COVID-19 STAKEHOLDER EXPERIENCES IN THE COMMONWEALTH OF KENTUCKY

2022





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The COVID-19 pandemic brought unprecedented changes and challenges to the healthcare system. During the pandemic, rates of telehealth visits increased dramatically, preventative care screenings were being missed due to COVID-19 infection concerns, and routine care appointments were delayed (IQVIA, 2020; American Cancer Society, n.d.; Czeislar et al., 2020). With a new healthcare landscape post COVID-19, attitudes toward health, health behaviors, and public health concerns are much different than pre-pandemic.

According to Bestsennyy et al. (2021), telehealth rates have relatively stabilized since the initial spike at the beginning of the pandemic. Bestsennyy et al. (2021) also reports an increase in positive attitudes about telehealth since pre-COVID-19, investments from companies into virtual care, and regulatory changes such as the expanded use of telehealth from the Centers for Medicare and Medicaid Services'. Most individuals, as of June 14, 2021, had resumed visiting specialists, urgent care, pharmacies, and primary care physicians in-person as compared to telehealth (Bestsennyy et al., 2021).

COVID-19 vaccination compliance has been an item of discussion within the healthcare system during the pandemic. According to the Kaiser Family Foundation (2022), adults who are somewhat older and who are educated are more likely to have had at least one vaccination for COVID-19. Rural rates for vaccinations have remained lower since the rollout of the vaccine, however, in January 2022, the gap between rural and urban vaccination rates has more than doubled (Saelee et al., 2022). According to Murphy and Marema (2022), as of March 17, 2022, 50.1% of the rural population in the US had reached vaccination status compared to 64.2% of the metropolitan population.

Other health behaviors, such as wearing a mask, as recommended by the Centers for Disease Prevention and Control, were met with some pushback. According to the Fischer et al., (2021), states with the lowest mask wearing adherence were most likely to have high rates of COVID-19. Other research suggests an inverse relationship between rurality and mask wearing (p<0.0001) (Pro et al., 2021).

The current survey examines how community members, specifically rural community members, view how the healthcare landscape has changed since the onset of COVID-19.

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KEY POINTS

- The majority of respondents get information concerning COVID-19 from the CDC.
- Engagement in telehealth services has declined, most individuals are attending visits in-person.
 - Satisfaction with telehealth remains high.
- Over 90% of respondents report having at least one dose of a COVID-19 vaccine.
- Eighty-one (81) respondents know at least one individual who has died from COVID-19 or COVID-19 complications.
- Attitudes about mask wearing, using hand sanitizer, and following recommendations from the CDC are relatively high.
- Most respondents reported either being "moderately concerned" or "very concerned" about being infected with COVID-19.

3 INTRODUCTION

The University of Kentucky Center of Excellence in Rural Health conducted surveys of healthcare providers, educators, community health workers (CHWs), community members, and clients of CHWs, to assess their experiences with COVID-19, as we are over a year into the pandemic. Surveys were conducted in the fall of 2021 including questions that appeared across surveys, as well as questions geared towards each respondent group.

4 PARTICIPANTS

Surveys were received from 145 participants, including healthcare providers, educators, community health workers, community members, and clients of CHWs during October 20, 2021 to December 3, 2021.

Healthcare providers

Healthcare provider surveys were sent to hospitals and healthcare facilities across the commonwealth of Kentucky. Responses were received from 36 individuals (29 completed all questions; 94%).

Providers indicated they were primarily from health departments (24/36) and Federally Qualified Health Centers (3/36), with some representation from hospitals (2/36) and alcohol and other drug entities (1/36). These 4 groups represented 83% of the respondents. One respondent stated, "Other" but provided no open-ended text-based responses (Figure 1).



Figure 1: Types of Organizations Represented by Healthcare Respondents

Educators

The educator survey was sent to all superintendents and principals across Kentucky, 1 response was received and was fully complete and identified as a teacher.

Community Health Workers

A survey was sent statewide to the Community Health Workers (CHWs) via the Kentucky Association of Community Health Workers listserv (n=103). Survey responses were received from 52 individuals with 44 of those fully complete (85%).

Clients of CHWs

Kentucky Homeplace CHWs completed surveys with their clients. Kentucky Homeplace is operated by the University of Kentucky Center of Excellence in Rural Health and serves a geographic region that includes most of the counties in eastern Kentucky (30 counties). Two responses were collected from clients of CHWs.

Community members

The University of Kentucky Center of Excellence in Rural Health maintains a Facebook page where a link was posted to allow followers/community members to access and respond to the survey. They have followers from across the commonwealth of Kentucky, though the majority of these responses are likely concentrated in the eastern part of Kentucky. Twenty-four responses were received from community members (23 fully complete; 96%).

All percentages are reported using denominators from non-missing records. Descriptive statistics were calculated using SPSS vs. 26. Surveys sent to community members and clients of CHWs largely included the same questions, and these questions were evaluated both individually and collectively.

6 **RESULTS**

Overview

In general, participants received their information from a variety of sources (Figure 2), including the Centers for Disease Control and Prevention (CDC) (27/36 healthcare; 18/24 community members; 1/1 educators, 39/52 Community Health Workers, 2/2 Community Health Worker Clients, 18/23 Faculty/Staff at the University), State (22/36 healthcare; 18/24 community members; 1/1 educators, 35/52 Community Health Workers, 1/2 Community Health Worker Clients, 16/23 Faculty/Staff at the University) and Local Health Departments (28/36 healthcare; 19/24 community members; 1/1 educators, 34/52 Community Health Workers, 1/2 Community Health Worker Clients, 15/23 Faculty/Staff at the University), and the World Health Organization (WHO) (13/36 healthcare; 8/24 community members; 1/1 educators, 12/52 Community Health Workers, 0/2 Community Health Worker Clients, 10/23 Faculty/Staff at the University).



Figure 2: Respondent Sources of Information about COVID-19

7 IMPACT OF COVID-19 ON TELEHEALTH ADOPTION AND PRACTICE

More than three-fourths (23/30) of healthcare respondents reported not utilizing telehealth in practice before the pandemic and 80% (24/30) reported using telehealth services during the pandemic (p=.001). Healthcare providers were mixed in their responses about telehealth services provided (6/31 behavioral health (mental health and substance use disorder), 8/31 primary care services, 8/31 women's health, 3/31 school-health, 1/31 HEP C/HIV counseling, 2/31 harm reduction, and 14 "other". The other responses were recoded and the most common responses were 8/31 WIC, 2/31 home health, and 2/31 family planning. A large portion of the healthcare responses indicated interest in receiving training and resources for telehealth (29/31), indicating a desire to learn more about telehealth options.

Less than half of healthcare workers, K12 educators, and CHWs responded to the item "Have you seen a healthcare provider since March 2020?" Of these respondents, 40/45 responded "yes". The majority report seeing a provider in office (31/45) and 19/45 report the visit was via telehealth. Almost all reported being satisfied with using telehealth (Figure 3). A small number of respondents felt uncomfortable using a telephone.



Figure 3: Respondent Satisfaction with Telehealth

One educator responded to the survey. They identified as a teacher and indicated classes in their school were being held in-person. The educator felt very concerned that they and or students were not receiving the education support and guidance that they need during the pandemic.

9 TESTING AND VACCINE ATTITUDES

Testing for COVID-19 was generally even across the groups. Over 85% responded "yes" to being tested for COVID-19. Of the 16 who had not been tested, the majority responded not testing due to not being exposed to COVID-19 or had symptoms. Almost a fourth of respondent's report testing for COVID-19 at work. Drive through testing was the overwhelmingly preferred mode of testing (57/101), followed by doctor's offices (31/101) (Figure 4). Of those who were tested for COVID-19, 25/101 report testing positive.



Figure 4: Location of COVID-19 Testing Preference

Over 90% of respondents (113/121) had at least one dose of a COVID-19 vaccine, the most popular vaccine was Moderna (93/121). Of those who stated they did not have the vaccine (8/121), 75% stated it would be very unlikely or definitely will not get the vaccination even if it were recommended by a doctor or nurse. Of the eight unvaccinated, 3/8 cite cultural or religious reasons for not getting the vaccination.

The majority of groups were represented within the unvaccinated (3/8 healthcare professionals, 3/8 CHWs, 1/8 community member, 1/8 faculty/staff at the University.

Out of the unvaccinated respondents, most were worried about unknown side effects (7/8), unknown risks due to the rushed approval (4/8), or felt the vaccine would not protect them from COVID-19. The majority of respondents felt people in their lives would generally approve of them getting the COVID-19 vaccine.

10 COVID-19 INCIDENCE AND BELIEFS

The majority of respondents know someone personally who has had COVID-19 (118/145). All healthcare respondents indicated knowing someone who has had COVID-19. Of those who knew someone who had been diagnosed with COVID-19, 99/145 had been hospitalized, 79/145 had been in ICU, 70/145 had been ventilated or had a similar procedure, 84/145 died of COVID-19 or related complications, and 13/145 responded none of the above (Figure 5). Eighty-one respondents knew at least one individual who has passed due to COVID-19 or COVID-19 complications (Figure 6).

Of the unvaccinated, 3/8 were healthcare professionals, 3/8 were CHWs, 1/8 was a community member, and 1/8 was university faculty staff. Six out of eight unvaccinated individuals report knowing someone who has been in the hospital due to COVID-19 (6/8), knew someone who has been in ICU due to COVID-19 (3/8), 2/8 know someone who has been placed on a ventilator due to COVID-19, and 3/8 report knowing someone who has died from COVID-19 (Figure 7).



Figure 5: Percentage of responses on the item "Do you know someone who that has _ due to COVID-19?"



Figure 6: Number of individuals respondents who reported knowing someone who has died from COVID-19 or COVID-19 complications:

Figure 7: Percentage of responses from unvaccinated respondents on the item "Do you know someone who that has _ due to COVID-19?"



Overwhelmingly, respondents were "very concerned' (44/145) and "moderately concerned" (34/145) about getting COVID-19, 29/145 have "a little concern" and 13/145 were "not at all concerned" (25

responses were missing from the analysis). The majority felt it would be "very serious" or "somewhat serious" (92/118) if someone who lives in their household contracted COVID-19.

Of the 145 respondents, 120 answered the following "How likely do you think it is that someone who lives in your household will contract COVID-19?" Most respondents felt that it was "somewhat likely" (51/120) and 42/120 felt like it was "not likely at all".

The item "How much do you trust the information that the CDC provides on the safety and effectiveness of COVID-19 vaccines?" had a mixed response from participants. The majority of respondents, 53/119, "mostly trust", 26/119 "completely trust", 25/119 "somewhat trust", and 8/119 "do not trust" the information from the CDC. Feelings of trust in information from CDC varied by group. Healthcare workers "mostly trust" information from the CDC (14/31) and 4/31 "do not trust at all", CHWs 16/52 "mostly trust" and 12/52 "do not trust at all" (Figure 8).





When asked "In the past month, how often have you felt stressed or worried due to the conditions of the COVID-19 pandemic?" responses were "always" 17/118, "most of the time" 24/118, "about half the time" 29/118, "sometimes" 41/118, and 7/118 responded "never". Participants were also asked to rate several health aspects during the past 2 weeks including mood, mental health, and personal relationships (Figure 9).



Figure 9: Responses when asked "In the past month, how often have you felt stressed or worried due to the conditions of the COVID-19 pandemic?"

11 BARRIERS TO STAY-AT-HOME ORDERS FOR INDIVIDUALS

When asked about barriers faced during COVID-19 virus stay at home and/or shelter in place orders, the most common response was "none of the above" (28/89). The second highest choice was "access to healthcare for chronic disease" (12/89) and the third most common response choice was "access to PPE" (10/89). Seven of the 89 individuals indicated access to food being and issue and three indicated access to prescription medications being a barrier. There were no significant differences between the groups on barriers experienced during the pandemic.

12 IMPACT OF COVID-19 PANDEMIC ON PATIENT ACCESS TO CARE

When asked about receiving treatment for a variety of chronic conditions, prior to the COVID-19 pandemic, the majority of respondents chose "None of the above" (19/89). Clients of CHWs and University faculty/staff were the only groups to indicate being treated for chronic health conditions prior to the pandemic. The most common condition indicated by CHW clients and University faculty and staff was hypertension (14/89), followed by depression (9/89) and anxiety (9/89). There were no significant differences between the groups on treated chronic health conditions.

On the question, "Did you have appointments/procedures cancelled or put on hold because of COVID-19", 46 respondents were almost evenly mixed with 25 (54.3%) answering "no" and 21 (45.7%) responding "yes". The same results occurred for the question "Have you had to delay a visit with a healthcare provider since COVID-19?" with most respondents answering "no" (24/46; 52.2%). The most common reasons reported for delaying a visit with a provider included fear of going to doctor during the pandemic and being unable to get an appointment. All respondents reported having insurance coverage pre-pandemic.

13 ADHERENCE TO CDC GUIDELINES AND RECOMMENDATIONS

Almost all respondents reported following recommended guidelines for staying safe as prescribed by the CDC (staying home, wearing a mask, hand washing, and using hand sanitizer) (Figure 10). There were mixed responses about mask wearing both indoors and outdoors (Figure 11).



Figure 10: Adherence to Guidelines and Recommendations, and Census Completion: Community Members vs. CHW Clients (all Community Member and CHW Client respondents)



Figure 11: Frequency of mask wearing indoors when interacting with people outside of household by group

14 DISCUSSION

The COVID-19 pandemic changed the healthcare landscape for healthcare workers, public health workers, and those accessing the healthcare system. Attitudes and beliefs, at a point in time during the COVID-19 decline in numbers, were assessed through the survey. The majority of responses were from Community Health Workers throughout the state, followed by community members.

Per respondents of the survey, the majority of medical appointments have returned to in-person compared to the reliance of telehealth during the pandemic. Although respondent's satisfaction with telehealth services still remains high. Healthcare respondents indicated an interest in additional training and resources related to telehealth services.

Most individuals have been fully vaccinated, tested, and believe that COVID-19 would be detrimental to them if infected. Most (over 80%) also reported compliance with the CDC guidelines and recommendations for avoiding large events, wearing their mask, handwashing and hand sanitizing.

Over 80% of respondents report knowing someone who had COVID-19, and almost 70% knew someone who has been hospitalized due to COVID-19. A little over 55% knew at least one person who has died due to COVID-19 or COVID-19 related illness.

Survey Limitations

One limitation was the number of surveys received, especially from educators and clients of CHWs. An increased sample could provide an opportunity for further analysis and investigation of differences among responses and between respondent groups. Additionally, the geographic and demographic information of respondents was not captured. This information would allow for comparison across populations.

Recommendations for Future Survey Activities

While the results from these surveys provide important information regarding perceptions of and response to COVID-19, we recommend the following activities to strengthen findings moving forward. These include:

- Expand surveys to other states to assess whether the thoughts, feelings, attitudes, interventions and activities reported by participants were unique to Kentucky, or more representative of rural or Appalachian regions more broadly.
- Use responses and response rates from the surveys reported herein to select and refine questions based on findings needing further exploration.
- Consider strategies to increase and document response rates to allow for further analysis and investigation of differences among responses and between respondent groups.
- Capture geographic and demographic information of respondents to support additional analyses by geographic region, rurality, and race and ethnicity, among other potential factors.
- Develop additional questions that could be implemented across all survey groups to support analysis of impacts and reactions to the COVID-19 pandemic across professional groups and individuals.

References

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- 2. https://ruralhealth.med.uky.edu/about-kentucky-homeplace (Figure 3)
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15 APPENDIX 1: HEALTH CARE SURVEY RESPONSES AND ANALYSIS

The University of Kentucky Center of Excellence in Rural Health conducted a survey of Kentucky hospitals and healthcare facilities across the state, generating 36 responses from individuals working in healthcare.

Q1 What best describes your organization? - Selected Choice

Respondents were given nine choices to select from, including "other" with the option to insert a text answer. Twenty-four (24) respondents selected "health department", three selected "FQHC", two selected "hospital", one selected "alcohol and other drug entities", and one selected "other".

Approximately 77% of respondents worked in health department settings, 9.7% worked in FQHCs, 6.5% worked in hospitals, and 3.2% worked in both alcohol and other drug entities and other. No open response was provided for the "other" response.



Figure A1-1: Types of Organizations Represented by Healthcare Respondents

Q2 How do you think COVID-19 impacted preventative screenings? (If Primary Care Center or FQHC) One responded "more screenings" (33.3%) and two responded "less screenings" (66.7%).

Q3 How do you think the number of mental health related diagnoses among patients has changed during COVID-19?

The majority reported "more diagnoses" (80.6%; n=25) and six reported "about the same number of diagnoses" (19.4%).

Q4 What mental health diagnoses are you seeing more of?

The one respondent within this work setting category stated, "Yes". Seventeen responded "anxiety (68%), seven responded "depression" (28%), and one responded "other" (4%).

Q5 How do you think the number of drug overdoses has changed during COVID-19?

Sixteen responded "More overdoses" (51.6%) and fifteen responded "about the same number of overdoses" (48.4%).

Q6 How do you think the number of patients in the Emergency Room (ER) has changed during COVID-19?

The majority of respondents chose "more patients" (26/31; 83.9%), four chose "less patients" (12.9%), and one chose "about the same number of patients" (3.2%).

Q7 How did you make changes to service delivery during COVID-19 (choose all that apply)?

Respondents could choose from 8 choices: "Social distancing among staff" (n=28; 19.3%), "mask mandates among staff" (n=29; 20%), "mask mandates among patients" (n=30; 20.7%), "plexiglass/safety dividers" (n=12; 8.3%), "expansion of telehealth" (n=18; 12.4%), "limiting patient or client capacity" (n=24; 16.6%), "change of business hours" (n=2; 1.4%), "other" (n=1; 2.1%).

Q8 How do you think the number of clients filling prescriptions changed during COVID-19?

Thirteen respondents chose "more clients filling prescriptions" (n=13; 41.9%), 13 chose "about the same number" (41.9%), and five chose "less client's filling prescriptions" (16%).

Q9 What Kentucky County does your agency serve?

No response

Q10 Do you have access to broadband at your organization?

The majority report having access to broadband (n=23; 74%), three report not having access to broadband (9.7%), and five report "don't know" (16.1%).

Q11 Did your organization use telehealth before the COVID-19 pandemic?

Five respondents chose "yes" (16.7%), 23 chose "no" (76.7%), and two chose "don't know" (6.7%).

Q12 What telehealth services did you provide before COVID-19 (choose all that apply)?

Only respondents who answered "yes" to the previous question completed this question. Two responded "behavioral health" and three responded "school-health".

Q13 Have you used telehealth services during the COVID-19 pandemic?

The majority responded "yes" (n=24; 80%), "no" (n=6; 20%).

Q14 What telehealth services did you provide during COVID-19?

Only respondents who answered "yes" to the previous question completed this question. "Behavioral health" (n=6; 4.1%), "primary care" (n=8; 5.5%), "women's health" (n=8; 5.5%), "dermatology" (n=0), "school-health" (n=3; 2.1%), "HEP C/HIV Counseling" (n=1; .7%), "harm reduction" (n=2; 1.4%), "other"

(n=14; 9.7%). Other responses included WIC, home health, COVID, Crisis Counseling, family planning, diabetes, and HANDS program.

Q15 Would you like training and resources for the following (choose all that apply)?

Respondents were given 8 options including, "Other" with the option to fill in a text answer. Respondents were spread across most choices. Five (5) selected "Telehealth Coverage and Reimbursement", 4 selected "Telehealth Implementation and Workflow", 4 selected "Telehealth Coding for Medicare, Medicaid & MCOs, Commercial Payers", 0 selected "Telehealth State and Federal Laws", 3 selected "Kentucky Actions and Guidance Related to Telehealth (waivers, suspensions, executive orders, etc.)", 4 selected "Telehealth Platforms and Peripherals", 4 selected "Remote Patient Monitoring", and 5 selected "Other" and 17 selected "none of the above".

16 APPENDIX 2: COMMUNITY HEALTH WORKER SURVEY RESPONSES AND ANALYSIS

The University of Kentucky Center of Excellence in Rural Health fielded a survey to Community Health Workers (CHW) across the state of Kentucky through a CHW listserv.

Note on Survey Limitations:

The sample for this survey was drawn from a listserv of 103 total members, generating 52 total responses for a 50% response rate. Though this response rate is high, little extrapolation and analysis can be conducted given the small number of responses included within the analysis. This survey does offer limited but useful insight into concerns and challenges faced by CHWs during the COVID-19 pandemic.

Q1 During COVID-19, have you seen changes in the type of clients contacting you? Thirty-four (34) respondents stated, "Yes" while 15 respondents stated, "No".

Туре (N)	Increase n (%)	About the Same n(%)	Decrease n(%)
Depression (30)	23 (76.7)	7 (23.3)	0
Anxiety (31)	26 (83.9)	5 (16.1)	0
Financial Stress (31)	28 (90.3)	2 (6.5)	1 (3.7)
Medicaid benefit applications (27)	14 (51.9)	12 (44.4)	1 (3.7)
SNAP (26)	14 (53.8)	12 (46.2)	0
Dental Benefit Applications (27)	14 (51.9)	12 (44.4)	1 (3.7)
Navigating transportation (28)	13 (46.4)	13 (46.4)	2 (7.1)

Q2 Change in the type of client's contacting you

Best practices to access food (29)	25 (86.2)	4 (13.8)	0
Best practices to access prescription meds (28)	16 (57.1)	10 (35.7)	2 (7.1)

Q3 During COVID-19 have client needs changed?

Forty-three (43) respondents stated, "Yes" while 4 respondents stated "No".

Q4 Change in client's needs

Changes in client's	Yes	No
needs (N)	n (%)	n (%)
Navigate changes in	24 (68.6)	11 (31.4)
health insurance		
status (35)		
Registering for	24 (70.6)	10 (29.4)
unemployment (34)		
Food insecurity (36)	32 (88.9)	4 (11.1)
Housing problems (34)	25 (17.2)	9 (6.2)
Transportation issues	25 (73.5)	9 (26.5)
(34)		
Access to reliable	22 (64.7)	12 (35.3)
internet connectivity		
(34)		
General concern about	37 (92.5)	3 (7.5)
exposure to virus (40)		
Method of interacting	33 (89.2)	4 (10.8)
with clients (37)		
Younger aged clients	19 (59.4)	13 (40.6)
seeking help (32)		

Q5 Do you have concerns about the welfare of certain clients now that COVID-19 restrictions are lifting/have been lifted?

Thirty-one (31) respondents stated, "Yes" while 13 respondents stated "No".

Q6 Are you concerned that clients:

	Yes	No
	n (%)	n (%)
Are fearful of leaving	28 (90.3)	3 (9.7)
their home (31)		
Are fearful of	25 (83.3)	5 (16.7)
returning to work (30)		
Are fearful of losing	24 (80)	6 (20)
governmental financial		
support (30)		

Are fearful of children returning to school (31)	30 (96.8)	1 (3.2)
Are suffering from ongoing financial hardship (30)	29 (96.7)	(3.3)
Are suffering from ongoing COVID-19 medical issues (30)	25 (83.3)	5 (16.7)

Q7 Do you have concerns for your safety returning to in person work with clients? Twenty (20) respondents answered "yes" and 24 answered "no".

Q8 Do you feel it is safe to begin reopening and reducing restrictions at this time? Seventy-nine (79) respondents stated, "Yes" while forty-nine (49) respondent stated "No".

Q9 Are you concerned with:

	Yes	No
Primarily working back in an	10 (52.6)	9 (47.4)
office		
Meeting with patients in their	16 (84.2)	3 (15.8)
homes		
Stopping use of COVID-19 PPE	15 (78.9)	4 (21.1)
in the field		

17 APPENDIX 3: COVID BELIEFS AND EXPERIENCES, VACCINATION, AND TESTING STATUS

The following questions were asked of all respondents and focus on COVID-19 experiences:

Q1 Have you personally known anyone who has had COVID-19?

One hundred and eighteen responded "yes", 0 responded "no" and 2 responded "not sure"

Q2 How many people do you personally know that have contracted COVID-19?

Number of people	Number of responses
2	4
3	3
4	5
5	11

6	5
7	1
8	3
10	22
11	1
12	6
14	1
15	8
19	1
20	12
25	6
30	7
40	4
50	6
60	1
75	1
100	4



Q3 How concerned are you about getting COVID-19?

	n (%)
Very concerned	44 (36.7)
Moderately concerned	34 (28.3)
A little concerned	29 (24.2)
Not at all concerned	13 (10.8)

Q4 How likely do you think it is that someone who lives in your household will contract COVID-19 within the next 3 months?

	n (%)
Very likely	6 (5)
Somewhat likely	51 (42.5)
Not likely at all	42 (35)
Not sure	21 (17.5)

Q5 How serious do you believe it would be if someone who lives in your household contracted COVID-19?

	n (%)
Very likely	44 (21.8)
Somewhat likely	48 (40.7)
Not likely at all	13 (11)
Not sure	13 (11)

Q6 How much do you trust the information that the CDC provides on the safety and effectiveness of COVID-19 vaccines?

	n (%)	
Completely trust	26 (21.8)	
Mostly trust	53 (44.5)	
Somewhat trust	25 (21)	
Do not trust at all	8 (6.7)	
Not sure	7 (5.9)	

Q7 How much do you trust the information and guidance provided by UK on the safety and effectiveness of COVID-19 vaccines? Only asked of those affiliated with the university.

	n (%)
Completely trust	4 (21.1)
Mostly trust	8 (42.1)
Somewhat trust	7 (36.8)
Do not trust at all	0 (0)
Not sure	0 (0)

Q8 What sources have you used to get information on COVID-19? (Choose all that apply)



Q9 How much do you agree or disagree with the following statement? "Whether I get COVID-19 is a matter of fate or inevitable. The actions I take will have little bearing on whether or not I get COVID-19."

	n (%)
Strongly agree	5 (4.2)
Somewhat agree	16 (13.6)
Neither agree nor disagree	16 (13.6)
Somewhat disagree	13 (11.0)
Strongly disagree	68 (57.6)

Q10 In the past month, how often have you felt stressed or worried due to the conditions of the COVID-19 pandemic?

	n (%)
Always	17 (14.4)
Most of the time	24 (20.3)
About half of the time	29 (24.6)
Sometimes	41 (34.7)
Never	7 (5.9)

Q11 Thinking about the past 2 weeks, how would you rate your...

Physical health

	n (%)
Excellent	11 (9.2)

Very Good	45 (37.5)
Good	39 (32.5)
Fair	19 (15.8)
Poor	6 (5.0)

Mental health

	n (%)
Excellent	12 (10)
Very Good	33 (27.5)
Good	46 (38.3)
Fair	17 (14.2)
Poor	12 (10)

Personal relationships

	n (%)
Excellent	27 (22.7)
Very Good	45 (37.8)
Good	37 (31.1)
Fair	8 (6.7)
Poor	2 (1.7)



Q12 Do you know somebody that (choose all that apply):

	n (%)
Has been in the hospital for COVID-19	99 (68.3)
Has been in the ICU for COVID-19	79 (54.5)

Has been ventilated or similar procedure for COVID-19	70 (48.3)
Has died of COVID-19 or COVID-19 related complications	84 (57.9)
None of the above	13 (9)



The following questions were answered by all groups and focus on vaccination.

Q1 Have you received at least one does of a COVID-19 vaccine?

113 responded "yes", 8 responded "no"

•	· · · · · · · · · · · · · · · · · · ·	
Vaccine Type	n (%)	
Pfizer-BioNTech Dose 1	9 (4.7)	
Pfizer-BioNTech Dose 2	10 (5.2)	
Moderna Dose 1	69 (36.2)	
Moderna Dose 2	93 (48.7)	
Johnson and Johnson	5 (2.6)	
Pfizer booster	5 (2.6)	

Q2 Which vaccine have you received? (Choose all that apply)

Q3 How likely are you to get the vaccine in the next month? (Respondents only include those unvaccinated)

Six of the eight said "very unlikely", 1 said "somewhat unlikely", and 1 said "not sure".

Q4 If a doctor or nurse recommends that you get the COVID-19 vaccine, how likely would you be to get it? (Respondents only include those unvaccinated)

Seven of the eight unvaccinated said "not likely" and one said "not sure".

Q5 Are there any cultural or religious reasons that you would not get the vaccine? Five responded "no" and three responded "yes".

Q6 Have you seen or heard of anything that would make you or other hesitant to get the COVID-19 vaccine? (Respondents only include those unvaccinated)

Two responded "no" and Six responded "yes".

Q7 Why are you hesitant to get the COVID-19 vaccine? (Choose all that apply)

Seven respondents chose "I am worried about unknown side effects of the COVID-19 vaccine", four chose "I think a COVID-19 vaccination may be risky because the approval was rushed", three chose "other", two chose "I do not think a vaccine would protect me from COVID-19", one chose "I plan to wait for 6-12 months to make sure it's safe and see how well it works against COVID-19", and one chose "I do not believe I am at a high-risk for severe illness associated with COVID-19".

Q8 Which of these statements is closest to your opinion:

"Getting vaccinated against COVID-19 is....

	n (%)
A personal choice"	46 (38)
A responsibility to protect the	75 (62)
health of all"	

Q9 Some people are concerned about the safety of vaccines- such as the likelihood for having a serious reaction- and some people are not. How safe do you think it would be for you to get a COVID-19 vaccine?

64 respondents chose "very safe", 39 chose "mostly safe", six chose "not safe at all", and 13 chose "not sure".

Q10 If you have people in your life that you believe would approve or disapprove of you getting the COVID-19 vaccine, please indicate that below:

	Generally would	Generally would	Don't know	N/A
	approve	disapprove		
Immediate family	96 (81.4)	11 (9.3)	5 (4.2)	6 (5.1)
Extended family	79 (66.9)	8 (6.8)	14 (11.9)	6 (5.1)
Friends	90 (76.3)	8 (6.8)	14 (11.9)	6 (5.1)
Significant other	86 (74.1)	8 (6.9)	2 (1.7)	20 (17.2)
Roommates	29 (26.6)	0	4 (3.7)	76 (69.7)
Employer	105 (90.5)	0	2 (1.7)	9 (7.8)
Classmates	31 (28.4)	1 (.9)	9 (8.3)	68 (62.4)
Faith leaders	72 (61.5)	5 (4.3)	13 (11.1)	27 (23.1)
Medical	103 (88)	3 (2.6)	4 (3.4)	7 (6.0)
professionals				

Q11 If you were to receive a COVID-19 vaccine, how confident are you that it will protect you from getting COVID-19?

	n (%)	
Very confident	35 (24.1)	
Somewhat confident	60 (41.4)	
Only slightly confident	13 (9)	
Not at all confident	9 (6.2)	
Not sure	4 (2.8)	

The following questions about testing were asked of all respondents:

Q1 Have you been tested for the CVOID-19 virus?

One hundred and two respondents chose "yes" and 16 responded "no".

Q2 What are some reasons that you have not been tested for COVID-19? (Choose all) (Only those who have not tested responded to this question)

Fourteen chose "I have not been exposed to COVID-19 symptoms", 3 chose "it is not required for me", 2 chose "I was not told by my healthcare provider to get tested", 1 chose "I don't think getting tested is necessary", and 1 chose "The test might be uncomfortable or painful".

Q3 Where did you go to get tested? (If you have been tested more than one time, think about the first time you were tested)

	n (%)	
Doctors office	29 (29)	
Drive thru testing site	43 (43)	
Emergency room	2 (2)	
Pharmacy	1 (1)	
Other	25 (25)	

Other responses included: health department (14), work (4), hospital (6)



Q4 Did you ever test positive for COVID-19?

Seventy-six responded "no" and 25 responded "yes".

Q5 In general, where would you prefer to receive COVID-19 testing if you chose to be tested?

	n (%)
Doctors office	31 (25.8)
Drive thru testing site	57 (47.5)
Emergency room	0 (0)
Pharmacy	1 (0.8)
Place of employment	26 (21.7)
Other	5 (4.2)

18 APPENDIX 4: BARRIERS, MEDICAL CHANGES, AND HEALTHY GUIDANCE ADHERENCE

A single question was used to assess barriers experienced during COVID for healthcare providers, educators, and Community Health Workers:

Q1 What barriers have you faced during the COVID-19 pandemic?

	n
Access to food	7 (11.3)

Access to PPE	10 (16.1)
Access to prescription medications	3 (4.8)
Access to healthcare for chronic disease	12 (19.4)
Other	2 (3.2)
None of the above	28 (45.2)

Healthcare providers, educators, and Community Health Workers were asked about medical care changes during the pandemic with the following questions:

Q1 Prior to COVID-19, were you receiving services for:

	n
Hypertension	14 (15.7)
Diabetes	7 (7.9)
Heart Disease	1 (1.12)
Asthma	2 (2.3)
COPD	0
Depression	9 (10.1)
Anxiety	9 (10.1)
Substance Use Disorder	0
Cancer treatment	0
Cancer screening	1 (1.12)
Other	4 (4.5)
None of the above	19 (21.4)

Q2 Did you have appointments/procedures cancelled or put on hold because of COVID-19?

Twenty-one responded "yes", 25 responded "no"

Q3 Have you had to delay a visit with a healthcare provider since COVID-19?

Twenty-two responded "yes" and 24 responded "no".

Q4 Reason for delay:

	n
Fear of going to doctor during COVID-	14 (50.0)
19 virus	
Not able to get to an appointment	10 (35.7)
Didn't have access to telehealth	2 (7.1)
Didn't understand how to use	0
telehealth	
Preferred not to use telehealth	1 (3.6)
Other	1 (3.6)

Q5 Have you seen your healthcare provider since March 2020?

Forty responded "yes" and 5 responded "no".

Q6 Where did you see your healthcare provider? (choose all that apply):

Thirty-one responded "office visit", two responded "emergency room visit", 11 report "drive through clinic", and 19 reported "telehealth visit".

	n
Very satisfied	7 (31.8)
Somewhat satisfied	9 (40.9)
Neither satisfied or unsatisfied	2 (9.1)
Somewhat unsatisfied	4 (18.2)
Very unsatisfied	0

Q7 How satisfied were you with using telehealth?

Q8 Have you delayed making appointments for preventative cancer screening (mammogram, prostate exam, colonoscopy, etc.)?

17 responded "yes" and 22 responded "no".

Q9 For what reason(s) did you delay preventative cancer screening (choose all that apply)?

Seventeen responded "yes", 22 responded "no" and seven responded "screenings were up to date". Eleven individuals reported delaying for "fear of going to the doctor during COVID-19", five reported "not being able to get an appointment", and four responded "other"

Q10 Did you have insurance coverage before COVID-19?

All respondents answered "yes" (46)

All groups of respondents were asked the following questions concerning COVID-19 guidelines:

Q1 How often were you able to follow the recommended guidelines for staying safe and healthy
provided by the CDC?

	Most of the time	Some of the time	Rarely	Never
Avoid large	105 (86.1)	16 (13.1)	1 (.8)	0
events and				
gatherings when				
possible				
Wear a mask if	108 (88.5)	11 (9)	3 (2.5)	0
you have to go				
out				
Hand wash for 20	112 (92.6)	9 (7.4)	0	0
seconds all				
throughout the				
day				
Use hand	116 (95.1)	4 (3.3)	2 (1.6)	0
sanitizer when				
unable to wash				
your hands				

Q2 How often do you wear a mask

	Always	Often	Sometimes	Rarely	Never
Indoors when	38 (31.1)	53 (43.4)	19 (15.6)	5 (4.1)	7 (5.7)
interacting with					
people not part					
of your					
household?					
Outdoors when	16 (13.2)	27 (22.3)	32 (26.4)	25 (20.7)	20 (16.5)
interacting with					
people not part					
of your					
household?					

One respondent chose "I did not interact with people who were outside of my household"



