/statements/2009/h1n1_20090427/en/index.html.

WHO. 2009f. "Swine influenza—Update 3." April 27, 2009. www.who.int/csr/don/2009_04_27/en/index.html.

WHO. 2009g. "Influenza A(H1N1)—Update 5." April 29, 2009. www.who.int/csr/don/2009_04_29/en/index.html.

WHO. 2009h. *Pandemic Influenza Preparedness and Response: A WHO Guidance Document* (Geneva: World Health Organization).

WHO. 2009i. *Summary Report of a High-Level Consultation: New Influenza A (H1N1)*. Geneva, 18 May. Information Note/2009/2, May 20. www.who.int/csr/resources/publications/swineflu/High_Level_Consultation_18_May_2009.pdf.
WHO. 2009j. "Third Meeting of the IHR Emergency Committee." www.who.int/csr/disease/swineflu/3rd_meeting_ihr/en/index.html.
WHO. 2009k. "New Influenza A (H1N1) Virus: Global Epidemiological Situation, June 2009." *Weekly Epidemiological Record*, 84: 249–257.
WHO. 2009l. "Pandemic (H1N1) 2009—Update 56." www.who.int/csr/don/2009_07_01a/en/index.html.
WHO. 2009m. "Pandemic (H1N1) 2009—Update 60." www.who.int/csr/don/2009_08_04/en/index.html.
WHO. 2009n. "Pandemic (H1N1) 2009—Update 68." www.who.int/csr/don/2009_10_02/en/index.html.
WHO. 2009o. "Pandemic (H1N1) 2009—Update 76." www.who.int/csr/don/2009_11_27a/en/index.html.
WHO. 2009p. "Pandemic (H1N1) 2009—Update 81." www.who.int/csr/don/2009_12_30/en/index.html.
WHO. 2009q. "Pandemic (H1N1) 2009—Update 93." www.who.int/csr/don/2010_03_26/en/index.html.
WHO. 2009r. "Pandemic (H1N1) 2009—Update 112." www.who.int/csr/don/2010_08_06/en/index.html.
WHO. 2009s. "H1N1 in Post-Pandemic Period." www.who.int/mediacentre/news/statements/2010/h1n1_vpc_20100810/en/index.html.
WHO. 2009t. "World Now at the Start of 2009 Influenza Pandemic." Statement to the press by WHO Director-General Dr Margaret Chan, June 11, 2009. www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html.
WHO. 2009u. "WHO Recommendations on Pandemic (H1N1) 2009 Vaccines." Pandemic (H1N1) 2009 briefing note 2, July 13, 2009. www.who.int/csr/disease/swineflu/notes/h1n1_vaccine_20090713/en/index.html.
WHO. 2009v. "Pandemic (H1N1) 2009—Update 51." www.who.int/csr/don/2009_06_19/en/index.html.
WHO. 2009w. "Pandemic (H1N1) 2009—Update 53." www.who.int/csr/don/2009_06_24/en/index.html.
WHO. 2009x. "Joint FAO/WHO/OIE Statement on Influenza A(H1N1) and the Safety of Pork." www.who.int/mediacentre/news/statements/2009/h1n1_20090430/en/index.html.
WHO. 2009y. "Swine Flu Illness in the United States and Mexico—Update 2." www.who.int/csr/don/2009_04_26/en/index.html.
WHO. 2010a. "Global Outbreak Alert and Response Network—GOARN: Partnership in Outbreak Response." www.who.int/csr/outbreaknetwork/goarnenglish.pdf.
WHO. 2010b. "Statement of the World Health Organization on Allegations of Conflict of Interest and 'Fake' Pandemic." January 22. www.who.int/mediacentre/news/statements/2010/h1n1_pandemic_20100122/en/index.html.
WHO. 2011a. "Avian Influenza." Fact Sheet, April Update. www.who.int/mediacentre/factsheets/avian_influenza/en/index.html.

WHO. 2011b. "Cumulative Number of Confirmed Human Cases for Avian Influenza A(H5N1) Reported to WHO, 2003–2011." November 29. www.who.int/influenza/human_animal_interface/EN_GIP_20111129CumulativeNumberH5N1cases.pdf.

WHO. 2011c. "H5N1 Avian Influenza: Timeline of Major Events." December 13. www.who.int/influenza/human_animal_interface/avian_influenza/H5N1_avian_influenza_update.pdf.

WHO. 2011d. "Director-General Responds to Assessment of WHO's Handling of the Influenza Pandemic." Remarks at the fourth meeting of the Review Committee of the International Health Regulations. March 28. www.who.int/dg/speeches/2011/ihr_review_20110328/en/.

WHO. 2011e. *Implementation of the International Health Regulations (2005): Report of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009*. Report by the Director-General. Sixty-fourth World Health Assembly, Provisional agenda item 13.2, A64/10, May 5. http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_10-en.pdf.

WHO. 2011f. *IHR News: The WHO Quarterly Bulletin on IHR Implementation*. July 5. No. 15 (Geneva: World Health Organization). www.who.int/ihr/ihrnews/ihrnewsissue15/en/index1.html.

WHO. 2011g. *IHR Core Capacity Monitoring Framework: Checklist and Indicators for Monitoring Progress in the Development of IHR Core Capacities in State Parties*. WHO/HSE/IHR/2011.6 (Geneva: World Health Organization). www.unicefinemergencies.com/downloads/eresource/docs/Health/WHO_Checklist%20and%20Indicators_eng.pdf.

WHO. 2012. *Implementation of the International Health Regulations (2005): Report by the Director-General*. Sixty-fifth World Health Assembly, Provisional agenda item 13.7, A65/17, March 22. http://apps.who.int/gb/ebwha/pdf_files/WHA65/A65_17-en.pdf.

WHO. 2013a. *Implementation of the International Health Regulations (2005): Report by the Director-General*. Sixty-sixth World Health Assembly, Provisional agenda item 15.1, A66/16, April 5. http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_16-en.pdf.

WHO. 2013b. *Implementation of the International Health Regulations (2005): Report by the Director-General*. Sixty-sixth World Health Assembly, Agenda item 15.1, A66/16_Add.1. http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_16Add1-en.pdf.

WHO. 2014a. *Implementation of the International Health Regulations (2005): Report by the Director-General*. Executive Board of the World Health Organization, Provisional agenda item 10.1, December 23, 2013. EB134/32. http://apps.who.int/gb/ebwha/pdf_files/EB134/B134_32-en.pdf.

WHO. 2014b. *Implementation of the International Health Regulations (2005): Report by the Director-General*. Sixty-seventh World Health Assembly, Provisional agenda 16.1, May 2. A67/35. http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_35-en.pdf.

WHO. 2014c. *Cumulative Number of Confirmed Human Cases for Avian Influenza A(H5N1) Reported to WHO, 2003–2014*. January 24. www.who.int/influenza/human_animal_interface/EN_GIP_20140124CumulativeNumberH5N1cases.pdf.

WHO and FAO. 2004. "Unprecedented Spread of Avian Influenza Requires Broad Collaboration: FAO/OIE/WHO Call for International Assistance." January 27. www.who.int/mediacentre/news/releases/2004/pr7/en/.

Widmaier, Wesley, Mark Blyth, and Leonard Seabrooke. 2007. "Exogenous Shocks or Endogenous Constructions? The Meanings of Wars and Crises." *International Studies Quarterly*, 21: 747–759.

Wilsmore, Anthony, Anne Ancia, Elisabeth Dieleman, and Naushad Faiz. 2010. *Outcome and Impact Assessment of the Global Response to the Avian Influenza Crisis 2005–2010*. Luxembourg: Publications Office of the European Union). www.eeas.europa.eu/health/docs/health_grai_en.pdf.

Wilson, Kumanan, John Brownstein, and David Fidler. 2010. "Strengthening the International Health Regulations: Lessons from the H1N1 Pandemic." *Health Policy and Planning*, 25: 505–509.

WPRO. 2005. *Asia Pacific Strategy for Emerging Diseases*. WPR/RC56.R4 (Manila: World Health Organization). www2.wpro.who.int/NR/rdonlyres/BEAA6927-BF27-4ADB-BDB4-9FFEDAA1C385/0/RC56_R04.pdf.

WPRO. 2006. *SARS: How a Global Epidemic Was Stopped* (Manila: Western Pacific Regional Organization).

WTO. 2009. "Members Discuss Trade Responses to H1N1 Flu." www.wto.org/english/news_e/news09_e/sps_25jun09_e.htm.

WTO. 2011. *Committee on Sanitary and Phytosanitary Measures—Specific trade concerns—Note by the Secretariat—Issues not considered in 2010—Addendum*. G/SPS/GEN/204/Rev.11/Add.2. March 1. http://docsonline.wto.org/gen_home.asp.

Yanacopulos, Helen. 2005. "The Public Face of Debt." *Journal of International Development*, 16: 717–727.

Zacher, Mark, and Tania Keefe. 2011. *The Politics of Global Health Governance: United by Contagion* (New York: Palgrave Macmillan).

Zahar, Marie-Joëller. 2012. "Norm Transmission in Peace- and Statebuilding: Lessons from Democracy Promotion in Sudan and Lebanon." *Global Governance*, 18: 73–88.

Zhang, Ying, Hugo Lopez-Gatell, Celia Alpuche-Aranda, and Michael Stoto. 2013. "Did Advances in Global Surveillance and Notification Systems Make a Difference in the 2009 H1N1 Pandemic?—A Retrospective Analysis." *PLoS ONE*, 8: e59893. doi:10.1371/journal.pone.0059893.

This page intentionally left blank

About the Authors

SARA E. DAVIES is an Australian Research Council Future Fellow in the Australian Centre for Health Law Research, Faculty of Law, Queensland University of Technology. She has written two books, including *Global Politics of Health* (Cambridge: Polity, 2010). Sara has authored articles and chapters on global health governance, international refugee law, and women, peace, and security. She is co-editor (with Alex J. Bellamy and Luke Glanville) of the journal *Global Responsibility to Protect* and Program Leader of the Prevention of Mass Atrocities Program at the Asia Pacific Centre for the Responsibility to Protect, University of Queensland.

ADAM KAMRADT-SCOTT is currently Senior Lecturer at the Centre for International Security Studies, University of Sydney. He has worked as a healthcare professional, political adviser, and public servant. Adam has published a number of articles and book chapters on pandemic preparedness, health security and the International Health Regulations, and global health governance. Adam is also the Precinct Leader for the Humanities Node of the Marie Bashir Institute for Infectious Diseases and Biosecurity at the University of Sydney.

SIMON RUSHTON is a Faculty Research Fellow in the Department of Politics, University of Sheffield. He has written widely on international responses to HIV/AIDS and other diseases; the links between health and security; the changing nature of global health governance; and issues surrounding health, conflict, and post-conflict reconstruction. He edits (with Maria Kett at University College London) the journal *Medicine, Conflict & Survival* and is an Associate Fellow of the Centre on Global Health Security at the Royal Institute of International Affairs, Chatham House, London.

This page intentionally left blank