

# Incorporating Complementary and Integrative Health Providers in the Public Health Pandemic Response

Lessons from COVID-19 and Recommendations for the Future from a Multidisciplinary Expert Panel

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## About This Report

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This report aims to inform complementary and integrative health (CIH) and public health practitioners about integrating CIH providers as part of the public health workforce for future public health emergencies. The objectives were to define the potential roles CIH practitioners could play and how the CIH professions could collectively mobilize to become a part of the public health workforce. We searched the literature and convened an expert panel of ten CIH and public health practitioners to discuss the topic.

This research was jointly funded by the National Chiropractic Mutual Insurance Company (NCMIC) Foundation and by donations from the institutional members of the RAND Center for Collaborative Research in Complementary and Integrative Health. This RAND Center for Collaborative Research in Complementary and Integrative Health project was carried out within the Access and Delivery Program in RAND Health Care.

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## Summary

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**Background:** During peak periods of the coronavirus disease 2019 (COVID-19) pandemic, many complementary and integrative health (CIH) providers, such as chiropractors and naturopathic doctors, saw their clinical practice reduced substantially or shut down completely. Simultaneously, many public health and medical practitioners were overwhelmed with providing emergency care and implementing mass testing and other preventive measures. CIH providers have been an underutilized public health asset in the fight against COVID-19. Researchers with the RAND Center for Collaborative Research in Complementary and Integrative Health sought to understand how these providers can be effectively integrated into future responses to public health emergencies.

**Methods:** The RAND team convened an expert panel of ten CIH and public health practitioners and researchers. We provided the panelists a review of the news media and the scientific literature about the essential tasks facing the public health workforce during a pandemic, how CIH practitioners could contribute, and how the CIH workforce could be better mobilized during future crises. RAND facilitated a daylong online panel discussion about these topics. The expert panel conversations were transcribed, and we identified key themes and recommendations.

**Results:** Essential tasks in the early response to the COVID-19 pandemic included testing, contact tracing, and education about prevention. Despite their clinical skills and resources, few CIH providers were involved in this work. We reviewed some exemplar cases where CIH providers were highly involved in the public health response.

Panelists stated that the reason CIH providers generally did not pivot toward public health activities was not their lack of specific skills to do needed tasks. Rather, panelists noted a lack of public health awareness among CIH providers, insufficient linkages between CIH and public health professionals, and policy and financial challenges facing CIH professionals during the pandemic. Panelists proposed solutions to these barriers, including more public health training for CIH students and practitioners, stronger formal relationships between CIH and public health organizations, and addressing fundamental funding issues.

**Discussion:** The literature review and panel discussion revealed that, in order for CIH practitioners to be more fully involved in responding to future public health crises, some changes to their training and interprofessional linkages are necessary. Specifically, there is a need for (1) mutual awareness—a recognition among CIH providers that they can fulfill a key role in a public health response, and recognition among public health planners of this potential; (2) training—increasing education opportunities in public health for CIH providers; (3) connections—building stronger links between CIH and public health professional organizations; (4) financial support for CIH providers contending with underlying economic challenges; and (5) formalizing public

health within CIH—advancing public health within the scope of practice of the CIH professions, including by statute.

More broadly, those involved in public health planning should recognize CIH providers as an existing and organized labor resource that can be called upon in a public health crisis. They possess both the clinical expertise and the community-level connections to complement the public health workforce. In addition, CIH professionals should be more proactive in seeking out a role and volunteering their knowledge, skills, and expertise.

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# 1. Introduction

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## Background

Complementary and integrative health (CIH) is a relatively new and evolving concept. For this report, we apply the definition of CIH as proposed by Coulter and colleagues: Complementary (or alternative) health care is a system that runs parallel to dominant health professions such as medicine and nursing, and integrative health brings together complementary and conventional approaches.<sup>1</sup> CIH care tends to emphasize prevention and wellness and frequently includes mind and body practices and/or natural products.<sup>2</sup>

The coronavirus disease 2019 (COVID-19) pandemic has posed challenges for everyone, but in particular it highlighted shortages in the public health workforce.<sup>3</sup> In the initial stages of the pandemic, in the absence of a vaccine or effective drug therapy, the only response was a public health response. This response involved intervention on a community-based scale with testing and tracing to determine and reduce the spread of the disease and identify vulnerable populations, as well as protection through social isolation, wearing masks and other protective equipment, and sanitizing.<sup>4</sup> Effectively communicating this information to the public was also a critical task for public health organizations,<sup>5</sup> one that was complicated by the evolving nature of the science about how the virus spreads and the effectiveness of preventive measures.<sup>6</sup> The competing “infodemic” of false information about the virus that was on social media and elsewhere added to these challenges.<sup>7</sup>

A successful public health response requires a sufficient and engaged public health workforce. Although a number of different health care practitioners could have helped, one largely untapped resource was those in the CIH professions—e.g., chiropractic or naturopathic medicine.<sup>8</sup> This report focuses on these CIH professions and how they could be involved in a public health response to a pandemic.

For some CIH providers in the United States, the COVID-19 pandemic meant being shut down completely during the lockdown.<sup>9</sup> For others, it involved being allowed to practice but only for urgent care and/or under strict safety guidelines. For example, a study of state-level websites in April 2020 showed that in 14 states chiropractors were restricted to providing urgent care, and the remaining states provided no guidance.<sup>9</sup> As of May 2020, naturopathic doctors were allowed to practice under only nine states’ emergency declarations.<sup>10</sup> All CIH providers likely experienced a drastic reduction in their patient flow and utilization of their services.<sup>8,9</sup> It seems that many CIH practitioners may have felt as though they had been sidelined during one of the most serious health crises to hit the United States.

Researchers at the RAND Center for Collaborative Research in Complementary and Integrative Health<sup>11</sup> were aware of the challenges faced by CIH practitioners during the pandemic. The center was established to advance the capacity of the CIH educational institutions in the United States and Canada to engage in research to address questions for their professions. Researchers at the center decided to take a timely look at what happened during the pandemic and whether CIH providers could have participated more fully in the public health response. Because most of the members of the RAND Center for Collaborative Research in Complementary and Integrative Health are chiropractic and naturopathic medicine educational institutions, we focus on those professions. The National Chiropractic Mutual Insurance Company Foundation was also interested in this topic and agreed to help fund the project.

The participation of the CIH professions in the pandemic was hampered in two areas: First, they lack training as public health operatives, and second, they have not been organized collectively to participate in broad-based public health programs. To understand why, we need to understand what is involved in public health.

## Public Health and Its Role in a Communicable Disease Pandemic

The goal of public health is to keep populations healthy, typically by implementing health care services and policy interventions that prevent death and disease and address public safety issues.<sup>15</sup> Public health is characterized as a science that crosses disciplines, and, as such, the public health system comprises health care providers, public agencies and community organizations, and private and voluntary entities.<sup>16</sup> The Centers for Disease Control and Prevention (CDC) outlines the ten essential public health services that these entities perform:<sup>16</sup> These services include monitoring population health and addressing health hazards; informing, educating, and mobilizing individuals and communities regarding health problems; developing and enforcing laws and regulations; supporting access to health care and public health services; and conducting evaluation and research related to public health problems and services.<sup>16</sup>

Public health efforts aim to mitigate various health threats, such as by influencing individual health behaviors to prevent chronic diseases<sup>17</sup> and addressing hazardous environmental exposures,<sup>18</sup> but public health is arguably best recognized for its central role in responding to acute threats of communicable (infectious) disease outbreaks. When these types of public health emergencies occur, public health systems must act quickly with a well-informed, coordinated response while also dealing with political challenges and public scrutiny.<sup>15</sup> In the case of the ongoing COVID-19 pandemic, the public health system has been responsible for identifying infections, tracking the spread of the disease, and taking steps to reduce further spread. This has been accomplished through working with state and local governments to establish stay-at-home orders and issuing guidance around preventive behaviors such as the use of face masks.<sup>12,13</sup> As the pandemic has evolved, the public health sector has continued to collaborate with other practitioners, scientists, and policymakers on COVID-19 prevention and mitigation, including



determining when and how to reopen businesses and schools,<sup>19</sup> and delivering vaccines against the virus.<sup>20</sup> Public health workers have been doing all this under a workforce shortage<sup>3</sup>—a shortage that could in part be lessened by involving CIH providers.

## The Overlap Between Public Health and CIH

It is useful to consider the overlap between the public health services needed to respond to a communicable disease outbreak and the services that CIH providers, such as chiropractors and naturopathic doctors, typically offer. Many of the former dovetail with the daily practice of CIH providers. Although CIH providers generally see patients on a one-on-one basis, they also regularly communicate with their communities to inform and educate people about health, factors that influence it, and how to improve it.<sup>21</sup> Furthermore, many public health guidelines refer to the need to establish and maintain a diverse, skilled workforce, as well as strong partnerships and infrastructure to effectively reach the entire population.<sup>22,23</sup> CIH providers can contribute meaningfully to a public health response, whether in a permanent or a temporary capacity. Over a third of the U.S. population use these providers for health care,<sup>24-26</sup> so they are ideally situated to educate a substantial portion of the public. Furthermore, surveys have documented that, in addition to their standard therapies (e.g., spinal manipulation), these providers are involved in a wide range of lifestyle counseling around issues such as physical activity and diet.<sup>27,28</sup>

Although most CIH providers would readily recognize elements of public health in their regular patient care, in this report we focus on their potential role in community-wide public health efforts. Also, although we focus on chiropractic and naturopathic medicine, much of the information contained in this report is relevant to the other CIH professions, and perhaps to non-CIH health professions.

While the CIH professions have some level of public health literacy, a 1995 study by Krishnan et al. found inconsistencies in pedagogy: CIH practitioners with advanced degrees (MPH or PhD) in public health are not unheard of, but public health training in their professional degree curricula varies.<sup>41</sup>

Brett and colleagues<sup>29</sup> examined the accreditation standards for public health competencies in naturopathic medicine and chiropractic. They found that the accrediting bodies of these professions did include competency standards for public health. Chiropractic education accreditation, for instance, specifies that students should meet competencies in health promotion and disease prevention, including understanding and applying basic epidemiology principles, as well as understanding health behavior change and the provision of public health information. Similarly, naturopathic medicine accreditation specifies competency in public health–related topics such as epidemiology, infectious disease, and preventive health behaviors. The study did not show the breadth of the competencies, whether the competencies were achieved, or how large a role they played in the overall curriculum.

In 2002, the *American Journal of Public Health* published one complete issue that addressed CIH and public health. As noted by Silenzio, “the question of the proper role of complementary and alternative medicine (CAM) in the health of the public remains perhaps the most important one to be asked by readers of the Journal.”<sup>30</sup> Furthermore, the author states, “Although in different ways, complementary and alternative health care and healing practices represent a vast and as yet unrealized sector of the public health systems of developed and developing nations.”<sup>30</sup>

### *Chiropractic and Public Health*

Chiropractic is one of the longest established professions within CIH, dating from the 1890s in the United States. Its primary therapy is manipulation of the spine and extremities. While chiropractors encounter a full range of health conditions in their practice, they are primarily used by the public for treating back pain.<sup>31,32</sup>

Chiropractors receive varying amounts of public health education. Hawk found that chiropractors receive minimal education about topics such as national public health priorities (e.g., the Healthy People objectives).<sup>33,34</sup> Similar to what has been seen in the other health professions (e.g., medicine and nursing), some of the challenges of teaching public health topics to chiropractic students have stemmed from differences in the fundamental values of the professions (e.g., prioritizing the needs of the individual patient versus the needs of the population).<sup>35</sup> However, scholars note that public health and chiropractic have recently evolved to have more common ground; both embrace a “holistic, qualitative, and practical approach” to addressing health problems.<sup>35</sup> Also, chiropractors have long contributed to the public health priorities of prevention and health promotion on the individual level—for instance, by counseling patients about health behavior change. About 25 percent of chiropractic visits include self-care counseling and education, and about 20 percent include exercise prescriptions and recommendations.<sup>36</sup> As Hawk noted, “Chiropractors have been quietly assisting patients with healthy lifestyles since the beginning of the profession, but they have been doing so in isolation from the rest of the health care mainstream.”<sup>33</sup> Two studies found that a course introducing chiropractic students to health promotion and public health changed their attitudes toward public health and increased their perception of its relevance to chiropractic practice.<sup>37,38</sup>

### *Naturopathic Medicine and Public Health*

First conceived in 1902, naturopathic medicine is a holistic, coordinated approach to health care that respects the unique individuality of each person and that integrates modern biomedical sciences with a wide array of natural and conventional therapies.<sup>39</sup>

Like chiropractic medicine, naturopathic medicine overlaps with public health with respect to its focus on health behavior change, such as smoking cessation and improvements in diet and exercise as ways to address obesity and other chronic diseases.<sup>40</sup> Between one-quarter and two-thirds of visits to naturopathic doctors include health promotion counseling and education.<sup>21,42</sup>

An important distinction is that, like chiropractors, naturopathic providers typically focus on individual-level clinical interventions, whereas public health solutions frequently emphasize interventions at the community or policy level, such as public smoking regulations.<sup>43</sup>

Both these CIH professions contribute importantly to public health goals through their individual-level patient interactions. Sutherland argues that the chronic and complex nature of modern epidemics like heart disease and diabetes requires a paradigm shift, and that public health and CIH providers could be powerful allies in this shift;<sup>44</sup> we argue that the point extends to infectious disease epidemics as well.

### *CIH Professions and Vaccinations*

One area where some disconnect does occur between the public health paradigm and the CIH professions has been vaccinations. For instance, research on both chiropractic and naturopathic medicine providers suggests that a substantial proportion of students of both professions do not support full vaccination (e.g., in a 2004 study, 13 percent of naturopathic students endorsed a belief that patients should receive no vaccinations),<sup>45</sup> and the percentage of support for vaccination among chiropractic and naturopathic students decreased over the course of their four-year programs.<sup>45,46</sup> This lack of support for vaccination connects to a broader issue of vaccine hesitancy, including about the COVID-19 vaccine, that has also been observed among students in medicine and dentistry.<sup>47,48</sup> A more recent study of chiropractic students found a higher level of support for vaccines overall, with an increase over time; the authors concluded that despite this progress, vaccine hesitancy will likely persist within the profession.<sup>49</sup> Given that vaccination programs are a central component of public health internationally, Wilson and colleagues point to a need for CIH students to engage with the public health community earlier in their careers.<sup>45</sup> This way, CIH students can more fully understand the role they play in community-based care and the need for vaccination, in addition to the individual care they are traditionally trained to provide.

In mid-January 2021, when we held our panel, COVID-19 vaccines were not yet available to the general public, although health care providers in the United States could access them.<sup>50</sup> Much of the public health focus was on rolling out the vaccine in a fast and equitable manner.<sup>50-52</sup> At that time, there was relatively little awareness of the extent of hesitancy about this vaccine<sup>53</sup> and no information about COVID-19 vaccine hesitancy in the CIH professions. It is important to keep this context in mind while considering the observations of the panel.

### **Responding to the Pandemic**

One lesson learned from the pandemic is that entities or organizations can pivot to new roles during a crisis. For example, public schools in Los Angeles, California, continued to provide the federal school-lunch program services by distributing food directly to families.<sup>54</sup> They were quickly able to adapt and establish a food production and delivery system that allowed families

to pick up bags of groceries in the same way they previously picked up their children from school. In other examples, automobile manufacturers converted plants to produce ventilators;<sup>55</sup> clothing manufacturers started making masks, gowns, and gloves;<sup>56</sup> and alcohol manufacturers began producing hand sanitizer.<sup>57</sup> In each case, these groups found a way to not only think differently about their roles or products, but also provide critical support to the COVID-19 public health effort.

Examples of CIH providers taking on distinct roles in response to previous public health crises exist. For instance, in the months following the attacks on September 11, 2001, CIH professionals volunteered to offer stress relief clinic hours that were free to people affected by the attacks.<sup>58</sup> Many also expressed openness to new roles during the COVID-19 pandemic. In March 2020, the American Association of Naturopathic Physicians issued a press release urging authorities to include and use naturopathic doctors in their response to the pandemic.<sup>59</sup> In April 2020, the California Chiropractic Association encouraged its members to sign up with the state's volunteer health worker registry; hundreds of chiropractors signed up,\* although it was unclear how many were contacted to participate.<sup>60</sup> In short, CIH providers and organizations expressed interest in engaging in the broader response to the pandemic, but there is little evidence to suggest that they were contacted to actually take part in those public health activities. The response of chiropractors to COVID-19 has generally focused on adapting their current practice to changing guidelines, such as shifting to telehealth practice,<sup>8</sup> rather than engaging in public health practice. While this is understandable, it represents a missed opportunity to contribute to key components of COVID-19 prevention. When a new infectious disease spreads globally, there are no immediately proven treatments or protections, such as a vaccine; thus, public health measures (which include testing, tracing, isolating, and protection on a population basis) are the only options available.<sup>61</sup> We argue that, to be more relevant during these emergencies, CIH providers, similar to all the allied health professions, need to hone their ability to adapt to a public health focus and think differently about how they approach practice.

## Study Objectives

As noted earlier, this study was intended to examine the potential public health role of U.S. CIH professions in a pandemic. The specific aims of this project were as follows:

1. Examine the public health role that CIH professions can play in a pandemic over and above the treatment of individual patients. In support of this aim, we convened and held an expert panel to discuss the essential tasks facing the public health workforce during a pandemic (e.g., testing, contact tracing) and the qualifications required. Then, we discussed whether these qualifications are met by CIH practitioners and students.

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\* Unfortunately, the only information on the actual number of California chiropractors who signed up is that it was "hundreds" of the approximately 13,000 chiropractors in the state. See the cited press release.

2. Examine how CIH professions could mobilize collectively in a pandemic or other public health crisis to form part of the public health intervention at a population and community level. In support of this aim, the panel discussed how the public health workforce is mobilized and how to mobilize CIH practitioners and students to meet public health needs.

## 2. Methods

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On January 19, 2021, researchers at the RAND Center for Collaborative Research in Complementary and Integrative Health convened a ten-member panel of CIH and public health experts to better understand what role CIH professions can play in a pandemic and how CIH professions can be mobilized in a future public health emergency. We identified an expert panel as the most appropriate approach to answer these questions because it would allow experts to share and build on one another's ideas and allow us to assess the degree of consensus around different ideas.<sup>62</sup> RAND has a long history of, and expertise in, using expert panelists as key informants.<sup>63-67</sup> Expert panels provide an efficient way of assembling persons with content knowledge into a forum where participants' "opinions are made transparent and subjected to critical appraisal."<sup>68</sup> This process adds rigor and transparency that is particularly valuable for addressing research questions on topics where there is little published information.<sup>68</sup>

### Preparation for the Panel

We chose panelists based on depth of experience in the CIH disciplines of chiropractic or naturopathic medicine, and/or public health. We sought to have representation of multiple regions of the United States, including large urban and rural/suburban areas, and a mix of community practitioners, administrators, and researchers. We invited 12 panelists to participate through a formal invitation letter from the principal investigators. All accepted except for two who were representatives from local public health departments who failed to respond, likely due to the effect of the pandemic on their schedules.

A week before the meeting, we provided the panelists with a briefing paper outlining the specific aims of the project and preliminary information on these aims from the news media and literature. This briefing paper provided to the expert panel was based on the results of a systematic search of the scientific literature in PubMed and Google Scholar, as well as journalistic literature (e.g., searching CIH and COVID-19-related news in Google) about the essential tasks facing the public health workforce during a pandemic, whether CIH practitioners are trained to accomplish these tasks and where they are contributing, and how the public health workforce is mobilized and how CIH practitioners could join that mobilization during future crises. The purpose of this briefing paper was to give all the panelists a common starting point, and we incorporated its contents into the introduction of this report. The briefing paper described the essential tasks facing the public health workforce during the COVID-19 pandemic as (1) testing, (2) contact tracing, (3) public education and support (for isolating, physical distancing, hand washing, wearing masks), and (4) vaccination (including education about and delivery of vaccines). We then described how the public health workforce is typically mobilized during a

pandemic, and we outlined barriers and opportunities for mobilizing the CIH professions for those efforts.

## Participants

The panel consisted of ten panelists from across the United States, including licensed CIH practitioners who have been involved with the public health workforce, those who teach public health to CIH students, and those involved in CIH and public health policy. Of the ten panelists, two were public health professionals from university departments, and another four had advanced degrees in public health beyond their professional degrees. Three were naturopathic physicians, and four were chiropractors. Two of the chiropractors and one of the naturopaths participated in local public health programs during the pandemic, and two of the panelists taught public health programs in CIH institutions. The panel contained both rural and urban practitioners. See Appendix A for short biographical sketches of the ten panelists.

## Panel Coordination and Facilitation

RAND staff coordinated and facilitated the meeting. The all-day panel was held online via Microsoft Teams on January 19, 2021. The agenda for the meeting (shown in Appendix B) closely followed the study's objectives and helped guide the topics of our discussions. Although other health professionals could have contributed to public health efforts during the pandemic and may have faced the same challenges, our focus was on how the CIH professions could help ease the shortages experienced in the public health workforce responding to a pandemic. We elicited information from the panel on involvement of CIH providers in public health efforts, but we did not require them to specify the type of involvement, which could range from volunteer to paid to leadership roles. The discussion was free-form, and no consensus was required. Early in the discussion, the panel determined that although the pandemic was the impetus for this project, the broader topic of the public health role of CIH professions during any public health crisis would be a more useful focus for discussion.

The panel meeting was video-recorded, and detailed notes were taken by two RAND staff throughout. Panelists received an honorarium for their participation. The study protocol was reviewed and approved by the RAND Human Subjects Protection Committee.

## Analysis

The research team (the four authors of this report) reviewed the panel meeting notes and, as needed, the video-recording, independently for salient themes. We then collectively agreed on a set of key themes and exemplar quotes. We gave special attention to themes collectively agreed on by the panelists as requiring action to better integrate CIH professions into a public health pandemic response.

### 3. Results

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In this chapter, we focus on five themes that were interpreted by the panel as barriers to CIH professions participating in a public health response to a pandemic. These are organized by barriers and solutions in the following categories: (1) attitudes and awareness, (2) education of CIH providers, (3) linkages between CIH and public health professionals, (4) economic barriers, and (5) additional considerations.

#### Attitudes and Awareness

Panelists commented that one barrier to the involvement of CIH professions in the public health response to COVID-19 was “ambivalence” by CIH providers about whether their presence was wanted. As one panelist said, it “is not that we can’t do it, but more that people don’t consider us, don’t know what we can do.” Another panelist referred to a persistent internal limitation that inhibits CIH providers from engaging in these activities, alluding to “historical reasons . . . why CIH providers have been sometimes hesitant of critique or ridicule.”<sup>†</sup> A public health practitioner commented that she would have welcomed involvement of CIH providers in her work coordinating COVID-19 prevention activities, but she did not have the relationships in place to bring them into those activities.

Relatedly, the panelists discussed that a willingness to get engaged in the public health response to COVID-19, such as organizing a testing site or taking nasal swabs, was more important than training in the specific tasks required. Most people who got involved, regardless of their prior experience or training, had to learn on the go. One person commented, “Nobody was qualified [i.e., had explicit experience to meet the needs of the COVID-19 pandemic], or very few.” A CIH practitioner who was highly involved in public health efforts against COVID-19 observed that in some instances even seemingly well-prepared people (both mainstream medical providers and CIH providers) did not help out: “No matter what type of training people had . . . the volunteer base wasn’t there.” Rather than training for specific tasks, involvement in public health activities depended on CIH practitioners’ general awareness of “what public health is” and willingness to jump in, as well as viewing health as “an aspect of the community” and not just of the individual. Part of the reason for CIH providers’ reluctance to engage in public health is that they do not see themselves as playing a public health role and instead view themselves as providers to individuals.

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<sup>†</sup> This panelist did not specify the reasons, but we include text in the next chapter on possible reasons for exclusion.



This is so much bigger than “here is a core set of skills that you need,” like swabbing and giving vaccines. It’s more about collaboration, communication, a broader professional obligation, to be more strategic about creating opportunities for our profession.

—CIH practitioner

## Education of CIH Providers

Another issue raised by the panel was that training for public health competencies should be oriented not just toward in-clinic prevention, but toward community-based work as well: “What we are talking about is not what you’re doing in public health in one-on-one appointments with patients, but what you can do [to be] more involved in the community, the community that is created around a crisis.”

The panelists outlined a set of broad competencies that would enable CIH providers “to effectively work in a public health system.” One way to ensure stronger connections to public health efforts would be for CIH professionals to hold public health leadership roles, which would require a much more comprehensive education in public health. This would include basic epidemiology and some background in health policy topics, such as understanding the health care system, the public health surveillance system, and logistics and operations for preparedness. Social science topics, such as the social determinants of health and initiating positive behavior change, would also be key to understanding the broader public health role. Finally, certain general skills, including interprofessional communication and the use of personal protective equipment, were thought to be important.

Providers described multiple options for delivering this education to CIH practitioners, depending on the level of interest of the trainee or practitioner. For CIH clinicians who are highly interested, a public health credential could be created. Alternatively, the Master of Public Health (MPH) degree was touted by the public health panelists as the most logical option for clinicians who want advanced public health training. One panelist summarized, “The more MPHs the professions can produce, the better.” This is a route medical doctors have traditionally followed, whereby the MPH is a common degree they earn after obtaining their MD degree. For interested clinicians who have completed their training, a series of brief intensives may work best with their busy schedules. The presence of a cadre of CIH professionals with advanced degrees in public health would also signal the importance of the field to these professions and to those outside of the CIH professions, particularly those in public health. Panelists also agreed that basic public health training should be implemented for all CIH trainees.

## Linkages Between CIH and Public Health Professionals

Panelists identified the disconnect between the CIH and public health professions as another significant barrier to CIH involvement in the response to the pandemic. A public health leader described how challenging it was to connect with local health leaders to staff her epidemiologic research efforts, testing sites, and contact tracing efforts. She described the need for local coalitions that included interested CIH providers along with pharmacy, nursing, and dental professionals who could be easily contacted and mobilized in a public health emergency.

One panelist noted that some CIH students wanted to participate in vaccine outreach efforts but did not know how to get involved: The students “want to have a role, even to just disseminate factual information that comes from the county,” yet “currently there is not a role. . . . At the same time, there is a shortage of health workers to administer vaccines.”

In some localities, certain policies have helped integrate CIH providers into COVID-19 vaccination efforts. In Colorado, the scope of practice for chiropractors was expanded to include administration of the COVID-19 vaccine (see State of Colorado Regulations<sup>69</sup>). In Oregon, naturopathic doctors were already able to administer vaccines,<sup>70</sup> and primary care institutions with naturopathic physicians have received grants for providing COVID-19 vaccines to underserved community members.

The lack of linkages between public health and CIH providers is also hindered by the tendency for the CIH providers to practice in isolated, solo clinics and the tendency for public health professionals to work in government municipal institutions, such as city departments of health, and university public health departments. Lack of colocation is a distinct barrier to co-engagement. Although colocation is typically not a feasible option, the barrier can be overcome through other mechanisms, such as joint engagement on issues of mutual concern.

Panelists suggested that professional organizations could help identify individual CIH practitioners interested in public health activities. At the national level, panelists mentioned the American Chiropractic Association, the American Association of Naturopathic Physicians, and the American Public Health Association. They also discussed the importance of state professional associations, as these usually have local societies or chapters. CIH colleges (e.g., chiropractic colleges and naturopathic colleges) and their public health programs were also mentioned. All these groups, with their multiple connections and active channels of communication to members of the profession (association members, alumni, staff), could mobilize the profession through maintaining contact information for CIH practitioners who want to be involved and assist in a public health emergency. Although the organizational structures are in place, they are not activated with regard to the public health role. This activation could include profiling those who participate in public health in their publications, forming committees, and providing education sessions at their annual conferences. At this level, it is about transforming these professions so that members see themselves in a different light and are more inclined to see themselves as capable of contributing to a public health response.

In addition, panelists cited a need for more CIH-trained professionals serving in state and national public agencies:

It's not just CIH providers on local health boards, but how do we have CIH providers at CMS [Centers for Medicare & Medicaid Services], HHS [Health and Human Services], CDC [Centers for Disease Control and Prevention], thinking on a state level and a national level.

It would involve political action to get members appointed to such places.

## Economic Barriers

The panelists identified economic issues as a barrier on multiple fronts to CIH professionals' involvement in the public health response to COVID-19. To start, CIH practitioners described challenges, long before the COVID-19 pandemic, with receiving insurance reimbursement for the full range of services they provide to patients, and these revenue challenges worsened during the pandemic. Regarding CIH clinics and institutions, because of "immediate reductions in revenue" due to patients staying at home, coupled with challenging decisions from states about what constitutes essential care (often defining CIH care as non-essential),<sup>9,59</sup> "the CIH institutions were shell-shocked," as one panelist put it, and limited in their ability to mount new efforts, including seeking out ways to join the public health workforce during a crisis.

Panelists also cited financial limitations on the public health side. Local public health leaders were relying on volunteers for essential public health activities in response to the pandemic, and this was concerning because "it undermines the [importance of the] actual tasks and responsibilities." "Public health jobs are significantly underpaid," noted one panelist. So, lack of funding for public health generally was seen as a problem.

Further, the financial limitations that face both CIH and public health practitioners exacerbate the challenge of motivating CIH students to obtain additional credentials in public health. As one panelist put it, "It's not a problem so much of getting CIH students interested in public health, but more that there is no clear career track . . . [CIH] students are graduating with a lot of debt from our institutions, and a public health career might not help."

However, when CIH professionals do take leadership during times of public health crisis, this can raise their status in their communities in a way that is ultimately helpful for the sustainability of their profession. One panelist stated, "The PR [public relations] and respect you gain from doing this. . . . Money can't buy it."

## Additional Considerations

The panelists also noted two additional challenges to CIH integration into public health efforts: attitudes about vaccination and moving from autonomous patient care to working on a team.

A panelist from the CIH professions said that although the professional members varied considerably in their views on vaccines, vaccine hesitancy, and even outright opposition to vaccines, these are features of the CIH professions that are commented on in the press and among those opposed to CIH. This has forced many of their professional associations to make public statements making it clear that they do not oppose vaccines (see our discussion of our findings in the next chapter). Some CIH professionals were involved in the rollout of the COVID-19 vaccine. However, there may be a perception by public health professionals that many of the CIH professionals are vaccine hesitant, leading public health professionals to a reluctance to engage CIH providers in public health responses during the COVID-19 public health emergency.

Individual attitudes and beliefs, as well as vaccine misinformation, vary across CIH and non-CIH health care providers. Hesitancy about the COVID-19 vaccine exists not just among CIH providers, but among some non-CIH providers as well: “It’s across the board . . . among health care providers, there is hesitancy, lack of trust.” Panelists noted that this could be helped if CIH providers received basic epidemiology training that includes education about infectious disease epidemiology and vaccinations: “There is a lot of misinformation around vaccine regulation, recording of adverse events, [and] how vaccines get approved” that additional training could help address.

Vaccine decisionmaking is part of a broader framework of prioritizing the needs of the community, as public health does, versus prioritizing the needs of individual patients, which is usually the approach in CIH. CIH providers might need to embrace the community approach more fully in order to be comfortable being integrated into vaccine efforts. However, while emphasizing the community benefits of vaccination may go a certain way toward increasing acceptance, vaccination is still ultimately an individual decision.

Although the panelists expressed optimism about the potential for better integration of CIH professionals into future public health emergency responses, there was also ambivalence. Being engaged in public health would require a cultural adaptation necessitating some compromises for CIH providers, particularly in terms of their independence. As one panelist described it, “Health providers are autonomous, CIH in particular. If we’re going to do this seriously, get CIH providers to participate in a national emergency, everyone has to let go of their autonomy.” Most CIH professionals practice in isolated practices and not in teams, whereas public health is overwhelmingly practiced as a team effort.

Many acknowledged that more fully incorporating the CIH professions into the needs of a public health emergency would be an uphill battle, having observed how many professionals “buried their heads in the sand” when the COVID-19 pandemic began. One panelist stated, “There are liabilities, there is ambivalence in public health and in the professions about whether they want to be involved.” Overcoming this would require forming coalitions between CIH providers and persons in public health committees and concrete proposals to remedy the situation. It is not entirely clear who would take the initiative: the public health system, which

wants to build this relationship to enhance capacity; individual CIH providers who want to be able to contribute to public health emergencies; CIH leaders who want to push their colleagues in a more community-minded direction; or some combination of all three.

## 4. Discussion

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### Summary of Conclusions and Recommendations

Through our review of the literature and panel discussion with CIH and public health experts, we identified five themes relating to CIH providers and their involvement in the public health response to COVID-19 and participation in future public health emergencies. Based on these and the panel discussion, we identify five changes we believe would be needed for CIH practitioners to be more involved in responding to future public health crises:

- **Attitudes and awareness:** CIH providers should recognize that their contributions to public health efforts could be important and welcome. Simultaneously, public health planners should recognize CIH providers as a resource that can be utilized.
- **Education of CIH providers:** The training of CIH providers needs to include content to ensure their proficiency in topics such as basic epidemiology and community-based interventions in order to broaden their perspective from individual patient care to the needs of public health.
- **Linkages between CIH and public health professionals:** Stronger linkages between CIH and public health practitioners, leaders, and professional organizations are needed to facilitate the mobilization of CIH providers in an emergency.
- **Economic barriers:** Continued advocacy about the importance of CIH care, including recognition that it is essential health care and support for insurance coverage of CIH services, is important to give CIH providers sufficient financial stability to allow them to engage in the emerging responsibilities and opportunities of a public health crisis.
- **Additional considerations:** Efforts to better incorporate CIH providers in public health efforts need to acknowledge and directly address issues on which public health professionals and some CIH providers may not completely align, in particular regarding vaccinations and team participation.

Finally, and overall, if the CIH professions and individual CIH providers want to more fully participate in public health practice, this participation should be formalized within CIH. Public health practice needs to be seen as part of the scope of practice of the CIH professions, both by statute and by the professions themselves.

To put the five themes of the panel—their opinions and conclusions—into a wider perspective, we went back to the literature to see how the findings of this single panel compare with what has been published in the literature.

#### *Attitudes and Awareness Between CIH and Public Health*

As noted earlier, the history of CIH providers being excluded by mainstream biomedical health care in the United States.<sup>30,71,72</sup> may have contributed to their hesitance to engage with public health efforts against COVID-19. This history of exclusion and stigma is well documented

in the literature,<sup>73,74</sup> but there is also evidence of increasing acceptance of CIH providers in North America,<sup>75,76</sup> including by public health professionals.<sup>30</sup> The public health panelists felt that CIH professionals would be a welcome addition to the workforce battling COVID-19 and alluded to the public health field's own challenges with being sidelined and underfunded within the U.S. health care system.<sup>77</sup>

### *Education of CIH Providers*

While it is not standard, some CIH providers already receive basic public health training,<sup>74</sup> and some CIH institutions offer an MPH degree.<sup>78</sup> Curricula for teaching public health concepts to CIH providers, such as chiropractors, have been developed<sup>79,80</sup> and evaluated.<sup>37,38</sup>

The need for more comprehensive basic public health education for all CIH trainees has been discussed in prior literature. Madigan and colleagues argued that existing curricula were not widely applied in chiropractic colleges because they were too extensive, were too prescriptive, and lacked sufficient stakeholder input in their development.<sup>80</sup> The authors instead proposed a set of competencies focused on four domains: the relevance of public health, principles of public health, public health policy, and practical applications of public health.<sup>80</sup> These align with the broad public health competencies that our panelists endorsed.

### *Linkages Between CIH and Public Health Professionals*

Training can also improve connections between public health and CIH on areas of preventive medicine and health promotion in clinical settings,<sup>80-82</sup> and collaboration among CIH and mainstream health care providers.<sup>29</sup> Those topics are important and overlap with the role CIH providers might have in addressing an emergent public health crisis. However, in order for CIH providers to be fully integrated into a public health crisis response, their public health education should also prepare them to take action in a community setting and/or to take on distinct, nonclinician roles (e.g., managing a help line<sup>83</sup>).

Opportunities for CIH providers to get involved in public health professional organizations have been outlined previously.<sup>74</sup> As mentioned earlier, one such organization is the American Public Health Association, which, although it formerly excluded CIH providers (50 years ago),<sup>84,85</sup> currently has sections for Integrative, Complementary and Traditional Health Practices and for Chiropractic Health Care.<sup>86</sup>

### *Economic Barriers*

Limited insurance coverage for CIH care<sup>87,88</sup> and the shortage of funding for public health programs<sup>89</sup> have been reported previously. The financial pressures facing CIH professions (like many other professions) may have intensified during the COVID-19 pandemic because of new requirements that affected how CIH providers could give care. Some shifted to providing care via telehealth,<sup>8,90</sup> whereas many modified their appointment schedules and reception area

protocols to minimize patient interaction.<sup>8</sup> These financial pressures and practice changes factored into the “shell-shocked” response to the pandemic that our panelists described.

### *Additional Considerations*

As discussed earlier, the panelists’ comments about how CIH providers have engaged, or not, in COVID-19 vaccination promotion efforts provide an informative case study of the barriers and facilitators for involvement of CIH providers in public health efforts. The panel took place in January 2021, when mass COVID-19 vaccination efforts were just getting underway in the United States. The panelists’ conversation around vaccine hesitancy, reaching diverse patient populations, and handling the logistics of a massive immunization effort has since become even more relevant.<sup>52</sup> The issue of general vaccine hesitancy and the role of CIH professions has been reported in opinion pieces. Historical vaccine hesitancy among a subset of chiropractors has been highlighted,<sup>91</sup> with media reports noting that there is a “split” in the profession regarding the COVID-19 vaccine.<sup>92</sup> Anti-vaccination attitudes run contrary to the stances of the major chiropractic associations.<sup>93</sup> Indeed, CIH professional organizations, including the Academy of Integrative Health and Medicine and the Institute for Functional Medicine, have published statements in clear support of the COVID-19 vaccine.<sup>94,95</sup> However, CIH students may not be sufficiently prepared to counsel patients about vaccines,<sup>96</sup> and they may be particularly hesitant about newly developed vaccines.<sup>49</sup> As the panelists noted, vaccine hesitancy is also present among allopathic or mainstream health care groups, such as medical students<sup>47</sup> and dental students.<sup>48</sup>

Patients who are hesitant about vaccines are more likely to seek care from CIH providers,<sup>97</sup> meaning that CIH providers can have more access to, and trust from, certain vaccine-hesitant populations. Scholars have argued that, for this reason, the vaccine-supporting majority of CIH providers have an important and unique role within vaccination efforts.<sup>98</sup> One strength that CIH providers bring is a willingness to engage patients in an open discussion about advantages and disadvantages of vaccines.<sup>99</sup> Mainstream providers, in contrast, may be less willing to engage with vaccine-hesitant patients.<sup>99</sup> The tendency for CIH providers to be highly responsive to individual patients’ concerns can be an advantage for connecting with certain patient populations, but it also represents a philosophical difference from the field of public health, which tends to prioritize the collective needs of the population over the needs of individuals.<sup>98,100</sup> The potential for CIH providers to aid in the battle against vaccine misinformation represents the broader challenges and promises of bringing CIH providers more fully into the public health response to COVID-19.

### **Lost Opportunity**

The lack of CIH provider involvement in COVID-19-related public health practice represents a lost opportunity on two fronts. First and foremost, the public health response lacked the full



contributions of many highly skilled CIH providers. The early public health response to the COVID-19 pandemic in the United States was insufficient<sup>101</sup> and contributed to many more deaths than might have occurred if recommendations for strengthening testing site networks and improving adherence to preventive measures such as social distancing had been followed.<sup>102–104</sup> There were examples of CIH providers who successfully led public health prevention efforts, such as the team of chiropractors from South Dakota who set up a regular testing site, an informational call center, and other forms of support for their community,<sup>80,83</sup> but most CIH providers were not significantly engaged in these types of public health activities. CIH health care providers are a modest part of the overall health workforce; for instance, in the United States, there are roughly 70,000 chiropractors<sup>105</sup> and 6,000 naturopathic physicians,<sup>106</sup> compared with over 600,000 active medical doctors, yet they could have made a contribution.<sup>107</sup>

Second, this was a missed opportunity for CIH providers to strengthen their ties to their communities and to make their skills and dedication more widely recognized. CIH professions may lack recognition or face negative perceptions from other health care professions and the general public,<sup>71,73,108</sup> despite positive outcomes and high satisfaction among their patients.<sup>109</sup> A CIH leader wrote, “This [COVID-19] pandemic requires us to take dramatic steps to not waste this moment. . . . This crisis is novel, and novel challenges demand innovative voices, innovative thinking, and innovative ideas and solutions.”<sup>110</sup> Our panel discussants noted that CIH providers who took on leadership of public health activities during the pandemic became better known and more respected in their communities.<sup>83</sup> Arguably, those who did not engage in public health activities missed an opportunity.

To be clear, CIH providers and many other health workers faced major barriers to engaging in this public health response, even individuals who were motivated to do so. The shutdown “wreaked havoc” on many businesses and companies, as industries struggled to successfully adapt.<sup>111</sup> Economic pressures and clinical changes were layered on top of other pandemic-related stressors, like concern about one’s personal health,<sup>112</sup> the health of one’s employees,<sup>8</sup> and managing new child-care and/or elder-care challenges.<sup>113</sup> These stressors may have contributed to what a panelist described as a “shell-shocked” response by many providers. At the same time, the fact that many CIH providers could dramatically change the way they provide care (e.g., moving from hands-on care to telehealth)<sup>8,90</sup> indicates a capacity to embrace new roles. This capability could be applied to new public health responsibilities as well.

## First Steps in a Strategic Plan

The recommendations from the work of the panel are directed primarily at the CIH professions. Although incorporating them into a public health response in a pandemic cannot be accomplished by the professions alone, there is much that CIH professions can do proactively if that is a role they seek for the future. Of the five potential solutions proposed, implementation of two could begin in the short term. Eventually, more public health training should be incorporated

into the curricula for new CIH providers, but in the meantime, short intensives—especially online—could begin to fill the gap and would include training for established practitioners. The RAND Center for Collaborative Research in Complementary and Integrative Health could be one platform for these trainings. The other solution amenable to implementation in the short term is improving connections between CIH and public health. We recommend that the academic members of the professions (1) promote more presentations of public health issues in the two CIH-related sections of the American Public Health Association and (2) request that the session leaders provide some sessions focused on the connection between public health planners and CIH practitioners. In the past, both sections have been headed by members of the CIH professions. We further recommend that public health officials be invited to speak at CIH conferences and vice versa.

## Strengths, Limitations, and Areas for Future Research

In this study, we leveraged the expertise of a diverse panel of ten CIH and public health researchers and practitioners. This was an effective approach to gain insight into how CIH providers can be better integrated into responses to public health emergencies. One limitation of an expert panel is the restriction on the number of participants; they cannot be said to represent all the stakeholders. All panelists had at least some awareness of CIH, and inclusion of some CIH-naïve or even CIH-opposed or -skeptical members could have offered additional insights. Our focus was on the involvement of the CIH professions in a public health crisis. Given the recency of the pandemic and the lack of detailed information in the literature on any health professions' involvement in public health efforts, we were dependent on the experience of the panelists to provide most of the information. Also, we regret not being able to include the frontline perspectives of individuals leading pandemic-related efforts in local and state public health departments. It should also be noted that the panelists were not specific about the form that CIH professions' public health involvement could take or is most feasible. That is, many of the panelists' points could refer to their being formal members of a public health team, their being recruited and compensated for their involvement, or their participation as volunteers.

This panel was conducted by the RAND Center for Collaborative Research in Complementary and Integrative Health, and we focused on the role of the CIH professions during the pandemic. While we believe the results presented here may be relevant to understanding the engagement of other health care providers (e.g., dentists, physical therapists) in public health activities, it was beyond the scope of this study to examine the activities of those groups.

Others have examined the ways CIH providers modified their practice in response to the pandemic,<sup>8</sup> but we are aware of no other study examining CIH providers' role in connection to public health activities during COVID-19. The study was not intended to comprehensively survey CIH providers' involvement in public health tasks during the pandemic, but this question

would be valuable for future studies to address. At the time when we conducted our expert panel, mass dissemination of the COVID-19 vaccine was just beginning.<sup>114</sup> Future research to examine in greater depth the unique contributions that CIH providers can play in education and delivery of COVID-19 vaccines is also needed. As studies of the public health involvement and barriers faced by other health professionals in the pandemic become available, they could provide additional insights that might help the CIH professions structure their responses to future public health crises.

The findings from this study can inform greater CIH involvement in public health practice, not only in the case of a viral pandemic, but in other emergent public health crises as well. During 2020, the public health and health care community responded both to the emerging COVID-19 pandemic and to continued, interrelated public health crises stemming from climate change,<sup>115</sup> racism,<sup>116</sup> and other issues. Health care providers have addressed these issues in important ways as part of their patient care,<sup>117</sup> and they have also acted outside of the clinical setting to promote the public's health (e.g., by acting against racism in the workplace<sup>118</sup> and supporting communities faced with wildfires<sup>119</sup>). While these situations are dynamic and the needs vary widely, we believe that the policy approaches outlined in this report—including recognition of CIH providers as potential public health providers by those within and outside the profession, stronger public health training for CIH providers, stronger linkages between CIH and public health organizations, and economic support for CIH providers—would support greater CIH provider involvement in a broad variety of public health areas. It is important to stress that what is being suggested is a two-way recognition: that, on the one hand, public health professionals and policymakers recognize that CIH providers could provide a potential labor force in a pandemic; and that, on the other hand, CIH professions both see themselves in the public health role and be proactive in seeking out participation.

## 5. Conclusion

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Based on the findings of an expert panel conducted in January 2021, we have outlined a set of barriers to increasing the involvement of CIH professions in the public health response to crises like the COVID-19 pandemic and recommended five potential solutions:

1. Increasing mutual awareness—both the awareness among CIH providers that they can play an important role in a public health response and the awareness among public health planners of CIH providers' potential as a resource
2. Improving training—enhancing the public health education of CIH providers
3. Strengthening connections—between CIH and public health professional organizations
4. Expanding support for CIH—addressing underlying economic challenges
5. Formalizing public health within CIH—elevating public health within the professions' scope of practice, including by statute.

We propose these recommendations with the belief that CIH providers can more fully contribute not just to the ongoing response to COVID-19, but also to future pandemics and public health crises.<sup>120,121</sup> To be relevant during these emergencies, CIH providers need to hone their ability to adapt a public health focus and think beyond their regular practice.

## Appendix A. Panel Members

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**Tom Bell, ND**, currently works as a primary care physician in a network of rural community health centers/federal qualified health centers (FQHCs) that covers a 600-square-mile service area in northeastern Washington State. He is the first naturopathic doctoral student in the country to receive a Health Resources and Services Administration–funded Rural Primary care, Research, Education, and Practice (PREP) research grant, awarded to medical students and residents working on research related to improving rural health care. Dr. Bell holds a doctor of naturopathic medicine degree from Bastyr University. He has been directly involved in evaluating patients at outdoor COVID-19 testing sites since the pandemic began.

**Bernadette Boden-Albala, DrPH, MPH**, is the director and founding dean of the Program in Public Health in the Susan and Henry Samueli College of Health Sciences at University of California, Irvine (UCI), where she is also a professor of epidemiology and population health and disease prevention. An internationally recognized expert in the social epidemiology of stroke and cardiovascular disease, Dr. Boden-Albala was a member of a statewide panel of experts that informed California’s public health response on the COVID-19 pandemic, and she collaborated with the Orange County Health Authority and UCI faculty on COVID-19 studies to help further the understanding of the virus and its impact on the region.

**Ryan Bradley, ND, MPH**, is the current director of research and an associate professor of nutrition and public health at the National University of Natural Medicine in Portland, Oregon. He is also an associate professor in the Herbert Wertheim School of Public Health at the University of California, San Diego, and an adjunct professor of public health at Bastyr University. In spring 2020, Dr. Bradley developed the Traditional Complementary and Integrative Health and Medicine COVID-19 Support Registry, which captured clinical case details, as well as other contributions to health education and preventive services, on over 700 COVID-19 patients seen by complementary medicine providers. He received his doctor of naturopathic medicine degree from Bastyr University in 2003 and his master of public health in epidemiology from the University of Washington in 2009.

**Joseph N. Carr, DC**, is a chiropractic specialist in Huron, South Dakota. He graduated with honors from National College of Chiropractic in 1989. Having more than 31 years of diverse experiences, Dr. Carr is a member of the American Chiropractic Association and South Dakota Chiropractic Association and serves on multiple boards and committees for the chiropractic profession. He also serves as a local high school and college chiropractic team physician. He is health and medical director of the Beadle County (South Dakota) COVID-19 Emergency Management Team.

**Michael Goldstein, PhD**, is Professor Emeritus of Public Health and Sociology at the University of California, Los Angeles. His work has focused on complementary and alternative medicine, self-help and self-care, and the sociology of the health professions. He is the author of the book *Alternative Health Care: Medicine, Miracle, or Mirage?* and (with John Weeks) the position paper “Meeting the Nation’s Primary Care Needs: Current and Prospective Roles of Doctors of Chiropractic and Naturopathic Medicine, Practitioners of Acupuncture and Oriental Medicine, and Direct-Entry Midwives,” which was commissioned and published by the Academic Consortium for Complementary and Alternative Health Care.

**Anthony W. Hamm, DC, MS**, holds a doctor of chiropractic degree from the National University of Health Sciences and diplomate certification in chiropractic orthopedics and forensic sciences. He has also earned a master of science in health sciences with a concentration on health care quality and leadership from the George Washington University School of Medicine and Health Sciences. Dr. Hamm is a past president of the American Chiropractic Association, and he formerly represented the chiropractic profession on the American Medical Association Relative Value Health Care Professionals panel as an adviser. Dr. Hamm has lectured extensively throughout the country on health care quality and reporting, clinical documentation, risk management, and health care compliance. He was honored as chiropractor of the year by the American Chiropractic Association in 2016.

**Rahelah Khorsan, PhD, MA**, is a full-time faculty member in the Interprofessional Clinical Sciences at the Southern California University of Health Sciences. Her recent research has examined factors that influence the success of integrative health care research and clinical programs. She holds a PhD in planning, policy, and design and an MA in demographics and social sciences from the University of California, Irvine. Dr. Khorsan teaches graduate seminars on public health, medical terminology, and medical ethics, including Introduction to Medical Ethics and Medical Ethics in Healthcare.

**Michele Maiers, DC, MPH, PhD**, is executive director of research and innovation at Northwestern Health Sciences University (NWHSU) in Minneapolis, Minnesota. In her role, Dr. Maiers leverages high-quality research to inform health care policy and innovation initiatives on the local, regional, and national levels. Recent areas of focus spearheaded by Dr. Maiers at NWHSU’s Center for Healthcare Innovation and Policy include racial inequities in integrative health care, the role of integrative providers during public health crises, and recognizing the CIH care workforce. She holds several leadership positions in professional associations, including president of the American Chiropractic Association, and has been an active contributor in the Chiropractic Health Care section of the American Public Health Association.

**Ian C. Paskowski, DC**, is medical director of the Spine Care Program at Beth Israel Deaconess Hospital–Plymouth in Massachusetts. He has held this position since 2008. Dr. Paskowski oversees an integrated clinical staff of ten, with a focus on maintaining the highest-

quality health care for patients suffering spine-related complaints. In March 2020, he was redeployed as director of operations of the COVID-19 Testing Site for Beth Israel Deaconess Hospital. In this capacity, he had oversight of staffing, procedure development, quality and process improvement, and daily operation and safety for the hospital's outpatient COVID-19 testing sites. The testing sites operated six days per week and included symptomatic patient, preadmission testing patient, first responder exposure, hospital employee exposure, and return-to-work visits. The team that manages the site operation is a collaboration among physician staff, the town public health department, Plymouth Police, and hospital laboratory, administration, facilities and safety officer, and central scheduling personnel. Ninety percent of all testing is performed by chiropractors.

**Stephanie Seitz, ND, MPH**, is a naturopathic doctor, holds a master of public health degree from the University of Arizona, and was a staff physician at the Southwest College of Naturopathic Medicine and Health Sciences (SCNM) Medical Center. She was a part of the SCNM COVID-19 task force and responsible for developing and implementing a COVID-19 blitz testing program that was in accordance with Arizona Department of Health Services guidelines. She also helped develop and enforce COVID-19 policies and procedures for patients, staff, and faculty at SCNM.

## Appendix B. Agenda for the Panel Meeting

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**AGENDA**  
**MEETING OF THE PANEL ON**  
**THE PUBLIC HEALTH ROLE OF THE CIH PROFESSIONS IN A PANDEMIC**  
**Tuesday, January 19th, 2021**

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8–10 am PST	Introductions, Overview, and Plan for the Day <ul style="list-style-type: none"><li>• Overall focus and goals for the panel</li><li>• Introductions including main expertise each of you bring to panel</li><li>• The key outcomes we need from today’s meeting</li><li>• Background on public health needs/roles during a pandemic</li></ul>
10–11 am PST	Break <ul style="list-style-type: none"><li>• Chat room open for comments and input from earlier session</li><li>• Time for CST and EST (and maybe MST) participants to eat some lunch</li></ul>
11 am–12:30 pm PST	First working session – Pandemic-related public health roles for CIH <ul style="list-style-type: none"><li>• Which roles can be fulfilled by CIH practitioners or students</li><li>• Which roles would require more training</li><li>• Would CIH practitioners or students want to take on these roles</li></ul>
12:30–1:30 pm PST	Break <ul style="list-style-type: none"><li>• Chat room open for comments and input on public health roles</li><li>• Time for PST (and maybe MST) participants to eat some lunch</li></ul>
1:30–3 pm PST	Second working session – How to mobilize the CIH public health workforce and next steps <ul style="list-style-type: none"><li>• Mobilizing the different CIH professions</li><li>• Finalize next steps regarding getting information out on the role of CIH practitioners in a pandemic</li></ul>

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