2022 Rapid Community Assessment Report for Boone County, MO

Columbia/Boone County Department of Public Health and Human Services

Published November 2022

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Overview

In 2022, Columbia/Boone County Public Health and Human Services (PHHS) began conducting a community health assessment to gain better understanding of the community's needs and concerns regarding COVID-19 among adults and parents. The assessment aimed to obtain community insight into lived experiences as a means of understanding hopes and concerns surrounding the COVID-19 vaccine, and to identify potential barriers and solutions to low vaccine uptake or vaccine confidence. PHHS adopted the Rapid Community Assessment Guide (RCA), created by the Centers for Disease Control and Prevention (CDC).

According to the CDC, the RCA guide is built on the latest, best practices and evidence for understanding and addressing vaccination demand challenges. It is designed to be fast, resource-efficient, and used at the local level. The guide uses the Behavioral and Social Determinants for Vaccination Framework to design data collection tools and analysis approaches. This framework outlines the impact of what people think and feel along with social processes for the motivation to get vaccinated, while acknowledging how practical issues impact the ability to get vaccinated (*COVID-19 Vaccine Confidence Rapid Community Assessment Guide*, 2022).

Background

PHHS began planning for the Rapid Community Assessment by identifying objectives. Objectives identified were: gain a better understanding of our community's needs and concerns regarding COVID-19 among adults and parents; collect community insight on lived experiences as a means of understanding hopes and concerns around the vaccine; and identify potential barriers and solutions to low vaccine uptake or vaccine confidence.

The community of focus was then identified as adults and parents in Boone County. All adult residents of Boone County were eligible to participate in the data collection for the Rapid Community Assessment. It was important to acknowledge the different feelings and concerns adults may have for themselves versus ones they may have for their children regarding COVID-19 and COVID-19 vaccines. Adult respondents chose to either respond to questions about themselves, or about their child. For this reason, survey data for parents was collected separately from adults, and the focus group was asked questions inquiring about parental views as well as their own. According to the United States Census Bureau, the estimated population of Boone County in 2021 was 185,840. Of this population, 20.6% were people under the age of 18 years based on the United States Census Bureau Quick Facts (2020), and the average family size in

Boone County was 2.37 +/-.05. This highlights the importance of acknowledging the portion of the population that either are children, or are people in care of children, and their concerns regarding COVID-19 independently.

According to CDC's COVID Data Tracker, as of Aug. 24th, 2022, 73.4% of Boone County's total population has received at least one dose of the COVID-19 vaccine. 62.8% of those individuals are fully vaccinated. Only 44.8% of the fully vaccinated population have received a first booster dose (2022). Part of the goal of the RCA was to understand the reasons behind why people were still choosing to not vaccinate or why they were unable to access vaccines. *It is important to note, since data was collected, analyzed, and the report began, a new bivalent vaccine was approved and distributed. The bivalent formulations of the Moderna and Pfizer-BioNTech vaccines for use as a single booster dose were approved as "updated boosters" on Aug. 31st, 2022 (Food and Drug Administration, 2022). The impact the bivalent boosters may have had on vaccination rates is not reflected in this data or report.*

Methods

PHHS collected both quantitative and qualitative data through surveys and focus group data collection. The survey and focus group questions were either selected directly from the Rapid Community Assessment Guide, or based on other surveys or focus group studies found in the World Health Organization's *COVID-19 Question Bank* (2022) to better fit the specificities of our target population, adults and parents in Boone County.

Surveys

Two variations of the survey were distributed throughout the community, one asking adults about their own thoughts and experiences and one asking parents their thoughts and feelings about vaccinating their children. The questions in the survey aimed to assess how people think and feel, what social processes affect their lives, what practical obstacles they face, and their motivation behind getting vaccinated or not. Questions selected shed light on community concerns, beliefs in vaccine safety, sources of credible information, level of knowledge of COVID-19, preparedness, vaccination status, responsibility to others, and perspectives on local and state government response to the pandemic. Constructs and questions were based on five defined domains for the surveys: thinking and feeling; social processes; practical issues; COVID-19 vaccination; and demographics. (Appendix A)

The survey was widely distributed using an online platform (SurveyMonkey) and was also available in paper format. Paper surveys were offered in four locations throughout Columbia, (PHHS clinic and WIC offices, Compass Health Network locations on Worley Street Broadway Bluffs) with a drop box. These paper surveys were then picked up and entered into the online survey platform by an RCA team member. Paper surveys allowed those in the community without regular internet access to provide their feedback as well. Paper versions of both the parent and the adult focused surveys were translated into Spanish.

Anyone who wanted to take the survey was allowed to do so. However, only responses from Boone County adult residents were used for analysis. After 5 weeks, the online survey was closed and any responses to the survey that included a non-Boone County zip code, or no zip code at all, were removed from analysis to ensure that only Boone County responses were recorded. Responses were then separated into those given as an adult in the community and those given as parents in the community.

Adult-Focused Survey (Appendix C)

The adult-focused survey aimed to ask adults (18 years and older) about their thoughts, feelings, and experiences with COVID-19 and COVID-19 vaccines, as well as demographic questions. The adult-focused survey was 34 questions long, with skip logic dependent on vaccination status. With the skip logic in place, participants were asked to answer either 31 for unvaccinated or 30 questions for vaccinated.

Parent-Focused Survey (Appendix C)

The parent-focused survey asked parents about their thoughts, feelings, and experiences with COVID-19 and vaccination for their children. The demographic questions asked about the child they were answering survey questions about. The questions from the adult-focused survey were re-written and edited to ask about the parent's perspective, but the same domains and constructs were used. The same number of questions were included in the parent-focused survey, with the same skip logic. Parents were asked to answer either 31 for unvaccinated or 30 questions for vaccinated.

Recruiting Participants

Different recruiting methods were used with the goal of recruiting a broad mix of Boone County residents. Survey data aimed to reflect as many perspectives as possible to ensure usable and inclusive insight, including diversity among ages, gender identities, races, ethnicities, and national origins. All emails, posts, and outreach materials included

information about the incentive offered by PHHS. Participants had the option to leave an email address or phone number, through Survey Monkey or on a paper incentive slip, to be entered into a drawing for a chance to win a $50 gift card funded by PPHS to increase participation and response rate.

Two outreach materials were created, one poster option that was printed and posted in different locations, and a virtual image was posted on Facebook (Appendix D).

Email Outreach. Emails were sent to PHHS employees, COVID-19 Vaccine Ambassadors, and a Boone County listserv group consisting of residents who had previously signed up for email updates from PHHS. The emails provided information about the survey and asked for their feedback on various aspects of the COVID-19 pandemic to help our community continue to respond to COVID-19 and prepare for future pandemics, and states the survey takes less than 10 minutes to complete, providing the direct link to the survey.

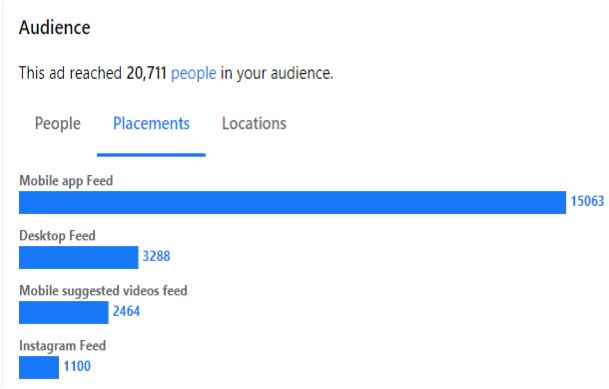
- COVID-19 Vaccine Ambassadors
    - Sent to 53 email addresses
    - Open rate of 63.5%
    - Click rate of 19.2%
    - Link clicks to survey: 10
- Boone County email list
    - Sent to 31,943 email addresses
    - 60.3% open rate
    - 12.8% click rate
    - Link clicks to survey: 2,678
- Health Department employees
    - Sent to 93 email addresses

Website. The link to the COVID-19 Rapid Community Assessment Survey was posted on the PHHS website on multiple pages.

- CoMo.gov/covidvaccine
- CoMo.gov/health

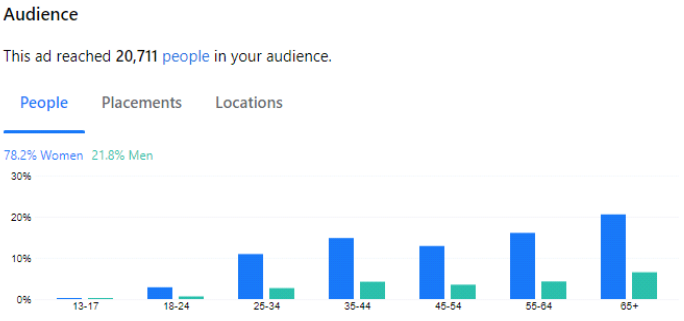
    - Public Health and Human Services webpage
- CoMo.gov
    - City of Columbia's home page under "News" feed

Social Media. Facebook was utilized for survey participant recruitment. The 2022 COVID-19 Community Assessment Survey post was published with text encouraging people to "Make your voice heard and help our community continue to respond to COVID-19 and prepare for future pandemics", with a direct link to the survey, and the digital survey poster. This post was boosted as a purchased ad, and ran from May 10 to May 24, at $35/day, for a total of $489.99.

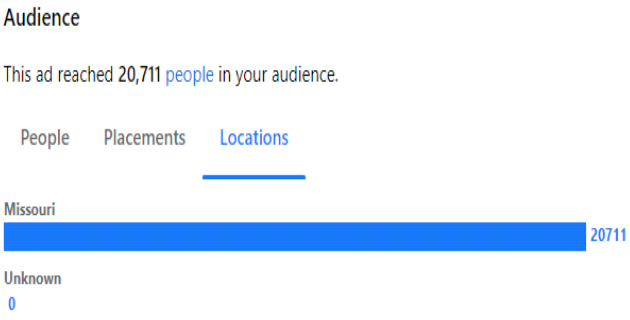


Audience reach: 20,711 people were reached through the ad, mostly via mobile app.

Performance: Survey link was clicked 1,047 times, for $.47 cost per click.



Audience Demographics: Majority of the audience reached through the ad were 65+, and female.



Audience Location: All of the audience reached through the ad were residents of Missouri.

"Snowball" Sampling. To recruit younger adult participants, an email was sent to two community health workers, younger PHHS employees, asking them to share information about the survey within their social circles. Another attempt at recruiting young adult participants was through an email sent to a Student Affairs department staff member of the University of Missouri, asking them to share information about the survey with students.

Another PHHS employee was emailed, a nurse with existing contacts and connections to the Hispanic community, and asked if she had any ideas that could help ensure voices from this population were heard. Business locations in the city of Columbia were recommended for survey placement, and Spanish translated paper copies of the survey were placed at these locations.

Lastly, to continue to diversify our survey responses, a PHHS health educator working with Live Well by Faith, a wellness program in the Black and African American church community was asked for her input regarding best methods to reach this population. A Facebook post was shared on their Live Well by Faith group timeline, and paper surveys were brought to a tabling event held at a church in Columbia.

News Interview. An interview was conducted by KOMU with a health educator and one of the creators of the survey, about the COVID-19 Community Assessment Survey and its importance. The interview states that the public's input and responses will help the community continue to respond to COVID-19, and provides a direct link to the survey.

Link to Interview

Clinic Waiting Rooms. Compass Health Network, a nonprofit health care organization, had paper surveys and drop boxes for completed surveys, available in their waiting rooms at two of their Columbia clinic locations.

The Columbia/Boone County Public Health and Human Services' Clinic and WIC (Women, Infants and Children) offices were also given paper surveys to provide to individuals and families checking-in for appointments.

Analysis

After five weeks of data collection (May 11 - June 15, 2022), the online survey closed and no further responses were collected. To begin analyzing the data collected, all data from completed surveys (paper and online) were loaded into a Microsoft Excel spreadsheet. All responses that included a zip code not representative of Boone County were removed. The survey included one question about COVID-19 vaccination status. Several questions followed based on how the question was answered. If the respondent selected "decline to answer" to the question of vaccination status or left it blank

(paper version), all responses gathered for that person were removed from the data set. *Due to the ability to skip some questions, sample sizes will vary.*

Data was then divided into two separate data sets: responses from parents reflecting their views regarding their child's experience with COVID-19 vaccines and responses from adults 18 years or older reflecting their views regarding their own COVID-19 vaccine experience. Then, both parent and adult data sets were further divided by age groups and by race. For adult responses, White, Black or African American, White/American Indian, and Asian & Asian American were the most prominent races selected. For responses from parents regarding their child's race, White and Black or African American were the only two races with enough responses to be viable for analysis. Survey participant demographic data can be found in Appendix B. *Participants who self-identified as both White and American Indian as their racial demographic, by selecting both options, were represented as "White/American Indian" throughout the report. Participants who self-identified by writing in "Asian" or "Asian American" were represented as "Asian & Asian American" throughout the report.*

Originally, the goal was to receive enough responses to represent a 95% confidence interval, meaning the collection of at least 1,059 total responses. Rather surprisingly, more than 2,100 responses were received the first day the survey was made available, with a rate of around 100 responses being collected each hour. After five weeks, 3,457 total responses were collected. Once removing any non-Boone County zip-codes, and any responses declining to answer about vaccination status, 3,024 adults and 150 parent survey responses remained, for a combined number of 3,174.

Because this was intended to be a Rapid Community Assessment, simple prevalence percentages were used to analyze the responses given. Further statistical analysis was not conducted.

Results (Appendix E)

Reasons to Vaccinate and Community Outlook

The first questions focused on the respondent's level of concern regarding getting COVID-19 and COVID-19 spreading throughout the community. Adults aged 70 to 79 showed the greatest concern for getting COVID-19 with 39.8% responding "very concerned." However, all other age groups reported "somewhat concerned" most, ranging from 35.8% in the 40 to 49 and 60 to 69 age groups to 60% in the 90 to 99 age group. The 18 to 29 age group also had the

highest percentage of participants (13%) reporting that they are “not at all concerned.” No other age group reported even 10% being “not concerned at all.”

All races of adults showed some level of concern for getting COVID-19. Nearly 90% (87.5%) of White/American Indian respondents stated they are “a little”, “somewhat” or “very concerned”. The remaining three groups responded the same at least 93% of the time. Notably, many respondents stated that they are not concerned at all. White respondents were more than 1.5 times (1.6) as likely as Black or African American respondents and twice as likely as Asian & Asian American respondents to state “not concerned at all.” Additionally, responses from White/American Indian adults were three times as likely as Black or African American adults and almost four times (3.7) as likely as Asian & Asian Americans to state “not concerned at all” about getting COVID-19. With the exception of White/American Indian respondents (43.8%), over half of adults polled in all racial groups responded that “less than half” the people in the community are concerned about the spread of COVID-19. Among the four racial groups, more participants from Black or African American and White/American Indian populations report to believe most people are concerned. Black or African American respondents felt most people are concerned twice as much (2.0) as Asian & Asian Americans did and 2 ½ (2.5) more than White adults did. White/American Indian respondents felt most people are concerned about 1 ½ times (1.5) more than White adults did.

Parents of younger children (<1 to 4 age group) show the greatest concern for their child getting COVID-19 with 62.5% responding “very concerned.” It is of note that the COVID-19 vaccine for children under the age of 5 years old was approved after most parents had completed the survey. However, this is nearly twice (1.8) the rate reported by parents of children in the 5 to 12 age group (34.1%) and 1 ½ times (1.5) the rate for parents of a child in the 13 to 18 age group. The older the child, the greater the chance the parent will not be concerned at all that their child will get COVID-19. Less than 15% (14.3%) of parents with a child in the oldest age group (13 to 18 age group) along with 16.3% of the two younger age groups responded that they are “not concerned at all.”

Across all age groups, the majority of parents stated that “less than half the people” in Boone County are concerned about the spread of COVID-19 in the community. However, a significant number of parents of children in each age group felt “about half the people” in Boone County are concerned, ranging from just under 30% (29.3%) in the 5 to 12 age group to around 35% in the youngest and oldest age groups (33.3% and 35.7%, respectively).

More than half (57.4%) of parents of a White child stated that “less than half the people” in Boone County are concerned about COVID-19 spreading in the community. Though a large percentage of parents to a Black or African American child agree, less than half (42.9%) answered the same. The same percentage (42.9%) of Black or African American adults stated that “most people” in the community are concerned about the spread of COVID-19. This is almost 4.5 (4.4) times the number of parents to a White child (9.8%) who felt “most people” are concerned.

The vast majority of adults in all age groups answered that getting vaccinated against COVID-19 to protect themselves is “very important.” Additionally, across the age groups, an upward trend exists in the percentage of adults responding that it is “very important”, from 83.2% of the 18 to 29 age group, to 91.3% of the 50 to 59 age group, to 100% of adults in the 90 to 99 age group. Also, of note, the low number of adults stating that getting a COVID-19 vaccine to protect themselves was “not at all important.” The younger the respondent, the more propensity towards feeling it is not important. For instance, adults in the 18 to 29 age group were over 4 times (4.2) more likely to say the vaccine is not important than were adults in the 70 to 79 age group (3.8% versus 0.9%).

Regarding race, most respondents in all racial groups felt getting a COVID-19 vaccine is important to protect themselves. In fact, no group believed it is important less than 90.6% of the time. No Asian & Asian American adults felt it to be “not important at all” but some participants of all other racial groups disagreed. White/American Indian respondents were more than four times (4.2) more likely to say “not at all important” than White individuals and 4.5 times more likely than Black or African Americans.

The majority of parents in all age groups stated getting their child vaccinated against COVID-19 is “very important” (83.3% in 13 to 18 age group, 84.1% in the 5 to 12 age group, 91.7% in the infant to 4 age group). Less than 10% of parents with a child from each age group answered that getting a COVID-19 vaccine for their child is “not at all important.” With regards to the race of the child, over 80% of the White (86.9%) and Black or African American groups (85.7%) stated that it is “very important” for their child to get a COVID-19 vaccine to protect them. However, whereas 4.1% of parents with a White child found vaccination “not at all important”, no parents of a Black or African American child shared this view.

Vaccine Safety. Next, adults and parents were asked how safe they felt the COVID-19 vaccine to be for themselves or their child. Nearly all age groups of adults reported they felt the COVID-19 vaccine is "completely safe," more than any other response, ranging from just under 50% (48.64%) of adults in the 50 to 59 age group to nearly 65% (64.5%) of those in the 30 to 39 age group. Doubt in vaccine safety proved to be low in all age groups. Only the 40 to 49 age group of adults (3%) registered more than 1.7% of responses as "not safe at all." Participants from the 40 to 49 age group stated the vaccine is "not safe at all" almost twice (1.8) as much as the next highest level of reporting "not safe at all" (50 to 59 age group – 1.7%).

Respondents from the White and White/American Indian racial group say they felt the COVID-19 vaccine is "completely safe" at least half the time (56.4% and 53.1% respectively). Less than half of Black or African American (43.1%) and Asian & Asian American (34.5%) participants felt the vaccine to be "completely safe". However, over half of the Asian and Asian American (55.2%) respondents felt the vaccine to be "very safe" and no one from this racial group regarded the vaccine as "not safe at all." A small percentage of the other three racial groups regarded the vaccine as "not safe at all." Notably, White/American Indian adults feel the vaccine to be "not safe at all" over twice the rate (2.1) of White adults. Black or African American adults were almost twice (1.9) as likely as White adults to say the vaccine is not safe.

70.9% of parents with a child in the <1 year to 4 age group feel the vaccine is "very safe" or "completely safe". Conversely, 8.3% of parents with a child in the <1 year to 4 age group find the vaccine to be "not safe at all." 82.9% of parents with a child in the 5 to 12 age group feel the vaccine is "very safe" or "completely safe." Conversely, only 4.9% of parents with a child in the 5 to 12 age group find the vaccine to be "not at all safe." Only 23.8% of parents with a child in the 13 to 18 age group feel the vaccine is "very safe" or "completely safe." This is 3 times (3.0) less than the youngest age group and 3 ½ times less than the 5 to 12 age group. Additionally, only 4.8% of parents with a child in the oldest age group (13 to 18) find the vaccine to be "not safe at all," almost exactly the same rate as the 5 to 12 age group (4.9%).

Over half (50.8) of parent respondents with a White child stated that the COVID-19 vaccine is "very safe" and almost three-quarters (71.4%) of parents with a Black or African American child agreed. However, there is some division when it comes to believing the vaccine is "completely safe" with parents of a White child stating this over 30% (32.8%) of the time. But parents with a Black or African American child showed greater hesitation. No parents with a Black or

African American child stated that the COVID-19 vaccine is “completely safe” and felt the vaccine to be “not safe at all” close to 10 times (8.9) more than White children’s parents who participated (14.3% versus 1.6%, respectively).

Sources Trusted for Accurate Information About COVID-19. Across all age groups of adult respondents, the sources trusted most were health care workers, local public health department(s), and messages from government or authorities. Conversely, all age groups of adults chose social media as one of the least trusted sources of information about COVID-19. The two youngest group of adults also trusted friends infrequently. Family members were rarely trusted for accurate information about COVID-19 in the 18 to 29 as well as the 40 to 49 age group. Additionally, respondents who were 50 years and older rarely trust schools.

Adult respondents from all four racial groups look to the same three sources for trusted, accurate information about COVID-19. All groups regarded health care workers, local public health department(s) and messages from the government or authorities as most trustworthy. All racial groups of adults also had similar feelings about which sources they trusted least. All four groups reported rarely trusting social media for COVID-19 information. White and White/American Indian adults reported schools as one of the least trusted sources. Black or African American adults also rarely trust friends and Asian & Asian American adults rarely trust family members for such information.

The top three sources for parents of each age group of children were health care workers, local health department(s), and messages from government or authorities. Parents of children in the <1 to 4 age group also listed TV and schools as least trusted sources of information. Parents of children older than 4 also reported family members as unreliable in terms of accessing accurate information about COVID-19.

Like the other sub-sets of respondent groups, parents of both White children and Black or African American children, relied on the same three trusted sources for accurate information about COVID-19. Additionally, parents of a Black or African American child reported information from community leaders as trustworthy. Both racial groups also had similar feelings about which sources they trusted least. Both groups rarely reported trusting social media, family members or friends for accurate COVID-19 information. Parents of a Black or African American child also rarely trusted traditional media outlets like radio, TV, or newspaper (each one only received 14.3% of responses).

Nearly all subset of responders also selected “none of the above” infrequently or not al all. This points to the notion of the list of potential sources being exhaustive.

Attitudes Toward Local Government Involvement. All respondents were asked how they feel about the level of action their local government is taking to protect vulnerable populations and preparedness for future COVID-19 spikes. Regarding adult respondents, the majority of adults from all age groups except 60 to 69 and 80 to 89 felt the response was "not enough." The largest segment of these two age groups (60 to 69, and 80 to 89) felt the response was "just right" (35.7% and 43.4%, respectively). However, nearly the same percentage of people in the 60 to 69 age group (34.5%) felt the response was "not enough." No age group showed more than 8.1% (40 to 49 age group) of its respondents stating that the response by local government was too much.

Well over one-quarter of White individuals and almost half of Black or African American adults (37.3% and 52.8%, respectively) felt the level of action was not enough. However, the majority of White/American Indian, and Asian & Asian Americans (43.8% and 50%, respectively) declared that their local government was exercising just the right amount of action to protect vulnerable populations. Relatively few adult respondents from the White, White/American Indian, and Asian & Asian American racial groups (less than 10% of each) answered their local government was exercising "too much" action. However, none of the Black or African American adults felt their local government was doing too much.

The largest percentage of parents with a child from each age group felt the response was "not enough." While the two older age groups yielded relatively the same percentage of respondents who felt the level of action wasn't enough (45.1% and 45.2%, respectively), parents with a child in the youngest age group (<1 year to 4 years) reported the response wasn't enough over 20% more frequently. Between a third and a fifth of all respondents of each category felt the response was "just right." Even though the percentages were relatively low in all age groups of children, parents from the two oldest age groups felt twice and three times (2.0 and 2.8, respectively) more likely than the youngest age group to say the response was "too much."

Close to half of parents of both White and Black or African American children groups saw the level of actions by their local government was "not being enough." 49.2% of parents of a White child and 42.9% of parents with a Black or African American child felt the level of action exhibited by their local government to not be enough. Conversely, parents of a Black or African American child were nearly twice (1.5) as likely as parents to a White child to feel the level of action by their local government was "just right." About 10% of parents to a White child (8.2%) think their government was doing too much. No parents of a Black or African American child agreed.

Responsibility to the Community. When participants were asked to rank their agreeance or disagreeance with the statement, "I have a responsibility to get vaccinated for COVID-19 to protect others," all age groups of adults stated "very strongly agree" most. In fact, only the 80 to 89 age group chose this option less than 70% of the time (63.6%). Coupling "very strongly agree" and "strongly agree" responses, the adults in the 80 to 89 age group selected one of these two options over 90% (90.9%) of the time. With the exception of the 50 to 59 age group (8%), less than 7% of each age group said they "do not agree."

Although the majority of adults polled from each racial group very strongly agreed that they have a responsibility to get a COVID-19 vaccination to protect others, not everyone reported feeling that way. The number of adults who stated "do not agree" ranged from a low of less than 3% (2.8%) of Black or African Americans, to a high of nearly 13% (12.5%) of White/American Indians adults. White/American Indian respondents said they "do not agree" 4 ½ (4.5) times more than Black or African American adults, over 3 ½ (3.7) times more than Asian & Asian American adults, and more than 2 ½ (2.6) times that of White adults.

Around 80% to 90% of the parents with a child from each age group (94% for <1 to 4, 87.7% for 5 to 12, 88.1% for 13 to 18) either "somewhat", "strongly agree" or "very strongly agree" with the statement, "I have a responsibility to get my child vaccinated for COVID-19 to protect others." Less than 10% of the parents in each age group selected "disagree."

The majority of individuals from either racial group felt they have a responsibility to get their child a COVID-19 vaccination in order to protect others. Over 80% for each group "strongly agree" or "very strongly agree" (81.1% for the White group, 88.3% for the Black or African American group). However, not everyone felt the same way. Almost 10% (7.4%) of parents with a White child stated that they do not think they have a responsibility to vaccinate their child against COVID-19. No parent of a Black or African American child stated they do not have a responsibility.

Access

To gather information about how respondents felt regarding access to resources, both adult and parent respondents were first asked, "Do you feel you have enough information about how to protect yourself and your family from COVID-19?" or "Do you feel you have enough information about how to protect your child from COVID-19?" Available responses were, "yes", "no", "don't know", "decline to answer". More than 90% of the respondents in each age

group of adults answered “yes”, with the exception of the adult respondents from the 18 to 29 age group, with 88.5% of the respondents answering “yes” to having enough information for protection. Response rates ranged from 90.2% of adults from the 60 to 69 age group up to almost 93% (92.6%) of those in the 80 to 89 age group and all respondents from the 90 to 99 age group. Very infrequently was “no” selected when asking if respondents had enough information about COVID-19. No age group of adult respondents had more than 4.5% (30 to 39 age group) who answered “no” to having enough information to be protected.

Breaking down the adult responses by race, over 90% of White, White/American Indian and Asian & Asian American respondents (91.2%, 90.6%, and 96.6%, respectively) selected “yes” to feeling they had enough information to protect themselves and their family from COVID-19. Over three-quarters (76.4%) of Black or African American adults chose “yes” as their answer. However, over 10% (11.1%) of the Black or African American group of adults responded, “no” they did not feel they have enough information about COVID-19 to protect themselves and their family. This is almost twice (1.8) the rate of White/American Indian adult responses. Black or African American respondents were more than three times (3.3) as likely as White or Asian &Asian American respondents to say they did not have enough information.

The vast majority of all parent respondents chose “yes” to having enough information to keep their child safe from COVID-19. However, the parents of the children in the youngest age group (<1 to 4 years) were more than 2.5 times more likely to say, “no,” they did not have enough information to keep their child safe from COVID-19 than parents of children in the two older age group (13 to 18 years) (25% and 9.5%, respectively).

To further gather information about access to resources, two questions were asked regarding attitudes towards preparedness for the future. Adult responders were asked, “In the future, if you were required to stay home because of a quarantine or school or work closure, would you be able to do at least part of your job from home?” Parents were asked, “In the future, if your child was required to stay home because of a quarantine or school or daycare closure, how difficult it would be to find alternative choices for care?”

When asked about ability to work from home, the youngest age group of adult respondents 18 to 29 (61.1%) appeared to have the lowest chance of doing at least part of their job from home by answering “yes” least frequently. Spanning across the age groups, ability to do their job(s) from home increased as the populations got older, to a point. Once community members get to 60 years old, the ability to work from home tended to decrease. However, noting that the

rates of "no" responses don't increase with age, perhaps those who have already retired tended to respond as "decline to answer." *A limitation to this particular question is that the option of "not applicable" was not available.*

Well over half of adult respondents from each racial group reported they could do at least part of their job from home if a quarantine or school closure required them to do so in the future by answering "yes." However, White/American Indian adults appear to be disproportionally affected in this regard. Nearly 40% (37.5%) of White/American Indian adults stated "no", they could not do at least part of their job from home in the future. This is almost 1 ½ times (1.4) more than Asian and Asian American adults, and more than two times greater than the White and Black or African American racial groups (2.6 and 2.4, respectively).

The level of difficulty in finding alternative choices for child care if there were a quarantine or school or daycare closure in the future was reported as "difficult" or "very difficult" by 43.1% parents with a White child. This is 13.1% higher than the reported 30% from parents of a Black or African American child. Both groups suspected finding alternate choice for care would be 'easy' or 'very easy' at approximately the same rate of 30% (30.3% for White, and 30% for parents of a Black or African American child).

With regard to age, over 60% of the parents (62.5%) with a child <1 year to 4 years old, would find it "difficult" or "very difficult" to find alternative choices of care if there was a future quarantine or school/daycare closure. Conversely, only 8.3% of parents with a child <1 year to 4 years old would find it "easy" or "very "easy". More than half (52.4%) of parents with a child 5 to 12 years old would find it "difficult" or "very difficult" and only 26.8% of parents in this age group would find it "easy or "very easy." Parents with a child in the oldest age group (13 to 18) stated it would be "difficult" or "very difficult" 16.7% of the time and around 40% (38.1%) would find it "easy" or "very easy."

COVID-19 Levels and Vaccination Status (COVID-19 and Non-COVID-19)

Three key questions were asked in order to establish COVID-19 infection and vaccination status in the community. First, all respondents were asked, "To your knowledge, have you ever had COVID-19?" or "To your knowledge, has your child ever had COVID-19?". Then, participants were asked, "Have you received at least one dose of a COVID-19 vaccine?" or "Has your child received at least one dose of a COVID-19 vaccine?". Lastly, the question "In the past two years, have you received any type of vaccine that was not a COVID-19 vaccine, such as seasonal flu?" or "In

the past two years has your child received any type of vaccine that was not a COVID-19 vaccine, such as seasonal flu?" was posed depending if they were completing the adult focused or parent focused survey.

The rate of "yes, I've had COVID-19" adult responses of 18 to 29 age group (32.1%) was slightly lower than those in the 30 to 39 age group (34.7%) and the 40 to 49 age group (33.5%). But for the 30 to 39 age group and older, the percentage of respondents who stated they have had COVID-19 trended down from 34.7% to a low of 6.6% for the 80 to 89 age group. However, the oldest age group of 90 to 99 was around three times more likely to respond that they have had COVID-19 than the next youngest age group (20% of the 90 to 99 age group versus 6.6% of 80 to 89age group). All age groups of adults over 59 years reported not ever having COVID-19 at least 72% of the time.

Over half of adult respondents from all racial groups reported not ever having COVID-19. 53.1% of White/American Indian adults and 59.7% of Black or African American adults in the survey reported they, to their knowledge, have not had COVID-19. Adults from the Asian & Asian American and the White racial groups reported never having COVID-19 around 70% of the time (75.9% and 70.9%, respectively). However, adults from the White/American Indian and Black or African American racial groups were 1.4 and 1.6 times more likely than White adults to report having had COVID-19. But all three non-White racial groups had somewhat significantly higher percentages of individuals who have had COVID-19. Almost 1 ½ as many Asian & Asian American (1.4) respondents reported having had COVID-19 than White respondents. Adults from the American Indian and Black or African American racial groups were 1.6 and 1.7 times more likely than White respondents.

These figures mirror the responses given when the adults were asked, "Have you received at least one dose of a COVID-19 vaccine?" No group of adult respondents showed lower than nearly 96% (95.5% of 18 to 29 age group) COVID-19 vaccination of at least one dose. The percentage of adults who said they have not received any doses of a COVID-19 vaccine was extremely low for this population, ranging from just 3% of the youngest adult respondents all the way down to 0% of the 80 to 89 and 90 to 99 age groups. By race, well over 90% of all adult respondents (all of the Asian & Asian American adults) stated they have received at least one dose of a COVID-19 vaccine.

In all age groups, more than half of parents responded "no" their child that has not had COVID-19 to their knowledge. In all age groups, around 40% of respondent's children have had COVID-19. The numbers were similar when looking at parents with a child from either racial group. Around 60% (57.1%) of parents with a Black or African American child stated yes, their child has had COVID-19 while over 40% (42.9%) of parents with a Black or African

American child answered, “no” their child has not had COVID-19 to their knowledge. This is the opposite for parents of a White child, whereas around 40% (40.2%) answered “yes”, their child has had COVID-19, and around 60% (57.4%) said their child has not, to their knowledge, had COVID-19.

In terms of race, nearly all (95.9%) parents of a White child reported their child had received a vaccine other than COVID-19 in the past two years. This is more than double (2.2) the rate of parents with a Black or African American child (42.9%). Parents of a Black or African American child reported their child not getting a non-COVID-19 vaccine in the past two years seven times as often as parents of a White child (28.6% and 4.1%, respectively). However, almost 30% (28.6%) of parents of a Black or African American child stated they were “not sure” of their child’s past vaccinations.

These figures somewhat mirror the responses given when the parents were asked if their child had received at least one dose of COVID-19 vaccine. Nearly 80% (77%) of parents of a White child and around 60% (57.1%) of parents of a Black or African American child stated their child has been vaccinated against COVID-19. Considering that 16.2% of respondents had a child in the youngest age group (<1-to-4 years old), it stands to reason the percentages of vaccination for COVID-19 would be somewhat “low” because a vaccine for children under 5 years old was approved after most parents had taken the survey. The percentages of children being vaccinated for other illness in the past two years, however, was quite high for White children (95.9%) and relatively high for Black or African American children (42.9%). Nevertheless, the parents of a Black or African American child reported not having their child vaccinated against COVID-19 nearly twice (1.9) as much as parents of a White child (42.9% vs. 23%, respectively).

Nearly 87% (86.6%) of those with a child in the 5 to 12 age group and 93% (92.9%) in the 13 to 18 age group reported their child being vaccinated for COVID-19. *Only 4.2% of the parents in the youngest age group (<1 to 4 years) stated their child was vaccinated for COVID-19. However, the vaccine for children under 5 years old was approved after the vast majority of responses had already been collected.*

Misinformation

The final segment of data gathered in the survey regarded respondents’ perceptions of misinformation. To do so, they were all asked, “In the last month, how often have you seen or heard any negative information about COVID-19 vaccine safety and effectiveness?” with answer options of “never”, “rarely”, “sometimes”, “often”, “not sure”, or “decline to answer”. All age groups of adults reported seeing or hearing negative information about COVID-19 vaccines at least

sometimes in the previous month. In fact, no age group of adults selected “sometimes” less than 32.8% (18 to 29 age group) of the time. Further proof of the pervasiveness of negative information are the somewhat small percentages of respondents from each age group (with the exception of 90 to 99 age group, 0.0%) reporting never encountering negative information about COVID-19 vaccines.

More than 30% of adults in all racial groups stated that they “sometimes” encountered negative information regarding COVID-19 vaccines in the last month. However, less than 10% of all racial groups feel they never encountered any negative COVID-19 vaccine information over the previous month. White and White/American Indian respondens were nearly twice (1.7) as likely to report never encountering negative information than were Black or African American adults. Also, adults from the White and White/American Indian racial groups reported never encountering negative information in the last month almost 1 ½ times (1.4) more than Asian & Asian American respondents.

Parents of children in the 5 to 12 age group were most likely to select “sometimes” (45.1%) encountering negative information about the COVID-19 vaccine, whereas respondents with a child in the youngest (<1 to 4 years old) or oldest age group (13 to 18 years old) were most like to state they rarely did (33.3% and 40.5%, respectively). However, nearly 30% of respondents with a child from one of those two age groups did state thy saw or heard negative information at least sometimes (29.2% and 26.2%, respectively) in the previous month. While a small percentage of parents with a child in one of the three age groups reported never having noticed negative information in the previous month, both the <1 to 4 and the 5 to 12 age groups indicated such over 12% of the time (12.5% and 12.2%, respectively). This is almost twice the 7.1% of parents with a child in the oldest age group.

While almost 30% (28.6%) of parent respondents with a Black or African American child said they saw or heard negative information regarding the COVID-19 vaccines at least sometimes over the previous month, almost 11% (10.7%) more parents of a White child (39.3%) agreed. Parents with a Black or African American child stated they had not encountered any negative information in the previous month over three times (3.2) more than parents of a White child (28.6% versus 9%) who agreed.

Challenges for Survey

Participating locations for paper surveys were all in the city of Columbia, there were no paper survey options distributed in other areas of Boone County. Suspecting that the greater the number of questions would increase the chance

of incomplete responses; some questions were removed for length considerations. For example, questions regarding household size and income were omitted.

Focus Group

A guided discussion with seven residents of Boone County was virtually facilitated to acquire a nuanced understanding of community questions, concerns, and perspective towards COVID-19 and COVID-19 vaccines. Participants were asked open-ended questions regarding motivators for accepting, delaying, or refusing COVID-19 vaccines; possible access barriers to vaccines; how to improve vaccine confidence and uptake; feedback on current efforts; and ways to prepare the community for a COVID-19 wave or future pandemic (Appendix H). The only specific inclusion criteria for focus group participation was to be a current, adult Boone County resident. Individuals interested in participating were asked to provide a Boone County mailing address to verify they were a Boone County resident, and to receive a $25 gift card funded by PHHS mailed to the address provided after the conclusion of the discussion.

The Rapid Community Assessment (RCA) Guide from the CDC was utilized for direction. The guide provided implementation instructions, a sample script, and questions that were adapted to fit the Boone County community. To start, internal meetings with PHHS staff working on the Rapid Community Assessment were organized to discuss ideas for the focus group. These meetings were also used to assign roles (facilitator, moderator, and note-taker), talk through the guide, and edit the RCA's list of key questions to better fit the community of focus and goals. Zoom was chosen as the online platform, its widespread use early in the pandemic making it likely that participants would be most familiar with this tool. A majority of the key questions included came directly from the Rapid Community Assessment listening session outline provided by the CDC, with two additional questions added, for a total of six core discussion questions aiming to measure three constructs. The constructs were: (1) COVID-19 Vaccine Attitudes in the Community; (2) barriers and Facilitators of COVID-19 vaccination in the community; (3) strategies to improve vaccine confidence in the community.

Recruiting Participants

Recruitment for the focus group needed to be intentional in ensuring diversity among participants. Community organizations were contacted and asked if they could share the information through a virtual flyer (Appendix F) with the people they serve and employees, or distribute it in a way they deemed appropriate, without sharing it on any social media platforms. These organizations included, Central Missouri Community Action, Daniel Boone Regional Library, Family

Access Center of Excellence (FACE of Boone County), Boone County Family Resources, and through a University of Missouri Student Affairs staff member. With this method of data collection designed to have very few participants, social media was not a useful tool in getting individuals signed up.

The items shared with these organizations was an informational digital poster with a QR code (Appendix F) that guided people to an "Focus Group Interest Survey" (Appendix G) were they were asked for their email address, name, if they were a Boone County resident, and for their mailing address. Of 26 respondents to the Focus Group Interest Form, eleven completed the survey, with their full name, a valid email address, and a valid Boone County mailing address, who were then contacted via email with an invitation and details to the virtual Focus Group. Of the eleven people who received invitation emails, seven participants were able to attend the scheduled focus group. Demographic information is attached in Appendix I.

Outline of Focus Group

The focus group was conducted via Zoom on July 12th, 2022, from 12:00 to 1:00pm. The PHHS moderator disclosed the recording and transcription of the session and explained how participants' de-identified data would be utilized. After consent was given, the participants completed a demographic survey and the moderator continued by following a semi-structured interview guide. Six key questions were asked: (1) How do you think COVID-19 has affected your community? (2) What do people in your community think about the COVID-19 vaccine? (3) What are the main reasons people in your community would want to get the vaccine? (4) In your opinion, what are the main questions, doubts, and fears about COVID-19 in your circle of friends and family? (5) How do you think the state or local health department is doing at building vaccine confidence and making COVID-19 vaccines accessible? (6) What should public health or medical professionals do to prepare the community for a COVID-19 wave or future pandemic? As participants answered, the note-taker recorded their responses on virtual post-it notes on a shared screen, giving the participants a chance to correct or edit anything that had been misinterpreted or recorded incorrectly. After the questions were asked and the conversation concluded, participants were thanked for their attendance and participation. The focus group recording was then used to create a transcription that was analyzed to find common themes.

Analysis

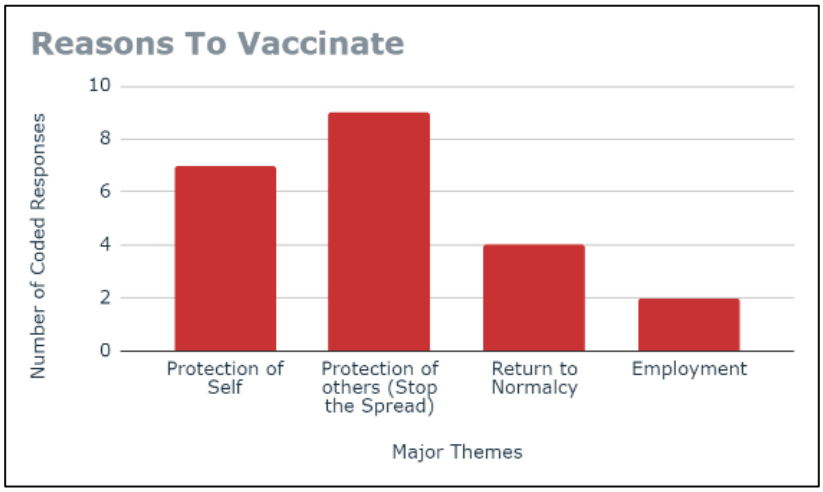
The focus group was transcribed by an outside company. An RCA team member began the analysis by reading the transcript of the discussion, the chatbox, and the virtual post-its repeatedly to gain familiarization. Data was grouped by the broad research questions used in the focus group, generating the initial themes. Open coding was then applied to these themes, adding and modifying categories throughout the process to create subthemes to more accurately reflect the participants' experiences and sentiments. After completing the initial analysis, two additional PHHS employees analyzed the focus group transcript using these codes to confirm reliability of the findings and limit researcher bias. Transcriptions and codes were compared and combined to finalize results of the focus group.

Results

Analysis revealed seven broad themes: (1) reasons to vaccinate; (2) reasons for hesitancy; (3) impact of COVID-19 on the community; (4) feelings about the vaccine; (5) access/barriers; (6) feeling about local and state health department's efforts; (7) moving forward.

Each broad theme consists of a number of subthemes. *It is important to note that a majority of the responses we collected regarding parents' feelings about vaccinating their children relied on secondhand accounts from our participants concerning what they believed others felt.*

Reasons to Vaccinate



Participants were asked what they felt were the main motivators behind the intent to vaccinate for people in their community. A follow-up question was then asked, inquiring about parents' motivations to vaccinate their children, and if there was a difference in the reasoning from the general public. From this question, although ranked differently, three common subthemes emerged for the general public and parents; (1) protection of others; (2) protection of self; (3) desire to return to normalcy.

Protection of Others. Results from the focus group showed that the top reported motivator for adults in Boone County to get themselves vaccinated against COVID-19, was for the protection of others. This sub-theme contains expressions of wanting to protect others in the community, including those who are immunocompromised, to gain herd immunity, and a desire to stop the spread of COVID-19.

> *And I think also not spreading it to other people was an important factor of getting the vaccine for a lot of people.* (Female in her 50s)

> *To try and get herd immunity for everyone, you know, if everyone got vaccinated, it would help create everyone else to get it. They would you know, what I'm trying to say is keep the virus down, so everyone will be protected.* (Female in her 50s)

> *I am just going to say that some people can't get vaccines because of health conditions, so, there's always going to be that small population among the people who rely on the rest of us to stay immune so they can stay immune.* (Female in her 60s)

When asked about a difference in motivation for parents wanting to get their children vaccinated, participants reported protection of others as the third most frequent motivator. In terms of vaccinating children for the protection of others, answers collected highlighted the school setting. Protection for teachers and other students was noted as a motivator.

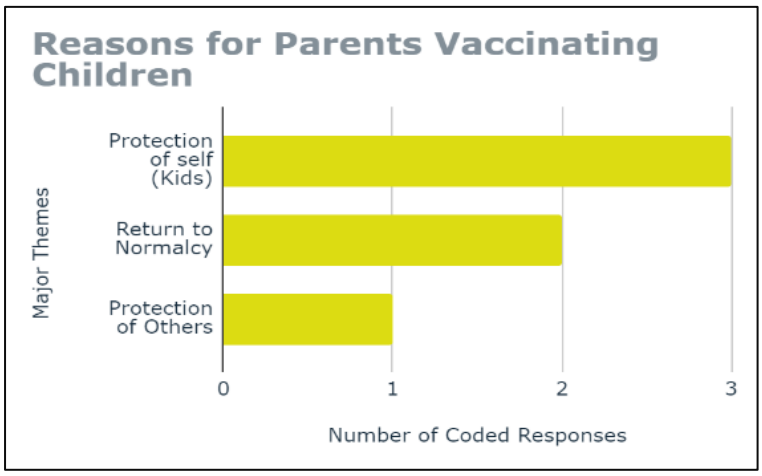
> *To be able to go to school and be healthy around their classmates, too.* (Female in her 50s)

Protection of Self. Participants expressed protection of self against COVID-19 as a motivator for vaccination second most frequently among adults in Boone County. Replies from participants that detail the desire to lessen the severity of COVID-19, underlying health conditions, and fear of getting COVID-19 as motives for vaccination were coded as protection of self.

> *To protect yourself from severe disease* (Female, 18 to 29 age range)

Basically, for protection of their health, because many people had underlying health conditions and they knew that it would intensify their underlying health conditions. (Female in her 50s)

Regarding parents vaccinating their children, "protection of self" was used to code excerpts expressing their desire to protect their child who would or did receive the vaccine. References to lessening severity of COVID-19 and keeping their children safe and protected were coded as protection of self. This was the top motivator for parents in vaccinating their child(ren) against COVID-19.



If they did catch it, (their children) maybe they wouldn't be as sick because I think that was the main thing about the COVID vaccine was that if you did catch it, you wouldn't be as sick as those who didn't get the vaccine. (Female in her 50s)

I think people wanting to keep their kids safe too. (Female in her 50s)

Desire to Return to Normalcy. The last overlapping subtheme emerging from motivations to vaccinate against COVID-19 for adults in the community as well as parents getting their children vaccinated, was a desire to return to normalcy. For participants in the focus group, this was expressed through sentiments describing eagerness to get back into the world, resume travel, have gatherings, see loved ones, and be able to socialize in the community. Sentiments highlighting or expressing these feelings were coded as a desire to return to normalcy.

I think for most of my community, it was a kind of 50-50 split between not spreading it and wanting to just get back out into the world. (Male, in his 40s)

Help them also get back to being able to have gatherings again, too. That was one of the main concerns, people wanted to get back to being able to see their grandkids and their families, and have picnics, and just being able to see one another basically was one of the main reasons everybody wanted to get back to being able to unite and be together. (Female in her 50s)

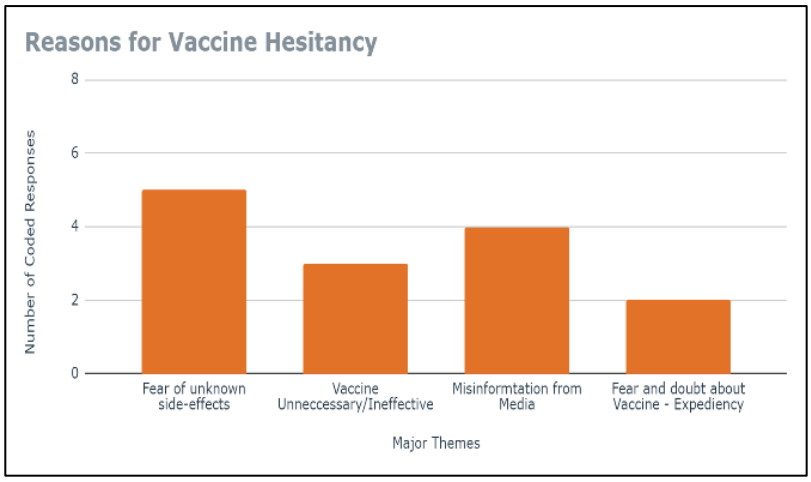
Participants communicated the desire to return to normalcy as a motivator for parents in the community to vaccinate their children with examples of returning to school, children being able to socialize with friends, and attend gatherings. Normalcy with regard to children highlighted the importance of socialization in the school settings, and being able to get out of the house. All of these examples and quotes were coded as a desire to return to normalcy.

> *Just getting them out of the house. Letting them, you know, do kid stuff again, go to the pool, you know, be with friends, have graduation, dances. That kind of stuff.* (Female in her 60s)

> *I saw this as the best way to get back to normal quote-unquote as far as school.* (Female in her 60's)

Reasons for Vaccine Hesitancy

Vaccine hesitancy refers to delay in acceptance or refusal of vaccination despite availability of vaccination services (MacDonald, 2015). The focus group participants were not asked specifically why people in the community may choose to not get vaccinated, but rather were asked about questions, doubts, and fears people may have in their circle of friends and family. Framing this question in such a way allowed participants to think of things that may contribute to vaccine hesitancy even if they did not know anyone who had chosen to not vaccinate. Conducting this focus group in the later stages of the COVID-19 pandemic, allowing participants to reflect on questions, doubts, fears, and concerns surrounding the vaccine regardless of vaccination status allowed for more answers and responses. Different sub-themes emerged for adults getting themselves vaccinated and parents getting their children vaccinated.



For adults in the community, four major subthemes regarding reasons for vaccine hesitancy emerged from the focus group: (1) fear of unknown side effects; (2) misinformation from media; (3) vaccine unnecessary/ineffective; (4) fear and doubt about the expediency. Although these subthemes were highlighted, it is also important to note that two

participants reported there being no doubts or fears from individuals in their social circle, but could reflect on things they had previously heard or seen from others.

For parents vaccinating their children, secondhand reports highlighted three major subthemes explaining reasons for hesitancy: (1) fear of unknown side effects; (2) more cautious about vaccinating children; (3) children's vaccine receiving later approval.

Fear of Unknown Side Effects. When asked about questions, doubts, or fears that people within the participants' circle of family or friends may have about the COVID-19 vaccines, responses highlighting fear of unknown side effects or what the vaccine may do were coded as a fear of unknown side effects subtheme. It is also important to note that the reported fear of unknown side effects surrounding COVID-19 vaccines from the participants, was secondhand information as no one expressed their own fears regarding side effects, or hesitation regarding vaccination overall. With this focus group held in the later stages of the pandemic, after vaccines have been available for adults, people who may have initially felt more hesitancy regarding possible side effects earlier in the pandemic, may have become less hesitant over time.

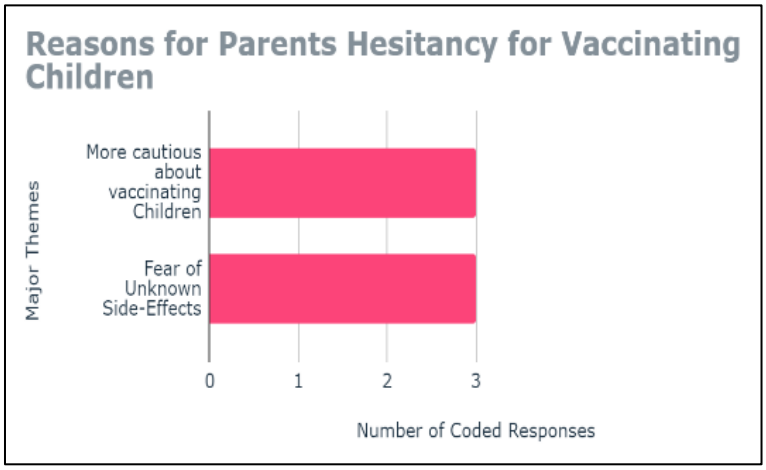
> *I mean, in my community, I've actually seen a lot of fear of the unknown about what side effects that the vaccine could cause* (Female in her 50s)

> *In my community most people have taken the vaccine. Some people I know are skeptical for two reasons: one, they either think it is not necessary or two, they're scared about the side effects.* (Female, 18 to 29 age range)

Vaccines for children have been available for less time than for adults. When this focus group was conducted, vaccines for children ages 6 months and older had just become available and recommended. Although we did see some reports of parents being hesitant to vaccinate their children due to possible side effects, these were secondhand. Further research focusing specifically on parents' feelings of hesitancy should be done to collect more data. Without knowing if our participants are parents or if they had their children vaccinated, and with limited responses from a parental point of view, the small number of coded responses still carries weight and highlights important insight. Responses from perceived parental point of view that communicated unknown side effects, effects on future fertility, and plans to "wait and see" if others experience side effects were coded as the sub-theme, fear of unknown side effects.

Yes, I know parents who have teenage daughters that don't want to vaccinate their girls because they believe that there are concerns related to future fertility. (Female, 18 to 29 age range)

In fact, I had someone say, I'm going to wait and see what the other kids experience with it before I have my kids get it. (Female in their 50s)



Misinformation from Media. According to the World Health Organization (WHO) in Managing the COVID-19 Infodemic (2020), the Coronavirus disease is the first pandemic in history in which technology and social media are being used on a massive scale to keep people safe, informed, productive, and connected. But this technology is also enabling and amplifying an infodemic. WHO defines an infodemic as an overabundance of information – some accurate and some not – that makes it hard for people to find trustworthy sources and reliable guidance when they need it. With a large amount of information, misinformation can flourish and spread at unprecedented rates. Misinformation is false or inaccurate information that can circulate and be absorbed quickly, changing people's behaviors, and potentially leading to taking greater risks. According to Centers for Disease Control and Prevention (CDC) in How to Address COVID-19 Vaccine Misinformation (2021), misinformation can affect COVID-19 vaccine confidence and vaccination rates, as it has focused on vaccine development, safety, and effectiveness.

This is highlighted in data from the focus group. Although the focus group was conducted more than two years after COVID-19 was declared a pandemic by WHO, participants still recalled seeing or hearing misinformation, or observing how misinformation affected people's intent to receive a vaccination in the community. Excerpts expressing the impact of social media on people's desire to not get vaccinated, theories about underlying intent of the vaccine, concerns about vaccines making people sicker, and observing misinformation, were all coded for the misinformation from media subtheme.

Crazy things like the government is trying to track us or control us, or a lot of that kind of, you know, fear of, and it's real fear to people. (Female in her 50s)

A lot of social media posts about it's going to cause people to be sterile, you know, all kinds of issues that it is going to make people sicker. (Female in her 60s)

Misinformation from other people on social media that people are scrolling through. (Female, 18 to 29 age range)

Vaccine Unnecessary/Ineffective. This subtheme was unique to adults speaking about getting themselves vaccinated, rather than vaccination for children. Breakthrough infections occur when those who are vaccinated still get COVID-19. The vaccine is intended to lessen the severity of symptoms and protect individuals from severe illness and possible hospitalization. Secondhand-reported perspectives that COVID-19 vaccines are not necessary, are not as beneficial as natural immunity, and concern that people were still getting COVID-19 after receiving vaccines were coded for the sub-theme, vaccine unnecessary/ineffective.

Sure, someone I know doesn't see a reason to get the vaccine because they've already been infected with COVID and it hasn't been that bad in the past, so they figure the vaccine isn't going to provide them any other benefits in the future that natural immunity would. (Female, 18 to 29 age range)

People say: well, you got the vaccine and still got COVID. Not looking at the fact that maybe it wasn't as worse as it would have been, but I hear that a lot, you know, so-and-so got the vaccine and they still got COVID. (Female her 50s)

Fear and Doubts about Expediency of Vaccine. Scientists have been working on vaccines against coronaviruses, such as those that cause severe acute respiratory syndrome (SARS) for many years ("Developing COVID-19 Vaccines", 2022). The knowledge gained through past research on coronavirus vaccines helped speed the initial development of current COVID-19 vaccines. Many people believe that the vaccine was made too quickly and was not held to the same rigorous safety and effectiveness standards as other types of vaccines in the United States. Quickness of vaccine development and the newness of the vaccine were portions of the transcript that fell into the subtheme of fears and doubts about expediency of the vaccine. This was also a sub-theme unique to adults choosing vaccination for themselves.

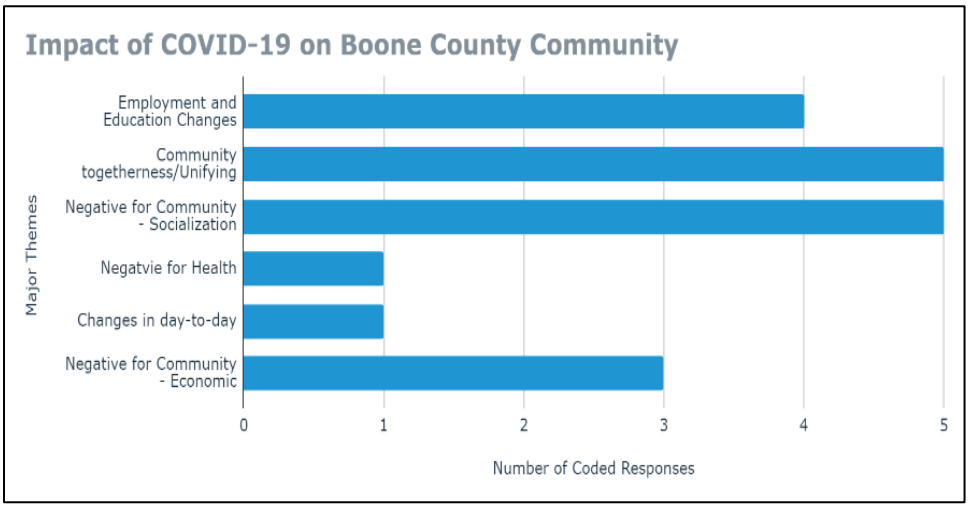
> *Maybe there are also divisive about how quick the vaccine was put together, but you have to understand time was of the essence…* (Female in her 50s)

More Cautious Vaccinating Children. The final subtheme in exploring reasons for vaccine hesitancy is rooted around parents feeling more cautious about vaccinating their children. This sub-theme is unique to answers from participants assuming or retelling of other parents' views in the community on vaccinating their children. When asked about parents' thoughts about the COVID-19 vaccine for their own children, our participants offered responses highlighting views from parents who had received the vaccine themselves but were unsure about getting their children vaccinated. Answers emphasized feelings of wanting to be more cautious when getting their children vaccinated than when deciding about their own vaccination as well as tentative feelings towards vaccinating their children because of the vaccine approval coming later than the adult vaccine.

> *Some people, I will say one, one person that I know that is a mother, she had caught COVID so she eventually did get the vaccine, but she won't get it for her kids so I didn't quite understand why she wouldn't get it for her kids considering that it's made for the adults.* (Female in her 50s)

> *I heard a lot of parents not getting it for their children. In fact, I know some that haven't gotten it that are close to me, and the fact that the children's vaccine came out later it instilled that fear of, okay, why wasn't it okay for them in the beginning? Now they want us to have the kids get it…* (Female in her 50s)

Impact of COVID-19 on the Community



Various responses were given by participants throughout the focus group detailing community impact of COVID-19. The opening question during the virtual focus group was, "How do you think COVID-19 has affected your community?" This question resulted in multiple responses that led to coding and creating sub-themes. The broad theme of "Impact of COVID-19 on the Community" was highlighted throughout the session. Six subthemes emerged; (1) community togetherness/unity; (2) employment and education changes; (3) negative for the community – socialization; (4) negative for health; (5) changes in day-to-day routines; (6) negative for community – economically.

Community Togetherness/Unity. The most frequently coded sub-theme emerging from the focus group question inquiring about the community impact of COVID-19, was community togetherness or unity. Participants expressed feeling community togetherness and unity with everyone working together to stop the spread. One participant also offered that the COVID-19 pandemic was unifying for his inner circle, being his close friends and family.

Employment and Education Changes. The COVID-19 pandemic led to employment and education changes throughout Boone County. Responses from participants in the focus group explained that changes in employment, whether voluntary or involuntary, were influenced by COVID-19. In early stages of the pandemic, a stay-at-home order forced employment changes. Once this order was lifted, some people maintained the desire to work from home, possibly changing their employment options.

> *I think a lot of people think about job changes, whether that was voluntary or involuntary based on the type of job, and what they were looking for more flexibility working from home now.* (Female, 18 to 29 age range)

Educational changes have impacted both children and adults. Many individuals were impacted by the switch to virtual learning. Younger school-aged children experienced the transition to online education as well.

> *I was going to comment about the changes to education and the lack of support that students felt while learning online.* (Female, 18 to 29 age range)

Negative for Community – Socialization. Social restrictions due to COVID-19 has reduced communal and social cohesion (Raymond & Ward, 2021). Individuals stated that COVID-19 had been divisive for the community, as it did not allow people to come together, caused events to be canceled, hindered people's ability to see loved-ones, contributed to a politicized divide over vaccination, and had a negative impact overall. All of these statements were coded negative for community socialization.

> *In the beginning like I guess we can talk about any point of COVID. So, it did not allow people to come together. So, like a lot of events were canceled like especially weddings, they had to push them back, so I believe that it stopped the congregation of masses.* (Female, 18 to 29 age range)

> *I think it made political differences stand out more in the forefront.* (Female, 30 to 39 age range)

Negative for Health. The pandemic has had major effects on individuals' lives everywhere in the world, including Boone County, that were not just physical symptoms after contracting COVID-19. According to Sher, during the initial stage of COVID-19, negative emotions such as anxiety, depression, and anger increased, while positive emotions and life satisfaction decreased (2020). COVID-19 symptoms can range from mild flu like symptoms to severe illness and death. Only one person in the focus group explicitly expressed the negative effect COVID-19 has had one their physical health, but also explained how their mental and emotional health was negatively impacted.

> *When I first think of COVID, I think of personal wellbeing, emotional health, mental health, especially a lot of things there. Physical health of course, a lot of economic issues, so just in a lot of those ways a negative impact.* (Female 50 to 59 age range)

Changes in Day-to-Day Routines. Reports about the impact the virus has had on day-to-day routines was included in this assessment. Impacts on restaurants, day cares, schools, and employment altered what a "normal" day for Boone County residents looked like.

> *The various systems that kept everybody's way of life running smoothly it up ended everybody's day to day well-being, and me, it has just put a halt to it, and we all have to readjust to it, to adapt to the virus, to make our way of like, to adjust to it.* (Female, 50 to 59 age range)

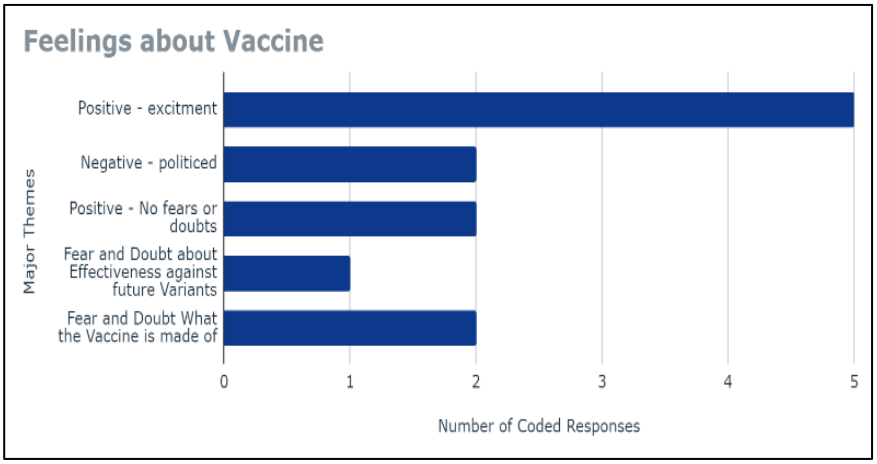
Negative for Community – Economic. According to the Center on Budget and Policy Priorities, the COVID-19 pandemic resulted in economic fallout causing significant hardship to individuals ("Tracking the COVID-19 Economy's Effects on Food, Housing, and Employment Hardships", n.d.). This includes employment struggles and job loss, hardship paying rent, food insecurity, and overall difficulty covering usual expenses. Some of this was highlighted in responses from the focus group with participants noting the onset of economic issues, and impacts on employment and restaurants. Although answers from this focus group did not provide a lot of insight regarding economic hardships resulting from the pandemic, it is an important measure to collect (especially in later stages of the pandemic), to see what hardships people in the community may still be facing.

> *Changed a lot of small businesses – a lot of restaurants stopped offering some foods and stopped offering coupons.* (Female, 18 to 29 age range)

> *Impact of the restaurants, you know, the jobs, especially on the daycare systems…*(Female, 50 to 59 age range)

Feelings Towards the Vaccine

Multiple questions throughout the focus group cultivated answers highlighting feelings about the vaccine. Answers showed how participants thought others felt about COVID-19 vaccines, how they had felt at one time, and how they currently feel toward COVID vaccinations. Feelings towards the vaccine is used as a broad theme, revealing five sub-themes or differently coded feelings from participants. The most disclosed feeling was positive, specifically excitement about vaccines.



> *Yeah, for us individually and for friends of ours and people that we know, we were really excited about the vaccine and the expediency of it. My husband and I were both in trials, to begin with; we were gung-ho and we wanted to get that as soon as we could.* (Female, 60 to 69 age range)

Another positive feeling towards the vaccine included having no fears or doubts about the vaccine.

> *I guess I would say that in my circle, there are no doubts or fears about the COVID-19 vaccine, but at this point, I self-selected for people who don't have doubts and fears about the COVID-19 vaccine.* (Male, 40 to 49 age range)

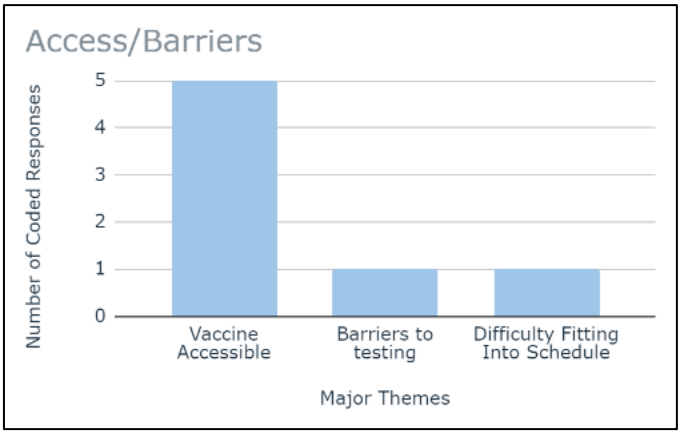
> *No concerns – trust in the FDA.* (Female, 30 to 39 age range)

Negative feelings that were revealed included negative reactions to the politicization of vaccination, concern about vaccine effectiveness against possible future variants, and worry about vaccine ingredients.

> *I think one of the biggest sorts of fears and doubts is trying to keep up with all the variants like is this vaccine going to be protective against, you know, B5, B4, you know whatever is coming next.* (Female, 60 to 69 age range)

I hear a lot about, you know, oh gosh, we don't know what's in it. (Female, 50 to 59 age range)

Access and Barriers



Although there was not a direct question posed to the focus group inquiring about accessibility or barriers to COVID-19 vaccines, through discussion, a follow-up question was asked about concerns regarding vaccine access. The majority of responses articulated that COVID-19 vaccines were accessible in Boone County. Two barriers were communicated: one about vaccine scheduling and one about access to COVID-19 tests. Both of these barriers can be considered structural barriers, as there are systematic issues impacting one's ability to access vaccines and tests. Lack of time and finding a time that fits their schedule is the only barrier to vaccination that was communicated by a participant.

Every now and then, I would hear someone say, 'I don't have time, or, it doesn't fit my schedule, but for the most part I always saw a lot of options for that…(Female, 50 to 59 age range)

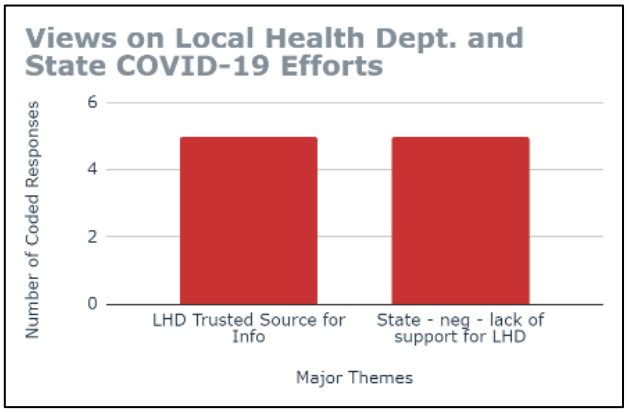
Access barriers to COVID-19 tests was communicated by recollection of the omicron wave and a surge of individuals trying to find at-home COVID-19 tests. Though it was not specifically explained what structural or systematic issues made it difficult to find tests, some may include - locations, costs, or availability.

During the omicron wave, there was a lack of available tests… (Female, 18 to 29 age range)

I saw the testing was something that was hard. (Female, 50-59)

Views on Local Health Department and State COVID-19 Efforts

When asked, "How do you think that state or local health department is doing at building vaccine confidence and making COVID-19 vaccine accessible?", participants answered with strict distinction between local and state efforts. Boone County residents who attended the virtual focus group explained that the local health department is a trusted source for information regarding COVID-19 and noted an appreciation for the current and previous efforts.



> *I'd say that based on the news that I read and messages I saw, the local health department did an outstanding job given everything that was going on in the community.* (Male, 40 to 49 age range)

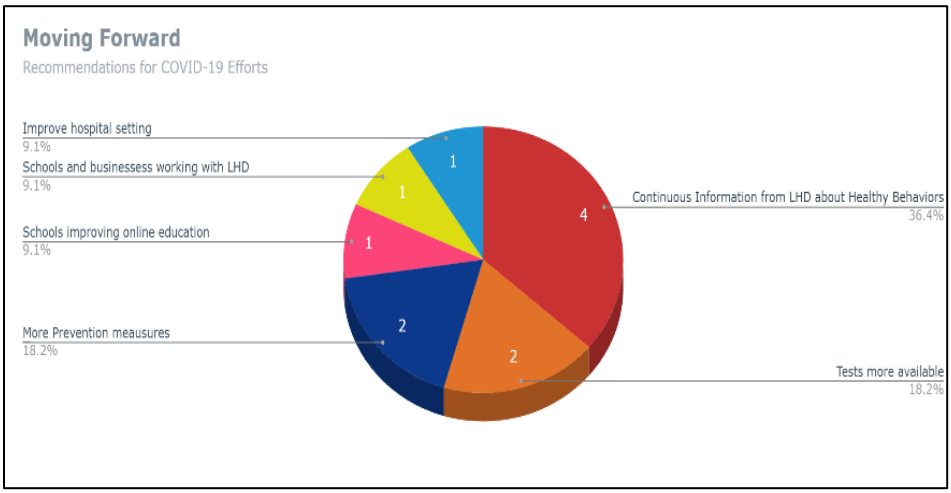
> *I saw some pretty straightforward graphics from the local health department about vaccines and answering questions about common concerns, so I appreciated that those were pretty basic, and to-the-point, especially since they were presented among misinformation with other posts.* (Female, 18 to 29 age range)

The opposite narrative was expressed when talking about state efforts. Participants explained they saw a lack of support from the state government for local health departments, lack of push, and had not depended on the state for COVID-19 needs from the beginning.

> *I want to echo what ____ said about the state versus the local, you know, information and push and support. I don't really see a huge push statewide now or back then for people to continue to get boosters and shots. (*Female, 60 to 69 age range)

> *As far as the state, I don't think that our state, our governor, did as much as he could have. I don't think he was as supportive as he could have been, especially to the individual health departments and such.* (Female, 50 to 59 age range)

Moving Forward



Boone County residents who participated in the focus group were asked, "What should public health or medical professionals do to prepare the community for a COVID-19 wave or future pandemic?" Six different answers were coded with different frequencies. The most common response given was the local health department should continue to disseminate information to the community using plain language. Participants spoke about how they found the information from the health department to be helpful, and moving forward wanted to see more continuous information from the local health department about not only COVID-19, but also healthy behaviors.

> *Yeah, I almost feel like that to be continuously proactive. For instance, gearing us up for flu season. Have you had your flu shot? Reminding us that masks are a good way when you're in crowded areas, when you have the cold or a flu, it doesn't have to just be COVID. Just sort of those constant daily, weekly, monthly reminders so that it's not a shock if something big were to happen… continuous campaign.* (Female, 60 to 69 age range)

Secondly, participants expressed a desire to see more preventative measures in the community and have tests more readily available. They noted the presence of masks and sanitizer in grocery stores and public places in the early stages of the pandemic and hoped to see that again in the future to make people feel safer. For tests, individuals wanted to have more ease when trying to access at-home tests, and even recommended having them in schools.

> *The sanitizing, the masks, the hand sanitizer, the wipes, you know. I don't personally see a lot of that anymore. It's like we kind of latched back on that kind of stuff and some people are like, oh, we're done, it's over, and then you know it's spiking again. (Female, 50 to 59 age range)*
>
> *More test readily available.* (Female, 18 to 29 age range)

Lastly, suggestions about improvements in hospital settings, online education, and having joint efforts between the local health department, businesses, and schools to come up with specific plans regarding COVID-19 were coded.

> *I think schools need to really refine and work on what being online looks like. I mean that's a whole other animal that they probably need to be better prepared and more proficient at.* (Female, 60 to 69 age range)

> *Increase hospital staffing – better wages, better patient ratios.* (Female, 30 to 39 age range)

> *I would hope that schools and businesses would work closer with the community health departments to come up with plans that support both the staff, the students, you know, just the community as a whole, and being educated about that.* (Female, 50 to 59 age range)

Challenges for Focus Group

Conducting a focus group virtually came with its challenges, including limited ability to observe body language and group dynamics, inability to include a population with limited internet access, and relying on snowballing recruitment rather than social media to be able to verify participants were Boone County residents.

Discussion and Conclusion

Findings

The main goals of this study were to gain a better understanding of our community's needs and concerns regarding COVID-19 among adults and parents, obtain community insight into lived experiences as a means of understanding hopes and concerns around the vaccine, and to identify potential barriers and solutions to low vaccine uptake or vaccine confidence. This report summarizes findings from data collected from Boone County residents via surveys and a focus group. Our data from both show overlap in motivations for vaccination, trusted sources for information, and misinformation from media. The data contained in both sources has led to further recommendations.

Motivations for Vaccination – Protection of Self

Both data from the focus group and surveys revealed a major motivator for choosing to receive COVID-19 vaccination for either oneself or for one's children, was for protection. Results from the survey showed an upward trend in the percentage of adults responding that it is "very important" to protect themselves, ranging from 83.2% of 18 to 29 age group to 91.3% of 50 to 59 age group all the way to 100% of adults in the 90 to 99 age group. Also, of note, is the low number of adults who stated that getting a COVID-19 vaccine to protect themselves was "not important at all." Participants in the focus group highlighted the same motivator. Adults in Boone County answering based on their own experiences cited protection of self second most frequently as a motivator for vaccination. Meanwhile, parents reported it most frequently as the reason for vaccinating their children. Large proportions of parents in all age groups stated getting their child vaccinated against COVID-19 is very important (83.3% in 13 to 18 age group to 84.1% in the 5 to 12 age group to 91.7% in infant to 4 age group). Across all age groups of children, less than 10% of parents felt that getting a COVID-19 vaccine for their child is "not at all important."

Motivations for Vaccination – Protection of Others

Similarly, protection of others was revealed as a motivation by both the focus group and survey data. Through the focus group, protection of others was shown as the top reported reasoning behind vaccination against COVID-19. Individuals expressed a desire to protect others and stop the spread of the virus in their community. The survey asked participants responding on their own behalf to rank in terms of agreement with the statement, "I have a responsibility to get vaccinated for COVID-19 to protect others." For parents responding to the survey, the question was asked, "I have a responsibility to get my child vaccinated for COVID-19 to protect others." The answer given most from all age groups

was agreeance for parents, and with 80% to 90% of parents with a child from each age group either “somewhat”, “strongly agree” or “very strongly agree” with the sentiment of community responsibility and vaccination of their child. Less than 10% of the parents in each age group chose “disagree.” The majority of parents polled with a child from either racial group (White and Black or African American) responded as “very strongly agree” that they have a responsibility to get their child a COVID-19 vaccination in order to protect others. When combining very strongly agree and strongly agree the rates jump to around 80% for each (81.1% for the White group, 88.3% for the Black or African American group). For the focus group, protection of others was the third most coded response regarding the reasons behind why parents are choosing to vaccinate their children.

Trusted Sources for Information

According to the survey data, all age groups of adult respondents, relied on health care workers, local public health department(s) and messages from government or authorities as their most trusted sources of information. Conversely, all age groups chose social media as one of the least trusted sources of information about COVID-19. The two youngest group of adults also trusted friends infrequently. The top three sources for each age group of children are health care workers, local health departments and messages from government or authorities. Although the focus group was not outright asked what sources they trusted for information about COVID-19, when asked about local and state health departments’ efforts, they shed light on which sources they had confidence in. Many participants recognized the local health department as one of the most, if not the most, trusted source for updates and information about COVID-19. This exhibits the importance of continued messaging from the local health department to help prepare and educate the community about COVID-19 updates or recommendations.

Misinformation from Media

The final segment of information gathered in the survey asked respondents' perceptions of misinformation. Survey participants were asked, "In the last month, how often have you seen or heard any negative information about the safety or effectiveness of COVID-19 vaccines?" Data showed all age groups of adults reporting at least sometimes hearing or seeing negative information in the previous month about COVID-19 vaccines. Within each age group, adults answered that they sometimes encountered negative information over 32.8% of the time. The pervasiveness of misinformation is also shown through the small percentages of respondents reporting never encountering negative information about COVID-19 vaccines. The focus group respondents echoed this sentiment when expressing reasons people may feel hesitancy around vaccines. Many explained the different types of negative misinformation they have seen or heard. Some respondents even went so far as to site misinformation from media as one of the driving causes behind others choosing to not get vaccinated for COVID-19. This again highlights the importance of education on how to identify misinformation, and debunk myths surrounding the vaccines.

Limitations and Challenges

Like all assessments, this one is not without limitations. This section will focus on four major limitations. To begin, with COVID-19 being an ever-changing and evolving pandemic, perceptions are constantly shifting with the release of new information. Our data is from a specific point in time and may not be an accurate representation of the thoughts of Boone County residents throughout the duration of the pandemic. With data collection for survey and focus group occurring at two separate times, there may have been a shift in opinion. During the time of survey data collection, vaccinations for children under the age of 5 had not yet been approved or available. However, by the time of the focus group, vaccines for all children above the age of 6 months had become recommended. Also, although valuable information was collected about participants' experiences, the fact that the assessment was conducted during the presumed "late stages of the pandemic" it is plausible that participants' current thoughts and feelings influenced their overall reflection on their general experience.

Next, some questions that should have been included in the survey were left out due to the number of questions and length of the printed version. It was a concern that the six-page printed version was already a deterrent for participants to complete, as it seemed long and overwhelming. As a result, it was decided to keep the printed survey no longer than six pages or take more than 10 minutes to complete the online version. Because of this, some questions had to be taken out.

Two questions that could have offered further insight were those that asked about income and highest level of educational attainment. Also, "Asian" was unintentionally left off as a racial demographic answer option. The listed options for the demographic section of this survey were taken directly from CDC's RCA Guide (COVID-19 Vaccine Confidence Rapid Community Assessment Guide, 2022). While this was an oversight from the CDC, it was also a mistake that was missed in the editing process from the team working on the Boone County Rapid Community Assessment.

A final oversight when developing the questions was that "N/A" was not included as an answer option when asking about working from home in the future if needed. Respondents who were not currently employed, or who have retired, had to choose from the responses, "yes," "no," "don't know," or "decline to answer." As a result, the response rates for this question might have been skewed slightly.

Biases could have impacted who participated as well as the information they offered. For both the survey and the focus group, self-selection bias may have resulted in the inclusion of participants with stronger views on COVID-19 than those who opted not to participate. People who did not respond might have been hesitant to be vaccinated, which can underestimate the true prevalence of vaccine hesitancy. With the focus group, social desirability bias could have also affected participants' responses. Participants may have answered questions in a manner that they believed would be viewed favorably by others. The information and insights gathered through the focus group could have been altered by this bias. Or participants who disagreed with the majority of the group may have decided to withhold their differing thoughts or experiences. Along with this, any reported reasons against COVID-19 vaccines were offered "secondhanded," as participants described other peoples' justification behind vaccine hesitancy.

Lastly, perhaps the most significant limitation presented in this assessment, is the lack of participation and representation of minority communities. Epidemics and pandemics historically and disproportionally affect marginalized populations negatively (Perry et al., 2021). Based on the racial and ethnic backgrounds of the Boone County community, our study samples are non-representative of the overall racial and ethnic background of the county (QuickFacts Boone County, Missouri, 2020). Communities of color have faced longstanding disparities of health and health care, leading to vaccine reluctance, among other hesitancies like participating in data collection (Wen & Sadeghi, 2020). Comprehensive data by race and ethnicity is key for understanding the impacts of COVID-19 across communities. Though great emphasis was put on attracting more diverse and younger participants, the demographics produced proved less than desirable, leaving this assessment with a considerable limitation, specifically regarding the focus group data collection. This limitation has unequivocal importance to note and improve upon with future research and more effective intentional recruitment for a diverse and representative sample.

Future Directions/Recommendations

The Rapid Community Assessment presents multiple avenues for future research and community improvement for COVID-19 vaccine uptake and preparation for a future wave or different pandemic. These recommendations, based off of the data from the RCA, include targeted messaging, support for working from home, assistance for child care, acknowledging negative economic repercussions of another shut-down, and how to help.

Tailored Messaging

Both the survey and focus group data showed a drop in the perceived importance for vaccination when participant's age or their child's age decreases. This displays a possible trend of younger adults (18 to 29 age range) feeling COVID-19 vaccination is unnecessary or ineffective if they are not at high risk. To improve and increase COVID-19 vaccination in this age group, targeting messaging, by using themes important to them, should be utilized. This may include vaccination for the protection of others including friends and family who may be at high risk, or for the desire to return to normalcy in regards to travel and education. Another approach for reaching younger adults with information and tools about COVID-19 mitigation may be peer education or student ambassador programs. With multiple universities located in Boone County, a student ambassador program tailored to campus culture, needs, and goals regarding COVID-19 could be beneficial. The CO-Vac Campus COVID-19 Student Ambassador Program is an example of programming that may help get important messages to the 18-29-year-old population in Boone County ("Student Ambassador Program

Planning Guide", 2022). Better understanding is still needed to support diverse ethnic and racial groups on how health care providers and public health teams can increase vaccine uptake and confidence. Culturally tailored messages, openly discussing perceived risks and mistrust through established communication channels should be utilized for tailored messaging among racial and ethnic diverse groups.

Support for Working from Home and Child Care

When asked via surveys about respondents' ability to work from home if needed, there was a difference between age groups and races. When compared to other age groups and races, participants aged 18 to 29 and American Indians were more likely to answer that they would not be able to work from home if required to. Though there is not data regarding why this may be, possible explanations could include industry of employment or location. For example, young adults may be more likely to work in the restaurant or service industry, both of which typically need to be done onsite. Further research is recommended to help those who may struggle if employment-from-home were to become the only option to earn a living, during a future pandemic. Follow up studies could help better understand what barriers prevent doing any work from home, and what support may be helpful. Possible support could include information about job openings allowing for the flexibility working from home, information about government assistance, or ways to find supplemental income.

Long COVID, or Post-COVID conditions, are a wide range of new, returning, or ongoing health problems that people experience after being infected with the virus that causes COVID-19. These conditions can last weeks, months, or longer, with possible symptoms including more general symptoms like fatigue, respiratory, neurological, and digestive symptoms, that could affect an individual's ability to work ("Long COVID or Post-COVID Conditions", 2022). Long COVID is a relatively new condition that is hard to definitively diagnose. Because of this, a better understanding and awareness among the general public and employers would be beneficial, to better engage in an interactive process to provide specific employment and medical accommodations.

Along with flexible employment, changes in education and child care could be a challenge of another wave or pandemic. Some respondents reported they would face considerable challenges if they were required to find alternative care for their child. Difficulty navigating and repercussions of COVID-19 on day care systems was also mentioned during the focus group. This may show reasons why individuals would find difficulty with alternative child care. Research should

look into what families in Boone County need or would find helpful if routine child care was interrupted due to another wave or pandemic.

Messaging and COVID-19 Preventative Measures

Based off of data from the focus group, it was suggested that the local health department continue sending clear messages to the community with COVID-19 updates, as well as information about general healthy behaviors. Participants expressed plain language, easy-to-understand graphics and information from the local health department were trusted and useful ways for the community to get information.

Along with constant dissemination of information, respondents revealed that more COVID-19 preventative measures throughout the community would be useful. For example, having more masks available in public spaces, as well as hand sanitizer and cart wipes for supermarkets made people feel safe and more protected against the virus. Efforts to have these measures more easily accessible throughout the community should be adopted permanently to increase confidence in protecting themselves and others in the community.

Lastly, it may be beneficial to more frequently implement unique COVID-19 vaccination clinics for those who may have different working schedules, lack of transportation, or lack of knowledge of where to get vaccinated. Some examples may be an after-hours clinic, hosting more clinics with community partners at their locations, and a mobile COVID-19 testing option.

Conclusion

Qualitative and quantitative data collected and analyzed by Columbia/Boone County Public Health and Human Services through survey dissemination and a focus group, brought to light multiple overlapping conclusions. Major motivators for individuals in the community to choose to receive vaccines for COVID-19 were for the protection of themselves, and the protection of others. This applied to both adults deciding to get themselves vaccinated, as well as adults choosing to vaccinate their children for COVID-19. Another conclusion that reflected from both the survey and focus group was that individuals in Boone County trusted specific sources for information regarding COVID-19. These sources were health care workers, local public health departments(s) and messages from government or authorities. Lastly, individuals who completed a survey or participated in the focus group both reported hearing about or seeing misinformation regarding COVID-19. Some even talked about how misinformation has influenced individuals' decision-making surrounding vaccination for COVID-19.

Appendix

A. Survey Questions Breakdown

Adult-Focused Questions directly from Rapid Community Assessment (CDC)

Domain: Thinking and Feeling

Construct	Question	Response Scale
Perceived susceptibility	(1) How concerned are you about getting COVID-19?	• Not at all concerned • A little concerned • Somewhat concerned • Very concerned • Decline to answer
Confidence in vaccine effectiveness	(3) How important do you think getting a COVID-19 vaccine is to protect yourself against COVID-19?	• Not at all important • A little important • Somewhat important • Very important • Decline to answer
Confidence in vaccine safety	(4) How safe do you think a COVID-19 vaccine is for you?	• Not safe at all • Somewhat safe • Very safe • Completely safe • Decline to answer
Had COVID-19	(12) To your knowledge, have you ever had COVID-19?	• Yes • No • Not sure • Decline to answer
Anticipated regret	(15) How much do you agree with the following statement? *If no vaccine doses received* If I do not get a COVID-19 vaccine, I will regret it. *If any vaccine doses received* If I had not gotten a COVID-19 vaccine, I would have regretted it.	• Do not agree • Somewhat agree • Strongly agree • Very Strongly agree • Decline to answer

Domain: Social Processes

Construct	Question	Response Scale
Social Responsibility	(7) How much do you agree with the following statement? I have a responsibility to get vaccinated for COVID-19 to protect others.	• Do not agree • Somewhat agree • Strongly agree • Very strongly agree • Decline to answer
Social norms	(21) If you had to guess, about how many of your family and friends have received a COVID-19 vaccine?	• None • Some • Many • Almost all • Decline to answer

Provider recommendation	(23) Has a doctor, nurse, or other health professional ever recommended that you get a COVID-19 vaccine?	• Yes, a health professional recommended • No, a health professional did not recommend • No, I haven't spoken to any health professional in the past 2 years • No, I was vaccinated before seeing any health professional • Don't know • Decline to answer
Exposure to misinformation	(24) In the last month, how often have you seen or heard any negative information about the safety or effectiveness of COVID-19 vaccines?	• Never • Rarely • Sometimes • Often • Not sure • Decline to answer

Domain: Practical Issues

Construct	Question	Response Scale
Perceived barriers	(16) Many things might make it difficult to get a COVID-19 vaccine. From the list below, please select all of the things that made it difficult for you.	• Getting an appointment online • Not knowing where to get vaccinated • Hard to get to vaccination sites • Vaccination sites aren't open at convenient times • None of these • Decline to answer • Other _____
Self-efficacy	(19) How much do you agree with the following statement? "I can get a COVID-19 vaccine if I want to."	• Do not agree • Somewhat agree • Strongly agree • Very strongly agree • Decline to answer

Domain: COVID-19 Vaccination

Construct	Question	Response Scale
Behavior	(13) Have you received at least one dose of COVID-19 vaccine?	• Yes • No • Decline to answer
Behavior	(14) How many doses of a COVID-19 vaccine have you received?	• One • Two • More than two • Not sure • Decline to answer
Intentions	*If no vaccine doses received* (20) How likely are you to get a COVID-19 vaccine?	• Definitely get a vaccine • Probably get a vaccine • Probably not get a vaccine • Definitely not get a vaccine • Not sure • Decline to answer
Other vaccinations	(22) In the past two years, have you received any type of vaccine that was not a COVID-19 vaccine, such as seasonal flu?	• Yes • No • Not sure • Decline to answer

Domain: Demographic

Construct	Question	Response Scale
Mental Health	(25) Would you say your mental health is excellent, very good, good, fair, or poor?	• Excellent • Very good • Good • Fair • Poor • Decline to answer
Age	(26) What is your current age (in years)?	• Under 18 years old • 18-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-99 • Over 100 years old • Decline to answer
Gender	(27) What is your gender?	• Male • Female • Non-binary • Transgender • Something else • Decline to answer
Pregnancy/Lactation	(28) Are you currently trying to get pregnant, pregnant, or breastfeeding?	• Trying to get pregnant • Pregnant • Breastfeeding • None of the above • Decline to answer
Hispanic ethnicity	(29) Are you of Hispanic or Latino origin?	• Yes • No • Decline to answer
Race	(30) Please choose one or more of the following categories to describe your race.	• White • Black or African American • American Indian • Alaska Native • Native Hawaiian • Pacific Islander • Something else _____ • Decline to answer
ZIP code	(31) What is your ZIP code?	[Text Entry]
Nativity	(32) Were you born in the United States?	• Yes • No • Decline to Answer

Insurance	(33) Do you have any kind of health care coverage? This includes health insurance, prepaid plans such as HMOs, or government plans such as Medicare, or Indian Health Service.	• Yes • No • Not sure • Decline to answer
Eligibility	(34) Do you have a health condition that may put you at a higher risk for COVID-19?	• Yes • No • Not sure • Decline to answer

Adult-Focused Questions from other studies, added by PHHS found at *COVID-19 Question Bank*. Who.int. (2022). https://www.who.int/data/data-collection-tools/covid19-question-bank.

Construct	Question	Response Scale	Source
Attitudes towards COVID-19 vaccine	(2) Approximately how many people in the community do you think are concerned about the spread of COVID-19 in the community?	• Most people • About half the people • Less than half the people • Decline to answer	Community needs, perceptions and demand: community assessment tool - A module from the suite of health service capacity assessments in the context of the COVID-19 pandemic WHO reference number: WHO/2019-nCoV/vaccination/community_assessment/tool/2021.1
Awareness of COVID-19, and media exposure	(5) Which source(s) do you trust for accurate information about COVID-19? *Please check all that apply.*	• Radio • Newspaper • TV • Social media • Health care worker(doctor, nurse, etc.) • Family member • Local public health department(s) • Friends • Community leaders • Messages from government or authorities • School • None of the above • Decline to answer	PMA COVID-19 Survey (Performance Monitoring for Action) Date: 28 Apr 2020 Version: 8 Performance Monitoring for Action. (2020, April 28). *PMA COVID-19 Survey.* Pmadata.org. https://www.pmadata.org/sites/default/files/2020-04/PMA-COVID-19-QRE-2020.04.28-v8-ENGLISH.pdf.
Perceptions of government's response	(6) How do you feel about the level of action your local government is taking to protect vulnerable populations and prepare for future COVID-19 spikes?	• Not enough • Just right • Too much • No opinion/not sure • Decline to answer	Kantar. (2020, March). *Seven in ten G7 say personal income has or will be affected by coronavirus.* https://www.kantar.com/Inspiration/Coronavirus/Seven-in-ten-in-G7-say-personal-income-has-or-will-be-affected-by-coronavirus.
Concerns for local community	(8) Which of the following statements accurately reflects your feelings on the potential impact of COVID-19 on your community?	• COVID-19 represents a catastrophic threat to my community • COVID-19 represents a major threat to my community • COVID-19 represents a moderate threat to my community	Kantar. (2020, March). *Seven in ten G7 say personal income has or will be affected by coronavirus.* https://www.kantar.com/Inspiration/Coronavirus/Seven-in-ten-in-G7-say-personal-income-has-or-will-be-affected-by-coronavirus.

		• COVID-19 represents a minor threat to my community • COVID-19 represents no threat to my community • Decline to answer	
Perceptions	(9) How worried are you that you or someone in your family will get sick from COVID-19?	• Very worried • Somewhat worried • Not at all worried • Not applicable • Don't know • Decline to answer	Kaiser Family Foundation Coronavirus Poll - March 2020 *KFF Coronavirus Poll: March 2020*. KFF. (2022). Retrieved 21 July 2022, from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-coronavirus-poll-march-2020/.
Perceptions	(10) Do you feel you have enough information about how to protect yourself and your family from COVID-19?	• Yes • No • Don't know • Decline to answer	Kaiser Family Foundation Coronavirus Poll - March 2020 *KFF Coronavirus Poll: March 2020*. KFF. (2022). Retrieved 21 July 2022, from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-coronavirus-poll-march-2020/.
Perceptions	(11) In the future, if you were required to stay home because of a quarantine or school or work closure, would you be able to do at least part of your job from home?	• Yes • No • Don't know • Decline to answer	Kaiser Family Foundation Coronavirus Poll - March 2020 *KFF Coronavirus Poll: March 2020*. KFF. (2022). Retrieved 21 July 2022, from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-coronavirus-poll-march-2020/.

Parent-Focused Questions directly from Rapid Community Assessment (CDC)

Domain: Thinking and Feeling

Construct	Question	Response Scale
Perceived susceptibility	(1) How concerned are you about your child getting COVID-19?	• Not at all concerned • A little concerned • Somewhat concerned • Very concerned • Decline to answer
Confidence in vaccine effectiveness	(3) How important do you think getting a COVID-19 vaccine is to protect your child against COVID-19?	• Not at all important • A little important • Somewhat important • Very important • Decline to answer
Confidence in vaccine safety	(4) How safe do you think a COVID-19 vaccine is for your child?	• Not safe at all • Somewhat safe • Very safe • Completely safe • Decline to answer
Had COVID-19	(13) To your knowledge, has your child ever had COVID-19?	• Yes • No • Not sure • Decline to answer

Anticipated regret	(16) How much do you agree with the following statement? *If no vaccine doses received* "If I do not get my child a COVID-19 vaccine, I will regret it." *If any vaccine doses received* "If I had not gotten my child a COVID-19 vaccine, I would have regretted it."	• Do not agree • Somewhat agree • Strongly agree • Very Strongly agree • Decline to answer

Domain: Social Processes

Construct	Question	Response Scale
Social Responsibility	(7) How much do you agree with the following statement? "I have a responsibility to get my child vaccinated for COVID-19 to protect others."	• Do not agree • Somewhat agree • Strongly agree • Very strongly agree • Decline to answer
Social norms	(22) If you had to guess, about how many of your family and friends have gotten a COVID-19 vaccine for their children aged 5-18 years old?	• None • Some • Many • Almost all • Decline to answer
Provider recommendation	(24) Has a doctor, nurse, or other health professional ever recommended that you get a COVID-19 vaccine for your child?	• Yes, a health professional recommended • No, a health professional did not recommend • No, I haven't spoken to any health professional in the past 2 years • No, my child was vaccinated before seeing any health professional • Don't know • Decline to answer
Exposure to misinformation	(25) In the last month, how often have you seen or heard any negative information about the safety or effectiveness of COVID-19 vaccines?	• Never • Rarely • Sometimes • Often • Not sure • Decline to answer

Domain: Practical Issues

Construct	Question	Response Scale
Perceived barriers	(17) Many things might make it difficult to get a COVID-19 vaccine for your child. From the list below, please select *all* of the things that made it difficult for you.	• Getting an appointment online • Not knowing where to get vaccinated • Hard to get to vaccination sites • Vaccination sites aren't open at convenient times • None of these • Decline to answer • Other _____
Self-efficacy	(20) How much do you agree with the following statement? "I can get my child a COVID-19 vaccine if I want to."	• Do not agree • Somewhat agree • Strongly agree

		• Very strongly agree • Decline to answer • My child is not yet eligible for a COVID-19 vaccine

Domain: COVID-19 Vaccination

Construct	Question	Response Scale
Behavior	(14) Has your child received at least one dose of a COVID-19 vaccine?	• Yes • No • Decline to answer
Behavior	(15) How many doses of a COVID-19 vaccine has your child received?	• One • Two • More than two • Not sure • Decline to answer
Intentions	*If no vaccine doses received* (21) Once your child is eligible for the vaccine, how likely are you to get your child a COVID-19 vaccine?	• Definitely get a vaccine • Probably get a vaccine • Probably not get a vaccine • Definitely not get a vaccine • Not sure • Decline to answer
Other vaccinations	(23) In the past two years, has your child received any type of vaccine that was not a COVID-19 vaccine, such as seasonal flu?	• Yes • No • Not sure • Decline to answer

Domain: Demographic

Construct	Question	Response Scale
Mental Health	(26) Would you say your child's mental health is excellent, very good, good, fair, or poor?	• Excellent • Very good • Good • Fair • Poor • Decline to answer
Age	(27) What age is your child?	• Less than 1 year old - 4 years old • 5-12 years old • 13 years old -18 years old • Decline to answer
Gender	(28) What is your child's gender?	• Male • Female • Non-binary • Transgender • Something else

		• Decline to answer
Hispanic ethnicity	(29) Is your child of Hispanic or Latino origin?	• Yes • No • Decline to answer
Race	(30) Please choose one or more of the following categories to describe your child's race. *Please select all that apply.*	• White • Black or African American • American Indian • Alaska Native • Native Hawaiian • Pacific Islander • Something else _____ • Decline to answer
ZIP code	(31) What is your child's ZIP code?	[Text Entry]
Nativity	(32) Was your child born in the United States?	• Yes • No • Decline to Answer
Insurance	(33) Does your child have any kind of health care coverage? This includes health insurance, prepaid plans such as HMOs, or government plans such as Medicare, or Indian Health Service.	• Yes • No • Not sure • Decline to answer
Eligibility	(34) Does your child have a health condition that may put you at a higher risk for COVID-19?	• Yes • No • Not sure • Decline to answer

Parent-Focused Questions from other studies, added by PHHS found at *COVID-19 Question Bank*. Who.int. (2022). https://www.who.int/data/data-collection-tools/covid19-question-bank. (World Health Organization, 2022)

Construct	Question	Response Scale	Source
Attitudes towards COVID-19 vaccine	(2) Approximately how many people in the community do you think are concerned about the spread of COVID-19 in the community?	• Most people • About half the people • Less than half the people • Decline to answer	Community needs, perceptions and demand: community assessment tool - A module from the suite of health service capacity assessments in the context of the COVID-19 pandemic WHO reference number: WHO/2019-nCoV/vaccination/community_assessment/tool/2021.1
Awareness of COVID-19, and media exposure	(5) Which source(s) do you trust for accurate information about COVID-19? *Please check all that apply.*	• Radio • Newspaper • TV • Social media	Performance Monitoring for Action. (2020, April 28). *PMA COVID-19 Survey.* Pmadata.org. https://www.pmadata.org/sites/default/files/2020-04/PMA-COVID-19-QRE-2020.04.28-v8-ENGLISH.pdf.

		• Health care worker(doctor, nurse, etc.) • Family member • Local public health department(s) • Friends • Community leaders • Messages from government or authorities • School • None of the above • Decline to answer	
Perceptions of government's response	(6) How do you feel about the level of action your local government is taking to protect vulnerable populations and prepare for future COVID-19 spikes?	• Not enough • Just right • Too much • No opinion/not sure • Decline to answer	Kantar. (2020, March). *Seven in ten G7 say personal income has or will be affected by coronavirus.* https://www.kantar.com/Inspiration/Coronavirus/Seven-in-ten-in-G7-say-personal-income-has-or-will-be-affected-by-coronavirus.
Concerns for local community	(8) Which of the following statements accurately reflects your feelings on the potential impact of COVID-19 on your community?	• COVID-19 represents a catastrophic threat to my community • COVID-19 represents a major threat to my community • COVID-19 represents a moderate threat to my community • COVID-19 represents a minor threat to my community • COVID-19 represents no threat to my community • Decline to answer	Kantar. (2020, March). *Seven in ten G7 say personal income has or will be affected by coronavirus.* https://www.kantar.com/Inspiration/Coronavirus/Seven-in-ten-in-G7-say-personal-income-has-or-will-be-affected-by-coronavirus.
Perceptions	(9) How worried are you that you, your child, or someone in your family will get sick from COVID-19?	• Very worried • Somewhat worried • Not at all worried • Not applicable • Don't know • Decline to answer	Kaiser Family Foundation Coronavirus Poll - March 2020 *KFF Coronavirus Poll: March 2020*. KFF. (2022). Retrieved 21 July 2022, from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-coronavirus-poll-march-2020/.
Perceptions	(10) Do you feel you have enough information about how to protect your child from COVID-19?	• Yes • No • Don't know • Decline to answer	Kaiser Family Foundation Coronavirus Poll - March 2020 *KFF Coronavirus Poll: March 2020*. KFF. (2022). Retrieved 21 July 2022, from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-coronavirus-poll-march-2020/.
Perceptions	(11) In the future, if you were required	• Yes	Kaiser Family Foundation Coronavirus Poll - March 2020

	to stay home because of a quarantine or school or work closure, would you be able to do at least part of your job from home?	• No • Don't know • Decline to answer	*KFF Coronavirus Poll: March 2020*. KFF. (2022). Retrieved 21 July 2022, from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-coronavirus-poll-march-2020/.
Perceptions	(12) In the future, if your child was required to stay home because of a quarantine or school or daycare closure, how difficult would it be to find alternative choices for care?	• Very difficult • Difficult • Fair/Neither difficult or easy • Easy • Very Easy • Not applicable • Decline to answer	Kaiser Family Foundation Coronavirus Poll - March 2020 *KFF Coronavirus Poll: March 2020*. KFF. (2022). Retrieved 21 July 2022, from https://www.kff.org/coronavirus-covid-19/poll-finding/kff-coronavirus-poll-march-2020/.

B. Rapid Community Assessment Survey Respondent Demographics

C. Parent Respondents - by Child's Age

Age	#	%
Less than 1 year old - 4 years old	24	16.1%
5 years old - 12 years old	82	55.0%
13 years old - 18 years old	42	28.2%
Decline to answer	1	0.0%
N	149	100.0%

Adults by Age

Age	#	%
18-29	131	4.4%
30-39	378	12.6%
40-49	371	12.4%
50-59	473	15.8%
60-69	862	28.7%
70-79	661	22.0%
80-89	122	4.1%
90-99	5	0.2%
Decline to answer	2	0.1%
N	3005	100.0%

Parent Survey – by Race of Child

Selections for Analysis	#	%
White ONLY	122	81.3%
Black or African American ONLY	7^	4.7%^
Decline to answer	5	3.3%
Single selections	6	4.0%
-American Indian - 2 *-Hispana - 1* *-Biracial - 2*		

-Human - 1		
Multiple selections	10	6.7%
-White/Asian - 4 *-White/Black or African American - 3* *-White/Hispanic - 1* *-White/Pacific Islander – 1* *-White/Native Hawaiian/Pacific Islander - 1*		

^It is recognized that both the sample size and percentage of responses of this racial group are very small. However, responses from a non-White racial demographic were needed for comparison with the White sample set. This was the largest non-White demographic available.

Adult Survey – by Race

Selections for Analysis	#	%
White	2756	92.9%
Black or African American	72	2.4%
White / American Indian	32	1.1%
Asian & Asian American	29	1.0%
Decline to answer	56	1.9%
Single selections	28	0.9%
-American - 2 *-American Indian - 3* *-Caucasian[†] - 1* *-Human - 4* *-India – 2* *-Indian – 1* *-Latino, Latino/hispanic, Hispano,* or *Hispanic - 4* *-Mixed - 2* *-Mongrel - 1* *-Pacific Islander -3* *-Puertorican - 1* *-South Asian - 4*		
Multiple selections	51	1.7%
-Asian Indian - 1 *-Asian, Latino - 1* *-Asian/East Indian - 1* *-Black/American Indian - 1* *-Black or African American/American Indian/Asian -1* *-Caucasian/Pacific Islander - 1* *-Chinese Japanese - 1* *-Euro American* or *European-American - 2* *-Indian American - 1* *-Indian-Asian - 1* *-Middle Eastern/Caucasian - 1* *-Pacific Islander/Asian - 1* *-White/Asian - 7* *-White/Black or African American - 8* *-White/Black or African American/American Indian - 5*		

-White/Black or African American/American Indian/Human - 1
-White/Black or African American/Native Caucasian of African descent - 1
-White/Black or African American/South Asian - 1
-White/European American (part Samme) - 1
-White/European decent - 1
-White/german swiss american - 1
-White/Human - 2
-White/Jewish - 2
-White/Middle Eastern - 2
-White/Mixed race - 1
-White/Native Alaskan - 1
-White/Pacific Islander - 2
-White/Spanish is - 1
-White/swedish german irish english - 1

[†] Because "White" was an option for selection but not chosen by respondent, it could not be assumed that respondent understood that "White" and "Caucasian" mean the same thing. As a result, this individual's responses were not collected with overall group of "White" responders.

D. COVID-19 Community Assessment Surveys (Double click logo to open)

Parent Version Link:

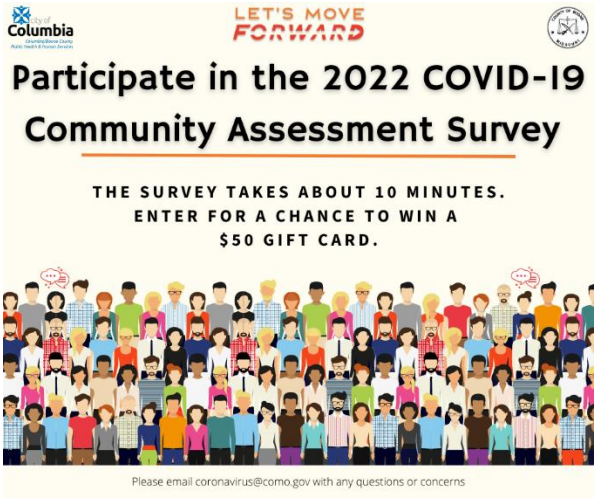
Comm Assess
Survey Guide - Parer

Adult Version Link:

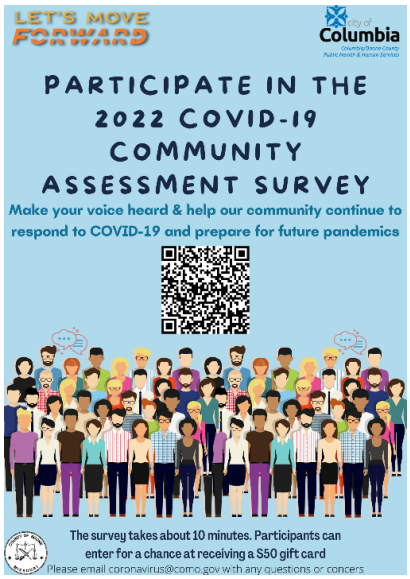
Comm Assess
Survey Guide - Adul

E. Survey Recruitment Material

Virtual Option: Link



Physical Option: Link

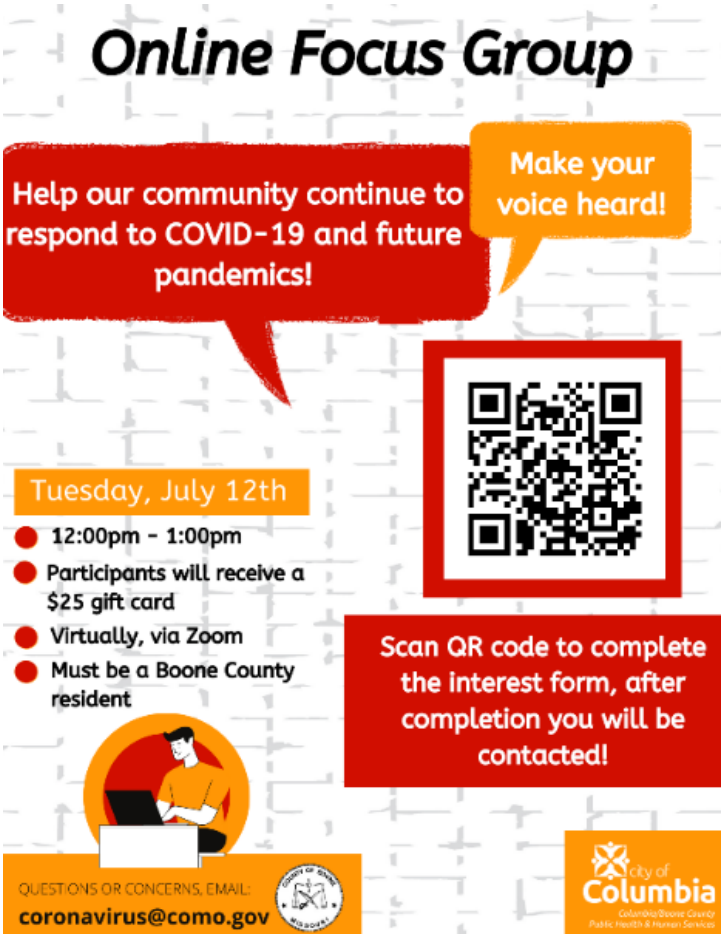


F. Survey Data Results (Double click logo to open)

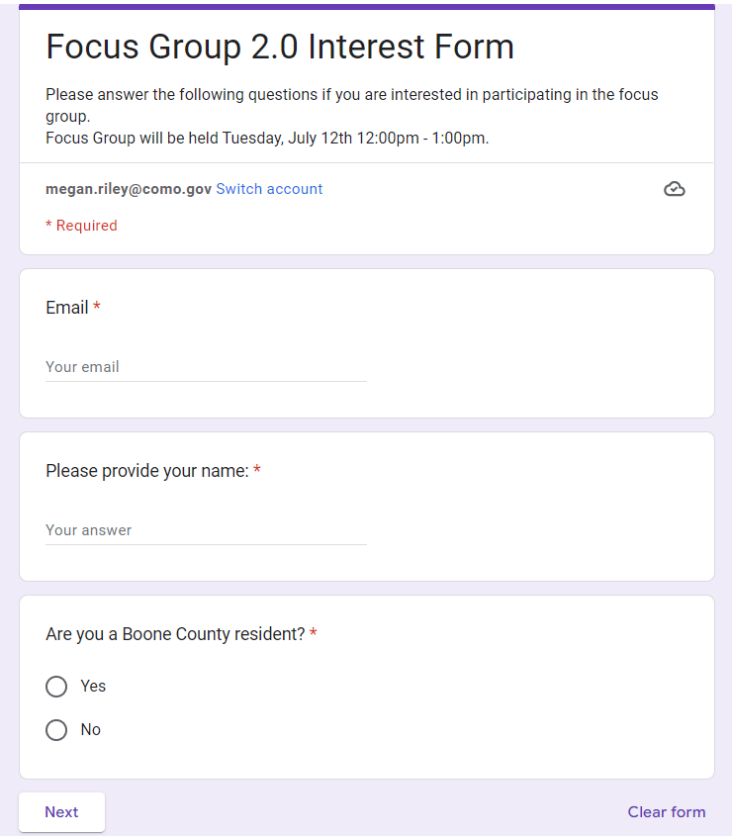
PDF

RCA Analysis - Adult & Child - All -

G. Focus Group Recruitment Material: Link



H. Focus Group Interest Form



Focus Group 2.0 Interest Form

Please answer the following questions if you are interested in participating in the focus group.
Focus Group will be held Tuesday, July 12th 12:00pm - 1:00pm.

megan.riley@como.gov Switch account

* Required

Email *

Your email

Please provide your name: *

Your answer

Are you a Boone County resident? *

Yes

No

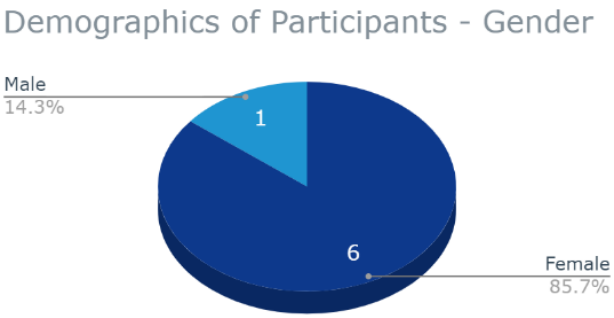
Next Clear form

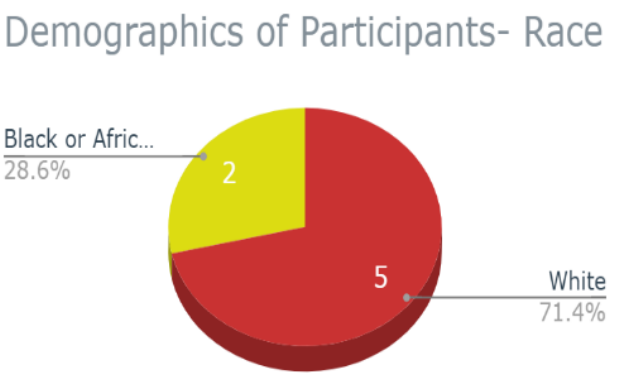
I. Focus Group Questions

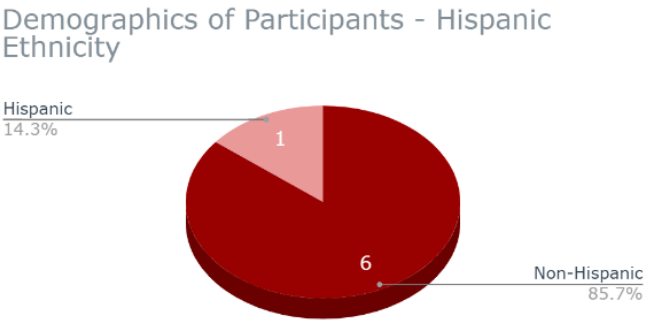
Domain Measured:	Question Asked:
General Introduction	How do you think COVID-19 has affected your community?
COVID-19 Vaccine Attitudes in the Community	What do people in your community think about the COVID-19 vaccine? What do parents in your community think about the COVID-19 vaccine?
Barriers and Facilitators of COVID-19 Vaccination in the Community	What are the main reasons people in your community would want to get the vaccine? Is there any difference when we're thinking about parents? What are the main reasons parents in the community would want to get their children vaccinated?
Barriers and Facilitators of COVID-19 Vaccination in the Community	In your opinion, what are the main questions, doubts, and fears about COVID-19 vaccines in your circle of friends and family?
Strategies to Improve Vaccine Confidence in the Community/Communication	How do you think the state or local health department is doing at building vaccine confidence and making COVID-19 vaccines accessible?
Preparedness	What should public health or medical professionals do to prepare the community for COVID-19 wave or a future pandemic?

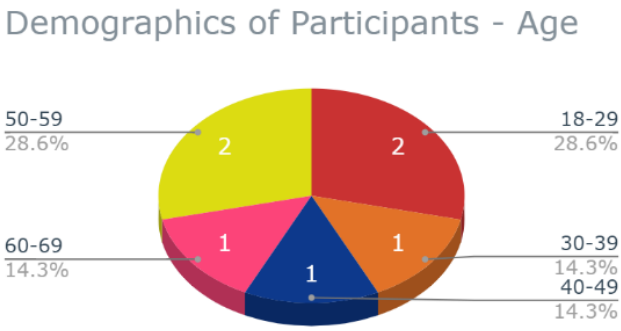
J. Demographics of Focus Group

White	Female	Non-Hispanic	18-29
Black or African American	Female	Non-Hispanic	18-29
White	Female	Non-Hispanic	30-39
White	Male	Non-Hispanic	40-49
White	Female	Hispanic	60-69
White	Female	Non-Hispanic	50-59
Black or African American	Female	Non-Hispanic	50-59









Resources

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