

# TELEMEDICINE ACROSS BORDERS: ENTRENCHED ISSUES EXPOSED BY COVID-19

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## I. INTRODUCTION

If medical professionals from the early twentieth century stepped into a hospital today, the scene would be nearly unrecognizable. The scientific and technological breakthroughs throughout the twentieth and twenty-first centuries have resulted in monumental advances within the study and practice of medicine.<sup>1</sup> These breakthroughs profoundly transformed nearly all areas of medical science, research, and treatment during the twenty-first century.<sup>2</sup> These monumental advances in technology include the increased reliance on telecommunication and computer technologies, which have expanded treatment options and improved the quality of and access to medical care.<sup>3</sup> The implementation and use of these advancements, which vary by country, depend on a number of factors, including national infrastructure, policy and governance, cultural and humanitarian considerations, the availability of medical experts, among others.<sup>4</sup> However, even developed countries that are well-positioned for the widespread use of medical technology have implemented telemedicine—a tool that allows doctors to physically separate themselves from their patients while still providing adequate levels of care—only in a limited capacity.<sup>5</sup> For many countries, that changed in 2019, when they were forced to reckon with a global pandemic.<sup>6</sup>

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<sup>1</sup> See generally Mary L. Fennell, *The New Medical Technologies and the Organizations of Medical Science and Treatment*, 43 HEALTH SERVS. RES. 1 (2008) (discussing the evolution of medical science and treatment and the impact of technological improvements on healthcare organizations).

<sup>2</sup> *Id.* at 1 (noting the profound changes in medical science and research during the twenty-first century, including innovations and discoveries in biology, pharmaceuticals, medical devices, and information technology).

<sup>3</sup> INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *TELEMEDICINE: A GUIDE TO ASSESSING TELECOMMUNICATIONS IN HEALTH CARE* 3, 16 (Marilyn J. Field ed. 1996).

<sup>4</sup> World Health Org. [WHO], *TELEMEDICINE: OPPORTUNITIES AND DEVELOPMENTS IN MEMBER STATES* 67 (2010), [http://apps.who.int/iris/bitstream/handle/10665/44497/9789241564144\\_eng.pdf?sequence=1&isAllowed=y](http://apps.who.int/iris/bitstream/handle/10665/44497/9789241564144_eng.pdf?sequence=1&isAllowed=y). See also Clemens Scott Kruse et al., *Evaluating Barriers to Adopting Telemedicine Worldwide: A Systematic Review*, 24 J. TELEMEDICINE & TELEHEALTH 4, 7 tbl. 1 (2016) (noting and discussing similar factors limiting access to telemedicine).

<sup>5</sup> See Kruse et al., *supra* note 4, at 7 tbl. 1 (identifying barriers to telemedicine in several developed countries, such as the United States, Belgium, Netherlands, and Australia); Rashid L. Bashshur et al., *Sustaining and Realizing the Promise of Telemedicine*, 19 *TELEMEDICINE J. & E-HEALTH* 339, 339 (2013) (“Despite the unprecedented promise, a long history of experimentation and development, and the ever-increasing ubiquity of the underlying technology in all sectors of modern society, the basic issues and questions regarding the sustainability and future of telemedicine have not been fully resolved.”).

<sup>6</sup> Sonu Bhaskar et al., *Telemedicine Across the Globe-Position Paper from the COVID-19 Pandemic Health System Resilience PROGRAM (REPROGRAM) International Consortium (Part 1)*, 8 *FRONTIERS PUB. HEALTH* 1, 1 (2020) (“Coronavirus disease 2019 (COVID-19) has accelerated the adoption of telemedicine globally.”).

In 2019, the coronavirus (COVID-19) pandemic superseded many of the factors impeding the widespread use of telemedicine by forcing medical professionals around the world to administer care remotely.<sup>7</sup> Given the virulence and relatively high mortality rate of COVID-19, medical distancing (i.e., the physical separation of patients from healthcare providers) quickly became an essential method of prevention and control from the early stages of the outbreak.<sup>8</sup> Forced to act quickly to reduce the impact of COVID-19, many national governments and professional medical societies developed guidelines to ensure the timely and successful implementation of remote treatment options within their own countries.<sup>9</sup> However, providing telemedical treatment to patients across national borders presented significant challenges.

While COVID-19 catalyzed individual nations to quickly overcome barriers that previously restricted telemedicine as a treatment tool, telemedicine remains underdeveloped and vastly underutilized across national borders.<sup>10</sup> This Note credits the dearth of international telemedicine to the lack of international regulations governing cross-border medical care. Despite the complex and diverging national legal framework regulating healthcare,<sup>11</sup> international healthcare regulations—especially those involving the treatment of global disease—are scant. In fact, only one international legal instrument focusing on global disease surveillance and control currently exists<sup>12</sup>—the

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<sup>7</sup> See *Telemedicine Market to Reach USD 185.66 Billion by 2026 | Global Report Size, Share, Growth, Analysis, Forecast [2019–2026]*, FORTUNE BUS. INSIGHTS (Aug. 17, 2020, 7:49 AM), <https://www.globenewswire.com/news-release/2020/08/17/2079161/0/en/Telemedicine-Market-to-Reach-USD-185-66-Billion-by-2026-Global-Report-Size-Share-Growth-Analysis-Forecast-2019-2026.html> (anticipating 23.5% growth in global telemedicine by 2026). See Catrin Sohrabi et al., *World Health Organization Declares Global Emergency: A Review of the 2019 Novel Coronavirus (COVID-19)*, 76 INT’L J. SURGERY 71–76 (2020), for a detailed description and overview of COVID-19.

<sup>8</sup> Elham Monaghesh & Alireza Hajizadeh, *The Role of Telehealth During COVID-19 Outbreak: A Systematic Review Based on Current Evidence*, 20 BMC PUB. HEALTH 1193, at 4 (2020).

<sup>9</sup> *Using Telehealth to Expand Access to Essential Health Services During the COVID-19 Pandemic*, CTRS. DISEASE CONTROL & PREVENTION (June 10, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/hcp/telehealth.html#edn8>.

<sup>10</sup> Maurice Mars & Richard E. Scott, *Global E-Health Policy: A Work in Progress*, 29 HEALTH AFFAIRS 239, 239 (2010) (“Unfettered, routine e-health practice across domestic and international borders currently does not exist beyond some limited agreements.”).

<sup>11</sup> See, e.g., Robert I. Field, *Why Is Health Care Regulation So Complex?*, 33 PHARMACY & THERAPEUTICS 607 (2008), (explaining reasons for the complexity in health care regulations in the United States); Petra Maresova, *New Regulations on Medical Devices in Europe: Are They an Opportunity for Growth?*, 10 ADMIN. SCIENCES, 16 (2020) (describing medical device regulation in the EU as “complex”).

<sup>12</sup> Andrea le Roux-Kemp, *International and Operational Responses to Disease Control: Beyond Ebola and Epistemological Confines*, 15 IND. HEALTH L. REV. 247, 264 (2018).

World Health Organization's International Health Regulations ("IHR").<sup>13</sup> Although the most recent revision to the IHR is more expansive than its predecessors, it is limited to surveillance and reporting in times of public health emergencies of international concern ("PHEIC").<sup>14</sup> Cross-border *treatment* through remote or other means, however, is not covered by the IHR or any other internationally recognized agreement. The lack of an international regulatory framework has contributed to an entrenched siloed national approach to medical treatment, which has left practitioners—even those who eagerly seek to develop global solutions—without guidance on how to mitigate liability, decipher licensing restrictions, or finance remote treatment.<sup>15</sup> More importantly, absent an established regulatory framework, cross-border treatment during and outside of PHEICs, like COVID-19, cannot exist.

This Note argues that international telemedicine has no footing without a more robust legal framework guiding healthcare providers, and critically analyzes some of the difficulties in establishing that framework. Part I establishes context by providing background information on telemedicine, the limited existing international regulations, and COVID-19. Applying this background, Part II analyzes the entrenched global and national issues that have inhibited telemedicine from successfully being utilized across borders. Global issues include the inadequacies of the World Health Organization's ("WHO") current binding and supplemental guidelines, as well as specific economic, social, and political turmoil usually accelerated during PHEICs. The subsection addressing national issues analyzes two competing approaches: (1) the current incompatible, siloed national approaches to healthcare, and (2) a one-size-fits-all global solution that is both impracticable and ineffective. Part III proposes solutions required to manifest change in the current telemedicine regulatory framework and predicts changes that will actually manifest following COVID-19. This Note concludes by briefly discussing the vital role that telemedicine will play in the future of global healthcare and anticipating future threats if changes to international telemedicine regulations are not made.

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<sup>13</sup> *Id.*

<sup>14</sup> See World Health Organization [WHO], *International Health Regulations (2005)* (3d ed.) at annex 1(A)(1) (identifying "surveillance, reporting, notification, verification, response and collaboration activities" as "core capacity requirements," but remaining silent on treatment).

<sup>15</sup> Vanessa Saliba et al., *Telemedicine Across Borders: A Systematic Review of Factors that Hinder or Support Implementation*, 81 INT'L J. MED. INFORMATICS 793, 801 (2012).

## II. BACKGROUND

### A. *Defining Telemedicine in Context*

Because telemedicine was still a largely emerging concept in medical practice and academic study prior to the COVID-19 outbreak, the full range of applications offered by telemedicine was undetermined.<sup>16</sup> Although COVID-19 catalyzed the use of telemedicine in national medical practice, the accelerated and widespread adoption of telemedicine during the COVID-19 pandemic resulted in a similarly incomplete inventory of telemedical applications.<sup>17</sup> The sudden, erratic growth and novel uses of telemedicine made implementing a universal definition of telemedicine difficult to achieve. Therefore, it is necessary to establish a working definition of telemedicine before discussing its regulatory framework and connection to COVID-19.

Defining telemedicine requires a brief examination of the concept's origin and historical development. Telemedicine originated in 1905, when a Dutch physician and professor demonstrated the potential of electrocardiography by transmitting the sounds of a heartbeat over a distance of nearly one mile.<sup>18</sup> Five years later, two American physicians developed the electrocardiogram, which transmitted visual cardiological reports telegraphically.<sup>19</sup> The use of telecommunications for the purpose of medical treatment first emerged in 1925 when radio and publishing visionary Hugo Gernsback envisioned a device that allowed a doctor to diagnosis patients remotely through radio.<sup>20</sup> As innovations in radio and television expanded over the next twenty-five years, Gernsback's prediction was confirmed.

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<sup>16</sup> See Bashshur et al., *supra* note 5, at 339 (“[I]t has not been determined whether telemedicine will fill only a unique niche in the health system . . . [o]r, alternatively, whether telemedicine can be designed, implemented, accepted, and integrated as a necessary component of the mainstream healthcare armamentarium.”).

<sup>17</sup> INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at 40.

<sup>18</sup> Bashshur et al., *supra* note 5, at 339 (citing Willem Einthoven, *The Telecardiogram*, 50 NED TIJDSCHR GEENESKD 1517 (1906)). See S. Serge Barold, *Willem Einthoven and the Birth of Clinical Electrocardiography a Hundred Years Ago*, 7 CARDIAC ELECTROPHYSIOLOGY REV. 99 (2003), for more information about Willem Einthoven and electrocardiography prior to 1905.

<sup>19</sup> Bashshur et al., *supra* note 5, at 339 (citing Walter B. James & Horatio B. Williams, *The Electrocardiogram in Clinical Medicine*, 140 AM. J. MED. SCI. 644 (1910)).

<sup>20</sup> Lee H. Schwamm, *Telehealth: Seven Strategies to Successfully Implement Disruptive Technology and Transform Health Care*, 33 HEALTH AFFAIRS 200, 204 (2014). The concept of healthcare delivery through telephone first emerged shortly after the telephone's invention in 1876. However, this idea languished until 1925. Scott Rupp, *A Quick Look at The History of Telemedicine*, NUEMD (Jan. 4, 2017), <https://nuemd.com/news/2017/01/04/quick-look-history-telemedicine>. See also INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at

The first reference to telemedicine in medical literature appeared in 1950, when an article described the transmission of radiologic images by telephone across a distance of twenty-four miles in Pennsylvania.<sup>21</sup> Expanding this growing phenomenon, radiologists at a Canadian hospital created a teleradiology system in the 1950s, and by 1959 medical uses of video communications in the United States began to emerge.<sup>22</sup> From there, telemedicine gained traction in the clinical, academic, and rural settings.<sup>23</sup> During the 1970s, United States agencies and partners expanded telemedicine through the use of cable television and satellite-based communication.<sup>24</sup> As a result, telemedicine expanded internationally.<sup>25</sup> The invention of the Internet in the 1980s further accelerated the use of telemedical treatment amongst healthcare providers.<sup>26</sup> Throughout the next twenty years, practitioners and researchers expanded the application of telemedicine to a variety of treatment contexts.<sup>27</sup> During the start of the twenty-first century, telehealth experienced extensive growth, and all signs indicate that this growth will continue.<sup>28</sup>

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35 (highlighting the emergence of telemedicine as a concept in the mid-1920s, despite the invention of the telephone in 1876).

<sup>21</sup> Rupp, *supra* note 20; INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at 36.

<sup>22</sup> See Rupp, *supra* note 20; (describing that by the 1950s, telemedicine had changed significantly and discussing Nebraska's use of telemedicine in closed-circuit televisions in 1960); INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE *supra* note 3, at 36 (discussing that most historians date medical uses of video communications in the United States to 1959).

<sup>23</sup> See INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at 36–38 (describing that although many early telemedicine uses arose out of concerns of lack of access in rural areas, urban uses appeared very quickly as did educational uses).

<sup>24</sup> INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at 36–39.

<sup>25</sup> See Rupp, *supra* note 20 (noting the use of mobile medicine in rural India hospitals); INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at 38–39 (discussing the partnership of federal and international agencies in testing satellite-based communications).

<sup>26</sup> Rupp, *supra* note 20.

<sup>27</sup> *Id.* See also WHO, *supra* note 4, at 36–37 (describing “teleradiology,” “telepathology,” “teledermatology,” and “telepsychiatry” as “four of the most popular and established areas of telemedicine”).

<sup>28</sup> See Michael L. Barnett et al., *Trends in Telemedicine Use in a Large Commercially Insured Population, 2005-2017*, 320 JAMA 2147, 2147 (2018) (reporting an average compound annual growth rate of 52% per year in telemedicine visits from 2005–2014); see also *Telehealth Market in US to Reach Revenues of Over \$25 Billion During the Period 2020–2025 - Market Research by Arizton*, CISION (Apr. 15, 2020), <https://www.prnewswire.com/news-releases/the-telehealth-market-in-us-to-reach-revenues-of-over-25-billion-during-the-period-2020-2025---market-research-by-arizton-301040962.html> (projecting a compound annual growth rate of 30% in telehealth market from 2020–2025).

Telemedicine can be defined as “the remote diagnosis and treatment of patients by means of telecommunications technology.”<sup>29</sup> Despite this seemingly broad definition, telemedicine is actually encapsulated within an even broader array of digital healthcare activities and services commonly referred to as “telehealth.”<sup>30</sup> Telehealth “encompasses clinical health care as well as a wide range of other services, including educating patients and providers, and promoting disease awareness and wellness.”<sup>31</sup> Put differently, “telemedicine refers specifically to the practice of medicine via remote means,” while “telehealth is a blanket term that covers all components and activities of healthcare and the healthcare system that are conducted through telecommunications technology.”<sup>32</sup>

Although these definitions seem straightforward, telehealth and telemedicine lack uniformly separate definitions and are often referred to synonymously.<sup>33</sup> This is largely because telemedicine was first defined broadly in the same way telehealth is used today.<sup>34</sup> For example, in 2010 the WHO recognized and accepted the terms telehealth and telemedicine as synonymous.<sup>35</sup> However, only a few years later, the term telemedicine began receiving recognition as a subset of telehealth, and the use of telecommunication in healthcare broadened to include nonmedical healthcare treatment as well.<sup>36</sup> For example, telehealth encompasses teleradiology,

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<sup>29</sup> *What Is Telehealth?*, NEJM CATALYST (Feb. 1, 2018), <https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0268> (categorizing telemedicine as a subset of telehealth).

<sup>30</sup> *Id.*

<sup>31</sup> Rita M. Marcoux & F. Randy Vogenberg, *Telehealth: Applications from a Legal and Regulatory Perspective*, 41 PHARMACY & THERAPEUTICS 567, 567 (2016).

<sup>32</sup> *What is Telehealth?*, *supra* note 29. Other terms have been used interchangeably with telemedicine and telehealth. See Mars & Scott, *supra* note 10, at 239 (defining e-health as “information and communication technology that facilitates health and health care”—a definition very similar to telehealth).

<sup>33</sup> Javeed Siddiqui et al., *Infectious Diseases Society of America Position Statement on Telehealth and Telemedicine as Applied to the Practice of Infectious Diseases*, 64 CLINICAL INFECTIOUS DISEASES 237, 238 (2017).

<sup>34</sup> See INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at 27 (defining telemedicine in 1996 broadly as “the use of electronic information and communications technologies to provide and support health care when distance separates the participants”).

<sup>35</sup> WHO, *supra* note 4, at 9. However, the WHO did note that some distinguish telemedicine as a subset of telehealth. *Id.*

<sup>36</sup> MALCOM FISK, TELEHEALTH, ENCYCLOPEDIA OF GERONTOLOGY & POPULATION AGING (Danan Gu & Matthew E. Dupre eds., 2021) (recognizing that “telemedicine may be restricted to services where physicians and health professionals are involved and, in some cases, to exchanges of information (for the purposes of diagnoses and treatment) which do not involve the patient,” while telehealth “will always involve the patient and can include its use by people who have no current or specific need for diagnoses or health-related treatments.”).

telepathology, telepharmacology, teledentistry, and telepsychiatry, while telemedicine is limited to medical treatment.<sup>37</sup>

The distinction between telehealth and telemedicine became even more important given the emergence of remote treatment during COVID-19.<sup>38</sup> Although the “remote diagnosis and treatment of patients” (i.e., telemedicine) was utilized during the pandemic,<sup>39</sup> the broader use of remote treatment extends far beyond telemedicine and includes monitoring through peripheral medical equipment, contact tracing through mobile devices, and self-check of symptoms at home to avoid overcrowding healthcare facilities.<sup>40</sup> Despite the importance of maintaining the term telemedicine within the broader umbrella of telehealth, this distinction is relatively recent and one that the international medical community has yet to adopt.<sup>41</sup>

### *B. Regulatory Framework of International Telemedicine*

In contrast to the intricate and often convoluted regulatory environment characteristic of most national healthcare systems,<sup>42</sup> few health regulations exist on the global front. Only one binding legal instrument exists

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<sup>37</sup> See TRACY A. LUSTIG, *THE ROLE OF TELEHEALTH IN AN EVOLVING HEALTH CARE ENVIRONMENT* (2012) 13–14, 123 (discussing the practice and developments of teleradiology, telepathology, telepharmacology, and teledentistry); WHO, *supra* note 4, at 36–37 (describing “teleradiology,” “telepathology,” “teledermatology,” and “telepsychiatry” as “four of the most popular and established areas of telemedicine”).

<sup>38</sup> See Mark Hagland, *Telehealth, COVID-19, and a Suddenly Rearranged Future*, HEALTHCARE INNOVATION (May 20, 2020), <https://www.hcinnovationgroup.com/population-health-management/telehealth/article/21138568/telehealth-covid19-and-a-suddenly-rearranged-future> (“More has happened in the past few weeks with telehealth than in the past 20 years. . . . COVID-19 will create a new normal, and telehealth will be a big part of that, going forward.”).

<sup>39</sup> *What Is Telehealth?*, *supra* note 29 and accompanying text (encapsulating telemedicine within the broader framework of telehealth).

<sup>40</sup> *Uses of Telehealth during COVID-19 in Low Resource Non-U.S. Settings*, CTRS. DISEASE CONTROL & PREVENTION (July 21, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/telehealth-covid19-nonUS.html#print>.

<sup>41</sup> See Siddiqui et al., *supra* note 33, at 238 (discussing the synonymy of definitions utilized in the realm of remote treatment through telecommunication technology). Sources cited throughout this Note will inevitably use the terms telemedicine and telehealth interchangeably. However, consistent with the growing trend toward defining telemedicine as a subset of telehealth, this Note will utilize the terms separately and will center its analysis on the core functions of telemedicine—diagnosis and treatment—across national borders. See *What Is Telehealth?*, *supra* note 28 (encapsulating telemedicine within the broader framework of telehealth).

<sup>42</sup> See Saliba et al., *supra* note 15, at 801 (noting the complexities of healthcare regulations within the United States and medical device regulation in the United Kingdom).



that regulates global disease response, prevention, and treatment—the IHR.<sup>43</sup> Although the IHR has little impact during PHEICs, its evolution has been a lengthy one. The IHR can be traced back to a series of “Sanitary Conferences” that were held in 1851 to curb the spread of infectious diseases introduced globally through trade.<sup>44</sup> In 1892, European states created the first binding international agreement, known then as the International Sanitary Conferences (“ISC”).<sup>45</sup> By 1926, the ISC had evolved to include yellow fever and plague; however, these preventative measures were not primarily intended to safeguard global public health.<sup>46</sup> Rather, the ISC was mostly limited to European countries who entered the agreement to self-protect against health threats that might compromise national power and security.<sup>47</sup>

This purpose began to shift in 1948, when the WHO assumed control over the ISC.<sup>48</sup> The World Health Assembly’s expansive authority allows it to adopt and enforce binding regulations designed to prevent the international spread of disease.<sup>49</sup> In 1951, the WHO exercised this broad authority to replace the ISC with the International Sanitary Regulations and expanded the

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<sup>43</sup> Roux-Kemp, *supra* note 12 (describing the IHR as the only international legal instrument that directly addresses disease surveillance and control). It is important to note that several past and present international public health treaties outside of the IHR have existed. *See, e.g.*, White Lead (Painting) Convention, Nov. 19, 1921, ILO No. 13 (prohibiting use of white lead in painting); Safety Provisions (Building) Convention, June 23, 1937, ILO No. 62 (establishing safety provisions for building workers using scaffolding and hoisting machines); Radiation Protection Convention, June 22, 1960, I.L.O. No. 115 (establishing safety measures to protect workers against ionizing radiation); Maximum Weight Convention, June 28, 1967, ILO No. 127 (restricting maximum permissible weight to be carried by workers); Asbestos Convention, June 24, 1986, ILO No. 162 (imposing safety requirements for asbestos use); Safety and Health in Construction Convention, June 20, 1988, ILO No. 167 (regulating safety and health in construction); Chemical Convention, June 25, 1990, ILO No. 170 (imposing safety requirements for chemical use); Safety and Health in Agriculture Convention, June 21, 2001, ILO No. 184 (regulating health and safety in agriculture). However, each of these Conventions focus on narrow issues relating to international health and safety, usually in the context of labor. The IHR addresses a variety of disease and methods for treatment and prevention. As discussed below, the 2005 revisions to the IHR reflect a movement toward even greater breadth.

<sup>44</sup> Lawrence O. Gostin & Rebecca Katz, *The International Health Regulations: The Governing Framework for Global Health Security*, 94 MILBANK Q. 264, 266 (2016).

<sup>45</sup> *Id.*

<sup>46</sup> *Id.* The original Sanitary Conventions and ISC specifically addressed the spread of cholera entering Europe through Asia to protect trade. *Id.*

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> *See* World Health Org. [WHO], *Constitution of the World Health Organization*, art. 21 (2006) [https://www.who.int/governance/eb/who\\_constitution\\_en.pdf](https://www.who.int/governance/eb/who_constitution_en.pdf). (conferring broad authority on the World Health Assembly, the decision-making body of the WHO, to adopt regulations aimed to slow the international spread of disease).

agreement to cover six diseases.<sup>50</sup> Disease-specific prevention has been the primary goal of each revision of the IHR since it replaced the International Sanitary Regulations in 1969.<sup>51</sup>

“[T]he emergence and pandemic potential of HIV/AIDS, the spread of endemic diseases to new parts of the world, and outbreaks of viral hemorrhagic fever” made clear that the 1995 revisions to the IHR were “insufficiently flexible to respond to new infectious disease threats.”<sup>52</sup> Accordingly, the WHO’s revision of the IHR in 2005 aimed “to prevent, protect against, control and provide a public health response to the international spread of disease.”<sup>53</sup> The 2005 revisions defined “disease” much more broadly, to include any “illness or medical condition, irrespective of origin or source, that presents or could present significant harm to humans.”<sup>54</sup> These revisions also emphasized epidemiological surveillance for the detection and control of communicable disease outbreaks, strengthened the national and international response to public health emergencies so that risks inside and outside a country are managed effectively, and focused on improving sanitation around cargo ports and airports to reduce the sources from which infectious diseases spread.<sup>55</sup>

IHR (2005) imposed additional requirements on States Parties to surveil disease outbreaks.<sup>56</sup> Specifically, States Parties are “required to develop, strengthen, and maintain core surveillance and response capacities to detect, assess, notify, and report public health events to the WHO and respond to public health risks and public health emergencies.”<sup>57</sup> These broader requirements ensure that IHR (2005) is “better adapted to the increasing volume and speed of international traffic and trade than were the previous regulations and take[s] into account current trends in the epidemiology of infectious diseases, as well as other emerging and reemerging health risks.”<sup>58</sup>

Given its broader requirements imposed on States Parties and shift from the “disease-specific model” of treatment to an “all-hazards strategy,” telemedicine seems, at first glance, to be an ideal tool “to prevent, protect against, control and provide a public health response to the international

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<sup>50</sup> Gostin & Katz, *supra* note 44, at 266.

<sup>51</sup> *Id.* The IHR has been amended twice since its original publication in 1969. The second edition of the IHR in 1995 narrowed the focus of the IHR to the three diseases originally addressed in the ISC—cholera, plague, and yellow fever. The most recent revision of the IHR occurred in 2005. *Id.* at 265.

<sup>52</sup> *Id.* at 266–67.

<sup>53</sup> WHO, *supra* note 14, at art. 2.

<sup>54</sup> *Id.* at art. 1.

<sup>55</sup> Max Hardiman & Annelies Wilder-Smith, *The Revised International Health Regulations and Their Relevance to Travel Medicine*, 14 J. TRAVEL MED. 141, 142 (2007).

<sup>56</sup> See WHO, *supra* note 14, at annex 1(A) (imposing surveillance and response requirements on States Parties).

<sup>57</sup> Hardiman & Wilder-Smith, *supra* note 55, at 142.

<sup>58</sup> *Id.*

spread of disease.”<sup>59</sup> However, IHR (2005) gives little guidance on the use of telecommunication technology as a form of international treatment. Various reports exist<sup>60</sup> and supplemental guidelines have emerged,<sup>61</sup> but telemedicine is largely unsupported by a defined regulatory framework.<sup>62</sup> Rather, medical professionals seeking to implement cross-border telemedicine as a method of treatment are forced to confront “a blurry legal patchwork” that is often difficult to decipher.<sup>63</sup> The IHR, even after the 2005 revision, is not an effective regulatory instrument in the field of telemedicine because it was originally intended to provide guidance on the prevention and control of specific diseases.<sup>64</sup> Despite its evolution in purpose demonstrated through revisions of the IHR, the agreement is still not designed to facilitate the use or global implementation of telecommunication technology in medicine.<sup>65</sup> As in-person treatment vastly subsided during COVID-19, healthcare providers became acutely aware of the issues entrenched in the delivery of telemedical treatment across borders.<sup>66</sup>

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<sup>59</sup> Gostin & Katz, *supra* note 44, at 267.

<sup>60</sup> See, e.g., WHO, *supra* note 4 (surveying States Parties about telemedicine implementation and application).

<sup>61</sup> See, e.g., *Statement on the Fifth Meeting of the International Health Regulations (2005) Emergency Committee Regarding the Outbreak of Coronavirus Disease (COVID-19) Pandemic*, WHO (Oct. 30, 2020), [https://www.who.int/news/item/30-10-2020-statement-on-the-fifth-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-coronavirus-disease-\(covid-19\)-pandemic](https://www.who.int/news/item/30-10-2020-statement-on-the-fifth-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-coronavirus-disease-(covid-19)-pandemic) (providing updated, suggested guidelines for national and international treatment during the COVID-19 pandemic).

<sup>62</sup> See William Ferreira & Adilene Rosales, *Deciphering International Telemedicine Regulations*, HOGAN LOVELLS (Apr. 13, 2020), [https://www.engage.hoganlovells.com/knowledgeservices/news/deciphering-international-telemedicine-regulations?nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQ71hKXzqW2Ec%3D&key=BcJlhLtdCv6%2FJTDZxvL23TQa3JHL2AIGr93BnQjo2SkGJpG9xDX7S2thDpAQsCconWHAwe6cJTmfSAQd2tI8D93OjGmtaEjr&uid=iZAX%2FROFT6Q%](https://www.engage.hoganlovells.com/knowledgeservices/news/deciphering-international-telemedicine-regulations?nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQ71hKXzqW2Ec%3D&key=BcJlhLtdCv6%2FJTDZxvL23TQa3JHL2AIGr93BnQjo2SkGJpG9xDX7S2thDpAQsCconWHAwe6cJTmfSAQd2tI8D93OjGmtaEjr&uid=iZAX%2FROFT6Q%22)

(“[C]linicians who seek to practice remotely across borders encounter a blurry legal patchwork from country to country.”). Although this article refers to foreign telemedicine regulations as “international” and “across borders,” the article makes clear that “any standardization of international telemedicine law” (i.e., the type of regulation for which this Note advocates) “is still a long way off.” *Id.*

<sup>63</sup> *Id.*

<sup>64</sup> See Gostin & Katz, *supra* note 44, at 266.

<sup>65</sup> Key inadequacies of the IHR are discussed at greater length in the next part of this Note.

<sup>66</sup> See *Using Telehealth to Expand Access to Essential Health Services during the COVID-19 Pandemic*, *supra* note 9 (describing the sudden adjustments healthcare providers had to make during the outbreak of COVID-19).

### C. Telemedicine and COVID-19

The WHO declared COVID-19 a global pandemic only a few months after recognizing the international threat that the virus posed.<sup>67</sup> Shortly following the pandemic declaration, the WHO recommended a number of restrictions to slow the spread of the outbreak.<sup>68</sup> These suggested restrictions included, among others, reducing the amount of person-to-person contact through social distancing, enforcing travel restrictions to and from quarantined cities and regions, and prioritizing the health of those most at-risk of contracting the virus (e.g., the elderly and those with underlying medical conditions).<sup>69</sup> As a result of these restrictions, healthcare providers were unable to offer the same solutions in the fight against COVID-19 that they have previously relied on during other types of natural disasters and epidemics.<sup>70</sup>

Given the novelty and danger that COVID-19 presented, “unique and innovative solutions” quickly became necessary, “to address both the critical needs of patients with COVID-19 and other patients in need of healthcare services.”<sup>71</sup> Thus, “to facilitate optimal service delivery while minimizing the hazard of direct person-to-person exposure” quickly became one of the foremost needs of healthcare providers during the initial stages of the outbreak.<sup>72</sup>

Experts suggest that telemedical technology is one of the most critical tools that healthcare providers could use to combat COVID-19.<sup>73</sup> Telemedicine allows physicians to video conference with patients through a smartphone or web-cam enabled computer.<sup>74</sup> Practitioners can conduct COVID-19 screenings from home during times of quarantine, which promotes social distancing.<sup>75</sup> Moreover, specialists from around the world can interact

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<sup>67</sup> See Jenny Lei Ravelo & Sara Jerving, *COVID-19 — A Timeline of the Coronavirus Outbreak*, DEVEX (Oct. 2, 2020), <https://www.devex.com/news/covid-19-in-2020-a-timeline-of-the-coronavirus-outbreak-99634> (last visited Nov. 8, 2021) (reporting that the WHO recognized the threat of a “potential pandemic” on February 24 and “declared the global COVID-19 outbreak a pandemic” on March 11).

<sup>68</sup> Monaghesh & Hajizadeh, *supra* note 8, at 2.

<sup>69</sup> *Id.* The CDC suggested similar restrictions to healthcare systems, including adjusting the way they triage, evaluate, and care for patients using methods that do not rely on in-person services in order to minimize the impact of patient surges on facilities. *Using Telehealth to Expand Access to Essential Health Services during the COVID-19 Pandemic*, *supra* note 9.

<sup>70</sup> Monaghesh & Hajizadeh, *supra* note 8, at 2.

<sup>71</sup> *Id.*

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> Judd E. Hollander & Brendan G. Carr, *Virtually Perfect? Telemedicine for Covid-19*, 382 N. ENGL. J. MED. 1679, 1679 (2020).

<sup>75</sup> *Id.*

with patients at the touch of a button.<sup>76</sup> Beyond the platform that telemedicine provides doctors to consult with patients and screen for symptoms, the broader use of telehealth expands far beyond a virtual doctor-patient interaction. For example, through mobile applications, telehealth can provide an easy method for contact tracing.<sup>77</sup> COVID-19 patients can report symptoms online rather than being confined to a hospital bed for a mere evaluation.<sup>78</sup> For patients requiring hospitalization, doctors in other geographic locations could utilize telehealth to monitor vital signs and transmit patient reports consistently and safely.<sup>79</sup> Each of these solutions are particularly important in developing countries, where in-person aid is a limited resource.<sup>80</sup>

Despite the indisputable need for and advantages of telemedicine as a treatment tool, healthcare providers quickly became aware of the deeply entrenched issues involved in delivering remote care during COVID-19.<sup>81</sup> From a legal perspective, practitioners are left to wade through the murky waters of national and international regulations—or lack thereof.<sup>82</sup> Though regulations have relaxed to promote the widespread use of telemedicine on the national level,<sup>83</sup> uncertainty persists on the global front.

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<sup>76</sup> *Id.* at 1680.

<sup>77</sup> *Uses of Telehealth during COVID-19 in Low Resource Non-U.S. Settings*, *supra* note 40. Contact tracing is a tool used to determine whether someone who contracted a disease has exposed anyone else before or after receiving a diagnosis.

<sup>78</sup> *Uses of Telehealth during COVID-19 in Low Resource Non-U.S. Settings*, *supra* note 40.

<sup>79</sup> See Vishal Nangalia et al., *Health Technology Assessment Review: Remote Monitoring of Vital Signs - Current Status and Future Challenges*, 14 CRITICAL CARE 233 (2010) (discussing the uses of telemonitoring, a telemedicine treatment tool that provides healthcare support and service where patient and provider are physically separated).

<sup>80</sup> See Carlo Combi et al., *Telemedicine for Developing Countries: A Survey and Some Design Issues*, 7 APPLIED CLINICAL INFORMATICS 1025 (discussing the need for telemedicine in developing countries due to the shortage of physicians). Although technological and infrastructural barriers present prevalent challenges to delivering remote aid, these challenges are easier to solve than the shortage of medical professionals.

<sup>81</sup> See Kimberly Lovett Rockwell & Alexis S. Gilroy, *Incorporating Telemedicine as Part of COVID-19 Outbreak Response Systems*, 26 AM J. MANAGED CARE 147 (2020) (discussing the unique challenges involved in delivering telemedicine solutions during COVID-19).

<sup>82</sup> *Id.*

<sup>83</sup> *Id.* For example, the United States expanded telemedicine service reimbursements, relaxed technology requirements, implemented novel approaches to licensure and credentialing, and reduced supervision laws related to nonphysician providers. *Id.* at 148. “Many European Union countries and countries in Asia have expanded laws and regulations to permit greater adoption of telemedicine systems, provided increased guidance on digital health technologies and cybersecurity expectations, and expanded reimbursement options.” *Id.* However, Rockwell and Gilroy remain silent on the issue of cross-border implementation. *Id.*

The WHO, which dictates the direction of IHR, has provided some response.<sup>84</sup> Although this response included recommendations that seemed to necessitate the implementation of telemedicine, the WHO did not reference telemedicine, telehealth, or telecommunication technology in its statements.<sup>85</sup> This left providers uncertain about how to overcome some of the complex legal hurdles involved and asking, “Where do we go from here?”<sup>86</sup>

### III. ENTRENCHED ISSUES

#### A. *Current Global Reality*

The technology underlying telemedicine has long been in place.<sup>87</sup> Even underdeveloped and low-income countries have established the scientific and technological means to make telemedical treatment possible and accessible.<sup>88</sup> Additionally, the need for telemedicine, even before the rise of COVID-19, has long been clear. Telemedicine can increase equitable access to quality health care, improve surveillance and treatment of communicable and non-communicable diseases, and standardize medical training and research.<sup>89</sup> Telemedicine has undeniable global health advantages, especially in developing countries. By opening a channel of transcontinental communication and treatment between doctor and patient, medical professionals can more effectively deliver quality healthcare to everyone, not just citizens of developed countries.<sup>90</sup> Yet, despite its accessibility and

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<sup>84</sup> See *Statement on the Fifth Meeting of the International Health Regulations (2005) Emergency Committee Regarding the Outbreak of Coronavirus Disease (COVID-19)*, *supra* note 61 (providing updated, suggested guidelines for national and international treatment during the COVID-19 pandemic).

<sup>85</sup> *Id.* Recommendations included: “[c]ontinue to coordinate global and regional multilateral organizations, partners, and networks and share best practices for responding to the pandemic;” “[c]ontinue to strengthen capacity at points of entry to manage potential risks of cross-border transmission and to facilitate international contact tracing;” and “[m]aintain essential health services with sufficient funding, supplies, and human resources.” *Id.* Consistent with the discrepancies in the IHR, any guidelines on the use of telemedical treatment were absent from the supplemental recommendations.

<sup>86</sup> See Saliba et al., *supra* note 15, at 801 (discussing the variety of legal issues inhibiting the international implementation of telemedicine).

<sup>87</sup> See INST. OF MED. COMM. ON EVALUATING CLINICAL APPLICATIONS OF TELEMEDICINE, *supra* note 3, at 36 (dating medical uses of video communications to 1959).

<sup>88</sup> See, e.g., WHO, *supra* note 4, at 16 (discussing use of telemedicine to support maternal and newborn health in Mongolia); *id.* at 20 (discussing use of telemedicine to screen for breast cancer in Mexico).

<sup>89</sup> Saira Afzal, *Telemedicine: Underutilized Tool of Global Health*, 22 ANNALS KING EDWARD MED. UNIV. 1, 1 (2016).

<sup>90</sup> *Id.*

unequivocal need, telemedicine remained nationally underutilized for decades.<sup>91</sup>

In many ways, COVID-19 was the catalyst that accelerated the national use of telemedical treatment. Given social and medical distancing requirements and the mass influx of COVID-19 patients in need of critical care, telemedicine became the only way for doctors to communicate with patients safely.<sup>92</sup> Hesitancy to fully adopt and incorporate remote treatment into medical practice evaporated in light of the extreme risks that COVID-19 posed to the traditional practice of medicine. This rapid, forced adoption of telemedicine into mainstream practice was largely contrived under an act-now-plan-later approach, which will likely accelerate the long-term implementation of telemedicine on the national level.<sup>93</sup> Despite its role in opening the door for national telemedicine, COVID-19 did not reduce uncertainty about the use of telemedicine on the global front. Instead, it revealed two significant issues in international healthcare governance during PHEICs: (1) the deficiencies of the IHR and supplemental regulations by the WHO, and (2) the economic, social, and political turmoil fueled by a siloed national approach to healthcare.

*i. Deficiencies of the IHR and Supplemental Recommendations*

The IHR fails to provide guidance on telemedical treatment for several reasons. The foremost reason is that the IHR—even its most recent revision in 2005—is still too narrow in scope to ensure effective and efficient global treatment, even during PHEICs. The 2005 revision significantly broadened the IHR in scope. Rather than focusing on response to specific diseases, like previous versions of the IHR, the 2005 revision of the IHR was designed “to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks.”<sup>94</sup> Despite this critical expansion to any event that could be considered a PHEIC, the recommended response to these public health emergencies provided by the IHR is far too limited.<sup>95</sup>

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<sup>91</sup> Bashshur et al., *supra* note 5, at 339.

<sup>92</sup> See Monaghesh & Hajizadeh, *supra* note 8, at 4 (discussing social distancing and medical distancing as preventative measure to reduce transmission of COVID-19).

<sup>93</sup> That is not to say that telemedicine was haphazardly adopted as a national treatment solution during COVID-19. Rather, practitioners were forced to quickly implement the already-existing telemedical framework into mainstream medical practice, notwithstanding the barriers that previously inhibited telemedicine from widespread use on the national level. See Kruse et al., *supra* note 4, for an overview of the barriers to telemedicine on the national level prior to COVID-19.

<sup>94</sup> WHO, *supra* note 14, at art. 2.

<sup>95</sup> *Id.* at art. 1.

While the IHR emphasizes surveillance and communication between States Parties, the IHR provides few universal guidelines for treatment during PHEICs.<sup>96</sup> Rather, the IHR expressly delegates this responsibility to States Parties, who are afforded broad discretion on how to respond to PHEICs.<sup>97</sup> States must still “uphold the purpose” of the regulations, but are otherwise granted “the sovereign right to legislate and to implement legislation in pursuance of their health policies.”<sup>98</sup> Without robust, universal guidelines for treatment, collaboration between countries to slow the spread of diseases becomes ineffective. A country might implement telemedicine as a part of their national treatment strategy, but absent international guidelines promoting and organizing cross-border use, it is up to individual nations to determine whether and how to implement mobile treatment beyond its borders.<sup>99</sup> This is particularly difficult for States Parties to accomplish during PHEICs, when information about the threat is incomplete and, especially in the case of COVID-19, growth of the threat is imminent.<sup>100</sup>

Second, the IHR, despite its legally binding status, lacks authority to regulate the treatment strategies that States Parties implement. Although the IHR requires States Parties to “develop, strengthen and maintain” a strategy to quickly respond to PHEICs,<sup>101</sup> these requirements focus on “surveillance,

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<sup>96</sup> See *id.* at art. 1 (omitting “treatment” or similar terminology from “Definitions” section); *id.* at Part II (requiring States Parties to participate in surveillance, notification, information-sharing, consultation with the WHO, reporting, and verification, but remaining silent on treatment); *id.* at annex 1(a)(1) (identifying “surveillance, reporting, notification, verification, response and collaboration activities” as “core capacity requirements,” but remaining silent on treatment).

<sup>97</sup> See, e.g., *id.* at art. 13(1) (“Each State Party shall develop, strengthen and maintain . . . the capacity to respond promptly and effectively to public health risks and public health emergencies or international concern”); *id.* at art. 16 (“[Nonbinding] standing recommendations of appropriate health measures . . . may be applied by States Parties regarding . . . specific ongoing public health risks in order to prevent or reduce the international spread of disease and avoid unnecessary interference with international traffic.” (emphasis added)); *id.* at art. 21(2) (recommending, but not requiring, States Parties sharing common borders to consider implementing ground crossing agreements); *id.* at art. 23 (recommending, but not requiring, health measures on arrival and departure); *id.* at art. 43(1) (“These Regulations shall not preclude States Parties from implementing health measures, in accordance with their relevant national law and obligations under international law, in response to specific public health risks or public health emergencies of international concern.”).

<sup>98</sup> *Id.* at art. 3(4).

<sup>99</sup> *Id.* at art. 43(1) (“These Regulations shall not preclude States Parties from implementing health measures, in accordance with their relevant national law and obligations under international law, in response to specific public health risks or public health emergencies of international concern.”).

<sup>100</sup> See Zeinab Abdelrahman et al., *Comparative Review of SARS-CoV-2, SARS-Cov, MERS-Cov, and Influenza A Respiratory Viruses*, 11 FRONTIERS IMMUNOLOGY 1, 2 (2020) (discussing the rapid growth of COVID-19 compared to previous similar outbreaks).

<sup>101</sup> WHO, *supra* note 14, at art. 13(1).



reporting, notification, verification, response and collaboration activities” rather than treatment.<sup>102</sup> Many of the recommendations that the IHR allows the WHO to issue during PHEICs are explicitly “non-binding,”<sup>103</sup> leaving States Parties the authority to respond in ways exclusive to their own national interests. Similar issues arise with “weak” requirements within the IHR itself.<sup>104</sup> For example, Article 44 of the IHR requires States Parties to collaborate in detecting and responding to events, facilitating technical and logistic support, mobilizing financial resources, and formulating laws.<sup>105</sup> However, the IHR significantly weakens the mandatory “shall” language of these requirements by preceding them with “to the extent possible.”<sup>106</sup> There are a myriad of reasons a nation could contrive to explain why collaboration with and syphoning resources to other nations during PHEICs—usually the times of greatest economic, social, and political turmoil for many nations—is not possible.

Further, while States Parties are legally obligated to comply with the IHR’s surveillance and response requirements, the WHO has no punitive power to ensure compliance.<sup>107</sup> There is no formal penalty for failure to notify the WHO of a potential PHEIC, or for failure to achieve core capacities for surveillance, reporting, and response.<sup>108</sup> Rather, cooperation with the IHR depends on the trust that Member States have in the WHO and other national governments.<sup>109</sup> That trust is difficult to maintain during the uncertainty of a PHEIC. For example, China became the target of global criticism for its role in masking the seriousness of the COVID-19 pandemic to the WHO and other world leaders.<sup>110</sup> China even took “legal measures” against eight doctors who shared information with WHO officials about the emerging threat posed by COVID-19.<sup>111</sup> Despite the Chinese government’s awareness of the virus’s human-to-human transmission, Chinese officials waited to place Wuhan—COVID-19’s city of origin—on lockdown until January 23, 2020, days after

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<sup>102</sup> *Id.* at annex 1(A)(1)(a).

<sup>103</sup> *Id.* at art. 1 (defining temporary recommendations and standing recommendations as “non-binding advice”).

<sup>104</sup> See David P. Fidler & Lawrence O. Gostin, *The New International Health Regulations: An Historic Development for International Law and Public Health*, 34 J. L. MED. & ETHICS 85, 88 (2006) (describing certain provisions of the IHR as “weak”).

<sup>105</sup> WHO, *supra* note 14, at art. 44(1).

<sup>106</sup> *Id.* at art. 44(2).

<sup>107</sup> Rebecca L. Katz & Julie Fischer, *The Revised International Health Regulations: A Framework for Global Pandemic Response*, 3 GLOBAL HEALTH GOVERNANCE 1, 12 (2009).

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

<sup>110</sup> See Jabin T. Jacob, ‘To Tell China’s Story Well’: *China’s International Messaging During the COVID-19 Pandemic*, 56 CHINA REP. 374 (2020) (examining China’s cover-ups to the origins of COVID-19 and its external propaganda effort to repair damage to its global image and interests).

<sup>111</sup> *Id.* at 377.

China's Lunar New Year holidays were well underway.<sup>112</sup> Approximately five million people left the city without being screened by the time China implemented containment efforts.<sup>113</sup> This situation illustrates the cascading effect of the unenforceable requirements that the IHR impose. Without some significant deterrent driving compliance with the reporting requirements, China sought to protect its own economic and global political interests over the interests of other States Parties. This made it more difficult for States Parties to comply with other IHR requirements, like collaborating during PHEICs,<sup>114</sup> considering the public distrust of China by citizens and governments of many nations.<sup>115</sup>

Third, the IHR in some instances conflicts with and restricts effective national response. For example, Article 43 of the IHR restricts measures that countries can implement to measures that are supported by science, commensurate with the risks involved, and anchored in human rights.<sup>116</sup> This restriction intends to prevent States Parties from taking needless measures that harm people or that disincentivize countries from reporting new public health risks to international authorities.<sup>117</sup> On its face, this restriction seems beneficial. However, during novel disease outbreaks, when there are many unknown risks and high populist pressures on national governments, these restrictions can be impracticable and sometimes counterproductive. In early 2020, many countries were critiqued for violating the IHR after imposing travel restrictions during the early stages of COVID-19.<sup>118</sup> The WHO itself

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<sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> WHO, *supra* note 14, at art. 44(1).

<sup>115</sup> See, e.g., Laura Silver et al., *Americans Fault China for Its Role in the Spread of COVID-19*, PEW RES. CTR. (July 30, 2020), <https://www.pewresearch.org/global/2020/07/30/americans-fault-china-for-its-role-in-the-spread-of-covid-19/> (reporting 78% of Americans “place a great deal or fair amount of the blame for the global spread of the coronavirus on the Chinese government’s initial handling of the COVID-19 outbreak in Wuhan”).

<sup>116</sup> Roojin Habibi et al., *Do Not Violate the International Health Regulations During the COVID-19 Outbreak*, 395 LANCET 664, 664 (2020) (citing IHR Article 43).

<sup>117</sup> *Id.* WHO data also indicate that travel restrictions have only limited effectiveness in slowing the spread of a disease outbreak. Ana LP Mateus et al., *Effectiveness of Travel Restrictions in the Rapid Containment of Human Influenza: A Systematic Review*, 92 BULLETIN WORLD HEALTH ORG. 868, 873 (2014). Research shows that “[o]nly extensive travel restrictions – i.e. over 90% – had any meaningful effect on reducing the magnitude of epidemics.” *Id.*

<sup>118</sup> Habibi et al., *supra* note 116, at 664. Critiques were made after reaching “a jurisprudential consensus on the legal meaning of IHR Article 43.” *Id.* Scholars argued that (1) travel restrictions violated Article 43(2) because they were not grounded in “scientific principles,” “scientific evidence,” or “advice from WHO”; (2) restrictions were more critical of international traffic and more invasive and intrusive to persons than reasonably available alternatives, in violation of Article 43(1); and (3) the restrictions violated Article 3.1—which requires all additional health measures to be implemented “with full respect

even advised against the application of travel or trade restrictions to countries experiencing COVID-19 outbreaks.<sup>119</sup> However, contradicting research later suggested that early travel restrictions were highly effective for containing the COVID-19 epidemic in some countries.<sup>120</sup> This conflicting direction not only reduces the trust that Member States have in the WHO and IHR, but also decreases the likelihood that States will coordinate with one another to develop and implement a uniform response.

Supplemental guidelines proposed by the WHO during PHEICs are similarly ineffective and potentially counterproductive. When the WHO declares a PHEIC, it has the power to issue temporary recommendations that advise States Parties to implement specific measures to prevent or reduce the international spread of disease.<sup>121</sup> However, as previously discussed, these temporary recommendations are expressly “non-binding,”<sup>122</sup> leaving States to determine whether and to what extent they will implement this supplemental advice.<sup>123</sup>

Pursuant to IHR Article 15, the WHO issued temporary recommendations throughout various stages of the COVID-19 pandemic.<sup>124</sup> These recommendations consisted of guidelines for research, surveillance, contact tracing, and national regulation.<sup>125</sup> However, any recommendations regarding treatment simply reinforced siloed national action over a collaborative, cross-border solution.<sup>126</sup> Not only do these recommendations

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for the dignity, human rights and fundamental freedoms of persons”—because they primarily restricted travel to China, the supposed source of Coronavirus. *Id.* See also Muhammad Adnan Shereen et al., *COVID-19 Infection: Origin, Transmission, and Characteristics of Human Coronaviruses*, 24 J. ADVANCED RES. 91, 91 (2020) (identifying Wuhan, China as the source of the Coronavirus outbreak).

<sup>119</sup> *Updated WHO Recommendations for International Traffic in Relation to COVID-19 Outbreak*, WHO (Feb 29, 2020), <https://www.who.int/news-room/articles-detail/updated-who-recommendations-for-international-traffic-in-relation-to-covid-19-outbreak>.

<sup>120</sup> See Valentina Constantino et al., *The Effectiveness of Full and Partial Bans Against COVID-19 Spread in Australia for Travellers from China During and After the Epidemic Peak in China*, 27 J. TRAVEL MED. 1, 2 (2020) (indicating that the full travel ban Australia imposed on China on February 1, 2020 reduced Australian COVID-19 cases by approximately 86%).

<sup>121</sup> WHO, *supra* note 14, at art. 15.

<sup>122</sup> *Id.* at art. 1 (defining temporary and standing recommendations as “non-binding advice”).

<sup>123</sup> See Katz & Fischer, *supra* note 107 and accompanying text (discussing the WHO’s lack of authority over States’ response to recommendations).

<sup>124</sup> See, e.g., *Statement on the Fifth Meeting of the International Health Regulations (2005) Emergency Committee Regarding the Outbreak of Coronavirus Disease (COVID-19)*, *supra* note 61 (providing updated, suggested guidelines for national and international treatment during the COVID-19 pandemic).

<sup>125</sup> *Id.*

<sup>126</sup> For example, the WHO recommended States Parties to “[e]ngage and empower individuals and communities to strengthen confidence in the COVID-19 response,” “[e]stablish a national multi-disciplinary taskforce” to assist with vaccine introduction and

fail to mention or suggest telemedicine as form of treatment, but the recommendations also emphasize national and local response rather than coordination between States.<sup>127</sup> Given the economic, social, and political turmoil during PHEICs, emphasizing national and local response can result in damage to a cooperative global effort.

ii. *Economic, Social, and Political Turmoil*

Economic, social, and political pressures that occur in various States during PHEICs also reduce the likelihood that States will commit to compliance with the IHR and supplemental recommendations or will collaborate with other States to develop new treatment options. Because citizens look to their own national governments rather than international organizations to provide aid and immediate leadership during times of global emergency, States' responses are often tailored around the needs of their own citizens rather than the needs of the global community. This type of national response is usually not callous or ill-intended. Indeed, it is logical for national leaders to prioritize the economic, social, and political needs of their own countries during PHEICs, since they—rather than world leaders—will be held directly accountable by their citizens for any negative economic, social, or political fallout. This heightened sense of national autonomy is particularly counterproductive to the formation of a global treatment strategy, even one that is entirely remote. This reality became brutally apparent during COVID-19.

The economic disruption caused by COVID-19 was devastating. As national economies dramatically slowed, tens of millions around the globe risked falling into extreme poverty, nearly half of the world's 3.3 billion global workforce faced losing their livelihoods, and domestic and international food supply chains became fragile.<sup>128</sup> Reduction in productivity after the initial outbreak caused disruptions in the global supply chain and factory closures worldwide.<sup>129</sup> Consumer spending behavior decreased, primarily due to decreased income and household finances, as well as fear and panic that accompanied the early stages of COVID-19.<sup>130</sup> International travel

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distribution, and “invest in implementing National Action Plans for sustainable preparedness and response.” *Id.* (emphasis added).

<sup>127</sup> *Id.*

<sup>128</sup> *Impact of COVID-19 on People's Livelihoods, Their Health and our Food Systems*, WHO (Oct. 13, 2020), <https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people%27s-livelihoods-their-health-and-our-food-systems>.

<sup>129</sup> Anton Pak et al., *Economic Consequences of the COVID-19 Outbreak: The Need for Epidemic Preparedness*, 8 FRONTIERS PUB. HEALTH 1, 3 (2020). For example, the production index in China in February 2020 declined by more than 54% from the preceding month's value. *Id.*

<sup>130</sup> *Id.*

restrictions, although mitigating the spread of COVID-19, significantly hindered global economic growth and development.<sup>131</sup>

Similarly, COVID-19 imposed new social pressures on citizens worldwide. Suddenly, individuals were expected to transform their ways of life to mitigate the risks of the virus while continuing to deal with the normal challenges of everyday living. One of the primary ways of combatting the disease—social distancing—drove many into complete isolation, keeping them physically safe but psychologically and relationally at risk.<sup>132</sup> Imposing these types of restrictions often placed national leaders in the difficult position of juxtaposing psychological needs that are usually non-competing: the need for self-protection and need for social affiliation.<sup>133</sup>

Perceived risk also varied widely based on national social and cultural structure. Research suggests that members of collectivists countries, such as China and Italy, showed more concern about COVID-19, especially in the beginning stages of the outbreak.<sup>134</sup> In contrast, highly individualistic countries, such as the United States and the United Kingdom, demonstrated a higher risk tolerance from the early stages of the virus.<sup>135</sup> This cultural discrepancy resulted in wide variations in the types of restrictions that national governments imposed during COVID-19.<sup>136</sup>

The political pressure exerted on many government leaders led to national actions discouraged by the WHO and in violation of IHR.<sup>137</sup> In some instances, political pressures even caused national leaders to blame the WHO when the global course of action contradicted national response. For example, under the Trump Administration, the U.S. signaled in mid-2020 that it would eliminate funding to and ultimately withdraw from the WHO as its death toll

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<sup>131</sup> *Id.*

<sup>132</sup> See Thiago Matias et al., *Human Needs in COVID-19 Isolation*, 25 J. HEALTH PSYCH. 871, 872 (2020) (discussing the negative psychological effects of the COVID-19 lockdown).

<sup>133</sup> *Id.* at 875–76.

<sup>134</sup> Alessandro Germani et al., *Emerging Adults and COVID-19: The Role of Individualism-Collectivism on Perceived Risks and Psychological Maladjustment*, 17 INT’L J. ENVTL. RES. & PUB. HEALTH 1, 10 (2020).

<sup>135</sup> See Simon Marginson, *The Relentless Price of High Individualism in the Pandemic*, 39 HIGHER EDUC. RES. & DEV. 1392, 1392 (2020) (contrasting resistance to restraints of individual freedom in the U.S. and UK with strict regulation and self-regulation of East Asian countries during COVID-19).

<sup>136</sup> For example, Italy imposed a mandatory lockdown in early March 2020 without significant pushback from citizens. Germani et al., *supra* note 134, at 10, 12. However, the U.S. and UK showed a “reluctan[ce] to close down and eager[ness] to reopen prematurely.” Marginson, *supra* note 135, at 1392.

<sup>137</sup> See *supra* text accompanying notes 116–20 (discussing conflicts between IHR guidelines and national responses during COVID-19).

from COVID-19 mounted.<sup>138</sup> A decision critiqued by many national and global scholars and pundits, President Trump's withdrawal from the WHO signaled distrust in the WHO's efforts to curb the spread of the virus.<sup>139</sup> This action also signaled mistrust of other States Parties. President Trump's criticism of the WHO centered around its failure to investigate China as the source of the disease.<sup>140</sup> Trump "accused Beijing of hiding the true scope of infections from the W.H.O., targeting the agency in the process."<sup>141</sup> Not only did statements and actions like these further cripple the cooperative response necessary to develop and implement effective global treatment, but they also risked rooting similar sentiments of divisiveness in citizens of other nations, which placed unnecessary burdens on countries attempting to establish measures for effective cross-border treatment. This carried the risk of accelerating populist concern over important international governance arrangements, like the IHR, that are essential to an effective global response to COVID-19 and other PHEICs.<sup>142</sup>

The economic, social, and political turmoil during PHEICs inhibits a more effective global response. In the case of COVID-19, these issues contributed to the inaccessibility of telemedicine across borders. National leaders and agencies quickly became so consumed with resolving the immediate turmoil disrupting their own countries that they failed to develop the infrastructure for remote treatment on the national level. However, this intrinsic failure does not reside within individual nations, but within global

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<sup>138</sup> Katie Rogers & Apoorva Mandevilli, *Trump Administration Signals Formal Withdrawal from W.H.O.*, NEW YORK TIMES (July 7, 2020), <https://www.nytimes.com/2020/07/07/us/politics/coronavirus-trump-who.html>.

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> *Id.* When he announced the United States' withdrawal from the WHO, Trump went as far as stating, "The world is now suffering as a result of the malfeasance of the Chinese government." *Id.*

<sup>142</sup> Kumanan Wilson et al., *The International Health Regulations (2005), the Threat of Populism and the COVID-19 Pandemic*, 16 GLOBALIZATION & HEALTH 1, 2 (2020). "Populism refers to movements which appeal to local population who believe their needs are not prioritized by ruling elites." *Id.* Countries around the world displayed varying degrees of populism during the response to COVID-19, especially in the beginning stages. *Id.* at 3. For example, many states have accused the WHO of delaying the declaration of a PHEIC and have circumvented the WHO's recommendations to implement travel restrictions that exceeded the scope permissible under the IHR. *Id.* Populist sentiments were obvious in the United States, which ceased funding and withdrew from the WHO. *Id.*; Rogers & Mandevilli, *supra* note 138. Other countries, fueled by populist sentiment and reluctance to trust global entities, entirely circumvented the WHO's recommended response and charted their own path. *Id.* For example, Brazil and the UK adopted a "herd immunity" strategy rather than the "lockdown" strategy suggested by WHO recommendations. *Id.* These wide variations in national response further complicated international cooperation and made treatment—including remote treatment—across national borders unfeasible.

leadership. After all, the immediate response to PHEICs by national leaders is to prioritize the best course of action for those who hold them directly accountable—their own citizens. This leaves the WHO and other international organizations with the responsibility of ensuring a cooperative global solution. However, while COVID-19 greatly stimulated the use of telemedicine at the national level,<sup>143</sup> international use of telemedicine stagnated because the existing regulatory framework offers no guidance on implementing treatment.<sup>144</sup> Rather, the WHO has explicitly delegated the responsibility of incorporating global treatment solutions to the States, whose primary concern during PHEICs is its own citizens.<sup>145</sup> In doing so, the WHO fails to recognize the depth and effects of national turmoil during PHEICs and imposes expectations on States Parties (e.g., to collaborate with other States to respond to PHEICs)<sup>146</sup> that have a low probability of compliance and only work to cement a siloed and autonomous approach to healthcare.

The current state of the international regulatory framework, as demonstrated by COVID-19, is characterized by patent weaknesses in the IHR and supplemental recommendations, and its rippling economic, social, and political impact on States. These systemic global issues shed light on why the implementation of telemedicine as a global treatment tool has largely failed, both prior to and during the COVID-19 outbreak. Countries have struggled to provide telemedical treatment across borders because the international framework—which provides no guidance on telemedicine—is silent on the development of possible treatment and how to implement said treatment, nationally or globally. Rather, treatment development is left to the States, whose siloed approaches impede the growth of telemedicine on the global front.

### *B. National Barriers to Telemedicine*

The international framework regulating healthcare is dependent the regulatory schemes of individual States, each of which is responsible for devising and maintaining its own response to treatment.<sup>147</sup> Thus, the extent to which individual nations choose to utilize remote treatment options is outside the bounds of any international control or concern. Accordingly, utilizing and

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<sup>143</sup> Bhaskar, *supra* note 6, at 1.

<sup>144</sup> See *supra* text accompanying notes 96–100 (discussing the IHR’s ineffective delegation of treatment to States Parties).

<sup>145</sup> See *supra* text accompanying notes 101–06 (discussing the lack of treatment requirements imposed on States Parties by the IHR and supplemental recommendations).

<sup>146</sup> WHO, *supra* note 14, at art. 44(1).

<sup>147</sup> See JESSICA A. HOHMAN, INTERNATIONAL HEALTHCARE SYSTEMS PRIMER 2 (Kao-Ping Chua ed. 2006) (“The study of international healthcare systems inevitably reveals stark and intriguing contrasts, which have at their root an individual country’s unique set of economic and social values.”).

implementing telemedicine across borders is largely the responsibility of States. However, until COVID-19, telemedicine was merely an emerging treatment tool, even in developed nations.<sup>148</sup> The slow growth and underutilization of telemedicine within individual nations has hampered telemedicine's development on the global front. Although many factors contribute to the slow national growth of telemedicine, the most significant issue centers on the underlying healthcare regulatory environment of each State. Therefore, it is important to analyze each national model of healthcare before arriving at a global solution.

*i. Incompatible Models of National Healthcare*

National healthcare systems can be categorized into four basic models: the Beveridge Model, the Bismarck Model, the National Health Insurance Model, and the Out-of-Pocket Model.<sup>149</sup> The Beveridge Model, implemented in countries such as the UK, Spain, Scandinavia, and New Zealand, is a type of "socialized medicine" that is premised on the basic principle that healthcare is a basic human right.<sup>150</sup> Under the Beveridge Model, "health care is provided and financed by the government through tax payments," just like the police force, public library system, and other public utilities.<sup>151</sup> The government owns many hospitals and clinics, and some healthcare professionals are government employees;<sup>152</sup> private doctors who are not directly employed by the government collect fees from the government.<sup>153</sup> Because the government acts as the sole payer in the healthcare industry, it controls what healthcare providers can do, how much they can charge, and the types of research and treatment they can develop and implement.<sup>154</sup> Another practical concern of the Beveridge Model is that governmental response to crises, such as public health emergencies, is

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<sup>148</sup> Bashshur et al., *supra* note 5, at 339.

<sup>149</sup> Lorraine S. Wallace, *A View of Health Care Around the World*, 11 ANNALS FAMILY MED. 84, 84 (2013). Some scholars suggest that national healthcare systems are not limited to the four listed here. However, because these four best encapsulate the differences between healthcare systems, this Note will use them to briefly differentiate the types of national healthcare systems. It is also important to note that some countries, such as the United States, do not fall into one single system, but rather share characteristics of all four systems.

<sup>150</sup> T. R. Reid, *Four Basic Models of Health Care*, CHANGE AGENT 26 (2009), <https://changeagent.nelrc.org/wp-content/uploads/2018/05/Four-Basic-Models-of-Health-Care.pdf>; HOHMAN, *supra* note 147, at 23.

<sup>151</sup> Reid, *supra* note 150. "General taxation funds approximately 80%" of healthcare in the UK; the remainder is funded through national insurance companies' contributions and small patient fees. HOHMAN, *supra* note 147, at 24.

<sup>152</sup> Reid, *supra* note 150, at 26.

<sup>153</sup> *Id.*

<sup>154</sup> *Id.*



severely limited.<sup>155</sup> If a national or global crisis arises that places economic strains on taxpayers—the primary source of healthcare financing—publicly provided health services may decline, placing hardships on the whole system.<sup>156</sup>

Somewhat related is the Bismarck Model, which is found in Germany, France, Belgium, the Netherlands, Japan, Switzerland, and some Latin American States.<sup>157</sup> The Bismarck Model relies upon an insurance system that is “usually financed jointly by employers and employees through payroll deduction.”<sup>158</sup> Additionally, unlike the Beveridge single-payer framework, health providers are generally private institutions.<sup>159</sup> Despite this privatization, the healthcare industry is still closely regulated by the government, which impacts the extent to which healthcare providers can implement and fund new forms of treatment.<sup>160</sup> Moreover, because treatment is funded by and prioritized for employed citizens, providing care for the unemployed, elderly, or those unable to afford contributions presents a practical concern.<sup>161</sup>

The National Health Insurance Model, commonly found in Canada, Taiwan, and South Korea, combines publicly funded, mandated universal healthcare with largely private delivery mechanisms.<sup>162</sup> This model primarily consists of private-sector providers, but payment comes through government-run insurance programs to which each citizen is required to contribute.<sup>163</sup> The National Health Insurance Model is more financially viable and less administratively complex.<sup>164</sup> As the single payer, the government has the market power to negotiate for lower prices, but it also has considerable control over the types of services healthcare providers are able to render.<sup>165</sup> This often results in limited medical services or extensive waitlists for treatment,<sup>166</sup>

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<sup>155</sup> Mimi Chung, *Health Care Reform: Learning from Other Major Health Care Systems* (Dec. 2, 2017), PRINCETON PUB. HEALTH REV., <https://pphr.princeton.edu/2017/12/02/unhealthy-health-care-a-cursory-overview-of-major-health-care-systems>.

<sup>156</sup> *Id.*

<sup>157</sup> Reid, *supra* note 150, at 26.

<sup>158</sup> *Id.*

<sup>159</sup> *Id.*; Chung, *supra* note 155. The number of insurers differs by country. “In some countries, there is a single insurer (France, Korea); other countries may have multiple, competing insurers (Germany, Czech Republic) or multiple, non-competing insurers (Japan).” *Id.*

<sup>160</sup> Chung, *supra* note 155.

<sup>161</sup> *Id.*

<sup>162</sup> HOHMAN, *supra* note 147, at 7; Reid, *supra* note 150, at 26.

<sup>163</sup> Reid, *supra* note 150, at 26.

<sup>164</sup> *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> *Id.*

which has fueled the phenomenon of “medical tourism” (i.e., international travel for the purpose of medical treatment).<sup>167</sup>

Lastly, the Out-of-Pocket Model is the found throughout most of the world.<sup>168</sup> This model is used in countries that are too poor or disorganized to provide national healthcare.<sup>169</sup> In these countries, only those who can pay directly for healthcare treatment can obtain it.<sup>170</sup> “In rural regions of Africa, India, China, and South America, hundreds of millions go their entire lives without ever seeing a doctor,” simply because it is not financially possible.<sup>171</sup> The Out-of-Pocket Model is particularly problematic for aging populations, who require more medical treatment with less ability to pay. Additionally, during times of emergency or economic strain, those who can afford healthcare must often prioritize treatment over other basic necessities.

Given the wide disparities in the organizational structures, financing, quality of and access to treatment, and systemic problems in each of these four national healthcare systems, failure to implement a global solution for telemedicine is unsurprising. Among the myriad of barriers, two predominate issues have inhibited telemedicine from successfully crossing national borders: payment structures and licensing conflicts. Payment structure concerns payers of care while licensing conflicts center around providers of care. Inconsistencies that run rampant from country to country in each of these issues make it difficult for States to develop and implement short and long-term treatment solutions that meet the needs of citizens in both local and global populations.

Beginning with payment structures, healthcare treatment—including remote treatment—is not free, regardless of whether the government is the single payer or payers are completely individualized. Accordingly, financing issues arise regardless of whether treatment is provided remotely or in-person. Someone still must pay for telemedical examinations, diagnoses, and treatments. To illustrate, if a Canadian citizen who is traditionally covered under a government-structured insurance plan<sup>172</sup> seeks a teleconsultation with a doctor in the United Kingdom, who are normally employed and paid by the government,<sup>173</sup> a complex question arises: who gets paid by whom? Should the Canadian Government be expected to fund the cross-border telemedical treatment, or should the United Kingdom look to its citizens or the Canadian

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<sup>167</sup> See Leigh Turner, “*Medical Tourism*” and the Global Marketplace in Health Services: *U.S. Patients, International Hospitals, and the Search for Affordable Health Care*, 40 INT’L J. HEALTH SERVS. 443 (2010), for an interesting examination of medical tourism and its effect on global healthcare.

<sup>168</sup> Wallace, *supra* note 149, at 84.

<sup>169</sup> *Id.*

<sup>170</sup> *Id.*

<sup>171</sup> *Id.*

<sup>172</sup> Reid, *supra* note 150, at 26.

<sup>173</sup> *Id.*

Government to cover the costs of treatment? Similar issues arise even between countries who use the same healthcare model.<sup>174</sup> For example, if a British doctor were providing telemedical treatment to a New Zealand patient, is the New Zealand Government required to fund treatment by the British healthcare provider? National healthcare regulations are often unclear. This is especially true in countries like the United States, where healthcare treatment is largely financed through private insurance.<sup>175</sup> Although the Out-of-Pocket Model, which is less constricted by government control and strict regulation, presents an easier route for cross-border treatment, healthcare providers in Out-of-Pocket countries usually lack the most up-to-date technology and infrastructure to effectively facilitate telemedicine.<sup>176</sup> Rather, Out-of-Pocket Model countries usually depend on developed countries to provide humanitarian intervention because they lack adequate treatment options.<sup>177</sup> Even healthcare providers who provide cross-border humanitarian aid are still constrained by licensure restrictions.

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<sup>174</sup> Similar problems even arise in different regions of the same country. For example, in the United States, each state's laws, regulations, and Medicaid program policies differ significantly, making it difficult for healthcare providers to agree upon reimbursement rates for telemedical treatment. CTR. FOR CONNECTED HEALTH POLICY, STATE TELEHEALTH LAWS & REIMBURSEMENT POLICIES 2 (2019). Although all fifty states and Washington D.C. provide some form of live video medical consultation service in Medicaid plans, reimbursement of telemedical services beyond live video differs from state to state. *Id.* at 2–3. States laws regulating actions of private insurers also differ from state to state, further complicating individual access to telemedicine. *Compare* GA. CODE ANN. § 33-24-56.4 (2020) (requiring payment parity between telemedicine and in-person services in Georgia), *with* FLA. STAT. 641.31 (2019) (permitting payments initiated between telehealth-delivered services and in-person services to differ in Florida). These complex and ever-changing state requirements often make it difficult for patients from one state to seek remote treatment in another, even though the infrastructure and technology for telemedicine has long been in place. Additionally, states' attempts to equate telemedicine with in-person treatment to expand access to care is somewhat counterproductive because they impede patients from seeking telemedical treatment across state borders. Payment problems in the United States are illustrative of reimbursement issues globally. Like the incompatible and complex state reimbursement requirements, incompatible national healthcare schemes are not designed to facilitate cooperative reimbursement solutions across national borders. Unlike the U.S., however, which maintains some consistency by exerting some federal control over state action, the global scheme lacks any form of uniformity by international bodies. *See, e.g.*, 42 U.S.C. § 1396 et seq. (2014) (outlining Medicaid funding requirements for states); H.R. 7078, 116th Cong. (2020) (proposing study to evaluate changes to telehealth under Medicare and Medicaid programs during COVID-19).

<sup>175</sup> HOHMAN, *supra* note 147, at 27.

<sup>176</sup> This is largely because the Out-of-Pocket countries are usually some of the poorest and most underdeveloped. Wallace, *supra* note 149, at 84.

<sup>177</sup> *See* Christophe Paquet, *The Big Challenge is to Improve Poor Countries' Health Care Systems*, AFD (Oct. 1, 2019), <https://www.afd.fr/en/actualites/big-challenge-improve-poor-countries-health-care-systems-christophe-paquet> (discussing various assistance programs used to increase access to medical treatment in impoverished countries).

Like the problems presented by diverging payment structures, the licensing schemes by which healthcare providers must abide are inconsistent from country to country. If licensing restrictions prohibit doctors from legally providing treatment to patients in different countries, treatment by healthcare providers across borders becomes largely unfeasible and sometimes impossible. Medical licensing is a necessary evil. Without stringent licensing requirements, physicians with inadequate training or experience could misdiagnose or mistreat patients, inadvertently causing serious injury or death. This type of inaccuracy can be detrimental during PHEICs. However, if States enforce licensing restrictions without exceptions, it will be impossible for telemedicine to take any meaningful form. Individual States internally relaxed licensing restrictions during COVID-19 to allow for more effective national responses to the virus. For example, the United States demonstrated “extraordinary flexibility by temporarily waiving or modifying medical licensure requirements to meet the needs of the nation.”<sup>178</sup> By relaxing license requirements, the United States increased access to telemedicine across state lines.<sup>179</sup> Similar flexibility on the global level between world leaders is an essential part of facilitating global treatment across borders.

*ii. The Impractical One-Size-Fits-All Solution*

Some suggest a “one-size-fits-all” solution to these two primary barriers to telemedicine. Under a “one-size-fits-all” solution, countries would subscribe to a uniform regulatory framework that oversees the clinical, operational, ethical, financial, and licensure of telemedicine as it is used across borders.<sup>180</sup> Although this one-size-fits-all approach would certainly present an ideal solution to the complex problems that the global implementation of telemedicine presents, this solution is simply not appropriate or practical enough to garner serious support for two key reasons.

First, national healthcare regulatory schemes are too diverse and complex to assimilate into a single, uniform regulatory body. Beyond the payment structure and licensing issues that permeate national healthcare markets lie differing standards on a variety of additional issues, such as consent to care, quality of care, ethical guidelines, professional associations, and data and privacy protection.<sup>181</sup> Legislative barriers also present additional

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<sup>178</sup> Anita Slomski, *Telehealth Success Spurs a Call for Greater Post-COVID-19 License Portability*, 324 JAMA 1021, 1021 (2020).

<sup>179</sup> *Id.*

<sup>180</sup> See Maurice Mars & Caron Jack, *Why Is Telemedicine a Challenge to the Regulators?*, 3 S. AFR. J. BIOETHICS & L. 55, 55 (2010) (introducing a one-size-fits-all approach to national healthcare systems and discussing the shortcomings of such a system).

<sup>181</sup> *Id.*

issues in many countries. Comprehensive national reform to the extent necessary to provide a uniform global cooperative telemedicine system would require legislative action that could take years.<sup>182</sup> This is especially true with legislation that is as important and controversial as healthcare. The implementation of telemedicine, an emerging treatment tool that has only recently started to garner widespread use, has and will continue to provide uncertainties likely to slow any prospect of international implementation.<sup>183</sup>

Second, current international regulations are not designed to introduce, maintain, or enforce a one-size-fits-all solution. The only current international regulation that could apply to telemedicine treatment across borders is the IHR. However, the IHR, given its current limited purpose and scope, is not designed to regulate telemedical treatment across borders, much less contrive an entire system supporting global telemedicine.<sup>184</sup> Instead, the IHR reinforces the siloed national approach to healthcare by leaving the development and implementation of treatment completely up to States Parties.<sup>185</sup> Although the IHR gives the WHO the authority to recommend treatment options, complying with these recommendations and implementing a treatment strategy is almost exclusively up to the States.<sup>186</sup> Further, even if the IHR did provide a uniform one-size-fits-all solution, the WHO would possess no actual authority to hold Member States to this agreement, even if the agreement was “binding” in name.<sup>187</sup> This is especially true during PHEICs, when the priorities of States Parties center around its citizens.

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<sup>182</sup> For example, it took nearly two years for the Affordable Care Act to be signed into law after it was introduced in the United States. Emily Smith, *Timeline of the Health Care Law*, CNN (June 28, 2012, 10:42 AM), <https://www.cnn.com/2012/06/28/politics/supreme-court-health-timeline/index.html>. And even after passing, a constitution battle over the Affordable Care Act continued for years. *See* National Federation of Independent Business v. Sebelius, 567 U.S. 519 (2012) (deciding the constitutionality of certain provisions within the Affordable Care Act). The amount of time it would take each country to pass legislation that would allow a global telemedicine plan to move forward would likely be prohibitive.

<sup>183</sup> For example, India tried to pass a comprehensive law regulating telemedicine nationally, but the proposed bill was never enacted because lawmakers could not agree on several key provisions, including domestic and international licensure, liability protocols, and limitations on doctor-patient communication. Mars & Jack, *supra* note 180, at 56.

<sup>184</sup> *See supra* text accompanying notes 96–100 (discussing the lack of treatment requirements imposed on States Parties by the IHR and supplemental recommendations).

<sup>185</sup> WHO, *supra* note 14, at 1.

<sup>186</sup> *See supra* text accompanying notes 101–106 (discussing the limits of the WHO’s authority over specific treatment and the explicit delegation by the IHR to states to devise their own siloed, national solutions).

<sup>187</sup> *See supra* text accompanying notes 118–120 (discussing deviations from WHO recommendations and IHR requirements by several countries during the initial stages of the COVID-19 outbreak).

## IV. NECESSARY SOLUTIONS

Significant entrenched global and national issues have impeded the implementation of a regulatory framework governing international telemedicine. To ensure the success of that framework in the future, the international community must tailor comprehensive solutions to address the significant barriers inhibiting telemedicine from becoming an internationally utilized treatment tool. Given the exposure that COVID-19 shed on those barriers, global healthcare reform is gaining the momentum necessary to create a framework for cross-border telemedicine. However, as explained above, these issues are deeply entrenched in decades of counter-productive regulations and guidelines. Telemedicine began to emerge as incompatible with these guidelines after COVID-19. So, the ideal solutions that *should* develop will likely not be the eventual response.

Incorporative of this reality, this part of this Note separates the solutions that should be implemented from predictions of what will actually occur. The first section focuses on the solutions that the international community should implement on both the national and international levels to pave the way for telemedicine as a vital treatment tool on the global front. National and international solutions will be discussed in the short and long term contexts, first addressing solutions necessary to implement telemedicine during and shortly after the COVID-19 pandemic, then discussing strategies for long-term implementation after the COVID-19 pandemic subsides. The second section will predict the likely response to telemedicine that will actually arise given historic revisions to international regulations and developments during COVID-19.

A. *Required Changes*

Effective long-term change on the national level will likely be determined by the steps that are taken in the short term, during or immediately following the cessation of the COVID-19 pandemic. Until COVID-19, telemedicine was largely considered an emerging treatment tool that was nonessential to healthcare providers. However, social distancing requirements and the high risk of spreading the disease changed that. Telemedicine in most cases became the only way for doctors to treat and consult with patients safely and effectively.<sup>188</sup> Prior hesitancy to rely on telemedicine as a mainstream treatment tool evaporated because of necessity. Accordingly, restrictions were forced to loosen on the national level, and remote treatment largely replaced traditional forms of treatment, such as in-person interactions between doctors and patients.<sup>189</sup>

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<sup>188</sup> Monaghesh & Hajizadeh, *supra* note 8, at 2.

<sup>189</sup> *Id.*

During COVID-19, States were forced to quickly solve several of the issues that previously inhibited effective telemedical treatment. For example, due to the influx of COVID-19 positive patients in critical condition, licensure restrictions were reduced to allow physicians to treat patients across state and regional lines.<sup>190</sup> Similarly, private and government insurers amended payment structures to allow for broader reimbursement and financing for telemedical treatment both related and unrelated to COVID-19.<sup>191</sup> Further, COVID-19 acted as a uniting force for many nations; strong social programs were established and economic relief was provided to support individuals and communities.

The success of the long-term national strategy depends on the extent to which States capitalize on the progress made by implementing telemedicine during COVID-19. When COVID-19 subsides, nations should think critically about a more developed national response that better incorporates collaboration with other national and international agencies. This strategy should clearly address critical issues that slowed the implementation of telemedicine prior to and during COVID-19, such as financing, licensing, and other important regulatory concerns. The restrictions that decreased during the national COVID-19 emergency response should be increased to allow healthcare providers to take full long-term advantage of the reduced regulations they enjoyed during the pandemic.<sup>192</sup> Further, international humanitarian aid, delivered nationally through the form of telemedicine, should be considered and implemented.

From an international perspective, the WHO is the international organization capable of enacting the most significant change. Thus, in the short-term, it is vital that the WHO reassure Member States that it is the entity most capable of providing a global solution during PHEICs. Inaction and missteps by the WHO during the early stages of COVID-19 created skepticism about the WHO's global leadership capabilities.<sup>193</sup> If national leaders lose confidence in the WHO—the leading global healthcare organization—not only will compliance with existing regulations decrease, any new regulations or recommendations in the future might garner similar skepticism. At worst, this skepticism could cause additional Member States to withdraw entirely from the WHO. Any of these actions would significantly harm a short or long term strategy for implementing telemedicine across borders.

The WHO must also act as the driving force in facilitating cross-border treatment. Rather than relying exclusively on the IHR and delegating

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<sup>190</sup> Slomski, *supra* note 178, at 1021.

<sup>191</sup> *COVID-19 Telehealth Coverage Policies*, CTR. FOR CONNECTED HEALTH POL'Y (Sept. 15, 2020, 3:00 PM), <https://www.cchpca.org/resources/covid-19-telehealth-coverage-policies> (reporting reimbursement policies during COVID-19 in the U.S.).

<sup>192</sup> Slomski, *supra* note 178, at 1021.

<sup>193</sup> Rogers & Mandevilli, *supra* note 138.

broad treatment strategies to each Member State, the WHO should, at a minimum, work with Member States to recommend a more comprehensive and uniform approach, including cross-border telemedical treatment, that States can implement for more rapid global recovery. Although any recommendations provided by the WHO would still be non-binding under IHR (2005), they would at least provide a suggested path for uniform treatment.<sup>194</sup> This would also allow the WHO to at least partially moderate the economic, social, and political issues that tended to flare up during PHEICs and lead States away from an exclusively siloed approach.

The long-term international implementation of telemedicine requires more comprehensive, systematic reform.<sup>195</sup> To account for the new challenges and opportunities for telemedicine created during COVID-19, this reform will require the current international healthcare framework to significantly expand in three ways. First, a new version of the IHR should be drafted that further expands the purpose and scope of the IHR and incorporates a more detailed treatment strategy for States Parties to follow during PHEICs and beyond. IHR (2005)'s transition from a "disease-specific model" to an "all-hazards strategy" demonstrates the WHO's intention to broaden the IHR.<sup>196</sup> Consistent with this intention, the next revision of the IHR should expand beyond surveillance and reporting after the WHO declares a PHEIC and into treatment and prevention of all public health risks. The new revision of the IHR should also include new requirements for telemedical treatment and address specific barriers to utilizing telemedicine across borders. For example, rather than merely recommending collaboration and assistance between States Parties without providing specific guidance on how to proceed,<sup>197</sup> the IHR should require States Parties to maintain minimum requirements so that they can collaborate with one another through telemedicine. Licensing, reimbursement, and other impeding issues should be addressed explicitly in the IHR or reserved for resolution in supplemental guidelines produced by the WHO.

Second, additional guidelines beyond the IHR should be implemented and agreed upon by Member States. This expansive step is twofold: include *all* States Parties in the process of creating and ratifying supplemental agreements and confer upon those agreements a binding effect. Currently, supplemental recommendations issued by the WHO are both narrow and ineffective—they are reserved for PHEICs, they are explicitly

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<sup>194</sup> WHO, *supra* note 14, at art. 1 (defining temporary and standing recommendations as "non-binding advice").

<sup>195</sup> See Anthony C. Smith et al., *Telehealth for Global Emergencies: Implications for Coronavirus Disease 2019 (COVID-19)*, 26 J. TELEMEDICINE & TELE CARE 309 (2020).

<sup>196</sup> Gostin & Katz, *supra* note 44, at 267.

<sup>197</sup> WHO, *supra* note 14, at art. 44.



“temporary,” and they have no binding effect.<sup>198</sup> These recommendations are likely imposed weakly to allow States Parties flexibility during PHEICs. However, by including States in the process of creating these recommendations prior to a PHEIC, States can contribute input that would not only prepare them to comply, but also make them more willing to comply. Additionally, this would grant the WHO more ground to impose penalties for noncompliance, since States will have the opportunity to collaboratively decide what those specific penalties should be.

Third, an international treaty should also be created that specifically creates a uniform response to public health emergencies by means of telemedicine. This measure, although ambitious, is not without precedent. Past similar treaties addressing disaster mitigation and relief through telecommunications have been entered into force. For example, the Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations imposes an obligation on States Parties to “cooperate among themselves and with non-State entities and intergovernmental organizations . . . to facilitate the use of telecommunication resources for disaster mitigation and relief.”<sup>199</sup> The Tampere Convention lays out specific guidelines for requesting assistance from other States Parties and imposes requirements on States Parties for responding to requests.<sup>200</sup> The Tampere Convention also establishes steps to resolve anticipated conflicts, such as reimbursement<sup>201</sup> and regulatory barriers.<sup>202</sup> Healthcare is a much more complex and rapidly-evolving industry than telecommunications, and a similar treaty regulating telemedicine would require States to consider a variety of additional factors. However, the Tampere Convention serves to illustrate that a comparable agreement for telemedicine is possible. And that agreement could serve as a valuable legal instrument helping expand the international healthcare regulatory framework.

### *B. Predicted Response*

As important as the solutions discussed above are to ensuring the success of telemedicine in the short and long term, the reality is that global leaders will likely continue ignoring these solutions for several reasons. For one, WHO Member States, especially emerging markets, will long be

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<sup>198</sup> *Id.* at art. 1 (defining “temporary recommendation” as “non-binding advice issued by WHO pursuant to Article 15 for application on a time-limited, risk-specific basis, in response to a public health emergency of international concern”).

<sup>199</sup> Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations, art. 3, 2296 U.N.T.S. 5 (entered into force Jan. 8, 2005).

<sup>200</sup> *Id.* at art. 4.

<sup>201</sup> *Id.* at art. 7.

<sup>202</sup> *Id.* at art. 9.

recovering from the economic strain of COVID-19. Some experts suggest that a global recession is inevitable after COVID-19 subsides.<sup>203</sup> This will likely cause State leaders to continue prioritizing their own nations over any form of collaborative globalism. This is unlikely to change until the residual effects of the COVID-19 pandemic subside. Additionally, some nations will not relinquish the skepticism formed against the WHO over the COVID-19 response. This skepticism will likely cause nations to lean away rather than voluntarily step into any additional restrictions imposed by the WHO. Lastly, the WHO seems hesitant to encroach upon the autonomy of Member States. This resulted in weak requirements in IHR (2005) and unbinding recommendations throughout the COVID-19 response. To be effective, the telemedicine regulatory framework must impose definitive, binding guidelines, which the WHO seems unlikely to create.

Instead, after the COVID-19 pandemic subsides, national and global leaders will likely settle for changes that are easier to implement, but less effective in the long run. First, health and political leaders will address the failures of the COVID-19 response and the substantial steps that should have taken place prior to COVID-19. This analysis will identify action that States should have taken during the pandemic to minimize the catastrophic effects that the virus had nationally and internationally. Because telemedicine played such an integral role during the COVID-19 response on the national level, international leaders will almost certainly evaluate it as a treatment solution when formulating next steps. However, the likelihood that those next steps will result in a robust framework to host telemedicine globally is low.

Second, both national and international regulations will be reviewed and revised. National restrictions that were relaxed during COVID-19 to ensure an optimal response to the outbreak will probably remain relaxed to some extent to allow telemedicine to continue its application in a post-pandemic world. Because telemedicine proved to be a widespread and successful tool during COVID-19, healthcare providers and patients will continue telemedicine in the future. Additionally, international regulations will take new form. Although it is doubtful that the IHR will be revised to impose treatment requirements on States Parties or increase penalties for violations, it will incorporate the findings from COVID-19 and continue expanding toward the all-hazards approach to disease prevention and control. The new revision will slightly expand past IHR 2005, but treatment options will still be left to Member States due to populist critique of the WHO during COVID-19. Internal measures will also be implemented by the WHO to ensure PHEICs are addressed and contained more rapidly and efficiently.

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<sup>203</sup> See Nuno Fernandes, *Economic Effects of the Coronavirus Outbreak (COVID-19) on the World Economy 2* (IESE Bus. Sch., Working Paper No. WP-1240-E).

## V. CONCLUSION

Regardless of the framework that develops around telemedicine after the COVID-19 pandemic subsides, one thing is clear: telemedicine will only continue to grow as a vital treatment tool in the healthcare industry.<sup>204</sup> The extent of that growth on the international level is dependent on a more robust regulatory framework established by global leaders within the WHO. The significant issues addressed in this Note were exposed by COVID-19 but are not unique to the most recent pandemic. If appropriate actions are not taken to facilitate telemedicine as a global treatment tool, some of the same failures experienced during the COVID-19 response will certainly translate to future natural disasters and public health emergencies. Telemedicine has the potential to become one of the most powerful tools of global medicine. But without the appropriate framework facilitating this vital tool, this great power will only become unduly stifled.

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<sup>204</sup> See *Telemedicine Market to Reach USD 185.66 Billion by 2026 | Global Report Size, Share, Growth, Analysis, Forecast [2019–2026]*, *supra* note 7 (anticipating 23.5% growth in global telemedicine by 2026).