

Effects of COVID-19 Pandemic on the Professional Roles and Responsibilities of Health Educators

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Abstract: Public health professionals are at the forefront of the COVID-19 pandemic response. However, the roles and responsibilities of health educators' in pandemic response is unknown. Researchers examined multiple factors that described how health educators' work priorities and lives have been affected by COVID-19. An electronic questionnaire was administered nationally to health educators to assess the effect of the pandemic on their professional responsibilities, the challenges they are facing, and their fears about the future. Of the 913 respondents, 487 (43%) reported changing work priorities, with 80% of that group (389) sharing that their work priorities shifted focus to COVID-19. Most felt qualified to take on the new job responsibilities, but many feared the inability to get back to previous work roles or for their organizations to financially withstand the pandemic. Regardless of workplace setting or job priorities, health educators are prepared in the skills outlined in the Responsibilities and Competencies for Health Education Specialists, (NCHEC, 2020), which may have led to their abilities in shifting roles so quickly and effectively. Findings from this study may prepare public health agencies to better use and train health educators for their roles in rapidly shifting public health priorities.

Keywords: Career Development/Professional Preparation, Health Education, Health Promotion, Training, Workforce Development

This is the author's manuscript of the article published in final edited form as:

Hancher-Rauch, H. L., Bishop, C., Campbell, A., Cecil, K., & Yazel, L. (2021). Effects of COVID-19 Pandemic on the Professional Roles and Responsibilities of Health Educators. *Health Promotion Practice, 22*(2), 156–162. <https://doi.org/10.1177/1524839920968523>

1 BACKGROUND

2 COVID-19 has spread across the globe, leading to economic, personal health, public
3 health, and social consequences. At the time of data collection, 216 countries, territories, or areas
4 reported 13,378,853 confirmed cases and 580,045 confirmed deaths (World Health Organization
5 [WHO], 2020a). The United States specifically confirmed 3,483,832 cases and 136,938 deaths
6 (Centers for Disease Control and Prevention, 2020a). COVID-19 has led to a disruption of daily
7 lives through business closings, social distancing measures, furloughed employees, school
8 closings, shifting to a remote workforce, widespread illness, and fear/anxiety (Pew Research
9 Center, 2020). Most state governments imposed executive stay-at-home orders in the early
10 months of the pandemic in order to abide by the Centers for Disease Control and Prevention's
11 (CDC) recommendations for social distancing, which included working from home when
12 possible to limit exposure (Centers for Disease Control and Prevention, 2020b). Though
13 implications due to the COVID-19 pandemic exist for all sectors of the workforce, there may be
14 unique outcomes for the public health sector during a pandemic of this nature.

15 While COVID-19 is a new strain of virus, there is limited original research on the effect
16 of epidemic/pandemic disease and the public health workforce. In a study of 308 local health
17 department staff, Balicer, Omer, Barnett, & Everly Jr. (2006) found barriers to public health
18 workers' effectively responding to an influenza outbreak. This study found that perceived risk of
19 disease exposure, uncertainty regarding work environment safety, performing roles for which
20 they were not appropriately trained, and concerns for well-being of family all affected the
21 respondents' willingness to work in the outbreak setting. In follow-up research, Barnett et. al.
22 (2009) found that approximately one in six public health workers were unwilling to respond to a
23 pandemic threat. This study found those most willing to respond were workers concerned about

24 the pandemic issue and those confident in their abilities/skills related to pandemic response
25 (Barnett et. al., 2009).

26 While these studies highlight perceptions and willingness of local public health workers'
27 responsiveness to pandemics, there is no literature specific to health educators' roles and
28 responsibilities in pandemic response. Health educators have a transferable skill set that may be
29 applied to a multitude of conditions or diseases. Yet, a sudden shift in the focus of health
30 educators' work priorities may have negative, long-term effects on prevention, diagnoses, and
31 management of chronic diseases and create unfilled gaps with other public health priorities. At
32 this point, the WHO (2020b) has found a 104% increase in mother to child HIV transmission due
33 to interruptions of services related to COVID-19. Additionally, the WHO has found a
34 widespread global interruption in the prevention of non-communicable diseases due to COVID-
35 19 related restrictions (WHO, 2020c). These are only a few examples of the consequences of
36 COVID-19 on other health priorities with which health educators may work.

37 **Purpose**

38 The overall purpose of this study was to examine the immediate effects of COVID-19 on
39 health educators' work and personal experiences. To achieve this, researchers focused on health
40 educators' work settings and pre-COVID-19 work priorities in relation to three specific points:
41 1) whether or not health educators had to shift work priorities due to the pandemic, 2) whether a
42 priority shift focused specifically on needs of COVID-19, and 3) responses to various
43 professional questions in association with respondents' work settings and main work priorities
44 prior to the pandemic. Additionally, other variables of interest were examined, such as
45 demographics and professional characteristics. The research was approved by the Institutional
46 Review Board of the first author.

47

48 METHODS**49 Participants and Procedures**

50 Sample size was calculated using The Survey System (Creative Research Systems, 2012)
51 software sample size calculator and examining sample sizes and return rates from similar
52 literature. The sample size needed was 921, for a confidence level of 95%, a confidence interval
53 of 3.11, and an estimated population of 12,712. The 921 also coincided with sample sizes and
54 return rates of similar literature.

55 A non-probability convenience sample was recruited. Email invitations were sent to
56 health education specialists on the mailing list of the National Commission for Health Education
57 Credentialing, Inc. (NCHEC), to members of the Society of Public Health Education's (SOPHE)
58 House of Delegates to be shared with state SOPHE chapters, and through the Eta Sigma Gamma
59 membership newsletter. Finally, recipients of the survey were asked to distribute it within their
60 networks, which involved a snowball technique for recruitment. Investigators did not collect data
61 to track from which channel participants received the survey.

62 The email invitation included an explanation of the research study, the consent language,
63 and survey instructions. The survey was emailed out once with no follow-up emails to non-
64 responders. The survey instrument populated after consent was designated. All data were
65 captured in REDCap™, and survey responses were stored on a password-protected computer.
66 Data were collected between May 1 and May 20, 2020 before being exported to SPSS version 26
67 for data cleaning and analysis.

68 Measures

69 The survey was a composite of 43 original questions, which included 14
70 demographic/professional characteristics questions. The survey took approximately 10 minutes
71 to complete and consisted of closed-ended questions with the exception to explain “other” write-
72 in statements, when appropriate.

73 **Analysis**

74 Descriptive statistics were run to describe sample characteristics. Univariate analyses
75 were conducted to determine the sample composition, the distribution of the study variables, and
76 frequencies and percentages. As investigators were examining associations only, chi-square tests
77 of association were conducted to examine relationships among variables of interest, such as
78 respondents’ work settings and main priority prior to the pandemic.

79 **RESULTS**

80 **Demographic and Background Characteristics of Participants**

81 Nine hundred and twenty individuals completed the survey; seven were eliminated due to
82 not providing consent or incomplete surveys, leaving a sample of 913 for analysis. Descriptive
83 statistics for the sample are found in Table 1. The majority of respondents were white (n=674,
84 74.5%), female (n=821, 90.1%), between the ages of 25-34 years (n=348, 38.2%), held master’s
85 degrees (n=581, 63.7%), and had worked in the field for five or fewer years (n=351, 38.5%). Of
86 respondents, 735 (79.9%) were CHES certified, 152 (16.5%) were MCHES certified, and 23
87 (2.5%) were CPH certified. Additionally, the top three work settings were university/college
88 (n=227, 24.9%), state/county health department (n=184, 20.2%), and healthcare/hospital (n=177,
89 19.3%). The majority of respondents spent most of their time in the areas of chronic
90 disease/chronic disease prevention (n=330, 36.2%) and K-12/college/university education
91 (n=172, 18.9%).

92 **Professional Activities during the Pandemic**

93 Of the 913 respondents, 487 (43%) reported needing to change work priorities due to the
94 COVID-19 pandemic. Participants who responded yes to changing work priorities due to the
95 pandemic were then asked about their level of concern regarding not being able to return to their
96 normal work priorities, with 285 (59%) reporting having little or no concern. State/county health
97 department employees (48, 24.5%), healthcare or hospital workers (47, 24%), and community
98 non-profit staff (41, 21%) reported the greatest concern. Finally, of the 487 who reported a
99 change in work priorities due to the pandemic, the most frequently reported work settings were
100 state/county health department (138, 28%) and healthcare/hospital (n=102, 21%).

101 Of the 487 respondents reporting having to change work priorities due to the pandemic,
102 389 (80%) reported that some or all of their work priorities shifted to a COVID-19-related focus.
103 Additionally, those who responded yes to work priorities shifting to a COVID-19-related focus,
104 331, (85%) reported having to fulfill normal work responsibilities in addition to the new
105 responsibilities. Finally, of those shifted to a COVID-19-focus, 325 (84%) stated they felt
106 somewhat or very qualified to provide those shifted services.

107 In order to examine respondents' work environments during the pandemic, they were
108 asked whether they were now expected to work remotely, with 706 (77%) responding in the
109 affirmative. Of those working remotely, the highest reports were from those working at
110 university/college settings (214, 30.3%), community non-profit settings (112, 16%), state/county
111 health departments (110, 16%), and healthcare or hospital settings (106, 15%). To further
112 explore work environment factors, researchers asked questions regarding the remote work
113 environment and shared spaces with dependents or partners. Findings show that 354 (39%) of
114 total respondents reported having children or adult dependents at home, while 226 (64%) of

115 respondents with dependents stated they were helping children with school work. Additional
116 related results displayed in Table 2.

117 Researchers conducted bivariate analyses to examine relationships between respondents'
118 work settings (Table 3) and main work priorities prior to the pandemic and other variables of
119 interest. Chi-square was used to examine whether relationships existed between the respondents'
120 reported pre-pandemic main work priorities and needing to change work priorities due to
121 COVID-19. There was a statistically significant finding ($\chi^2(11) = 45.83, p < .001$) indicating
122 association. The association was moderately strong (Cramer's $V = .224$), with chronic disease
123 and K12/university education contributing the most to the significant finding (adjusted
124 standardized residuals of 3.1 and -5.1 respectively). When examining the related frequencies,
125 those working in chronic disease were most likely to report needing to shift work priorities (182,
126 37.4%).

127 Chi-square was used to examine relationships related to respondents' work setting and
128 variables of interest. A statistically significant relationship was found ($\chi^2(7) = 90.2, p < .001$)
129 when examining the relationship between respondents' work setting and whether their work
130 priorities changed due to COVID-19. The association was moderate (Cramer's $V = .297$), with
131 the state/county health department and university/college setting contributing the most to the
132 significant finding (adjusted standardized residuals of -7.0 and 6.7 respectively). Additionally,
133 researchers examined the associations between respondents' work settings and their levels of
134 concern regarding being unable to return to previous work priorities after the emergent needs of
135 the pandemic are over ($\chi^2(7) = 14.6, p < .05$). The association was small (Cramer's $V = .173$) with
136 community non-profit and federal health organizations contributing most to the significant
137 finding (adjusted standardized residuals of 2.5 and -2.1 respectively). Finally, statistical

138 significance was discovered when examining respondents' concern for the long-term financial
139 security of their work organization due to COVID-19 and their work settings ($\chi^2(7) = 47.6$,
140 $p < .001$). The association was moderate (Cramer's $V = .229$), with the state/county health
141 department and community non-profit setting contributing the most to the significant finding
142 (adjusted standardized residuals of -5.2 and 3.7 respectively).

143 Additionally, researchers were interested in examining relationships between
144 respondents' current work environments during the pandemic with variables of interest. A
145 statistically significant interaction was found when examining respondents' work settings and
146 whether they were expected to work from home due to the pandemic ($\chi^2(7) = 108.9$, $p < .001$).
147 There was a moderate association (Cramer's $V = .346$), with state/county health department,
148 healthcare or hospital setting, and university/college setting contributing the most to the
149 significant finding (adjusted standardized residuals of 5.8, 6.1, and -7.3 respectively). No other
150 significant findings were evident.

151 **DISCUSSION**

152 The purpose of this study was to examine the immediate effects of COVID-19 on health
153 educators' work and personal experiences. The findings present the first look at health educators'
154 work experiences during the COVID-19 pandemic, reducing the gap in knowledge and limited
155 literature on health educators' roles and responsibilities during a pandemic. Of the 913
156 respondents, 43% reported their work priorities had shifted as a result of the COVID-19
157 pandemic, with 389 (80%) of those reporting a shift to a COVID-19 focus. This is an interesting
158 finding for two reasons. First, it documents the significant shift in public health priorities during
159 a pandemic of this nature. Just under half of health educators reported being pulled from some
160 level of their normal, pre-pandemic duties. This may mean that programs, such as chronic

161 disease prevention or maternal and infant health initiatives, are going short-staffed, under
162 resourced, or may have halted altogether. For example, some sources are reporting significant
163 shifts in healthcare and a lack of prevention services like cancer screenings as a result of the
164 pandemic (IQVIA, 2020). Additionally, service disruptions due to COVID-19 are reported as
165 leading to significant increases in mother-to-child HIV infection as individuals are struggling to
166 access preventive services (WHO, 2020b). Additionally, WHO also reports significant
167 disruptions related to noncommunicable disease prevention such as hypertension, heart disease,
168 cancer, and diabetes (WHO, 2020c). Could there be long-term health effects in communities as a
169 result of the decreased programming or prevention services being offered during the time of
170 shifted resources to the COVID-19 pandemic? The outcome seems plausible based on the shifted
171 priorities reported here.

172 Second, of those reporting a shift to a COVID-19 focus, 39% reported they felt very
173 qualified to conduct the new job tasks required of them, and 45% felt at least somewhat
174 qualified. Previous authors have documented that concerns about being trained properly for
175 responsibility shifts during a pandemic influenced professionals' willingness to help (Balicer,
176 Omer, Barnett, & Everly Jr., 2006). The reports of qualifications for their new roles during the
177 COVID-19 pandemic might be explained from both positive and negative perspectives.
178 Positively, 84% of health educators stated they felt somewhat or very qualified for the new roles.
179 This may be due to health educators being trained as experts with broad, foundational skills that
180 can apply to many settings and content areas (National Commission for Health Education
181 Credentialing, Inc., 2020). On the other hand, approximately 16% of health educators did not
182 feel qualified to take on their shift in priorities and fill job responsibilities involving pandemic-
183 related work, indicating that not all health educators feel they have the transferable skills or the

184 desire to accommodate the need. Feeling qualified may be the reason behind the high number of
185 individuals feeling willing to shift priorities, similar to the previous findings of Balicer et al.
186 (2006).

187 The pandemic provides a teachable moment for both organizations and staff members.
188 Organizations may need procedures in place for training staff for a role shift prior to
189 implementing these needed types of changes during a pandemic. Additionally, academic
190 institutions could include pandemic response skills in their curricula and prepare future health
191 educators for the flexibility and shifting job responsibilities that can happen in public health. It
192 would be impossible to prepare health educators for every potential role due to a limitless
193 number of health topics and social issues, but the ability and responsibility of these professionals
194 to shift from one role to another certainly can be viewed as a benefit to their broad training.

195 In the current pandemic, just under half of the respondents reported their jobs had shifted
196 due to organizational needs for dealing with COVID-19, but 331 (85.3%) of those respondents
197 continued to work in their previous roles in addition to taking on new COVID-19-associated
198 responsibilities. The majority of health educators were accepting of the new COVID-19 roles
199 (88%), yet 40.3% reported concern they will not be able to get back to their previous work
200 responsibilities, potentially leading to work dissatisfaction. The percentage of those willing to
201 shift is similar to findings of previous authors (Barnett et al., 2009), but the concern about being
202 able to return to previous priorities has not previously been studied. Though this research did not
203 specifically inquire about stress or burnout levels, there have been multiple reports of stress
204 levels increasing significantly during the COVID-19 pandemic (Park et al., 2020; Taylor et al.,
205 2020). It will be interesting to see the short and long-term consequences related to the personal
206 and professional health of health educators. Likewise, this is especially interesting when one

207 considers that 354 (39%) of respondents reported being responsible for dependents at home,
208 while 226 (25%) of those respondents said they were helping a school-aged child with distance
209 learning while juggling work responsibilities. Approximately 29% of the U.S. workforce needs
210 childcare for children aged 3-12 years (Bayham & Fenichel, 2020). This may present a challenge
211 for health educators as they seek to find care for their children while many childcare centers
212 closed due to the pandemic. The combination of these factors may have a significant effect on
213 the mental and emotional well-being of health educators.

214 **Limitations**

215 This study was cross-sectional, so researchers could not assess changes over time. This
216 was not a random sample of health educators, however, the recruitment efforts resulted in a large
217 number of responses, representing health educators in many different work environments. A
218 second limitation is that no peer-reviewed work has been published thus far on the effect of
219 COVID-19 on health educators. For this reason, it was difficult to ground the research efforts
220 here in the findings of past authors. Continuing to study this phenomenon with additional
221 analyses and samples over time will help bridge this gap in knowledge. Lastly, authors did not
222 ask questions about stress or mental health. It would have been helpful to explore relationships
223 between the reported professional and personal experiences of health educators with their mental
224 health.

225 **Implications for Practice and Research**

226 Health educators are a group of professionals trained in a wide array of skills that can be
227 applied across a vast number of settings and health topics. Their versatility likely has affected
228 their abilities to move from pre-COVID-19 job tasks to roles combining those previous tasks
229 with newer COVID-19-related tasks as well. This speaks well to the skills acquired within the

230 profession. Health educators' reports of added job responsibilities, in combination with the high
231 rates of caring for family members and helping children with distance learning are bound to bear
232 significant effect over time, and may mean they will face mental and emotional fatigue, burnout,
233 and stress. If the pandemic continues at current rates, it is unlikely that health educators will be
234 able to shift back to previous job responsibilities in the near future, potentially stressing the
235 workforce. Certainly, health educators are playing important roles across the country in
236 addressing significant community needs during the COVID-19 pandemic, and their work should
237 be applauded.

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References

- 240 Balicer, R. D., Omer, S. B., Barnett, D. J., & Everly Jr., G. S. (2006). Local public health
241 workers' perceptions toward responding to an influenza pandemic. *BioMed Central*
242 *Public Health*, 6, 99. <https://doi.org.10.1186/1471-2458-6-99>
- 243 Barnett, D. J., Balicer, R. D., Thompson, C. B., Douglas Storey, J., Omer, S. B., Semon, N. L.,
244 Bayer, S., Cheek, L. V., Gately, K. W., Lanza, K. M., Norbin, J. A., Slemp, C. C., &
245 Links, J. M. (2009). Assessment of local public health workers' willingness to respond to
246 pandemic influenza through application of the extended parallel process model. *PLoS*
247 *ONE*, 4(7), e6365. <https://doi.org.10.1371/journal.pone.0006365>
- 248 Bayham, J., Fenichel, E. P. (2020). Impact of school closures for COVID-19 on the US health-
249 care workforce and net mortality: A modeling study. *Lancet Public Health*, 5, e271-278.
250 [https://doi.org/10.1016/S2468-2667\(20\)30082-7](https://doi.org/10.1016/S2468-2667(20)30082-7)
- 251 Centers for Disease Control and Prevention. (2020a). *Coronavirus disease 2019 (COVID-19):*
252 *Cases in the U.S.* Retrived from [https://www.cdc.gov/coronavirus/2019-ncov/cases-](https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html)
253 [updates/cases-in-us.html](https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html)
- 254 Centers for Disease Control and Prevention. (2020b). *Coronavirus disease 2019 (COVID-19):*
255 *Social distancing.* Retrieved from [https://www.cdc.gov/coronavirus/2019-ncov/prevent-](https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html)
256 [getting-sick/social-distancing.html](https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html)
- 257 Creative Research Systems. (2012). Sample size calculator. Retrieved from
258 <https://www.surveysystem.com/sscalc.htm>
- 259 Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J.G. (2009).

- 260 Research electronic data capture (REDCap) – A metadata-driven methodology and
261 workflow process for providing translational research informatics support, *Journal of*
262 *Biomedical Informatics*, 42(2), 377-381. <https://doi.org/10.1016/j.jbi.2008.08.010>
- 263 IQVIA. (2020, April 29). *Shifts in healthcare demand, delivery, and care during the COVID-19*
264 *era: tracking the impact in the United States*. Retrieved from
265 [https://www.iqvia.com/insights/the-iqvia-institute/covid-19/shifts-in-healthcare-demand-](https://www.iqvia.com/insights/the-iqvia-institute/covid-19/shifts-in-healthcare-demand-delivery-and-care-during-the-covid-19-era)
266 [delivery-and-care-during-the-covid-19-era](https://www.iqvia.com/insights/the-iqvia-institute/covid-19/shifts-in-healthcare-demand-delivery-and-care-during-the-covid-19-era)
- 267 National Commission for Health Education Credentialing, Inc. (2020). *Responsibilities and*
268 *competencies for health education specialists*. Retrieved from
269 <https://www.nchec.org/responsibilities-and-competencies>
- 270 Park, C.L., Russell, B.S., Fendrich, M., Finkelstein-Fox, L., Hutchison, M., & Becker, J. (2020).
271 Americans' COVID-19 stress, coping, and adherence to CDC guidelines. *Journal of*
272 *General Internal Medicine*, 1-8. <https://doi.org/10.1007/s11606-020-05898-9>
- 273 Pew Research Center. (2020, March 30). *Most Americans say coronavirus outbreak has*
274 *impacted their lives*. Retrieved from [https://www.pewsocialtrends.org/2020/03/30/most-](https://www.pewsocialtrends.org/2020/03/30/most-americans-say-coronavirus-outbreak-has-impacted-their-lives/)
275 [americans-say-coronavirus-outbreak-has-impacted-their-lives/](https://www.pewsocialtrends.org/2020/03/30/most-americans-say-coronavirus-outbreak-has-impacted-their-lives/)
- 276 Society for Public Health Education. (2020). Professional preparation. Retrieved from
277 <https://www.sophe.org/professional-preparation/>
- 278 Taylor, S., Landry, C. A, Paluszek, M. M., Fergus, T. A., McKay, D., & Asmundson, G. J. G.
279 (2020). Development and initial validation of the COVID stress scales. *Journal of*
280 *Anxiety Disorders*, 72. Advanced online publication.
281 <https://doi.org/10.1016/j.janxdis.2020.102232>

- 282 World Health Organization. (2020a). *Coronavirus disease (COVID-19) pandemic*. Retrieved
283 from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- 284 World Health Organization. (2020b). *The cost of inaction: COVID-19-related service disruptions*
285 *could cause hundreds of thousands of extra deaths from HIV*. Retrieved from
286 [https://www.who.int/news-room/detail/11-05-2020-the-cost-of-inaction-covid-19-related-](https://www.who.int/news-room/detail/11-05-2020-the-cost-of-inaction-covid-19-related-service-disruptions-could-cause-hundreds-of-thousands-of-extra-deaths-from-hiv)
287 [service-disruptions-could-cause-hundreds-of-thousands-of-extra-deaths-from-hiv](https://www.who.int/news-room/detail/11-05-2020-the-cost-of-inaction-covid-19-related-service-disruptions-could-cause-hundreds-of-thousands-of-extra-deaths-from-hiv)
- 288 World Health Organization. (2020c). *COVID-19 significantly impacts health services for*
289 *noncommunicable diseases*. Retrieved from [https://www.who.int/news-room/detail/01-](https://www.who.int/news-room/detail/01-06-2020-covid-19-significantly-impacts-health-services-for-noncommunicable-diseases)
290 [06-2020-covid-19-significantly-impacts-health-services-for-noncommunicable-diseases](https://www.who.int/news-room/detail/01-06-2020-covid-19-significantly-impacts-health-services-for-noncommunicable-diseases)
291

Table 1
Demographic and Background Characteristics of Participants

Variable	N	Percent of total (%)
Age		
18-24	71	7.8
25-34	348	38.2
35-44	201	22.0
45-54	165	18.1
55-64	95	10.4
65+	26	2.9
Prefer not to say	6	0.7
Gender		
Male	78	8.6
Female	821	90.1
Transgender	5	0.5
Prefer not to say	7	0.8
Race		
White	674	74.5
Black/African American	121	13.4
American Indian	8	0.9
Asian American	24	2.7
Native Hawaiian and Other Pacific Islanders	1	0.1
Multiracial	45	5.0
Prefer not to say	32	3.5
Hispanic		
No	807	88.8
Yes	91	10.0
Prefer not to say	11	1.2
Education		
High school or equivalent	1	0.1
Bachelor's degree	193	21.2
Master's degree	581	63.7
Doctoral or other terminal	137	15.0
How many CHES certified		
Total	735	79.9
How many MCHES certified		
Total	152	16.5
How many CPH certified		
Total	23	2.5
Public health work		
Full time	757	83.2
Part time	153	16.8
Management position		
Yes	335	36.8
No	576	63.2
How position financially supported		

Fully funded by grants/outside support	247	27.1
Partially funded by grants/outside support	165	18.1
Not funded by grants/outside support	387	42.5
It can vary depending on available funds	56	6.2
I do not know	55	6.0
Years working in field		
0-5 years	351	38.5
6-10 years	208	22.8
11-15 years	122	13.4
16-20 years	82	9.0
20+ years	148	16.2
Type of setting		
State/county health department	184	20.2
Federal health organization	42	4.6
Healthcare or hospital	177	19.3
University/college	227	24.9
Community/non-profit	136	14.9
K-12 school	20	2.2
Worksite health	41	4.5
Other	86	9.4
Area spend majority of time		
Chronic disease/disease prevention	330	36.2
Infectious diseases	58	6.4
Epidemiology	9	1.0
Health policy, advocacy, lobbying	26	2.9
Environmental health	21	2.3
Maternal/infant/child health	57	6.3
Grant writing	2	0.2
Biostatistics	1	0.1
Research or program evaluation	71	7.8
Minority health/health equity	23	2.5
K-12/college/university education	172	18.9
Other	142	15.6

Table 2
Factors Related to Working from Home

	Yes	No	Missing or N/A
Expected Work from Home (n=913)	706(77.4)	206(22.5)	**1(.1)
*Able to Conduct Work from Home (n=703)	638(90.8)	65(9.2)	-
*Work Provided Necessary Resources to Work from Home (n=702)	580(85.6)	122(17.4)	-
*Provide Quality Services from Home (n=703)	529(75.2)	146(20.8)	*** 28(4.0)

*These questions were only asked to those responding yes to expected work from home.

** Represents missing

*** Represents N/A option for this question

Table 2
Selected Frequency and Bivariate Analysis Regarding Work Setting and Main Work Priority n(%)

	State/County Health Dept.	Federal Health Org.	Healthcare or Hospital	University /College	Community Non-Profit	K12 School	Worksite Health	Other	p-value
Priority Change	138(28.3)	28(5.7)	102(20.9)	76(15.6)	77(15.8)	7(1.4)	22(4.5)	37(7.6)	$\chi^2(7)=108.9, p<.001$
**Priority Change to COVID-19 Focus	129(33.2)	21(5.4)	78(20.1)	57(14.7)	52(13.4)	4(1.0)	18(4.6)	30(7.7)	$\chi^2(7)=28.23, p<.001$
Expected Work Home	110(15.6)	37(5.2)	106(15.0)	214(30.3)	112(16.0)	18(2.5)	30(4.2)	79(11.2)	$\chi^2(7)=108.9, p<.001$
Worry Job Security	41(11.3)	9(2.5)	73(20.1)	106(29.1)	72(19.8)	8(2.2)	21(5.8)	34(9.3)	$\chi^2(7)=47.6, p<.001$
Worry Financial Security of Organization	84(16.1)	12(2.3)	91(17.4)	159(30.5)	98(18.8)	12(2.3)	19(3.6)	47(9.0)	$\chi^2(7)=61.7, p<.001$

*Priority change reports yes to changing priorities; priority change to COVID-19 focus reports yes to focus on COVID-19; expected work from home reports yes response to now working from home; worry job security reports very or somewhat concerned about job security; worry financial security of work report yes to worry about organization financial security.

** n=484, only those answering yes to priority change could answer this question