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The Rise and Fall of the US-China Health Relationship

Deborah Seligsohn

US-China health cooperation reaches back to the signing of the bilateral Science and Technology Umbrella Agreement, their first agreement after normalization of diplomatic relations in 1979. Bilateral cooperation has shaped the China Center for Disease Control and Prevention (China CDC) and produced some of the world's finest epidemiological research over the last thirty years. US-China research and technical cooperation has covered the full range of health-related topics, with no area given more attention than research and technical cooperation on emerging infectious diseases. In the wake of the outbreak of severe acute respiratory syndrome (SARS), the United States ramped up the staff presence of its Center for Disease Control (CDC) in China. Although this changed in the Obama years, as China's epidemiological capacity developed rapidly, the dramatic shift occurred with the Trump administration, whose cuts, just as COVID-19 arose as the largest epidemiological threat to the world in a century, left only a skeleton staff in place, and the US government without eyes and ears on the ground. Nonetheless, there is a reservoir of mutual respect and willingness to cooperate among the health professionals in both countries. If there is political will, this could become the foundation for a next-phase bilateral health relationship.

Keywords: *COVID-19, China, public health, US-China relations, international relations, health diplomacy, CDC, WHO.*

THE US-CHINA GOVERNMENT-TO-GOVERNMENT HEALTH RELATIONSHIP WAS built over decades through a combination of careful nurturing of relationships, financial support for key projects and high-level support for cooperative programs. The current Chinese public health approach is based heavily on lessons shared between the United States Centers for Disease Control and Prevention (US CDC) and what became China CDC. That relationship began with specific projects, but ultimately was built up into a permanent office with approximately fifty US CDC staff

in Beijing who worked in collaboration with China CDC, the various provincial CDCs, and Chinese centers of academic medicine. Most of the US staff was withdrawn during the first three years of the Trump administration, signaling to the Chinese government significantly less US interest and support for health cooperation and leaving US CDC with few eyes and ears on the ground to assess and prepare for the COVID-19 pandemic.

The US-China health relationship had three phases. The first was the *relationship-building phase*, 1979–2002, which began with US-China diplomatic normalization and developed through both project-based cooperation and US CDC advice on how to build Chinese public health infrastructure. Headline successes were transformative epidemiological work on birth defects and the establishment of China CDC. The second phase focused on *building infrastructure* for the long term, 2003–2016. SARS transformed the relationship as the Chinese government realized it needed to increase its own public health investment and get advice from international experts. SARS also elevated US concern about emerging infectious diseases to the highest level. The third phase, 2017–2020, has been one of *deteriorating relations*. The United States focused on trade and security and, until the COVID-19 crisis, health was ignored. Most US public health personnel in China were withdrawn, and cooperative activity diminished considerably. Both governments at times descended into a war of words over COVID-19.

This article will discuss each of these three phases in detail, as well as the two major epidemics that have been key drivers of change. The divide between the slow building phase and the more mature bilateral relationship was SARS, a disease that transformed China's approach to public health and the US government's level of concern for emerging disease detection. The shift from that phase to the declining phase of the relationship resulted from the election of President Trump, who did not have as much interest as his predecessors in supporting international public health. This weakened health relationship went largely unnoticed until the shock of COVID-19, when the United States found itself without eyes and ears to inform it of what was happening with the pandemic in China. I will discuss what might be a possible way to build a new health relationship given the state of current US-China bilateral relations.

Phase 1: Getting to Know Each Other

The US-China Science and Technology Cooperation Umbrella Agreement (STC) was signed in 1979, the first agreement under normalization (Jin 2003). Cooperation began almost immediately with the signing of a Health and Human Services Protocol (Bureau of Oceans and International Environmental and Scientific Affairs 2006) and a visit to China by heads of US science agencies, including both the National Institutes of Health (NIH) and a representative of the CDC director. US CDC saw the need and the opportunity for greater epidemiological collaboration in China.

Two types of opportunities presented themselves. The first was to collaborate with the Chinese on specific health issues. Here, the pioneer was Dr. Godfrey P. Oakley, Jr., director of the Division of Birth Defects and Developmental Disabilities. Oakley championed a neural tube project that ultimately involved a quarter million mothers and their babies in a long-term randomized control trial that eventually saved millions of babies (Kowal 2015; US CDC Office of Science 2016). The second was to help the Chinese create a true public health infrastructure. This work was led by Dr. Jeff Koplan, later US CDC director from 1998 to 2002. Koplan focused on developing in China the capacities that made US CDC the world's premier epidemiological institution, a combination of field and lab expertise and the ability to respond to outbreaks in real time (Author video interview with Dr. Jeff Koplan, July 13, 2020).

Relationships between US and Chinese experts developed during visits and even lengthy stays, in both Beijing and Atlanta. One early project partner even lived with his American partner in Atlanta (US CDC Office of Science 2016). US CDC's work was often integrated into the work of international organizations. The World Health Organization (WHO) and World Bank both brought US CDC doctors to China. WHO sponsored a program focused on what it called a "risk approach," and sent a CDC expert assigned to Geneva, Dr. Brian McCarthy, to run it (Kowal 2015). The idea behind the risk approach was to help local Chinese health authorities record data and then use the data to determine the greatest public health challenges (Author video interview with Dr. Robert J. Berry, July 17, 2020). At the same time, when acting as a technical advisor on a number of World Bank loans, Dr. Koplan established a relationship with the Chinese Academy of Preventive Medicine (CAPM), the organization that ultimately became China CDC.

To develop support in China, create the relationships, and raise funding for the birth defect study required much of a decade, but ultimately it

proved to be a landmark in randomly controlled trials while establishing folic acid as a critical nutritional supplement to ensure healthy babies. The research also established modalities for data collection in rural China. Starting with training in the “risk approach,” Chinese health officials were encouraged to collect data systematically, so that they could look for problems in the overall population. Then Dr. Berry, the China-based US advisor to the study, trained Chinese health officials to use computers to input data, and ultimately helped them leapfrog (Fong 2009) the fax-dependent approach still extant in the United States (Kliff and Sanger-Katz 2020) to a centralized computer-based data-collection system (Kowal 2015; Author video interview with Berry, July 17, 2020; and Author audio interview with Dr. Wu Zunyou, July 16, 2020).

CDC’s early partners, including for the birth defects study, were academic institutions. Koplan and others from CDC wanted to encourage the development of a public health agency with a core budget rather than one driven by research grants. After first being paired with the Shanghai No. 1 Medical College, US CDC was later assigned to partner with the Chinese Academy of Preventative Medicine (CAPM), a research institute based on the old Soviet model and conveniently located in Beijing. Because China had no CDC equivalent, Koplan took it as his mission to educate his counterparts on US CDC’s functions and the logic behind them. He advocated that China develop an elite national institution with both field and laboratory capacity that then would provide advice and assistance to subnational public health agencies. An academy like CAPM, dependent on grants, didn’t have the rapid response capability needed to respond in real time to disease outbreaks and to provide comprehensive regular guidance to subnational public health entities. Through visits, training, and high-level engagement, CDC helped CAPM build the case for a Chinese CDC. In 2001 CAPM was authorized to officially change its name to China CDC.

During this period of the 1990s, US CDC was able to help improve Chinese public health, often through programs integrated with international organizations. CDC employees seconded to WHO and UNICEF helped improve childhood vaccination worldwide. Beginning in 1986–1987, CDC personnel trained Chinese personnel in flu sample collection and analysis for WHO’s global influenza surveillance effort (anonymous audio interview, July 30, 2020). Dr. Koplan became head of US CDC in 1998 and continued his focus on China. In 2001 he helped CAPM establish a Field Epidemiology Training Program (FETP). US CDC has helped set up FETPs in over seventy countries around the world to provide hands-on field epidemiology training (US CDC Global

Health n.d.). FETP was headed by a Chinese director, while US CDC staff working on other projects acted as advisors and instructors. Under ideal circumstances there would have been a permanent assignee to help get the program moving, but in 2001 neither US CDC nor CAPM had the resources.

CAPM studied public health institutions around the world and concluded that the US CDC model suited them best. In 2002, China CDC was formed. (Lee 2004; Mason 2016) Thus, on the eve of the SARS outbreak, China had a brand-new public health organization, a CDC, that finally had a core budget, that was not focused on research grants, and that had several dozen staff trained in field epidemiology. However, China CDC was still small and weak. A number of CDCs in wealthy coastal provinces were already better financed, had more staff, and were unlikely to turn to the national CDC for advice or to report to them on disease in a timely manner (Schwartz, Evans, and Greenberg 2007).

SARS Changed Everything

In the late fall and winter of 2002 rumors began to circulate of a new and surprisingly fatal disease in Guangdong province. Locals warned each other in text messages to stay away from hospitals. WHO did not hear about the outbreak until February 10, 2003, when it received a note about the rumor, subsequently confirming it with China's Ministry of Health (MOH). (Only later was the first case identified as having occurred in Foshan, Guangdong in November 2002.) China's MOH began reporting cases of atypical pneumonia to WHO, but did so indicating that it was "under control." At the end of February 2003, cases emerged in Hong Kong, Hanoi, Toronto, and Vietnam, where the patient was treated by a WHO physician. WHO and the international community started pressuring the Chinese government to be more forthcoming on this new disease. Little was known about it, and it was not until April that the actual virus causing it, SARS-COV-1, was identified (World Health Organization 2020d).

The first WHO team of three top experts, including US CDC's lead influenza epidemiologist Dr. Keiji Fukuda, arrived in China February 23, 2003. Initially, they were allowed only in Beijing (Lundberg 2013), but were permitted to visit Guangzhou, March 4 (Schnur 2006). WHO issued its first global alert for SARS on March 13. By then the disease had spread to more than a half-dozen countries. In mid-March, China also provided its first brief report on the Guangdong situation, again

stating it had tapered off. During much of March the global infectious disease community debated what the disease was. WHO had initially been concerned that it was a virulent form of influenza, especially because there had been a large outbreak of H5N1 in Hong Kong in 1997 (Lundberg 2013; Fukuda video interview, July 22, 2020). By March, scientists in Singapore had identified it as a coronavirus. China CDC, however, mistakenly insisted the pathogen was a type of chlamydia until the end of March, and it was only then that it agreed that the cases in Guangdong were all SARS.

A second WHO team arrived in Beijing on March 23, after the United States had also seen its first SARS case, to ask for permission to visit Guangdong province. They again had to wait for permission to travel to Guangdong. As they waited, on April 2 WHO issued the strictest travel warning in its history for Hong Kong and Guangdong (Lundberg 2013). The travel warnings may have acted as pressure on the Chinese government to respond to the WHO request for authorization to visit Guangdong (anonymous audio interview, July 11, 2020), as the team was authorized to visit Guangdong April 3. This second team included two US CDC experts, along with one expert each from Germany and the United Kingdom, accompanied by two from the WHO Beijing office. The team determined that Guangdong had the outbreak under control; however, it was concerned that other provinces, and especially Beijing did not (Lundberg 2013).

The Chinese still had not provided data to WHO on other provinces, but rumors were widespread in Beijing that SARS was already there. WHO later identified Beijing residents who had traveled to Hong Kong and returned to the city infected in mid-March. The Beijing epidemic ultimately was revealed in part through a whistleblower, Dr. Jiang Yanyong, and in part through the WHO team's dogged visits to Beijing hospitals from April 10 to 15. It was not until April 15 that they heard about, but did not see, SARS patients at some of China's military hospitals. By this time, Vice Premier Wu Yi was personally involved, meeting with the WHO country representative and team in early April. On April 20, the Chinese government fired both the Beijing mayor and the health minister and appointed Vice Premier Wu Yi to serve concurrently as the health minister. With Wu Yi in charge, the health ministry had access to the highest decision-making levels, and the central government had full access to health information (chronology based on World Health Organization n.d.; interviews with those there at the time and personal observation).

Prior to April 20, it was difficult for the United States to get information. The Chinese central government—both the MOH and CDC—itsself had trouble obtaining clear data from the provinces. But the United States was able to liaise informally with its CDC staff and visitors in country. Moreover, all WHO teams included US CDC experts. Kurt Tong, then the embassy science counselor, cited Dr. Keiji Fukuda from the first WHO mission as particularly helpful (Tong audio interview, July 10, 2020). Fukuda described his membership in the WHO team rather than as a representative of CDC as a balancing act, but said that each of the team members did brief their home embassies (Fukuda video interview, July 22, 2020). CDC's close relationship with WHO and support for the WHO mission helped give it a window into developments in the SARS epidemic.

Once the Chinese government publicly acknowledged the extent of the problem, closing Beijing's schools and implementing social distancing, the doors opened for WHO experts. WHO organized expert teams to advise China CDC and provincial CDCs. They helped them set up proper testing, contact tracing, and data reporting protocols. There were perhaps forty US CDC experts seconded to WHO providing technical assistance, comprising half the total number of additional experts staffing WHO during this period (personal recollection as the US Embassy Science Counselor from June 2003 to August 2007; Fukuda video interview, July 22, 2020).

Only eighteen days after the Chinese government acknowledged the Beijing outbreak, on May 8, the epidemic peaked, and then declined so rapidly that WHO lifted the travel advisories on all of mainland China by June 24 and elsewhere by July 5. The SARS epidemic was over.

Phase 2: Post-SARS, The US-China Relationship Blossoms

In the wake of SARS, public health cooperation rose to the top of the bilateral agenda. Within months, both CDC director Julie Gerberding and US Health and Human Services (HHS) secretary Tommy Thompson visited Beijing. The United States and China began negotiating to establish long-term advisory personnel in Beijing focused on emerging infectious diseases. At the same time, CDC finally assigned a permanent advisor to the FETP. The advisor's arrival enabled China CDC to rapidly increase the number of its trainees, who then were assigned to CDC offices throughout China. At the same time HHS also assigned its

first permanent health attaché to Beijing. CDC's Global AIDS Program (GAP) also opened in the spring of 2003. Thus, in short order the health presence in Beijing doubled. It then began to grow even more as the GAP program hired local staff.

China CDC also grew rapidly. It hired recent graduates, including some with US degrees, developed training programs, built new labs, and established a nationwide disease-reporting system that fed data uploaded at local hospitals directly to CDCs at all levels and to the MOH.

In the winter of 2003 and into 2004, China faced one of its most serious H5N1 bird flu outbreaks, killing thousands of birds and requiring much larger culls. There were serious illnesses and deaths in China, Thailand, Vietnam, and Indonesia. Although SARS had been a wakeup call, experts continued to believe that the most likely pandemic would be an influenza, as in 1918. This H5N1 outbreak so soon after SARS heightened US CDC and WHO interest in increasing technical assistance to China (Fukuda video, July 22, 2020). At the same time, China CDC's response to the H5N1 outbreak demonstrated its increased capacity and transparency. Human cases of bird flu were identified quickly and reported through the new system and to WHO (anonymous audio interview, July 11, 2020).

Both the US and Chinese sides required buy-in not just from their respective CDCs, but also from HHS and MOH, as well as from senior leaders in both governments. People involved in the process at both China CDC and MOH described intensive documentation to obtain both Ministry of Foreign Affairs (MFA) and leadership support. In Washington, HHS wanted an HHS-wide program, not just a CDC program. This coincided with a MFA desire for a program office, rather than a United States government department office (anonymous video interview, July 9, 2020). In November 2005, the two governments signed a Memorandum of Understanding (MOU) for an Emerging Infectious Disease (EID) program involving CDC, NIH, and the Food and Drug Administration (FDA) on the US side, and MOH, China CDC, and the State Food and Drug Administration (SFDA) for China. The agreement enabled technical exchange, support for improving laboratories and surveillance, training, and joint research. The agreement created a project office at China CDC, as well as an affiliation with the US Embassy (Bureau of Oceans and International Environmental and Scientific Affairs 2006; HHS 2005; Memorandum of Understanding 2010).

Both American and Chinese interlocutors describe the ensuing years as particularly productive. China CDC rapidly gained resources and applied them to developing a US CDC-type model. Moreover, the

provincial CDC's also expanded and, through programs like FETP and the GAP, received direct training. Wu Zunyou, now chief epidemiologist at China CDC, notes that scientists gained better access to senior officials than they had had before SARS. At a meeting with Wu Yi, a senior scientist suggested that AIDS should be the top goal after SARS (Beech 2004; Wu 2020). The United States provided assistance through CDC GAP as well as a USAID program administered from Bangkok. Progress on HIV/AIDS was striking. While the UNDP in 2002 had predicted 10 million cases by 2010, a more careful epidemiological study run by UNAIDS in 2005 found 650,000 people to be living with HIV/AIDS and estimated likely growth to 1.5 million by 2010. That the total number of people living with HIV/AIDS in 2015 was estimated at 850,000 demonstrates China's tremendous success in HIV/AIDS prevention and treatment (Wu 2020). Indeed, although China has four times the US population, it had fewer cases than in the United States. Other programs flourished as well, including rapid growth in flu surveillance, with hundreds of new sites and thousands of new trainees (Bouey 2020).

Despite improvements to its budget, China CDC still needed outside funding during the first decade of the 2000s. US CDC not only provided funding for its projects, it helped China CDC write grant applications for the Global Fund for AIDS, TB and Malaria, a huge international fund created by the wealthy donor countries. China had not received any money in the first two Global Fund funding rounds, and CDC GAP worked closely with them to draft successful projects for the third. Within a couple of years, the China CDC became the second largest grant recipient (anonymous audio interview, July 8, 2020 and personal observation from author's time serving as Environment, Science, Technology and Health Counselor at the US Embassy in Beijing, 2003–2007).

While the US-China CDC collaboration was close, it was easily derailed by issues in the overall relationship. My impression while working at the US Embassy in Beijing at the time, which was confirmed with interviews with former MOH and CDC employees in July 2020, was that MOH dreaded any attention from MFA. If health became political, which tended to mean that it touched on Taiwan, their bureaucratic workload shot up and their ability to actually conduct health cooperation plummeted. The relationship experienced considerable friction when US HHS Secretary Thompson shook hands with Taiwan's health minister at the May 2004 World Health Assembly in Geneva. This gesture went beyond what Beijing had expected to occur when Taipei gained observer status. Moving past this issue and getting the EID negotiations back on track took at least six months, despite the overall warmth of the

relationship (anonymous audio interview, July 11, 2020 and personal recollection).

The transition from the Bush to the Obama administration went smoothly for US-China cooperation on infectious disease. Programs continued and, especially after the H1N1 epidemic of 2009, President Barack Obama took global public health as seriously as had President George W. Bush. The EID continued to grow, with CDC Beijing ultimately totaling about fifty staff, including both US and Chinese nationals. Toward the latter years of the Obama administration, the US began planning to draw down the GAP program given China's success in controlling HIV/AIDS. China CDC believed that overall US funding was more limited than it had been earlier (anonymous audio interview, July 16, 2020). At the same time, however, the two countries began to discuss working together internationally.

The US and China first collaborated in the field during the 2014 West African Ebola epidemic. The Chinese team was led by Dr. George Gao (National Academy of Sciences Member Directory), who now heads China CDC. By all accounts US-China cooperation in Sierra Leone was cordial and productive. The two countries followed up the positive experience by signing an MOU to work together to support the Africa Centers for Disease Control and Prevention (USTR Archives 2016). However, these developments took place late in the Obama administration; there does not appear to have been bilateral cooperation in third countries since.

By the end of the Obama administration, the bilateral relationship had changed from where it had been during the years immediately after SARS. The intensity of government-to-government health interaction had declined and, in the words of one Chinese interlocutor, the relationship became more "formal." This may have been due to MFA preference, or the change to the Xi Jinping administration, or both. The Americans also were ensconced in their large embassy, now much farther away from China CDC, which had moved to the distant suburbs. All this made for less contact. But US CDC also had a much larger Chinese staff—reaching forty-one—almost all of whom were public health experts from different CDCs around the country. They were a critical part of US CDC's ability to get information about what was going on in China.

By this time, China CDC did not need US CDC as much as it had before. Almost everyone I spoke to, both Chinese and American, felt that there were still gaps that US CDC could usefully fill, but there was little agreement on what precisely these gaps were. Perhaps the best

description was from Dr. Keiji Fukuda, who suggested that technical assistance and training are never 100 percent useful; there will always be some mismatch. But, he suggested, if a decade ago such assistance was 80 percent useful and 20 percent not helpful, the ratio had reversed. Moreover, MOH and CDC no longer needed nor were likely to get international aid dollars. In fact, donors hoped the Chinese would coordinate their own giving with them—hence the Africa CDC MOU.

Thus, at the end of the Obama administration, there was a large US institutional presence in Beijing, but less frequent interaction with Chinese counterparts than in earlier years. China CDC's infrastructure of disease detection and surveillance had been built up significantly. But there were cracks: Just as the United States had started to spend less on public health after the 2008 recession, the Chinese were also investing less than they had in the buildup after SARS (Bouey 2020). This led to varying capacity, with wealthier provinces better resourced than both poorer provinces and the central CDC. This problem of an under-resourced central CDC concerned US experts. They felt continuing high-level engagement was key to making the case for this funding to the Chinese leadership.

There also continued to be the legacy of CDC's origins as a research laboratory. The current head of China CDC, Dr. George Gao is a world-renowned scientist and a member of the US National Academy of Sciences. However, Dr. Gao is a bench scientist rather than an epidemiologist. Various interlocutors expressed concern that China CDC still overemphasized research and academic publication in comparison with basic epidemiological work. Determining a pathogen's DNA may seem more exciting than getting a patient's exact demographic details. The Chinese system heavily weights academic publications in promotion, and academic publication rewards bench science most highly.

Phase 3: The Trump Administration— Saying Goodbye

The Trump administration began with skepticism toward all aspects of the US-China relationship, including public health. By eliminating the National Security Council's (NSC) Global Health and Security Directorate and cutting the US CDC budget (Garrett 2020; Reichmann 2020), no one was left to advocate for continued health engagement anywhere in the world, and US CDC was forced to make hard choices about where to cut staff and programs (Sun 2018). At the same time, relations with

China became increasingly tense and were focused almost entirely on trade. Science cooperation with China was framed around intellectual property theft (Gurtov and Selden 2019; Medeiros 2019; Swanson 2019; US-China Economic and Security Review Commission 2019).

Without minimizing the importance of intellectual property protection, the longstanding view of most scientists in the United States has been that scientific cooperation benefits both countries. The Chinese research establishment had developed to the point where many scientists in the United States wanted to collaborate with Chinese partners in order to do the best science. Moreover, in health, if you are looking for pathogens, you need to go to where they are. If you want to test new drugs or vaccines, it has to be in a population that experiences the disease. Deliberately cutting the United States off from China left the United States less prepared to address disease risks to the US public.

By the end of 2019, US CDC had only a skeleton staff in Beijing. It had one or at most two US assignees left at the embassy, along with the long-term childhood immunization expert seconded to WHO, as well as a mere handful of local hires. The tremendous wealth of experience that had existed, with its connections all over China, was gone. The FETP trainer, the American who had the direct connection to trainees throughout China, had left in the summer of 2019, not to be replaced (Taylor 2020). High-level contact was also minimal. The Trump administration had suspended the cabinet-level dialogues that during the two previous administrations ensured that the health ministers met at least once a year. As a result, the United States had few points of government access to what was happening in China were a pandemic threat to arise.

COVID-19: Everyone's Nightmare

In 2014, President Obama said, “There may and likely will come a time in which we have both an airborne disease that is deadly, and in order for us to deal with that effectively we have to put in place an infrastructure, not just here at home but globally, that allows us to see it quickly, isolate it quickly, respond to it quickly, so that if and when a new strain of flu like the Spanish flu crops up five years from now or a decade from now, we’ve made the investment and we’re further along to be able to catch it” (Lee 2020). And so, COVID-19 emerged in the vicinity of Wuhan in November 2019. It appears not to have been identified as a new pathogen until sometime in December. The world first learned about it from a notice WHO Beijing spotted on a Wuhan government website on

December 31 (World Health Organization 2020c). WHO requested information from the Chinese government on January 1, 2020, and alerted the Global Outbreak Alert and Response Network (GOARN), of which CDC Atlanta is a member, on January 2.

Not only did the Chinese provide a report to WHO on January 3, the heads of China and US CDCs also had a telephone call that very day (Kessler 2020). On January 6, US CDC director Robert Redfield followed up with an offer of US assistance “in identification of this unknown and possibly novel pathogen” (FOIA 2020, 14). But China CDC was already within days of identifying the pathogen. It informed WHO of a novel coronavirus on January 9, and then published the DNA sequence on January 11 (Cohen 2020a). On the same day, the Chinese government also announced the first death from the disease.

While the scientific data came out fairly promptly, case information in the first half of January 2020 was sparse. The Chinese reported a number of cases on January 3 and then did not report new cases for weeks. Starting January 11, they reported zero new cases daily to WHO. This changed January 20, when Xi first spoke about the outbreak publicly, and China began reporting regular numbers to WHO. WHO also made its first apparently limited visit to Wuhan on January 20 and 21 (World Health Organization 2020a). There clearly was a cover-up, although it is less clear who was covering up what from whom. Dali Yang (2020) argues that local officials hid cases even from central teams sent down to investigate the outbreak. A separate report from CNN (Griffiths 2020) cites a party document that suggests that Xi learned about the outbreak on January 7, raising the possibility that he knew more, or that the local authorities hid information even from him.

Of greatest concern, the Chinese were quite late in recognizing the fact and the efficiency of human-to-human transmission. Fukuda, the flu specialist who worked closely with his counterparts during SARS, suggests that there were two reasons for this. First, there was the universal reluctance to report bad news to the boss. Wuhan authorities acknowledged the outbreak, but then wanted to report that it was under control, just as Guangdong and then Beijing authorities had during SARS. But Fukuda also wonders if another reason was that China CDC simply had not outgrown its lab origins sufficiently. Although it failed to keep track of the number of cases and didn’t express enough skepticism that cases would suddenly drop to zero, it was also working very hard to identify the virus and its genome. Thus, the gap was in the very area the United States had just depleted through its cuts to EID and its pulling the FETP advisor.

The Chinese dealt with their coverup and moved to control the epidemic much more rapidly than they had during SARS, but COVID-19 turns out to be a much more infectious disease. By the time the Chinese focused on the severity of the outbreak, cases were also reported in Japan, Thailand, and South Korea. On January 23, Wuhan went into lockdown. The United States had its first identified case on January 21, even before the Wuhan lockdown, and other countries were soon reporting cases, as well.

On January 31, President Trump halted travel from China, a move that brought a strong Chinese objection (Taylor 2020). While the Chinese were clearly incorrect in suggesting that travel restrictions were unnecessary, it now appears that the way US travel restrictions were imposed was highly counterproductive. They caused a large number of people to move rapidly back to the United States, creating crowding in airports and increasing infection. The restrictions were implemented so fast that US CDC had no time to set up to monitor returning travelers, and the restrictions were also leaky (Fallows 2020).

For the Chinese, the travel restriction came as a surprise, since Trump had repeatedly said that he trusted Xi and that China had the outbreak under control (Ward 2020). Trump continued to downplay the epidemic and to praise China. He mentioned several calls with Xi throughout January and February, but they don't appear to have advanced US interests in learning more about the virus. The administration claims it continued to offer assistance to China (Kessler 2020).

The United States had two doctors, one each from CDC and NIH, on the second WHO visit to Wuhan, from February 16 to 24 (World Health Organization 2020b). The visit provided rich detail on the level of effort needed to contain the disease. The Chinese had 1,800 teams, with a minimum of five members each, conducting contact tracing. They had set up fever clinics to isolate patients, because they found the disease clustered in families. US team members spoke publicly and to the press. However, it isn't clear how much of their experience was received by the White House since, unlike South Korea, for example, the United States did not start immediate preparations to respond to the emergency.

The widespread impression during this period, when Wuhan still had the largest number of cases in the world, was that China did badly in controlling the epidemic. But in fact, once the original communications blockages were resolved, the Chinese moved swiftly and efficiently. With more than 4 million cases in the United States in July 2020, China's 86,202 looks quite modest in comparison. Moreover, almost 80 percent of China's cases were in Hubei province, the original site of

the pandemic (Johns Hopkins University Coronavirus Resource Center data), and that percentage is likely understated, given that early cases were clearly missed. Once the Chinese identified the pathogen, they controlled it in the rest of the country. And we know that has continued because they have responded to each new outbreak in China rapidly, with testing, contact tracing, and isolation (Zhang and Woo 2020; Associated Press 2020). There seems to have been an assumption, as is exhibited in CDC director Redfield's letter, that western countries, and especially the US, had a great deal to offer China, and no clear understanding that the Chinese were rapidly becoming experts on the disease that emerged in their midst.

While the United States was hampered by its lack of government-to-government engagement in China, scientific consultation continued, including a number of high-level teleconferences with China CDC director, George Gao, and working-level contacts between doctors treating patients and scientists working on vaccines and therapeutics (Gartner 2020; International Association of National Public Health Institutes 2020; Frueh 2020; Gao 2020). At the same time, the public discourse became quite nasty, with conspiracy theories pointed in each direction. In China, rumors spread, at one point somewhat endorsed by MFA, that COVID-19 was a US Army bioweapon (Mu 2020). Meanwhile, in the United States the president tossed around epithets like "Wuhan flu" and "kung flu" and accused the Chinese of producing the virus inside one of its laboratories (BBC 2020). The laboratory origins have been generally dismissed, with both US intelligence and most scientists stating it is unlikely (Andersen et al 2020; Calisher et al 2020; Cohen 2020c; Warrick et al. 2020). The President's top aide on China, Peter Navarro, even accused the Chinese of deliberately sending sick people out to other countries to "seed" the disease (Porter 2020). This has left many Chinese scientists feeling battered and defensive about criticism from the US government and from much of the press. As one of China CDC's top virologists, a longtime recipient of NIH grants, Dr. Shao Yiming, said to *Science*, "The house was on fire" (Cohen 2020b). Chinese scientists, and indeed the general public, wanted to hear more sympathy.

By July 2020, at the time of writing, other than the gratuitous insults still lobbed at China by Trump and some of his staff, the United States was focused inward on its own tragedy. The pandemic had raged so much longer and hotter than it did in China, its place of origin. The overall bilateral relationship has grown tenser by the day, with many speculating that President Trump is trying to use China as an issue to

distract from the failure to address the COVID-19 epidemic effectively (Costa et al. 2020; Haltiwanger 2020).

Future Prospects

Both China and the United States are fundamentally different from when their public health relationship began. China began with a very weak public health system. With a great deal of US assistance, it had developed considerably over the previous thirty years. When US CDC director Redfield wrote to his counterpart, January 6, 2020, it was apparently without understanding that learning would need to be a two-way street: If we didn't study what they did, we were destined to see our own outbreaks grow out of control. As Dr. Shao said, "At the beginning, US CDC wanted to send a team, and in my view it was not a proper request. It's like US CDC was a professor and China was the student—they were not equal. When students have problems, the professor has to come help. These are equal agencies that are guiding the health of two big countries" (Cohen 2020b). After so many years of assistance, China CDC wanted the United States to recognize how prepared it was.

During SARS, China needed international help and advice to do basic things to control the disease and identify the pathogen. With COVID-19, China was able to do this on its own. But my Chinese interlocutors all said there were still areas on which they wanted to work with US counterparts, treatments and vaccines, in particular. Great science is not restricted to any one country. But Chinese scientists do not want to be treated as the students with Americans just assumed to be the professors. We can imagine that a different administration would begin by eliminating the name calling and the false blame. However, unless the US policy community can rethink its scientific relations and take a more egalitarian approach, it is going to be hard to resume the previous closeness. The United States will not only need to undertake a careful examination of how it encourages and monitors science to ensure that it does not treat normal academic exchange as potentially nefarious, but also recognize that knowledge is generated in both countries. We cannot approach a healthy scientific relationship with China with the assumption that we are always the professors. There is an opportunity after COVID-19 is conquered for the United States to be more humble, to look to the former student and say we have a lot to learn.

Notes

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References

- Andersen, Kristian G., Andrew Rambaut, W. Ian Lipkin, Edward C. Holmes, and Robert F. Garry. 2020. "The Proximal Origin of SARS-CoV-2." *Nature Medicine*, vol. 26, no. 4, pp. 450–452.
- Ashraf, Haroon. 2003. "WHO Declares Beijing to Be Free of SARS." *Lancet (London, England)*, vol. 361, no. 9376, p. 2212.
- Associated Press. 2020. "Wuhan Tests 10 Million People, Finds Few Virus Infections." June 3. www.usnews.com/news/health-news/articles/2020-06-03/wuhan-tests-10-million-people-finds-few-infections.
- BBC. 2020. "Coronavirus: Trump Stands by China Lab Origin Theory for Virus." May 1. www.bbc.com/news/world-us-canada-52496098.
- Beech, Hannah. 2004. "The 2004 Time 100: Wu Yi." *Time*, April 26. http://content.time.com/time/specials/packages/article/0,28804,1970858_1970888_1971095,00.html.
- Bouey, Jennifer. 2020. "China's Health System Reform and Global Health Strategy in the Context of COVID-19." Testimony before the US-China Economic and Security Review Commission, May 7, 2020. www.uscc.gov/sites/default/files/2020-05/Bouey_Written_Testimony_FINAL.pdf.
- Bureau of Oceans and International Environmental and Scientific Affairs, US Department of State. 2006. "U.S. China Science and Technology Cooperation (S&T Agreement): Report to Congress." Washington, DC, December. Accessed July 17, 2020. <https://2001-2009.state.gov/g/oes/rls/or/2006/96328.htm>.
- Calisher, Charles, Dennis Carroll, Rita Colwell, Ronald B. Corley, Peter Daszak, Christian Drosten, and Luis Enjuanes et al. 2020. "Statement in Support of the Scientists, Public Health Professionals, and Medical Professionals of China Combatting COVID-19." *The Lancet*, vol. 395, no. 10226 (March 7), e42-e43.

- Cohen, Jon. 2020a. "Chinese Researchers Reveal Draft Genome of Virus Implicated in Wuhan Pneumonia Outbreak." *Science*, January 11. www.sciencemag.org/news/2020/01/chinese-researchers-reveal-draft-genome-virus-implicated-wuhan-pneumonia-outbreak.
- . 2020b. "'The House Was on Fire.' Top Chinese Virologist on How China and US Have Met the Pandemic." *Science*, May 22. www.sciencemag.org/news/2020/05/house-was-fire-top-chinese-virologist-how-china-and-us-have-met-pandemic.
- . 2020c. "'Trump Owes Us an Apology.' Chinese Scientist at the Center of COVID-19 Origin Theories Speaks Out." *Science*, July 24. www.sciencemag.org/news/2020/07/trump-owes-us-apology-chinese-scientist-center-covid-19-origin-theories-speaks-out.
- Costa, Robert, Philip Rucker, Yasmeen Abutaleb, and Josh Dawsey. 2020. "Trump's May Days: A Month of Distractions and Grievances as Nation Marks Bleak Coronavirus Milestone." *Washington Post*, May 31. www.washingtonpost.com/politics/trumps-may-days-a-month-of-distractions-and-grievances-as-nation-marks-bleak-coronavirus-milestone/2020/05/31/123e7e6a-a120-11ea-81bb-c2f70f01034b_story.html.
- Fallows, James. 2020. "The 3 Weeks That Changed Everything." *The Atlantic*, June 29. www.theatlantic.com/politics/archive/2020/06/how-white-house-coronavirus-response-went-wrong/613591/.
- FOIA (Freedom of Information Act). 2020. Letter by Robert R. Redfield to Dr. George Fu Gao, January 6, 2020. HHS-CDC-20-0895-A-000012. "CDC Communications Reflecting Early January COVID-19 Call Between Director Redfield and Chinese Authorities." American Oversight, June 24, 2020, pp. 1–28. Last accessed August 28, 2020 at www.americanoversight.org/document/cdc-communications-reflecting-early-january-covid-19-call-between-director-redfield-and-chinese-authorities.
- Fong, Michelle W. L. 2009. "Technology Leapfrogging for Developing Countries." In *Encyclopedia of Information Science and Technology*, 2nd edition. New York: IGI Global, pp. 3707–3713.
- Frueh, Sara. 2020. "NAS Annual Meeting: Experts Discuss COVID-19 Pandemic and Science's Response." The National Academies of Sciences Engineering Medicine, April 27. www.nationalacademies.org/news/2020/04/nas-annual-meeting-experts-discuss-covid-19-pandemic-and-sciences-response.
- Fukuda, Keiji. 2020. "Leaving WHO Is Equivalent of Shooting Your Allies during Battle." *CNN*, July 16. www.cnn.com/2020/07/16/opinions/world-health-organization-covid-19-trump-mistake-fukuda/index.html.
- Gao, George Fu. 2020. "Lessons Learned Amid a Pandemic: How the United States and China Can Collaborate on Global Health Crises." Webinar presentation at track 2 dialogue hosted by the National Committee on US China Relations, July 20, 2020. www.apha.org/events-and-meetings/apha-calendar/webinar-events/2020/lessons-learned.

- Garrett, Laurie. 2020. "Trump Has Sabotaged America's Coronavirus Response." *Foreign Policy*, January 31. <https://foreignpolicy.com/2020/01/31/coronavirus-china-trump-united-states-public-health-emergency-response/>.
- Gartner, Lisa. 2020. "One Breath at a Time." *Philadelphia Inquirer*, April 12. www.inquirer.com/health/coronavirus/a/philadelphia-coronavirus-response-temple-university-hospital-20200412.html.
- Griffiths, James. 2020. "Did Xi Jinping Know about the Coronavirus Outbreak Earlier than First Suggested?" *CNN*, February 17. www.cnn.com/2020/02/17/asia/china-coronavirus-xi-jinping-intl-hnk/index.html.
- Gurtov, Mel, and Mark Selden. 2019. "The Dangerous New US Consensus on China and the Future of US-China Relations." *The Asia-Pacific Journal: Japan Focus*, vol. 17, no. 15 (August). <https://apjif.org/-Mel-Gurtov--Mark-Selden/5299/article.pdf>.
- Haltiwanger, John. 2020. "Republicans Are Using Racism against China to Try to Distract from Trump's Disastrous Coronavirus Response." *Business Insider*, March 19. www.businessinsider.com/trump-using-racism-against-china-to-distract-from-coronavirus-failures-2020-3.
- HHS (Health and Human Services Department). 2005. "HHS and People's Republic of China Partner to Combat Infectious Diseases." *Infection Control Today*, November 14. www.infectioncontroltoday.com/view/hhs-and-peoples-republic-china-partner-combat-infectious-diseases.
- International Association of National Public Health Institutes. 2020. "Webinar with the China Center for Disease Control and Prevention (English)." Presentation by Dr. George Fu Gao, April 15, 2020. *COVID-19 Webinar Series*. <https://ianphi.org/news/2020/covid-webinars.html>.
- Jin, Xiaoming. 2003. "The China-US Relationship in Science and Technology." In *China's Emerging Technological Trajectory in the 21st Century* forum, New York, Lally School of Management and Technology, Rensselaer Polytechnic Institute, pp. 4–6.
- Johns Hopkins University and Medicine, Coronavirus Resource Center, "COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)." <https://coronavirus.jhu.edu/map.html>.
- Kessler, Glenn. 2020. "Did Trump Offer Experts to China to Help with the Coronavirus?" *Washington Post*, April 3. www.washingtonpost.com/politics/2020/04/03/how-much-pressure-did-trump-put-china-access-concerning-coronavirus/.
- Kliff, Sarah, and Margot Sanger-Katz. 2020. "Bottleneck for US Coronavirus Response: The Fax Machine." *New York Times*, July 13. www.nytimes.com/2020/07/13/upshot/coronavirus-response-fax-machines.html.
- Kowal, Deborah. 2015. *The China-US Partnership to Prevent Spina Bifida: The Evolution of a Landmark Epidemiological Study*. Nashville, TN: Vanderbilt University Press.
- Lee, ArLuther. 2020. "Obama Warned of Pandemic Threat in 2014, but Republicans Blocked Funding." *The Atlanta Journal-Constitution*, April 16. www.ajc.com/news/obama-warned-pandemic-threat-2014-but-republicans-blocked-funding/dh2H9HxiuBY05T5uPqtqpl/.

- Lee, Liming. 2004. "The Current State of Public Health in China." *Annual Review of Public Health*, vol. 25 (April), pp. 327–339.
- Liang, Wannian, Zonghan Zhu, Jiyong Guo, Zejun Liu, Xiong He, Weigong Zhou, Daniel P. Chin, Anne Schuchat, and Beijing Joint SARS Expert Group. 2004. "Severe Acute Respiratory Syndrome, Beijing, 2003." *Emerging Infectious Diseases*, vol. 10, no. 1 (January), pp. 25–31.
- Lundberg, Kirsten. 2013. "Credible Voice: WHO-Beijing and the SARS Crisis." Mailman School of Public Health, Columbia University Case Series, Case No. MSPH-13-0004.0. February, pp. 1–21. Accessed July 21, 2020. https://ccnmtl.columbia.edu/projects/caseconsortium/casestudies/112/casestudy/files/global/112/WHO%20SARS_wm.pdf.
- Mason, Katherine. 2016. *Infectious Change: Reinventing Chinese Public Health after an Epidemic*. Stanford, CA: Stanford University Press.
- Medeiros, Evan S. 2019. "The Changing Fundamentals of US-China Relations." *Washington Quarterly*, vol. 42, no. 3, pp. 93–119.
- "Memorandum of Understanding for the Collaborative Program on Emerging and Re-emerging Infectious Diseases between The Department of Health and Human Services of the United States of America and The Ministry of Health of the People's Republic of China." 2010. May 25. <https://2009-2017.state.gov/documents/organization/143674.pdf>.
- Mu, Chunshan. 2020. "On China, COVID-19, and Conspiracy Theories." *The Diplomat*, March 17. <https://thediplomat.com/2020/03/on-china-covid-19-and-conspiracy-theories/>.
- National Academy of Sciences, Member Directory. "George F. Gao." Accessed July 5, 2020. <http://www.nasonline.org/member-directory/members/20047366.html>.
- Porter, Tom. 2020. "A Top White House Official Claimed, Without Evidence, that China Sent Sick People to Other Countries to 'Seed' COVID-19 around the World." *Business Insider*, May 18. www.businessinsider.com/trump-official-navarro-accuses-china-of-plot-to-seed-coronavirus-2020-5.
- Riechmann, Deb. 2020. "Trump Disbanded NSC Pandemic Unit That Experts Had Praised." *Associated Press*, March 14. <https://apnews.com/ce014d94b64e98b-7203b873e56f80e9a>.
- Schnur, Alan. 2006. "The Role of the World Health Organization in Combating SARS, Focusing on the Efforts in China." In Arthur Kleinman and James L. Watson, eds., *SARS in China: Prelude to Pandemic?* Stanford, CA: Stanford University Press, pp. 31–52.
- Schwartz, Jonathan, R. Gregory Evans, and Sarah Greenberg. 2007. "Evolution of Health Provision in Pre-SARS China: the Changing Nature of Disease Prevention." *China Review*, vol. 7, no. 1, pp. 81–104.
- Shu, Yuelong, Ying Song, Dayan Wang, Carolyn M. Greene, Ann Moen, C. K. Lee, Yongkun Chen, Xiyuan Xu, Jeffrey McFarland, Li Xin, Joseph Bresee, Suizan Zhou, Tao Chen, Ran Zhang, and Nancy Cox. 2019. "A Ten-year China-US Laboratory Collaboration: Improving Response to Influenza Threats in China and the World, 2004–2014." *BMC Public Health*, vol. 19 (Supplement 3), 520. <https://bmcpublichealth.biomedcentral.com/track/pdf/10.1186/s12889-019-6776-3>.

- Sun, Lena H. 2018. "CDC to Cut by 80 Percent Efforts to Prevent Global Disease Outbreak." *Washington Post*, February 1. www.washingtonpost.com/news/to-your-health/wp/2018/02/01/cdc-to-cut-by-80-percent-efforts-to-prevent-global-disease-outbreak/.
- Swanson, Ana. 2019. "Trump Officials Battle Over Plan to Keep Technology Out of Chinese Hands." *New York Times*, October 23. www.nytimes.com/2019/10/23/business/trump-technology-china-trade.html.
- Taylor, Derrick Bryson. 2020. "A Timeline of the Pandemic." *New York Times*, July 21. www.nytimes.com/article/coronavirus-timeline.html.
- Taylor, Marisa. 2020. "Exclusive: US Axed CDC Expert Job in China Months Before Virus Outbreak." *Reuters*, March 22. www.reuters.com/article/us-health-coronavirus-china-cdc-exclusiv/exclusive-u-s-axed-cdc-expert-job-in-china-months-before-virus-outbreak-idUSKBN21910S.
- US CDC (Center for Disease Control and Prevention) Global Health. n.d. "FETP – Field Epidemiology Training Program – Disease Detectives in Action." Accessed July 21, 2020. www.cdc.gov/globalhealth/infographics/uncategorized/fetp.htm.
- US CDC Office of Science. 2016. "We Were There, Folic Acid, Birth Defects and Perspectives from China." Video program, Wednesday, November 30. Accessed July 1, 2020. www.cdc.gov/os/wewerethere/index.html.
- US-China Economic and Security Review Commission. 2019. "2019 Report to Congress." November. www.uscc.gov/sites/default/files/2019-11/2019%20Annual%20Report%20to%20Congress.pdf.
- USTR Archives, Office of the United States Trade Representative. 2016. "U.S. Fact Sheet for the 27th U.S.-China Joint Commission on Commerce and Trade." November 2016. Accessed July 20, 2020. <https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2016/november/us-fact-sheet-27th-us-china-joint>.
- Ward, Myah. 2020. "15 Times President Trump Praised China as Coronavirus Was Spreading around the World." *Politico*, April 15. www.politico.com/news/2020/04/15/trump-china-coronavirus-188736.
- Warrick, Joby, Ellen Nakashima, Shane Harris, and Anna Fifield. 2020. "Chinese Lab Conducted Extensive Research on Deadly Bat Viruses, but There Is No Evidence of Accidental Release." *Washington Post*, April 30. www.washingtonpost.com/national-security/chinese-lab-conducted-extensive-research-on-deadly-bat-viruses-but-there-is-no-evidence-of-accidental-release/2020/04/30/3e5d12a0-8b0d-11ea-9dfd-990f9dcc71fc_story.html.
- World Health Organization (WHO). 2020a. "Mission Summary: WHO Field Visit to Wuhan, China 20–21 January 2020." January 22. www.who.int/china/news/detail/22-01-2020-field-visit-wuhan-china-jan-2020.
- . 2020b. "Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)." February 16–24. www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf?sfvrsn=fce87f4e_2.
- . 2020c. "Timeline of WHO's Response to COVID-19." June 29. www.who.int/news-room/detail/29-06-2020-covidtimeline.

- . n.d. “Update 95 – SARS: Chronology of a Serial Killer.” Accessed July 21, 2020. www.who.int/csr/don/2003_07_04/en/.
- Wu, Zunyou, ed. 2020. *HIV/AIDS in China: Beyond the Numbers*. Singapore: Springer.
- Yang, Dali L. 2020. “Wuhan Officials Tried to Cover up Covid-19—and Sent It Careening Outward.” *Washington Post*, March 10. www.washingtonpost.com/politics/2020/03/10/wuhan-officials-tried-cover-up-covid-19-sent-it-careening-outward/.
- Zhang, Lusha, and Ryan Woo. 2020. “Beijing’s Coronavirus Outbreak under Control, Chinese Expert Says.” *Reuters*, June 17. www.reuters.com/article/us-health-cornavirus-china/beijings-coronavirus-outbreak-under-control-chinese-expert-says-idUSKBN23P029.