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## Pandemic Influenza: ‘The Most Feared Security Threat’

As government officials met in Geneva at the 58th WHA to endorse the revised IHR (2005), alarm was mounting that the world confronted an imminent new menace. The emergence and progressive spread of the highly lethal H5N1 avian influenza ‘Bird Flu’ virus from 2004 onwards had captured the international community’s attention. It had also directly fed into the ‘threat’ from the emerging and re-emerging infectious diseases narrative that had been actively promoted since the 1990s – and in the particular case of influenza – that the world was ‘overdue’ for another pandemic. Ultimately, however, Bird Flu did not become the etiological agent for the first influenza pandemic of the new millennium. Rather, it was another novel strain of H1N1 influenza (A) usually found in pigs that was first identified in a small Mexican village in 2009 that achieved human-to-human transmission and spread around the world.

In the lead up to the 2009 H1N1 influenza pandemic, the WHO had been engaged in a decade-long campaign to highlight the dangers of another influenza pandemic. In a classic securitizing move, this culminated in the organization labelling the disease ‘the most feared security threat’ in the 2007 World Health Report *A Safer Future* (WHO 2007a, p. 45), elevating the influenza virus above all other disease threats. The focus of this chapter is to examine the WHO’s approach to influenza and how this approach has changed and adapted over time. Accordingly, the chapter commences with a brief survey of the WHO’s efforts in the 1950s – from its initial scepticism of protective measures to its proclamation that influenza vaccines were the ‘cornerstone’ of preparedness. Next, the chapter reviews the organization’s attempts to embed influenza preparedness within country health systems in order to devolve itself of responsibility, until that is an outbreak of H5N1 avian influenza

in 1997 in Hong Kong prompted the WHO to re-evaluate its stance. The chapter then moves to examine how the organization has sought to manage the emergence and progressive spread of the H5N1 virus by securitizing the disease, before exploring the WHO's role in the 2009 H1N1 influenza pandemic and how it has affected its global health security mandate in the wake of the IHR (2005) revision.

### **First days: the WHO and flu**

Public perceptions regarding the menace posed by influenza to international society altered markedly in the wake of the 1918 Spanish Influenza pandemic. The widespread illness and death prompted by this event spurred new research into identifying its cause; as a result, a small team of scientists isolated the virus in 1933 (Smith et al. 1933). It also triggered the desire to regularly monitor outbreaks of 'epidemic influenza' by existing international health organizations such as the OIHP and LNHO (Sydenstricker 1924, Hampton 1925), efforts that were understandably interrupted by the outbreak of WWII. When the decision was taken in 1946 to establish a new universal health organization, one of the first tasks assigned to the Interim Commission of the WHO was to develop a new programme to monitor and study the disease. The World Influenza Centre (WIC) was founded in London the following year with the three-fold objective to: (a) prevent future pandemics, (b) develop control methods to limit impacts arising from a pandemic, and (c) to limit wherever possible the economic consequences of influenza epidemics and pandemics. To complement the WIC and inform the WHO's broader influenza-related activities, in 1950 the Third WHA also approved the creation of an Expert Committee on Influenza (Payne 1953, see also Doull 1948). The Committee met only once in 1952, but the meeting drew together a number of well-respected and highly influential influenza experts (mostly from European countries and the United States) to decide on the methods and structure of a new international scientific research network – the GISN (WHO 1953).

The basic premise of the GISN was to create an international network of research laboratories that would assist the WHO to provide technical support to member states in controlling influenza outbreaks, epidemics, and pandemics. Accordingly, to this day the primary function of the network continues to be the identification and isolation of strains of the virus that are circulating, which it accomplishes by receiving samples from participating countries via National Influenza Centres (NICs).

The NICs forward samples to WHO reference laboratories (otherwise known as WHO Collaborating Centres), where the strains are isolated and categorized. The epidemiological intelligence gathered from these activities is then consolidated and shared with pharmaceutical companies to develop therapeutic countermeasures such as influenza vaccines. In 1952, when the GISN was founded, some 40 laboratories immediately joined the network (Jensen and Hogan 1958), and by 1977 the association had grown to 98 NICs spread through 70 countries (Pereira 1979). Since then, both the number of NICs and reference laboratories has continued to grow, so that at the time of writing the GISN comprises 141 institutions in 111 countries, supported by a total of six WHO Collaborating Centres based in the United Kingdom, the United States, Japan, Australia, and China (WHO 2014d). In 2011, the GISN was renamed the Global Influenza Surveillance and Response System (GISRS) to signify the change from a previously publicly funded technical cooperation system to a public-private partnership following the passage of the 2011 PIP Framework (*ibid.*, Kamradt-Scott 2013).

When the GISN was established in 1952 it was still not apparent how the international community could best protect itself against the disease. Although the virus had been isolated in 1933, it took a number of years before clinical trials to test the efficacy of vaccines were launched. Somewhat intriguingly, the majority of clinical trials were initiated by military forces on account of the outbreak of WWII and due to concerns that there would be a repeat of the 1918 Spanish Influenza pandemic at the end of the second global conflict (Francis 1947). Once the war had concluded though, responsibility for developing pharmaceutical countermeasures once again passed into civilian hands; yet by 1952 results from trials conducted in the United Kingdom, the United States, and elsewhere were still inconclusive. As a result, the WHO Expert Committee on Influenza was forced to conclude in its first (and only) report that:

Experience in the past has shown that it is possible to reduce the incidence of influenza by means of immunization. Nevertheless, influenza virus vaccination is still, in the opinion of the committee, an experimental procedure, since success or failure is determined by a number of different factors which demand further experimentation. (WHO 1953, p. 10)

Undeterred, work on vaccines continued apace, and with the commencement of the 1957 'Asian Flu' pandemic questions over the efficacy of influenza vaccines were firmly resolved. In fact, as a direct

consequence of countries' widespread use of vaccines throughout the 1957 pandemic, the WHO Expert Committee on Respiratory Virus Diseases (which succeeded the Expert Committee on Influenza) proclaimed, 'Experience in many countries has now established vaccination as the most efficient method for the prevention of influenza' (WHO 1959b, p. 15). This modification of views was due, in large part, to the considerable evidence that had been collated from annual seasonal influenza epidemics and various clinical trials (Davenport 1979). Added to this, the information obtained from the widespread use of laboratory-based influenza surveillance and community-based public health surveillance in the context of the 1957 Asian Flu pandemic further strengthened the case for vaccines and validated the importance of both the WIC and the GISN. As Jensen and Hogan (1958, p. 140) noted, 'The role of the laboratory in defining and following the spread of an infectious agent has never been more dramatically shown than in the present epidemic of Asian influenza'. These techniques allowed national health authorities (and by default the WHO secretariat) to not only monitor the progressive spread of the 1957 pandemic, but also to identify and isolate the strains of virus responsible, distinguish between 'influenza-like illnesses' and the number of real cases, develop strain-specific vaccines, and then assess their efficacy (Stewart 1958, Roden 1963).

It is in this regard that the late 1950s marked a particular turning point in the development of influenza prevention and control practices. The experience of the 1957 Asian Flu pandemic cemented the importance of vaccination as an effective strategy to reduce human morbidity and mortality (Kamradt-Scott 2012). As a result, over the next decade emphasis was increasingly placed on refining the vaccines to ensure better efficacy, less toxicity, and greater yield within a shorter timeframe. The WHO secretariat's actions throughout the 1957 pandemic (and the subsequent 1968 'Hong Kong Flu' pandemic) in consolidating epidemiological intelligence, providing policy advice, and encouraging governments to develop national surveillance programmes and pharmaceutical manufacturing capacity was consistent with the organization's classical approach to managing global health security. It also contributed to the WHO global influenza programme being perceived as 'an authoritative source of information on the occurrence of influenza and its spread from one country to another' (WHO 1969b, p. 8).

Perversely, however, the proven benefit of surveillance techniques and the efficacy of influenza vaccines had a deleterious impact on the WHO's global influenza programme. Moreover, the WHO secretariat was somewhat complicit in this de-escalation. As early as 1959, for

example, the WHO Expert Committee on Respiratory Virus Diseases officially recommended that:

the laboratory network originally organized under the programme should be brought into closer relationship with national public health authorities. This is necessary for two reasons – first, in order that the influenza centre of the country may be alerted to, and may organize the investigation of, outbreaks in distant parts of the country, of which it might otherwise not learn in time, and secondly so that the centre may keep the health authorities informed of the appearance of unusual viruses or epidemics elsewhere in the world and of the appropriate technical measures which should be taken. (WHO 1959b, p. 22)

The report – and by default, the WHO secretariat – thereby advocated that member states take greater carriage of influenza programmes, embedding them within existing national public health structures. When this advice was also viewed in light of the success of vaccines (which could be produced by state-owned or government-sponsored pharmaceutical manufacturers), it gave additional weight to the notion that influenza was a largely controllable disease that could be managed effectively by individual governments.

Accordingly, the perception emerged that there was less need for international resources – a perception that the WHO secretariat failed to dissuade its principals from holding in what might be described as an example of agency shirking. Noting the downturn of interest, for example, in 1988 the then-directors of the WHO Collaborating Centres issued a statement calling for the WHO influenza programme to be 'maintained and strengthened because, by facilitating the earliest possible detection of new epidemic strains of influenza virus and recommending the use of new antigenic variants for vaccines, it provides the foundation for activities to prevent and control the disease' (WHO 1988, p. 457). The call went largely unheeded though, and was not repeated. As a result, even as the 'threat' of emerging and re-emerging infectious diseases was gaining political attention throughout the mid-1990s (Lederberg 1996), and notable virologists were warning the world was 'overdue' for another influenza pandemic (Webster 1994, Webster and Kawaoka 1994), by 1996 the number of WHO personnel overseeing the organization's influenza work had been reduced to one staff member (Kamradt-Scott 2012).

In many respects, the WHO secretariat's actions throughout this period exemplified the organization's classical approach to managing infectious diseases. For instance, the WHO secretariat limited its activities

to coordinating influenza-related epidemiological intelligence, which it accomplished via oversight of a network comprised exclusively of externally operated (and externally funded) laboratories and institutes. The second function that the WHO performed was that of providing policy advice, realized through the periodic gathering of internationally recognized influenza experts. Reflecting the post-MEP aversion to directing member states and evaluating their performance (or lack thereof), the WHO declined to scrutinize whether governments had in fact followed its recommendations in developing surveillance systems and pharmaceutical manufacturing capacity. Member states were instead encouraged to 'do the right thing', which – while the GISN did continue to grow and expand – meant that influenza failed to be prioritized.

For the purposes of this book, it is equally important to note that throughout this entire period the WHO did not seek to securitize the disease. Within the broader health community periodic references were made to the 1918 Spanish influenza pandemic and the 'threat' of an equivalent epidemiological event (Walters 1978, Pyhälä 1980), but these comments were usually made within the context of debates surrounding public health expenditure in an attempt to heighten awareness and/or obtain additional resources for influenza. Even in this respect, the WHO secretariat generally refrained from such advocacy work, preferring instead to publish technical advice in the *Weekly Epidemiological Record* to be 'widely distributed to health authorities, influenza centres, and other interested institutions and persons' (Ghendon 1991, p. 513). In this regard, the organization's global influenza programme was explicitly public health-focused, emphasizing traditional, proven biomedical techniques, methods, and interventions. Equally, however, within this environment influenza-as-a-public-health-priority languished, so much so that the WHO's own programme was severely curtailed.

### **The emergence of H5N1 and the WHO's securitization of flu**

Political interest in the WHO's influenza programme only really re-emerged in 1997, following an outbreak of H5N1 avian influenza in Hong Kong that killed six out of 18 infected people (Snacken et al. 1999). While small in terms of overall human morbidity and mortality, the outbreak caused significant international anxiety that a new pandemic was imminent. As a result, Hong Kong's health minister, Margaret Chan, controversially ordered the destruction of the territory's entire poultry population on the grounds that it was the most appropriate action to take – a

decision that was reportedly based on the epidemiological evidence (Shuchman 2007). The subsequent medical consensus that emerged was that Chan's actions likely prevented a new pandemic (MacPhail 2009), but the outbreak renewed international pressure on the WHO to reinvigorate its influenza programme, and the organization immediately began developing new policy guidelines on how its member states should prepare for mitigating an influenza pandemic. The WHO's first official pandemic influenza preparedness guideline document was then released in 1999, and outlined in broad terms the steps that countries should take to protect their respective populations from the 'pandemic threat' by developing vaccination and other control strategies, strengthening surveillance systems, and ensuring access to critical supplies such as vaccines and personal protective equipment (WHO 1999b).

Yet between the mid-1990s and late 2003, high-level political interest in influenza prevention and control continued to fluctuate. In the lead up to and the subsequent creation of the MDGs, much of the world's public health community had become preoccupied with engaging the political elite about other infectious diseases (such as HIV/AIDS, malaria, and, to a lesser extent, TB) and health objectives such as improving maternal and child health. Within this milieu, and as reflected in the 1998 World Health Report summary document, the WHO influenza programme struggled for prominence (see WHO 1998c, pp. 9–12). In the technical sphere, prominent scientists, epidemiologists, and medical professionals did continue to progress matters, establishing new web-based surveillance tools such as FluNet and publishing journal articles, commentaries, and opinion pieces warning of the dangers of a new influenza pandemic (Flahault et al. 1998, Dowdle 1999, Fauci 2003). Yet progress remained slow. In 2001, in an attempt to 'raise the profile of influenza as a disease that has significant *economic as well as public health* consequences throughout the world', the WHO secretariat issued a call for proposals to develop a 'Global Agenda on Influenza Surveillance and Control' (Stöhr 2003b, p. 1744, emphasis added). The Agenda was launched the following year and identified four key goals:

- Provide impartial guidance to all parties on priorities for research and development and national/global action for influenza control;
- Support coordination of action for influenza control and surveillance;
- Support implementation of identified priorities; and
- Support advocacy and fundraising. (ibid.)

A further 17 priority activities were identified under these key goals, such as increasing vaccine usage, enhancing surveillance, standardized training, assisting with national and regional pandemic planning, and so on (*ibid.*, pp. 1746–1748). Giving effect to these new priorities, the WHO secretariat released the first draft of the *Guidelines on Vaccine and Antiviral Use during Influenza Pandemics* in October 2002 and held its first influenza surveillance and epidemiology training course the following month (*ibid.*, p. 1745). Proposals were also advanced for the creation of a new influenza advisory group to inform the organization's activities and forums (*ibid.*).

Importantly, however, there again appeared to be little urgency to the WHO secretariat's efforts. Several internal and external factors can conceivably account for this. First, as discussed in the previous chapter, during this period the WHO secretariat – and specifically the CSR department – was engaged in revising and updating the IHR, evaluating the results of the syndromic reporting trial, and establishing the GOARN. Given the limited number of CSR personnel, it can be reasonably assumed that these activities occupied the majority of their resources and time. Individual diseases that were not currently active (like pandemic influenza) were simply not viewed as critical, and progressing with related policies and activities therefore became less important. Further, as evidenced by the publications and reports produced throughout this period, it is clear that even though the WHO secretariat identified influenza as a 'major threat' in its 2001 report to the 54th WHA on global health security (WHO 2001d), equally the secretariat continued to largely view the disease as a public health problem that could be addressed by conventional public health measures – influenza-as-a-security-threat had still not been widely internalized. Added to this, the appointment of a new director-general in 1998 resulted in the organization undergoing a radical restructuring of its programmes and policies, which in turn unsettled some of its employees. Meanwhile, events outside the WHO – such as the 1997 Asian financial crisis, the launch of the MDGs, the 2001 terrorist attacks on the World Trade Centre and the Pentagon, and the Second Gulf War arguably also served to distract attention from the 'threat' of pandemic influenza, reducing the perceived urgency to deal with the issue amongst both the organization's principals and the agent itself. Although it would be unfair to label such an outcome as IO shirking, it is equally the case that the WHO secretariat was afforded more time and space to pursue its influenza-related delegated responsibilities – time and space that the agent willingly took advantage of, that is, until events again overtook the IO.



Confirmation in early 2004 of widespread outbreaks of H5N1 avian influenza throughout several East Asian countries fundamentally changed the WHO's approach to influenza. Moreover, since 2004 the organization's global influenza programme has remained in a state of perpetual alert. This is principally because, as the WHO secretariat has noted, H5N1 and the more recent H7N9 avian influenza virus that emerged in March 2013 retain 'pandemic potential, because they continue to circulate widely in some poultry populations, most humans likely have no immunity to them, and they can cause severe disease and death in humans' (WHO 2014e). Although at the time of writing neither the H5N1 virus nor the H7N9 virus has successfully transmuted into a pathogen that spreads easily between humans, the potential hazard nevertheless remains, and the WHO secretariat continues to closely monitor the situation.

Intriguingly, the first reappearance of the H5N1 influenza virus after the 1997 outbreak in Hong Kong coincided with the emergence of the 2003 SARS outbreak. In February 2003 two human cases were confirmed, and a third was later suspected, resulting in two fatalities (WHO 2011b). The virus temporarily disappeared again for a number of months, until November that year, when it again re-emerged in China to cause the death of yet another individual. Over the next few months further human infections continued to occur sporadically, but as early as February 2004 the virus was confirmed to be infecting poultry in over nine territories throughout East and Southeast Asia (*ibid.*), indicating that the virus had gained a firm epidemiological foothold throughout the region. By mid-2005 the virus had expanded its purchase, progressively spreading to Central Asia, Europe, Africa, and the Middle East (WHO 2006b).

Bolstered from its successful management of the 2003 SARS outbreak, the WHO secretariat responded forcefully to the new menace. Since February 2003, both the GISN and the GOARN had been attuned to the potential reappearance of the H5N1 virus, and when this was then confirmed in November that same year, both networks went on full alert. Through the GISN the secretariat was kept apprised of the changing epidemiological situation in Asia as official notifications and data were received from NICs, national ministries of health, and WHO epidemiologists in the field (WHO 2006b). This data in turn permitted the organization to again start providing policy advice in real-time, which it accomplished via the GOARN's disease outbreak news website and the *Weekly Epidemiological Record*. It is in this regard that the WHO secretariat also revisited its role as a directing and coordinating authority, for as

soon as the epidemiological picture indicated that the virus had gained a foothold in Asia the organization responded by urging member states to develop pandemic preparedness plans, increase surveillance, and strengthen their health systems to be more responsive. Unlike the WHO's management of SARS, however, the organization somewhat ameliorated its approach. For whilst the WHO directed member states to take actions designed 'to strengthen national preparedness, reduce opportunities for a pandemic virus to emerge, improve the early warning system, delay initial international spread and accelerate vaccine development', and closely monitored their progress in following this advice (WHO 2005b, p. 384), the secretariat did not criticize or condemn those countries that failed to do so.

The WHO secretariat's approach and response to the reappearance of the H5N1 virus – at least in its initial days – thus exemplified a combination of the organization's classical approach to disease eradication and its newfound, emboldened method. For instance, the WHO secretariat assumed the function of real-time epidemic intelligence coordinator, gathering data from its principals affected by the virus, identifying gaps in existing knowledge and evidence, and promoting further research be undertaken. Similarly, it performed an effective role in acting as a real-time policy adviser, issuing recommendations and advice on what governments could do to mitigate the H5N1 threat. It is in this regard that the WHO secretariat also employed a more confident tone in its communications with its principals, returning to its constitutionally mandated role as the directing and coordinating authority by instructing member states to implement a series of measures as rapidly as possible. Where the organization deviated substantially, however, from its post-SARS approach was in again declining to serve as government assessor and critic.

What explains this break with the WHO's newly minted approach to managing global health security? Conceivably there may be a number of explanations. Arguably the first is that the reappearance of the H5N1 virus coincided with a series of regional consultations on the revised IHR (ahead of the formal IGWG) whereby the WHO's powers and authority were again under review. Although member states had unanimously publicly praised the organization's handling of the SARS outbreak at the 56th WHA in May 2003, privately concerns were being raised in the lead up to the IHR IGWG about the level and extent of IO autonomy that the WHO secretariat had displayed. Several countries, including Canada, Norway, Russia, Switzerland, Samoa, and the United States responded to early drafts of the proposed legislative framework, highlighting the need

to carefully balance the WHO's imperative to intervene in a public health emergency with state sovereignty, with many erring on the side of protecting principals' sovereignty. The fact that so many member states expressed reservations – even those who were widely viewed as 'WHO friendly', such as Norway – regarding the level of the IO's autonomy undoubtedly sent a clear message to the secretariat that it needed to proceed with caution or risk a backlash from its principals through the imposition of new control mechanisms.

A second potential explanation for why the WHO secretariat refrained from publicly criticizing member states may be simply that so few of them had taken steps to protect themselves. By the organization's own reckoning, for instance, by 2005 less than 25 per cent of member states had even developed pandemic preparedness plans despite six years of the IO's urging, and even fewer had actually taken steps to gain access to anti-viral drugs (WHO 2005b, p. 384). For the WHO secretariat to roundly criticize three quarters of its member states would hardly have served much benefit. Any perceived criticisms would likely have antagonized the organization's distal and proximal principals alike and again risked the possibility that member states would retaliate, either by reducing the IO's operational budget or by applying new legal constraints.

The third possibility that may have affected the WHO secretariat's willingness to criticize member states at this time was the proposed creation of an entirely new entity: the United Nations System Influenza Coordinator (UNSIIC). By early 2005 multiple UN and non-UN agencies – such as the Food and Agriculture Organization (FAO), the UNDP, UNICEF, the World Bank, and the World Organization for Animal Health (OIE), amongst others – had launched programmes targeting H5N1. Concerns were subsequently expressed within the UN (and later by several Asian leaders) that some of these programmes might work at cross-purposes and place unduly heavy reporting burdens on recipient countries. In addition, it was recognized that the UN itself lacked a contingency plan for responding to a pandemic, and so a meeting was convened in New York on 13 September 2005, involving several senior UN officials and associated agencies engaged in H5N1 work, to discuss the creation of a coordinating entity.

For the WHO secretariat the establishment of another purpose-built UN agency to deal with a specific disease likely caused anxiety that its authority in global health would again be compromised. As noted earlier, the perceived failure of the IO's leadership in responding to the emergence of HIV/AIDS was widely attributed to the creation of UNAIDS in 1996, which assumed the WHO's mandate for coordinating global

efforts to combat the disease. In 2005 when the proposal was then put forward to create an entirely new entity for responding to the menace of pandemic influenza, WHO Director-General Dr Jong-wook Lee met with UN Secretary General Kofi Annan to discuss the terms of UNSIC's role and responsibilities, no doubt in part to prevent a repeat of history and the possibility that the WHO would be circumvented. David Nabarro, who was appointed to lead UNSIC in September 2005 (UN 2014a), recalls:

Obviously staff in WHO wondered what my role and theirs would be because it was a new position. But the terms of reference for my job were very much jointly decided by Kofi Annan and Jong-wook Lee to firstly help the UN system prepare for a pandemic, and secondly to help UN agencies as a whole work in support of countries on pandemic preparedness but always with the technical direction being provided by WHO. UNSIC was also always a tiny outfit, and I was just one person, so I was absolutely clear that our job was just to coordinate and to take the technical guidance of WHO and promote it amongst all relevant UN agencies including those tasked with development, humanitarian and peacekeeping responsibilities. (Nabarro 2014)

Lastly, a number of factors within the organization may also explain – at least to some degree – why the WHO secretariat declined to serve as government assessor and critic in the case of H5N1. For instance, in July 2003 the new WHO director-general, Dr Jong-wook Lee, removed Dr David Heymann from his role as executive director of the Communicable Diseases Cluster (the unit which had coordinated the WHO's response to SARS) and appointed him as Special Representative to the Director-General for Polio Eradication. This transfer was widely interpreted by staff within the WHO as an admonishment to Dr Heymann and an attempt by the director-general to appease disgruntled member states (Anonymous 2005).<sup>1</sup> Arguably, however, Dr Lee's actions also reflected a different management style from that of the former director-general, Dr Gro Harlem Brundtland, who was perceived as 'a calculated risk taker' (Heymann 2005). Ultimately though, irrespective of which set of circumstances best explains why the WHO secretariat refrained from assessing and/or criticizing member states, it is clear that in the context of H5N1 the IO altered its management approach again, returning to its pre-SARS respectful deference towards member states.

Moreover, this revised approach permeated the WHO's efforts towards H5N1 even as the organization intensified its securitization of the

disease. In November 2005, for example, the WHO hosted a joint intergovernmental meeting (IGM) on H5N1 with the World Bank, the OIE, and the FAO. The meeting, which brought together over 600 experts from more than 100 countries, sought to take stock of efforts to date in combating the virus and to heighten awareness of the need for decisive measures and additional resources (WHO 2005c). To accomplish the latter, the threat of another influenza pandemic was repeatedly emphasized, with many participants reportedly noting that 'pandemic influenza was a threat with scientific, technical, political, social, economic, agricultural, and health dimensions as well as implications for national and global security' (ibid., p. 9). While various governments, international agencies, and NGOs were acknowledged as having a role to play in H5N1 containment efforts, the WHO – or more specifically, its real-time epidemic intelligence coordinator role – was viewed as critical. As the summary report noted, 'Clear information about the evolving epidemiological situation was also essential to allow WHO to declare the right level of pandemic alert, which, in turn, would trigger a defined series of national and international response measures' (ibid., p. 24). Likewise, despite the fact that the UNSIC office was now officially responsible for global coordination, in reality the WHO secretariat lost little of its directing and coordinating authority via issuing real-time policy advice. Unlike SARS, however, the WHO secretariat did not publicly comment on or criticize member states that failed to follow its guidelines. Rather, the IO preferred to emphasize the need for further action against the H5N1 'threat' and sought constructive collaboration with H5N1-affected countries at the regional, national, and sub-national levels (WHO 2005d, Curley and Herington 2011, Phommasack et al. 2012).

One of the key recommendations to emerge from the November 2005 meeting was for member states to voluntarily comply with the revised IHR (2005). Even though the framework had only been endorsed less than six months previously, in light of the spread of H5N1 participants at the meeting voiced their strong support in urging member states to act as if the revised IHR already applied (WHO 2005c, pp. 27, 30). The WHO secretariat, acting on this recommendation, subsequently invited all member states to establish liaison offices (otherwise described as 'National Focal Points' [NFPs] under the revised IHR) and initiated a process to establish an Influenza Pandemic Task Force (akin to the IHR Emergency Committee provision under the IHR [2005]) to provide strategic advice. These measures were then formally endorsed in May the following year with the passage of resolution *WHA59.2 Application of the International Health Regulations (2005)*. The resolution also directed the

secretariat to mobilize international assistance and financial resources in aiding member states to build and strengthen their health systems, develop guidelines, stockpile pharmaceuticals, and accelerate training in surveillance, biosafety, and laboratory capacity (WHO 2006c, pp. 3–6). The pandemic task force then met for the first time in September 2006 to provide expert advice on avian and pandemic influenza and to recommend the WHO pandemic alert level (WHO 2006d).

The November IGM reflected the fact that, by 2005, the international community had become particularly alarmed by the spread of the H5N1 virus and its potential to instigate an influenza pandemic – an unease that ultimately only dissipated with the commencement of the 2009 H1N1 influenza pandemic. Throughout this period, the WHO secretariat proved central in aiding its principals to respond to the perceived crisis, gathering surveillance data and publishing results, issuing new pandemic influenza preparedness guidelines (WHO 2005e), extending and improving geographical information systems for disease surveillance (WHO 2006d), launching operational protocols for rapid response, developing strategic action plans, lobbying for additional financial resources, developing stockpiles of drugs and an action plan for increasing vaccine supply, and offering training courses (WHO 2007e). The secretariat also played a prominent role internationally, working closely with other IOs such as the FAO, the OIE, the World Bank, and UNSIC to ensure coordination and avoid duplication of effort (see, for example, FAO and OIE 2007, IMCAPI 2008), as well as regionally with organizations such as the Association of South East Asian Nations (ASEAN) and the European Commission to help strengthen preparedness (EC 2010). The organization thus executed its mandate as the coordinating authority in international health matters, as well as its real-time epidemic intelligence coordinator and policy adviser roles, but continued to shirk its directing authority and eschew any perceived or actual criticism of member states' performance.

Alongside the WHO secretariat's technical assistance, the organization was also engaged in an active campaign to reframe influenza not just as a public health menace, but also as a threat to national and international security. This threat narrative surrounding influenza had begun a decade earlier, but by 2005 the WHO secretariat had fully embraced this new rhetoric (Davies 2008, Kamradt-Scott and McInnes 2012, Weir 2015). Moreover, as reflected in the WHO's 2005 pandemic preparedness guidelines, the organization clearly viewed the securitization of the disease as a strategic tool, noting, 'A new appreciation of infectious diseases as threats to global and national security offers the prospect that high-level political leadership could be enlisted in support of the necessary

intersectoral planning' (WHO 2005e, p. 4). Some members of the WHO secretariat have been even more explicit, as Andrew Cassels, former Director of Strategy for the Office of the Director-General, noted in an interview in 2010, stating:

The security and economic arguments have gone hand in hand. First of all it was about bringing HIV/AIDS to the forefront of the agenda, but then it expanded to include deliberate release. In part though, it has also been about securing political and financial support for the organisation. Bringing health issues into the security domain has been a fairly deliberate strategy – one that has been criticized by some Member States admittedly, but one that has probably been inevitable. (Interview on 22 March 2010, as quoted in Kamradt-Scott and McInnes 2012, p. S101)

Subsequent reports produced by the WHO secretariat for member states' consumption – either in the WHA or the EB meetings – habitually emphasized not only the physical dangers, but also the economic, social, and political threats the disease presented (WHO EB 2006a, WHO 2007e, 2008c). In November 2006 the newly appointed director-general, Dr Margaret Chan, identified the 'looming threat of an influenza pandemic' as a particular menace to global health security (WHO EB 2006a, p. 3), but the following year the securitization of the disease was escalated even further with the publication of the 2007 World Health Report that identified pandemic influenza as 'the most feared security threat' (WHO 2007a, p. 45). The intended audience of the WHO's securitization attempts – namely its member states – responded in kind, with the majority of countries developing pandemic preparedness plans, implementing 'all hazards' and 'one health' contingency planning, stockpiling pharmacological products, and changing legislation to facilitate prompt reporting (see, for example, Elbe 2011, Martin and Conseil 2012, Mwacalimba and Green 2014). In a few instances, governments even responded by ranking pandemic influenza as a more serious threat to national security than terrorism (Elbe et al. 2014). Although the WHO secretariat was not the only IO to engage in securitizing moves by repeatedly describing and emphasizing the 'threat' influenza posed (see IMF 2006, UNSIC 2006, FAO and OIE 2007), equally, due to its prominence in the global response to H5N1 and its recognized authority on international health matters, the IO was indubitably at the forefront of securitizing actors, advocating not only for new emergency powers (in the form of the revised IHR), but also for additional resources to combat the threat.

## The 2009 H1N1 influenza pandemic

Surprisingly, however, the first influenza pandemic of the 21st century did not arise from the much-feared H5N1 virus, but instead emerged from an influenza strain usually found in pigs. Even more unexpectedly, the pandemic spread globally from a small Mexican village in La Gloria, Veracruz, as opposed from somewhere within Asia, which for many years has been viewed as a 'hot bed' of emerging infectious diseases and where the bulk of H5N1 human cases had occurred. Exactly when the influenza A(H1N1) strain achieved human-to-human transmission is not entirely known (Girard et al. 2010), but the virus was detected in early March 2009 when the Mexican Ministry of Health received reports of an unusually high number of individuals experiencing influenza-like illness when seasonal influenza cases were expected to be in decline. Unsure of whether the cases were an anomaly or something more serious, the Mexican Directorate General of Epidemiology ordered that surveillance for acute respiratory diseases be heightened. Throughout the first 10 days of April 2009, government and non-government sources then began to document an outbreak of an influenza-like illness that had affected a large proportion of La Gloria's inhabitants (Brown 2009, WHO 2009a, Shkabatur 2011). Samples collected from patients identified an influenza A virus but the sub-type was unknown, and so under a newly agreed health security pact between the United States, Mexico, and Canada, the specimens were sent to the CDC in Atlanta and the Canadian Public Health Agency's National Microbiology Laboratory for testing. On 18 April the CDC notified the WHO under the IHR (2005) to the presence of a novel strain of influenza with human-to-human transmission (PAHO 2009a, WHO 2009a), but the virus had already spread to Mexico City, the United States, and Canada (WHO 2009a, Davies et al. 2015).

The international community responded vigorously and rapidly to this news. Somewhat ironically, even as the virus was infecting villagers in Mexico, in Geneva the WHO secretariat was planning a simulation exercise to test the IHR (2005) framework. Confronted with the presence of a new influenza strain with pandemic potential the exercise was understandably abandoned as real-life events overtook the IO and international attention fixated on the evolving epidemiological situation in Mexico. In contrast to China's actions during the SARS outbreak, the Mexican government openly shared information regarding the number of cases and the measures they were taking to limit the pathogen's spread. As a result, by late April 2009 Mexican health authorities had conveyed to the WHO – and the wider international community – that



infection rates had reached as high as 50 per cent in some areas (WHO 2009b), that there were over 1,300 suspected cases, and that 84 deaths could probably be attributed to the new influenza strain (PAHO 2009b). Several countries, including China, Argentina, Peru, Cuba, Sudan, and Ecuador reacted negatively to this information by imposing temporary bans on all flights from Mexico, while others resorted to quarantining Mexican and/or other North American citizens (Gostin 2009, Hodge 2010, Katz and Fischer 2010). When further information came to light that the virus was of porcine origin, prompting the WHO secretariat to initially label the disease 'Swine Flu', over 20 countries responded by imposing trade import bans on pork and pork products while other countries such as Egypt and Iraq resorted to slaughtering livestock (Karadesh 2009, Katz and Fischer 2010).

Nonetheless, the virus continued to spread. Invoking the IHR (2005) framework for the first time, WHO Director-General Margaret Chan officially convened the inaugural meeting of the IHR Emergency Committee on 25 April 2009 to provide guidance on the rapidly changing epidemiological situation. On the basis of the Committee's first assessment, the WHO's pandemic alert phase was increased from level 3 (limited human-to-human transmission) to level 4 (community-level outbreaks) on 27 April 2009. Just two days later it was raised again, this time to level 5 (sustained community transmission) following laboratory confirmation of localized outbreaks occurring within nine countries (WHO 2009c). Over the next fortnight, the WHO secretariat executed its now well-trodden real-time epidemic intelligence coordinator and policy adviser roles by gathering data and reports, holding regular press briefings, and issuing daily – at times twice daily – global updates and alerts containing medical guidance and recommendations. Moreover, in this capacity, by 12 May the secretariat had obtained official reports of some 5,251 confirmed cases of influenza A(H1N1) throughout 30 countries in the Americas, Europe, and Oceania (WHO 2009a).

Despite these figures, by early May 2009 the WHO secretariat was criticized for having acted prematurely in declaring pandemic alert phase 5. According to the WHO's latest pandemic guidelines that had been released only a few months earlier, the declaration of phase 5 was meant to be 'a strong signal that a pandemic is imminent' (WHO 2009d, p. 25), which was also expected to cause severe illness and large numbers of human deaths. The epidemiological picture that was emerging, however, suggested that the H1N1 virus did not meet these criteria; yet when the IO was questioned over this apparent disjuncture between its guidelines and the seemingly mild nature of the virus, the secretariat responded by

removing its latest guidelines from its website (Cohen 2009). Not surprisingly, these actions created disquiet amongst the IO's principals, so much so that the WHO director-general convened an urgent high-level consultation immediately prior to the scheduled 2009 WHA to examine the IHR Emergency Committee's decisions and the available epidemiological data, with the aim of reassuring member states that its response to H1N1 was both measured and appropriate (WHO 2009e). Nonetheless, throughout the WHA the political pressure applied by the IO's principals became so intense that Dr Keiji Fukuda, director of the WHO Influenza Programme, subsequently announced that the organization would include a new severity assessment in its definition of a pandemic (McNeil 2009, SooHoo 2009, Doshi 2011).

In response to member states' calls for greater transparency and clarity, the WHO director-general convened the IHR Emergency Committee for a third time on 5 June to obtain advice on whether to amend the IO's definition of a pandemic and whether the continued spread of the virus now warranted declaration of a full-scale pandemic (phase 6). Some 64 countries had already reported at least one laboratory-confirmed case of H1N1 (WHO 2009f); yet while the Committee determined that further announcements ought to discuss severity issues wherever possible, it advised against raising the current pandemic alert status (WHO 2009d). The following week, however, this decision was overturned when, confronted by over 28,100 laboratory-confirmed cases, 144 H1N1-related deaths, and sustained community-level outbreaks throughout multiple countries, the Committee recommended the director-general raise the global alert status to reflect the fact that a full-scale pandemic was underway (Davies et al. 2015). Dutifully following this advice, Dr Chan announced the first influenza pandemic of the 21st century on 11 June 2009 (WHO 2009g).

Over the ensuing weeks and months the WHO secretariat performed its dual role as real-time epidemic intelligence coordinator and policy adviser with exactitude, providing regular updates on the ever-changing epidemiological situation and outlining in considerable detail the severity of the pandemic throughout different areas, countries, and regions. Indeed, it was on the basis of the IO's constant accumulation and interpretation of epidemiological data that the director-general was subsequently empowered to declare, on 10 August 2010, that the international community had now entered the 'post-pandemic period' (WHO 2010a), officially signalling the end to the H1N1 pandemic. Throughout this period the organization had also continued to issue medical advice and recommendations on how best to treat suspected or

confirmed cases (WHO 2009h, 2009i), the inappropriateness of trade and travel restrictions (WHO 2009j), and the availability and usefulness of pharmaceutical countermeasures (WHO 2009k, 2009l). Interim guideline documents were likewise produced on surveillance protocols (WHO 2009m), communication strategies (WHO 2009n), and social distancing measures such as school closures (WHO 2009o).

It was additionally in this regard that the WHO was clearly viewed by its member states as the lead technical agency in coordinating the international community's efforts to combat the spread of the H1N1 virus. Yet once again the IO sought to avoid the perception that it was directing its principals. Throughout the organization's communications and policy advice to member states, for instance, the WHO secretariat abjured an overly prescriptive approach, selecting instead to outline a series of actions, principles, and preferred measures that member states *should* apply – if they chose to do so – to counter the spread of the virus within their respective territories (see, for example, WHO 2009p, 2009q). Within this context, the organization did not shy from indicating the limits of acceptable state behaviour; but equally, in seeking to provide member states with options that took account of the available scientific evidence and their respective economic, social, and epidemiological circumstances, the IO also sought to avoid the risk that its leadership might be viewed as inflexible.

At the broader global level the organization also assumed a lead role in coordinating other public and private entities engaged in H1N1-related work. Although officially UNSIC was tasked with coordinating all UN agencies' efforts, in reality the office of the Coordinator lacked the human resource capacity to mount a far-reaching campaign and so, by necessity, focused its energies on addressing urgent needs via the implementation of a system to aid low-income countries (Nabarro 2014). Aware of UNSIC's limitations, the WHO secretariat unashamedly took responsibility for coordinating the various UN agencies such as the OIE and the FAO (WHO 2009r), yet was equally conscious to at least publicly declare in a joint statement with the International Federation of the Red Cross, UNSIC, OCHA, and UNICEF that 'No one agency can provide all of priority interventions. Instead they should be coordinated by building on capacities and comparative advantages of each partner' (WHO 2009s). Using the vehicle of a speech to the UN General Assembly at the commencement of the pandemic, the WHO director-general also sought to apply political pressure to pharmaceutical manufacturers to donate a proportion of their products to low-income countries (WHO 2009t). In the months that followed, multiple private meetings and

consultation discussions were held, which proved partially successful (see WHO 2009u). Throughout these various interventions, however, the WHO secretariat was careful to avoid the risk of alienating organizations and entities by seeming overly prescriptive or aggressive, preferring instead to coordinate efforts where there was consensus and emphasize the need for all parties to work together towards a common purpose.

Even so, the WHO's handling of the crisis did attract further criticism. In late 2009, a Danish newspaper alleged that members of the IHR Emergency Committee had received financial support from pharmaceutical manufacturers. The charge, which implied that the director-general had been improperly influenced into declaring a PHEIC, provoked the secretariat to publicly release the names of the scientists and public health experts serving on the Committee. It also occasioned the director-general to issue a strongly worded statement refuting the allegations, reaffirming, 'The world is going through a real pandemic. The description of it as a fake is wrong and irresponsible' (WHO 2010b). The statement nonetheless proved insufficient to dispel public disquiet, and both the Council of Europe and the *British Medical Journal* initiated inquiries to ascertain whether the WHO had been improperly influenced into declaring a pandemic. In April 2010, before the findings of these inquiries were handed down, the director-general announced that an additional, independent external review would be held to examine the WHO's management of the 2009 H1N1 pandemic and appointed Dr Harvey Fineberg from the US Institute of Medicine to oversee the investigation (Davies et al. 2015). Although the inquiries ultimately failed to identify any improper conduct, Director-General Chan accepted the need to review the organization's policies and procedures in light of the criticisms that emerged (WHO 2011c), resulting in several reports to the WHA detailing the measures taken (WHO 2012a, 2012b, 2013a, 2014f).

It could be appreciated, therefore, that unlike the 2003 SARS outbreak the 2009 H1N1 pandemic was not a resounding political success for the WHO secretariat in spite of its epidemiological outcome. The IO's handling of the crisis was heavily criticized from several directions over a perceived lack of openness and transparency in the secretariat's decision-making processes. These criticisms adversely affected the WHO secretariat's credibility, evidenced by the fact that no less than three external investigations were launched to establish whether corporate interests had unduly influenced the IO. The criticisms levelled at the WHO secretariat also had two further consequences, serving to firstly divert the secretariat's attention and energy into defending the

organization and, secondly, to make the IO even less willing to criticize a select number of member states that openly – and in some instances, unapologetically – contravened the IHR (2005) agreement.

As noted earlier, for example, following the revelation that a novel influenza virus with pandemic potential of Mexican origin was spreading internationally, a number of countries responded by quarantining Mexican citizens and travellers from Mexico, irrespective of whether or not they were exhibiting any symptoms of the disease. Some other governments cancelled all international flights to and from Mexico, with a few even extending equivalent bans to all flights from North America. Added to this, in the wake of the WHO secretariat's decision to label the disease 'swine flu' on 24 April 2009 (presumably to avoid the risk that it would become known as the 'Mexican Flu' and the damage that would ensue to Mexico's economy were that association to affix), several governments immediately applied importation bans on live pigs and pork products, and a small number slaughtered existing livestock. As soon as this information came to light, the WHO secretariat attempted to counter these measures by issuing a statement on 27 April 2009 that travel restrictions were not warranted and that there was no risk of infection 'from consumption of well-cooked pork and pork products' (WHO 2009j). Yet despite that these statements were reissued and intermittently repeated (WHO 2009v), and although the WHO secretariat refrained from ever again referring to the disease as 'swine flu' from 29 April onwards, throughout the pandemic approximately 20 to 30 countries retained these trade import bans on pork and pork products.

Not surprisingly, countries that were large pork exporters immediately decried the bans, citing the need to ensure measures were based on scientific evidence as stipulated in the revised IHR – evidence, critically, which was absent. Yet while other member states joined with the pork-exporting countries in condemning the actions of those that imposed the bans (Davies et al. 2015), rather than join with the majority of its principals the WHO secretariat elected instead to simply reiterate its earlier statements on the safety of well-cooked pork and pork products. This, it has to be said, was to many a somewhat unexpected development, given the forcefulness with which the WHO secretariat had responded to China's actions throughout SARS and given the fact that under the IHR (2005) the IO had been officially imbued – for the first time – with the authority to publicly 'name and shame' countries that did not comply with the object and purpose of the revised cooperation framework. Equally, however, when viewed against the IO's traditional reluctance to criticize or even be perceived to be critical of its

member states, the WHO secretariat's actions were entirely consistent with the organization's classical approach to disease eradication. The corollary of the secretariat's reticence to utilize its new 'name and shame' powers, left those countries adversely affected by the trade and travel bans little recourse other than to raise their objections within the context of the WTO's dispute resolution forum (WTO 2011).

So what explains the WHO secretariat's feeble defence of the revised IHR (2005) framework and its unwillingness to defend its newly fortified global health security authority? Conceivably, as in the case of the WHO's management of the H5N1 crisis, a variety of internal and external factors may have been involved. For example, a large proportion of the countries that applied trade importation bans on pork and pork products were observed to comprise Muslim-majority populations. Although it remains unlikely to have been the only cause, it nevertheless may have been that the WHO secretariat refrained from publicly criticizing member states, fearing that any criticisms might be interpreted as anti-Islamic and/or religiously motivated. For an IO that is fiercely protective of its assumed impartial, apolitical reputation, such an outcome would be especially damaging and therefore worth avoiding.

Another important consideration may have been the identity of those member states that applied excessive additional health measures and their pre-existing relationship with the WHO. One of the countries, for instance, that instituted trade import bans (as well as taking the rather unusual measure of slaughtering its entire pig population following the announcement that the virus was of porcine origin) was Egypt. Yet, since the 1950s, Egypt has hosted the WHO regional office for the Eastern Mediterranean (EMRO) and in this role has often sought to serve as a regional leader in advocating compliance with the IO's programmes, policies, and procedures. In this regard, for many years Egypt has operated as a proximal principal to the WHO secretariat, and the IO may have been justifiably concerned that its severe criticism of those member states that contravened the IHR (2005) protocols might further antagonize the Egyptian government and thereby damage relations with EMRO.

Similarly, another country that was observed to apply trade import bans on pork and pork products was Indonesia, which since 2007 had enjoyed a somewhat strained relationship with the WHO secretariat over what was described as 'a breakdown of mutual trust' (Sedyaningsih et al. 2008). The dispute between Indonesia and the WHO paradoxically arose as a direct consequence of the securitization of pandemic influenza and was eventually resolved (see Elbe 2010a, Kamradt-Scott 2013),

but in 2009, at the height of the H1N1 influenza pandemic, tensions remained. Indonesia, like Egypt, had also actively cultivated its regional leadership credentials, including (as will be explored in greater depth in the next chapter) adopting an adversarial position towards the WHO's reframing of its public health mandate under a security rubric. Accordingly, the WHO secretariat may have been concerned that strident criticisms of any government's actions may further harm not only its direct relationship with Indonesia, but also the IO's engagement with other countries in the region.

A third possible explanation may be that the WHO secretariat, aware of the lack of enforcement mechanisms to ensure member state compliance with the IHR (2005), simply decided that it was powerless to affect any change in behaviour. Admittedly, this account is probably considered the least plausible, if only for the fact that the WHO secretariat had worked so tirelessly to see the IHR – and by implication, its own global health security authority and powers – revised and updated. It would also be inconsistent with the decade-long trajectory of the WHO secretariat actively seeking to influence state behaviour via the promotion, adoption, and internalization of new global health security norms (see Davies et al. 2015). Having said this, it must be acknowledged that by 2009 several members of the WHO secretariat's epistemic community that had been so instrumental in promoting the IO's new risk management approach – individuals such as David Heymann, Mike Ryan, Sandy Cocksedge, Guénaél Rodier, and others – had either left the IO entirely or moved portfolios, resulting in a change of personnel that may have held different views on the ability of the WHO to affect change.

Arguably, the most compelling explanation is that the WHO secretariat had internalized the lessons learned from SARS and adopted a 'small target' approach to prevent further principal retaliation. The director-general must have been aware, for instance, of the extent to which even 'friendly' member states had expressed concern over the level of IO autonomy displayed by the WHO in the context of SARS and the measures then taken collectively by principals throughout the IHR IGWG to prevent a repeat of such behaviour. More specifically, although at the time the majority of member states were supportive of the WHO secretariat's public critique of the Chinese government over its attempted subterfuge and mishandling of SARS, equally no member state wanted to be subjected to a similar experience. This led directly to the new requirement under the IHR (2005) for the director-general to convene an IHR Emergency Committee comprised of government-nominated experts with which s/he is obliged to consult. Against this background,

it is entirely plausible that the WHO secretariat was reluctant to risk antagonizing even a small proportion of member states in the context of the 2009 H1N1 pandemic – irrespective of whether they were proximal or distal principals – over fear that it might lead to retribution and a further reduction of IO autonomy and authority. In such a scenario, the director-general may very well have weighed the costs and benefits involved and determined that strident criticism of governments over their adoption of excessive (albeit limited) additional health measures was simply not in the long-term interests of the WHO.

Of course, even if the above account is considered the most credible, it is nevertheless conjectural. What is important to appreciate is that the WHO secretariat's actions – or more specifically, lack of action – in condemning those member states that flagrantly contravened the IHR (2005) during the H1N1 pandemic fundamentally undermined the revised framework at its very first investiture. If, as suppositioned above, the director-general did favour protecting the IO's post-IGWG autonomy over and above the revised IHR, then regrettably it was done so at the cost of the very framework the WHO secretariat had worked so hard to re-establish.

## **Conclusion**

As this chapter has sought to highlight, the WHO secretariat's first attempts to respond to the menace of pandemic influenza very much reflected the IO's classical approach to disease eradication. Indeed, when the WHO secretariat established the governance structures in the 1950s to monitor the disease, they were designed explicitly in such a way as to help the IO consolidate the available epidemiological intelligence, which it would then disseminate via weekly publication. While the organization's policy advice to governments was initially very limited due to the uncertain benefit of influenza vaccines, intriguingly, when the efficacy of pharmacological interventions was proven, the WHO secretariat immediately sought to divest (shirk) some of its responsibilities for global management of the threat by encouraging member states to build pharmaceutical manufacturing capacity and thereby take ownership of the problem. Critically, however, during most of the 20th century the WHO secretariat avoided evaluating member states' compliance with this advice. In this regard, the IO settled comfortably into its coordinating role, shunning the opportunity to direct, assess, or critique its principals on their performance.

By the late 1990s, however, a very different situation was emerging, which required the WHO to adjust its approach. The 1997 outbreak of



H5N1 in Hong Kong and its reappearance in the wake of SARS fed directly into a broader, now-established narrative of the 'threat' from emerging and re-emerging infectious diseases. In response, the WHO secretariat recognized that it needed to rapidly upscale its real-time epidemic intelligence, policy adviser, and overall coordination efforts. Moreover, as the chapter has evidenced, the WHO secretariat became acutely aware that this 'threat' narrative assisted in securing additional political attention and resources, and so, after initially testing the waters with the passage of resolution WHA54.14, the IO actively began to promulgate the securitization of public health hazards and particularly pandemic influenza. Member states, persuaded by the WHO secretariat's securitizing moves, allocated literally billions of dollars, passed new legislation, and amended existing or built new national, regional, and international governance structures to strengthen global pandemic preparedness. Within this context, the WHO was expected (and willingly assumed) a global coordination role despite the proliferation of actors now engaged in preparedness activities. Importantly, however, the IO was careful to avoid repeating its SARS-inspired role of government assessor and critic, as the reappearance of the pandemic influenza threat coincided with the IHR revision process in which the IO's autonomy and its new approach to managing global health security was being intensely scrutinized.

What the chapter has additionally sought to elicit is that in the wake of the IHR revision process the WHO's global health security mandate and its disease eradication delegation contract has once again undergone revision. On the one hand, the IO's principals intentionally used the IHR IGWG to impose a range of new control mechanisms on the WHO secretariat to prevent unintended IO autonomy and slippage. On the other hand, however, as evidenced by its actions in the context of the 2009 H1N1 influenza pandemic, the WHO secretariat – including, importantly, the director-general – appear to have constrained their own behaviour, presumably in an attempt to avoid the imposition of yet further limits on the organization's autonomy and/or amendments to its delegation contract. How these developments will manifest in the WHO secretariat's management of future public health emergencies remains decidedly unclear. But what is apparent is that while the WHO's adoption of the health security agenda was initially welcomed, in the wake of the IHR revision process there has been growing dissatisfaction amongst some principals over the secretariat's reframing exercise, which is the topic of the next chapter.