# Riverside University HEALTH SYSTEM Public Health

in affiliation with



Riverside County Public Health COVID-19 Needs Assessment

An Analysis of Public Health Regions

July 2022

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# **EXECUTIVE SUMMARY**

#### Introduction

The purpose of this report was to provide the results of a County-wide needs assessment by Riverside County Public Health region. There are five of these Public Health regions across Riverside County: Coachella Valley, East, Mid, Northwest, and Southwest.

Established in 1926, the Riverside University Health System – Public Health (RUHS – PH) is the local public agency responsible for ensuring the health and well-being of county residents and visitors in service of the well-being of the community. HARC, Inc. (Health Assessment and Research for Communities) is a nonprofit research and evaluation organization based in Riverside County. HARC advances the quality of life by helping community leaders use objective research and analysis to turn data into action. RUHS – PH and HARC partnered to produce this report, as well as a series of other reports to understand the impact of COVID-19.

#### Methods

Ace Printing purchased a random sample of 40,000 households in Riverside County. HARC and Ace mailed an "invitation package" to all 40,000 households, which included a cover letter (in English and Spanish), a paper survey in English, a paper survey in Spanish, a prepaid return envelope, and a \$2 bill as a pre-incentive. Each survey was printed with a unique identifier code so that each household could only participate once.

#### Results

A fair amount of demographics from the surveys were approximately similar to Riverside County demographics; however, there were some slight biases towards older and Whiteidentifying individuals. Thus, the survey results were weighted to account for these demographic differences to provide a more representative illustration of the county.

A total of 9,144 surveys representing the various Riverside County Public Health regions are included in this report. When weighted, these 9,144 surveys represent 1.8 million adult residents. The Public Health region, East, did not have a sufficient sample size to be included in these custom analyses. That is, the Public Health region East only had 58 completed surveys, and these 58 completed surveys would have represented four cities of Eastern Riverside County, which would be problematic in terms of representativeness. Conversely, each of the other regions (Coachella Valley = 2,391 surveys, Mid = 1,292 surveys, Southwest = 1,856 surveys, and Northwest = 3,605 surveys) returned thousands of surveys. Thus, the East region was excluded from the analyses that follow.

#### Demographics

The demographics are reported in detail for each region in the demographics section of this report. Generally, the Coachella Valley region leans towards higher percentages of elderly adults, White adults, male adults, homosexual adults, and households with just one or two people. In contrast, the other three regions had younger adults, more Hispanic adults, fewer homosexual adults, and larger household sizes. There was also a higher percentage of adults identifying as Democrats in the Coachella Valley compared to the other regions. Overall, residents in the Mid region tend to have lower incomes; poverty is less in the Southwest than in other regions.

#### COVID-19 Attitudes and Behaviors

Overall, high percentages of adults experienced impacts in work/school participation and social life or relationships across the regions. However, the Northwest region experienced significantly more of an impact in work/school participation compared to Mid region and Coachella Valley. The Mid region experienced significantly more of an impact in the economic situation compared to the Southwest, likely due in part to the lower income levels in the Mid region. The Northwest region experienced significantly more of an impact on mental health compared to Coachella Valley. The Coachella Valley region and Mid experienced significantly more of an impact on social life or relationships compared to the Southwest. The Northwest region experienced significantly more "fear of getting sick" and "worry about friends and family" when compared to the Southwest region.

The most common difficult experience among all regions included a loss of savings or retirement due to COVID-19. A significantly lower percentage of adults in Coachella Valley reported childcare issues compared to the other three regions, likely due to the significantly greater proportion of elderly residents living in the Coachella Valley region. Further, a significantly higher percentage of adults in the Mid region reported problems with getting food compared to Southwest. A significantly higher percentage of adults in the Mid region reported transportation issues compared to Southwest and Coachella Valley.

#### COVID-19 Diagnosis and Treatment

A significantly higher percentage of adults in Northwest (24.3%) and Mid (24.9%) tested positive compared to Coachella Valley (17.7%).

#### COVID-19 Vaccine

A significantly higher percentage of adults in the Coachella Valley region reported believing "very much," that the COVID-19 vaccine would protect them, compared to the other three regions. As such, it is not surprising that a significantly higher percentage of adults in the Coachella Valley region reported being fulling vaccinated compared to the other three

regions. A significantly higher percentage of adults in the Mid region reported not being vaccinated (and having no plans to get vaccinated) compared to Northwest and Southwest.

#### Disproportionate Impact of COVID-19 on Communities of Color

A significantly higher percentage of adults in the Coachella Valley region "strongly agree" that people of color are having more of a health impact compared to the other three regions. Similarly, a significantly higher percentage of adults in the Coachella Valley region strongly agree that people of color are facing more of an economic impact compared to the other three regions.

#### COVID-19 Information Seeking

A significantly higher percentage of adults in the Southwest and Mid regions are "not at all" trusting in information from members of their own community when compared to the Northwest region and Coachella Valley. Conversely, a significantly higher percentage of adults in the Coachella Valley region reported being "very" trusting in information from members of their own community compared to Southwest and Mid region.

#### Knowledge of Public Health Efforts During COVID-19

Several significant differences were present regarding knowledge of Public Health efforts. Generally, residents knew about or did not need certain efforts; however, there were some regional differences pertaining to mask distribution, food assistance, data being provided to the community, childcare assistance, educational information, and testing and vaccination sites. These differences are detailed in the report.

#### Conclusion

The purpose of this report was to provide the results of a County-wide needs assessment by Riverside County Public Health region (Coachella Valley, Mid, Northwest, and Southwest). Overall, each of the Public Health regions has been negatively impacted by COVID-19. Residents among each of these regions have reported being impacted in work/school, social life, and their economic situations.

Altogether, this report provides information on regional differences in attitudes, behaviors, and the impact of COVID-19. Generally, each region has experienced the same impact and has similar attitudes; however, there are some noticeable differences that exist between communities. Local health and human service agencies may use this report to respond appropriately in outreach and education.

# INTRODUCTION

The purpose of this report was to provide the results of a County-wide needs assessment by Riverside County Public Health region. There are five of these Public Health regions across Riverside County: Coachella Valley, East, Mid, Northwest, and Southwest.

For brevity, detailed methods and appendices have been removed from this report, and only the most pertinent pieces of information remain. The initial report detailing results at the Riverside County-level includes comprehensive analyses and information regarding survey development, sampling protocol and timeframes, and data weighting. If desired, please contact Riverside University Health System – Public Health or HARC for a copy of these comprehensive reports.

This report is a custom analysis of data collected from a County-wide study measuring COVID-19 attitudes and health needs. This project was supported by Epidemiology and Laboratory Capacity Enhancing Detection funds, which expands upon previous COVID-19 awards and is provided by the Centers for Disease Control and Prevention by way of the Paycheck Protection Program and Health Care Enhancement Act Response Activities for Cross-Cutting Emerging Issues. The present report was developed by HARC, Inc. on behalf of Riverside University Health System – Public Health (hereafter referred to as RUHS – Public Health).

# About RUHS – Public Health

Established in 1926, the Riverside University Health System – Public Health (RUHS – PH) is the local, public agency responsible with ensuring the health and well-being of county residents and visitors. RUHS – PH's values of respect, integrity, service, and excellence are demonstrated through their strong partnerships with community-based organizations, academic institutions, tribal organizations, faith-based organizations, local governmental agencies and community leaders, local business, social service providers, nongovernmental organizations and other relevant partner organizations necessary to improving the health of Riverside County's community.

#### About HARC

HARC, Inc. (Health Assessment and Research for Communities) is a nonprofit research and evaluation organization based in Riverside County. HARC advances the quality of life by helping community leaders use objective research and analysis to turn data into action. HARC specializes in providing data that helps improve the social determinants of health.

# **Public Health Regions**

Riverside County Public Health regions comprise five areas: Coachella Valley, East, Mid, Northwest, and Southwest. RUHS – Public Health was interested in seeing the results of the County-wide needs assessment by these regions. The map below shows the geographic boundaries of these regions, and the table on the subsequent page details each Public Health region and the corresponding city.



#### Figure 1. Public Health Regions

The table below includes a list of cities that correspond to each Public Health region.

Coachella Valley	East	Mid	Northwest	Southwest
Bermuda Dunes	Blythe	Aguanga	Corona	Canyon Lake
Cathedral City	Desert	Anza	Coronita	French Valley
	Center			
Coachella	Mesa Verde	Banning	Eastvale	Lake Elsinore
Desert Edge	Ripley	Beaumont	El Cerrito	Lakeland Village
Desert Hot		Cabazon	El Sobrante	Meadowbrook
Springs				
Desert Palms		Calimesa	Good Hope	Menifee
Garnet		Cherry Valley	Home	Murrieta
			Gardens	
Indian Wells		East Hemet	Jurupa Valley	Temecula
Indio		Green Acres	Lakeview	Warm Springs
Indio Hills		Hemet	Nuevo	Wildomar
La Quinta		Homeland	Lake Mathews	
Mecca		Idyllwild-Pine Cove	March ARB	
North Shore		Lake Riverside	Mead Valley	
Oasis		Mountain Center	Moreno Valley	
Palm Desert		San Jacinto	Norco	
Palm Springs		Valle Vista	Perris	
Rancho Mirage		Winchester	Riverside	
Sky Valley			Romoland	
Thermal			Temescal	
			Valley	
Thousand			Woodcrest	
Palms				
Vista Santa				
Rosa				
Whitewater				

#### Table 1. Public Health Region by City

# **METHODS**

Ace Printing purchased a random sample of 40,000 households in Riverside County. HARC and Ace mailed an "invitation package" to all 40,000 households, which included a cover letter (in English and Spanish), a paper survey in English, a paper survey in Spanish, a prepaid return envelope, and a \$2 bill as a pre-incentive. Each survey was printed with a unique identifier code so that each household could only participate once. Invitation packages were mailed out in eight batches of 5,000 on the following dates:

- Batch 1: 9/15/21
- Batch 2: 9/16/21
- Batch 3: 9/21/21
- Batch 4: 9/22/21

- Batch 5: 9/24/21
- Batch 6: 9/27/21
- Batch 7: 9/29/21
- Batch 8: 9/30/21

Residents were offered a \$25 Visa card as a post-incentive; as such, those who returned the survey were sent a \$25 Visa card within two weeks of receipt of their paper survey. On 11/24/21, the completed dataset was sent to a statistician for weighting. Weighting is important to ensure that the results of the survey appropriately represent the county. Missing data were imputed using a hot deck method. Iterative proportional fitting was used to ensure marginal distributions for age, sex, race by ethnicity, and household income aligned. In the end, a response rate of approximately 21.5% was achieved.

Figure 1 below provides additional context to the data collection timeline. That is, data was being collected right after the detection of the Delta variant and before the detection of the Omicron variant. The purple cases in the figure below indicate the data collection period.



Figure 2. COVID-19 Daily Cases in Riverside County

Note: Data in the chart are from RUHS - Public Health.

# **RESULTS: COVID-19 Needs Assessment**

#### Weighted Data

A fair amount of demographics from the surveys were approximately similar to Riverside County demographics; however, there were some slight biases towards older and Whiteidentifying individuals. Thus, the survey results were weighted to account for these demographic differences to provide a more representative illustration of the county.

All results that follow were weighted according to the United States Census Bureau, American Community Survey, 1-year estimates (Household Income, Age, and Sex), and the Decennial Census, 2020 (Race, Ethnicity, and Race by Ethnicity). This weighting essentially "corrects" the skewed data.

#### Understanding the Data

While figures/tables may include estimates such as "percentages," "frequencies," "counts," etc., these all refer to weighted estimates and percentages. Furthermore, the survey results contain data for and are weighted for the **adult population only**. Thus, this report may refer to "residents" a number of times, and these residents are always Riverside County residents who are ages 18 and older.

In many areas of the report, highlighting differences between regions is accomplished through identifying **statistically significant results**. If results are statistically significant during analyses, they are noted as being "significant" in the narratives of the report. These results mean that the analyses provided evidence of a true difference between regions; that is, differences found are likely to be real differences. For brevity, detailed statistics regarding these statistical tests are omitted but can be provided upon request.

Lastly, because this report is based on weighted data analyzed by a variety of categories, there are times when the data may become unreliable (**statistically unstable estimates**). These statistically unstable estimates are based on the ratio of the standard error of the estimate to the estimate itself. When this ratio exceeds 30%<sup>1</sup>, the estimate is deemed unreliable and should not be interpreted. When this occurs in the report, the unstable estimate in the figure/table is identified in red.

<sup>&</sup>lt;sup>1</sup> California Health Interview Survey (n.d.). UCLA Center for Health Policy Research. <u>https://healthpolicy.ucla.edu/chis/faq/Pages/default.aspx#e4</u>

## Demographics

A total of 9,144 surveys representing the various Riverside County Public Health regions are included in this report. When weighted, these 9,144 surveys represent 1.8 million adult residents.

#### Geography

As mentioned previously, there are five Riverside County Public Health regions. Furthermore, the data in this report is weighted to reflect both the count and demographics of the larger Riverside County population. However, one of the five regions (East), did not have a sufficient sample size to be included in these custom analyses. That is, the East Region only had 58 completed surveys representing four cities of Eastern Riverside County. In comparison, each of the other regions (Coachella Valley = 2,391 surveys, Mid = 1,292 surveys, Southwest = 1,856 surveys, and Northwest = 3,605 surveys) returned thousands of surveys. Thus, the East region was excluded from the analyses that follow. See the figure below for percentages of each region. Note that Northwest comprises 44.4% of the sample, which is expected given how many residents reside in this region.



#### *Figure 3. Public Health Regions*

Note: Coachella Valley *n* = 396,501, Mid *n* = 229,698, Northwest *n* = 802,474, and Southwest *n* = 378,205.

#### Language of Survey

Residents had the option of responding in either an English or a Spanish survey. The Southwest region (96.2%) had significantly more English responses compared to the Mid (92.7%), Northwest (91.3%), and Coachella Valley (91.1%) regions.





Note: Coachella Valley n = 396,501, Mid n = 229,698, Northwest n = 802,474, and Southwest n = 378,205.

#### Age

As illustrated in the figure below, Coachella Valley had significantly more older adults (60s and 70s+) than the other three regions. In contrast, the Northwest region had a significantly larger percentage of younger adults (18 to 29) than the other three regions.



#### *Figure 5. Age (Imputed) Categories*

Note: Coachella Valley *n* = 396,501, Mid *n* = 229,698, Northwest *n* = 802,474, and Southwest *n* = 378,205.

#### Ethnicity

A significantly higher proportion of Northwest residents (51.5%) who identified as Hispanic/Latino compared to Coachella Valley (43.3%), Mid (43.4%), and Southwest (36.9%).



#### Figure 6. Ethnicity

Note: Coachella Valley n = 385,563, Mid n = 219,063, Northwest n = 781,912, and Southwest n = 363,131.

#### Race

Coachella Valley (72.9%) had a significantly higher percentage of people who identified as White compared to Mid (61.0%), Northwest (53.9%), and Southwest (61.5%).



#### Figure 7. Race

Note: Coachella Valley *n* = 369,003, Mid *n* = 215,620, Northwest *n* = 738,337, and Southwest *n* = 360,413.

#### Race by Ethnicity

Race was also crossed with ethnicity to provide clarity on the number of people identifying as Hispanic (e.g., when asked about race, respondents may choose "other" since Hispanic is not an option).

The Northwest (51.1%) had a significantly higher percentage of people identifying as Hispanic/Latino compared to the Southwest (37.4%), Mid (42.9%), and Coachella Valley (43.4%).

In contrast, the Coachella Valley had a significantly higher percentage of people identifying as non-Hispanic, White alone (48.6%), compared to the Northwest (27.8%), Southwest (41.3%), and Mid (38.8%).



#### *Figure 8. Race by Ethnicity*

Note: Coachella Valley *n* = 396,501, Mid *n* = 229,698, Northwest *n* = 802,474, and Southwest *n* = 378,205.

#### Gender Identity

Two questions were utilized to measure gender identity per best practices established in the field of survey research<sup>2</sup>. Firstly, residents were asked, "What sex were you assigned at birth, on your original birth certificate?" As illustrated in the figure below, participants in the Coachella Valley were significantly more likely to be male at birth than the other regions.





Note: Coachella Valley n = 396,501, Mid n = 229,698, Northwest n = 802,474, and Southwest n = 378,205.

Next, residents were asked about their current gender identity: "How do you describe yourself?" Residents could indicate male, female, transgender, or "do not identify as female, male, or transgender." Once again, Coachella Valley residents were more likely to identify as male than residents from the other three regions.



Figure 10. Gender Identity

Note: Coachella Valley *n* = 389,282, Mid *n* = 223,628, Northwest *n* = 792,487, and Southwest *n* = 369,961.

<sup>&</sup>lt;sup>2</sup> Williams Institute (2009). Best practices for asking questions about sexual orientation on surveys (SMART). Available online at <u>https://williamsinstitute.law.ucla.edu/publications/smart-so-survey/</u>

#### Sexual Orientation

To measure sexual orientation, participants were asked, "Do you consider yourself to be..." with response options including bisexual, heterosexual, homosexual, questioning, or another orientation.

The Coachella Valley had a significantly higher percentage of adults who identify as homosexual than the other three regions. In fact, 18.0% of Coachella Valley adults identify as homosexual—a rate that is *six times to nine times higher* than the rate in the other regions.



Figure 11. Sexual Orientation

Note: Coachella Valley *n* = 372,486, Mid *n* = 208,041, Northwest *n* = 749,553, and Southwest *n* = 354,889.

#### Household Size

The median household size for Riverside County was two people.

The Coachella Valley had a significantly higher percentage of households with just one or two people compared to other three regions, as illustrated in the figure below. Note that in the Northwest, 1 in 4 households have five or more residents.



Figure 12. Household Size

Note: Coachella Valley n = 391,168, Mid n = 222,861, Northwest n = 790,171, and Southwest n = 369,737.

#### Income and Poverty

Residents were asked, "Last year, what was your household income from all sources before taxes?" Overall, residents in the Mid region had lower incomes than those in the other regions. Specifically, the Mid region had a significantly lower percentage of income levels above \$150,000 (9.2%) than the other three regions: Coachella Valley (18.2%), Northwest (17.1%), and Southwest (20.6%).



Figure 13. Household Income (Imputed)

Similarly, the Mid region had a significantly lower average household income (\$69,400) than the Northwest (\$97,452) and Southwest (\$101,954), as illustrated in the figure below.



Figure 14. Household Income (Imputed)

Note: Coachella Valley n = 396,501, Mid n = 229,698, Northwest n = 802,474, and Southwest n = 378,205. Page **20** of **49** 

Note: Coachella Valley *n* = 396,501, Mid *n* = 229,698, Northwest *n* = 802,474, and Southwest *n* = 378,205.

Using household income and the number of people within the household, the Federal Poverty Level (FPL) was calculated using the Department of Health and Human Service's guidelines for poverty in 2021.

As illustrated in the figure below, individuals in the Southwest region had significantly less poverty than the other three regions, with nearly two-thirds of residents living in homes that have incomes at least three times higher than the poverty line.



Figure 15. Federal Poverty Level

Note: Coachella Valley n = 308,383, Mid n = 173,222, Northwest n = 608,414, and Southwest n = 292,781.

#### Political Affiliation

As a final demographic question, residents were asked, "Generally speaking, do you think of yourself as a...?" Response options included democrat, independent, republican, other, unsure, or choose not to respond.

As illustrated in the figure below, adults in the Coachella Valley region are significantly more likely to identify as Democrats (44.8%) than adults in the other three regions: Mid (30.4%), Northwest (34.8%), and Southwest (29.5%).



Figure 16. Political Affiliation

Note: Coachella Valley *n* = 384,225, Mid *n* = 220,975, Northwest *n* = 784,822, and Southwest *n* = 368,987.

## **COVID-19 Attitudes and Behaviors**

#### Impact of COVID-19

The world has forever changed since the first case of COVID-19. To understand some areas of impact, residents were asked, "How had the COVID-19 pandemic impacted your personal daily life with regards to:" and were then given a list of options: to a great extent, somewhat, very little, and not at all.

In the figure below, "impacted to a great extent," responses are the only responses utilized; however, proportions for all responses are on the following page in a table. Overall, high percentages of adults experienced impacts in work/school participation and social life or relationships across the regions.



Figure 17. COVID-19 Impact on Daily Life

Note: Work/school participation Coachella Valley n = 353,164, Mid n = 206,156, Northwest n = 746,490, and Southwest n = 353,032. Social life or relationships Coachella Valley n = 378,915, Mid n = 220,779, Northwest n = 780,708, and Southwest n = 367,172. Physical health Coachella Valley n = 368,731, Mid n = 208,831, Northwest n = 755,154, and Southwest n = 357,753. Mental health Coachella Valley n = 368,760, Mid n = 212,835, Northwest n = 760,431, and Southwest n = 360,070. Economic situation Coachella Valley n = 366,133, Mid n = 212,809, Northwest n = 760,166, and Southwest n = 358,013.

Category	Rating	Coachella Valley	Mid	Northwest	Southwest
Work/school	Not at all	31.3%	29.2%	21.8%	24.6%
participation	Very little	9.3%	11.1%	10.9%	10.6%
	Somewhat	19.9%	20.7%	21.3%	22.1%
	To a great extent	39.5%	39.0%	46.1%	42.7%
Economic situation	Not at all	27.6%	27.2%	25.8%	28.4%
	Very little	18.4%	16.8%	19.3%	22.9%
	Somewhat	28.8%	27.4%	30.8%	27.5%
	To a great extent	25.2%	28.6%	24.1%	21.2%
Physical health	Not at all	35.7%	34.9%	33.2%	37.6%
	Very little	25.3%	24.5%	23.8%	25.1%
	Somewhat	26.7%	24.6%	27.7%	24.7%
	To a great extent	12.3%	16.0%	15.3%	12.6%
Mental health	Not at all	22.6%	26.0%	23.5%	25.0%
	Very little	21.4%	20.2%	18.9%	20.2%
	Somewhat	36.1%	30.3%	32.0%	33.6%
	To a great	19.9%	23.4%	25.6%	21.3%
	extent				
Social life or	Not at all	9.3%	11.9%	11.4%	13.0%
relationships	Very little	12.5%	14.5%	12.7%	15.2%
	Somewhat	36.9%	30.4%	36.4%	36.1%
	To a great extent	41.4%	43.2%	39.5%	35.7%

#### Table 2. COVID-19 Impact on Personal Daily Life

Note: Work/school participation Coachella Valley n = 353,164, Mid n = 206,156, Northwest n = 746,490, and Southwest n = 353,032. Economic situation Coachella Valley n = 366,133, Mid n = 212,809, Northwest n =760,166, and Southwest n = 358,013. Physical health Coachella Valley n = 368,731, Mid n = 208,831, Northwest n = 755,154, and Southwest n = 357,753. Mental health Coachella Valley n = 368,760, Mid n = 212,835, Northwest n = 760,431, and Southwest n = 360,070. Social life or relationships Coachella Valley n = 378,915, Mid n = 220,779, Northwest n = 780,708, and Southwest n = 367,172. Residents were also asked to select from a list of ways in which they were affected by COVID-19. Specifically, "COVID-19 had also affected how people feel and act. Which of the following have you experienced due to COVID-19? Please select all that apply."

Negative COVID-19 experiences included a variety of response options. Thus, for clarity, only the top six responses are illustrated in the figure below, whereas all responses are in a table on the following page.

The Northwest region experienced significantly more "Fear of getting sick" (53.2%) and "Worry about friends and family" (63.3%) compared to the Southwest region (46.3% and 57.0%, respectively).



Figure 18. Negative COVID-19 Experiences

Note: Coachella Valley *n* = 389,604, Mid *n* = 226,211, Northwest *n* = 790,413, and Southwest *n* = 373,214.

Table 3. Negative COVID-19 Experiences

Experience	Coachella	Mid	Northwest	Southwest
Worry about friends and family	60.1%	61 7%	63.3%	57.0%
Anviety	50.8%	46 7%	51.6%	47.6%
	50.6%	40.7%	51.070	47.0%
Fear of getting sick	50.6%	47.8%	53.2%	46.3%
Boredom	46.5%	43.1%	45.4%	43.5%
Decreased exercise	46.0%	40.2%	43.2%	40.9%
Frustration	41.5%	43.9%	43.5%	43.0%
Increased eating	28.9%	24.1%	30.0%	28.4%
Depression	26.4%	26.5%	28.9%	27.5%
Loneliness	23.6%	25.5%	24.5%	23.0%
Trouble sleeping	21.4%	25.8%	24.9%	20.2%
Conflict in the home	14.3%	16.3%	18.5%	17.9%
Decreased sexual activity	13.8%	13.1%	12.8%	12.2%
Confusion	13.0%	14.9%	17.2%	14.7%
Increased alcohol or other substance use	12.1%	9.4%	9.4%	11.2%
Loss of hope	9.4%	9.5%	12.6%	10.8%
Increased sexual activity	3.4%	4.0%	3.3%	2.8%
None of the above	8.9%	11.5%	8.3%	10.7%
Other	6.9%	5.7%	4.8%	7.1%

Note: Coachella Valley *n* = 389,604, Mid *n* = 226,211, Northwest *n* = 790,413, and Southwest *n* = 373,214.

#### Delay/Absence of Healthcare During COVID-19

Access to regular, affordable healthcare is critical to the overall health and well-being of an individual. However, as a result of COVID-19, many day-to-day activities were either delayed or canceled. Among these activities included access to healthcare, which is dangerous as a disruption in care can increase the risk for life-threatening medical emergencies.<sup>3</sup>

To assess the delay in healthcare, residents were asked, "At any time in the last 12 months, did you DELAY getting \_\_\_\_\_\_ because of the coronavirus pandemic?" and could rate several types of care. Delays in various types of care were approximately similar across regions, with the exception of mental care. A significantly higher percentage of residents in the Coachella Valley region (83.6%) delayed mental care compared to the Northwest region (79.2%).



## Figure 19. Delays in Healthcare

Note: Medical care delay Coachella Valley n = 385,615, Mid n = 218,411, Northwest n = 782,124, and Southwest n = 370,688, mental care delay Coachella Valley n = 367,330, Mid n = 208,785, Northwest n =749,407, and Southwest n = 356,353. Dental care delay Coachella Valley n = 382,471, Mid n = 219,598, Northwest n = 782,238, and Southwest n = 372,014.

<sup>&</sup>lt;sup>3</sup> Czeisler MÉ, Marynak K, Clarke KE, et al. Delay or Avoidance of Medical Care Because of COVID-19-Related Concerns – United States, June 2020. MMWR Morb Mortal Wkly Rep 2020;69:1250-1257. DOI: http://dx.doi.org/10.15585/mmwr.mm6936a4external icon

Residents were also asked about not getting healthcare. Specifically, "At any time in the last 12 months, did you need \_\_\_\_\_\_ for something other than coronavirus, but DID NOT GET IT because of the coronavirus pandemic?"

The absence of various types of care was approximately similar across regions with the exception of mental care. That is, a significantly higher percentage of adults in the Northwest (13.6%) and Southwest (13.4%) regions reported "yes" they did not get mental care compared to the Coachella Valley region (9.4%).



#### Figure 20. Absence in Healthcare

Note: Medical care absence Coachella Valley n = 382,265, Mid n = 219,419, Northwest n = 782,500, and Southwest n = 369,857. Mental care absence Coachella Valley n = 370,744, Mid n = 211,598, Northwest n = 755,795, and Southwest n = 359,091. Dental care absence Coachella Valley n = 384,296, Mid n = 220,074, Northwest n = 780,645, and Southwest n = 369,997.

# **COVID-19 Diagnosis and Treatment**

#### COVID-19 Diagnosis

Residents were asked, "Have you ever tested positive for COVID-19?" A significantly higher percentage of adults in Northwest (24.3%) and Mid (24.9%) tested positive compared to Coachella Valley (17.7%).



*Figure 21. Tested Positive for COVID-19* 

Note: Coachella Valley *n* = 367,082, Mid *n* = 209,324, Northwest *n* = 762,266, and Southwest *n* = 360,998.

Those who selected "no" were subsequently asked, "How serious do you think it would be if you tested positive for COVID-19?" A significantly higher percentage of adults in the Coachella Valley (43.5%) region reported "very serious" compared to the Northwest (37.8%) and Southwest (34.8%) regions.



*Figure 22. Perceived Seriousness of Contracting COVID-19 – Residents who Have Never had COVID-19* 

Note: Coachella Valley *n* = 304,442, Mid *n* = 158,984, Northwest *n* = 576,944, and Southwest *n* = 284,234.

Residents who stated that they <u>had</u> tested positive for COVID-19 were subsequently asked, "How serious was it when you tested positive for COVID-19?" As illustrated in the figure below, perceived seriousness was approximately similar across regions.





Note: Coachella Valley n = 62,166, Mid n = 51,106, Northwest n = 179,932, and Southwest n = 72,822.

#### COVID-19 Treatment

Many people infected with COVID-19 had to seek emergency medical care throughout the pandemic. Typically, when people experience trouble breathing, persistent pain, confusion, inability to wake, or pale, gray, or blue skin, emergency care is recommended immediately.<sup>4</sup>

Residents who stated they tested positive for COVID-19 were then asked, "Did you have an overnight stay in a hospital for suspected or diagnosed COVID-19?" As illustrated in the figure below, overnight hospital stays were approximately similar across regions.



Figure 24. Overnight in Hospital Due to COVID-19 - COVID-19 Positive Residents Only

Note: Coachella Valley n = 64,491, Mid n = 51,957, Northwest n = 182,763, and Southwest n = 74,091.

Among those who had an overnight stay in a hospital, these residents were then asked, "If yes, were you put into the ICU (intensive care unit) because of suspected or diagnosed COVID-19?" ICU stays were approximately similar across regions.



Figure 25. ICU Stay – Residents Who had an Overnight Stay in a Hospital

Note: Coachella Valley n = 4,521, Mid n = 2,262, Northwest n = 9,119, and Southwest n = 4,932.

<sup>&</sup>lt;sup>4</sup> What to do if you are sick? (2021). Centers for Disease Control and Prevention. <u>https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html</u>

#### COVID-19 Recovery

Most people infected with COVID-19 recover quickly (i.e., within weeks); however, some people experience symptoms for a prolonged period (e.g., a month or more).<sup>5</sup>

Among the residents who tested positive for COVID-19, they were further asked, "If you know, or believe, that you had COVID-19: have you recovered to your usual state of health?" As illustrated in the figure below, recovery was approximately similar across the regions.



Figure 26. Recovered to Usual State of Health – Positive COVID-19 Test Residents Only

Note: Coachella Valley n = 59,720, Mid n = 50,822, Northwest n = 180,488, and Southwest n = 72,519.

<sup>&</sup>lt;sup>5</sup> Post-COVID Conditions (2021). Centers for Disease Control and Prevention. <u>https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects/index.html</u>

# **COVID-19 Vaccination**

#### Perceptions of COVID-19 Vaccine

Misinformation regarding the purpose and efficacy of COVID-19 vaccines had been perpetuated throughout the pandemic. This misinformation can affect beliefs/attitudes towards vaccines, as well as the rate of vaccination.<sup>6</sup>

All residents were asked, "In your opinion, how much would the COVID-19 vaccine protect you against getting COVID-19?" A significantly higher percentage of adults in the Coachella Valley region (66.5%) reported "Very much" compared to all three other regions: Northwest (54.7%), Southwest (51.6%), and Mid (52.3%).



*Figure 27. Perceptions of COVID-19 Vaccine Protection* 

Note: Coachella Valley *n* = 392,192, Mid *n* = 224,712, Northwest *n* = 791,008, and Southwest *n* = 374,786.

<sup>&</sup>lt;sup>6</sup> How to Address COVID-19 Vaccine Misinformation (2021). Center for Disease Control and Prevention. <u>https://www.cdc.gov/vaccines/covid-19/health-departments/addressing-vaccine-misinformation.html</u>

#### COVID-19 Vaccine Mandates

Requirements regarding COVID-19 vaccination and testing have proliferated since the inception of the COVID-19 vaccine. For example, in 2021, the State of California required both school staff and students to be vaccinated against COVID-19,<sup>7</sup> the California Department of Public Health required all workers in healthcare facilities to be vaccinated,<sup>8</sup> and even city-level mandates have been issued regarding dining in restaurants.<sup>9</sup>

To assess where residents have experienced vaccine mandates/requirements, residents were asked, "Have you experienced any COVID-19 vaccine requirements?" and were encouraged to select all that apply.

A significantly higher percentage of adults in the Coachella Valley region (11.9%) reported, "Yes, friends have required me to be vaccinated to visit them," compared to Northwest (7.2%), Southwest (7.5%), and Mid (6.2%). Further, a significantly higher percentage of adults in the Northwest region (9.7%) reported that there was a vaccine requirement at their school compared to Southwest (5.0%) and Coachella Valley (5.3%).



Figure 28. COVID-19 Vaccine Requirement Experiences

Note: Coachella Valley n = 335,378, Mid n = 202,405, Northwest n = 700,205, and Southwest n = 333,147.

<sup>&</sup>lt;sup>7</sup> California Becomes First State in Nation to Announce COVID-19 Vaccine Requirements for Schools (2021). Office of Governor Gavin Newsom. <u>https://www.gov.ca.gov/2021/10/01/california-becomes-first-state-in-nation-to-announce-covid-19-vaccine-requirements-for-schools/</u>

<sup>&</sup>lt;sup>8</sup> State Public Health Officer Order of August 5, 2021. California Department of Public Health. (2021). <u>https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Order-of-the-State-Public-Health-Officer-Health-Care-Worker-Vaccine-Requirement.aspx</u>

<sup>&</sup>lt;sup>9</sup> New Citywide COVID-19 Safety Requirements (2021). City of Palm Springs. <u>https://www.palmspringsca.gov/government/covid-19-updates</u>

#### COVID-19 Vaccination Status

In California, the COVID-19 vaccine was distributed in a phased approach to reach populations with the highest risk of acquiring the disease or of the highest risk of developing severe illness. Thus, certain groups such as healthcare workers, staff at skilled nursing facilities and similar settings, essential workers, and people with a higher risk of severe illness, including the elderly, could obtain a vaccine before the general adult population.<sup>10</sup>

At the time of the data collection (September to November 2021), the general adult population was eligible for the COVID-19 vaccine and had been for several months. As such, residents were asked, "Have you had the COVID-19 vaccine?"

A significantly higher percentage of adults in the Coachella Valley region (91.3%) reported being fulling vaccinated compared to Northwest (82.3%), Southwest (80.9%), and Mid (77.2%). Also, a significantly higher percentage of adults in the Mid region (14.7%) reported, "No, and I don't plan on getting vaccinated," compared to Northwest (10.5%) and Southwest (12.5%).



#### Figure 29. COVID-19 Vaccination Status

Note: Coachella Valley n = 390,990, Mid n = 224,857, Northwest n = 794,632, and Southwest n = 373,118.

<sup>&</sup>lt;sup>10</sup> COVID-19 Vaccination Plan (2020). California Department of Public Health.

https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/COVID-19/COVID-19-Vaccination-Plan-California-Interim-Draft V1.0.pdf? cldee=Y2Jha2VyQGNhbGhvc3BpdGFsLm9yZw%3d%3d&recipientid=contacta44bb655054aea11a812000d3a3b70c9-d3b1f5fdf153475aa1e698a39640f95b&esid=8767241f-2213-eb11-a813-000d3a3abdcf

As of December 2021, COVID-19 vaccines are recommended for the population five years and older, as they are safe and effective at preventing infection and transmission.<sup>11</sup> However, there are some who still choose not to receive the COVID-19 vaccine.

Participants who had <u>not</u> been vaccinated were then asked, "What is/are the main reason(s) you have not taken the vaccine?" and were then encouraged to select all that apply, including an "other, please specify" option. Note that this question included many statistically unstable estimates. Thus, only responses that had stable estimates across all regions were included in the figure below.

A significantly higher percentage of adults in the Southwest region (50.5%) reported having concerns about the vaccine being a new type of vaccine compared to Northwest (32.9%) and Coachella Valley (29.8%).



Figure 30. Reasons for Not Getting the Vaccine – Residents Who Are Unvaccinated

Note: Coachella Valley n = 29,090, Mid n = 40,607, Northwest n = 113,265, and Southwest n = 60,718.

<sup>&</sup>lt;sup>11</sup> Benefits of Getting a COVID-19 Vaccine (2021). Centers for Disease Control and Prevention. <u>https://www.cdc.gov/coronavirus/2019-ncov/vaccines/vaccine-benefits.html</u>

#### Likelihood of Recommending the COVID-19 Vaccine

Residents who were vaccinated were asked, "How likely are you to recommend the vaccine to someone else?" Response optinos ranged from "extremely likely" to "extremely unlikely", as illustrated in the figure below.

A significantly higher percentage of adults in the Coachella Valley region (74.0%) were extremely likely to recommend the vaccine to someone else compared to Northwest (64.8%), Southwest (63.8%), and Mid (66.9%).



Figure 31. Likelihood of Recommending Vaccine to Others – Vaccinated Residents Only

Note: Coachella Valley *n* = 359,678, Mid *n* = 178,189, Northwest *n* = 668,091, and Southwest *n* = 306,314.

#### COVID-19 Vaccine Side Effects

Some people experienced side effects from the COVID-19 vaccines, which are common indications that the vaccine is developing protection<sup>12</sup>. Common side-effects of COVID-19 vaccination include tiredness, headaches, muscle pain, chills, fever, and nausea, in addition to pain, redness, and swelling of the arm<sup>13</sup>. Residents who were vaccinated were asked, "Did you have any side effects or symptoms after receiving the COVID-19 vaccination?"

A significantly higher percentage of adults in the Northwest region (55.4%) reported having side effects compared to Mid (46.9%) and Coachella Valley (48.6%).



Figure 32. Side Effects/Symptoms of COVID-19 Vaccination

Note: Coachella Valley *n* = 358,318, Mid *n* = 177,570, Northwest *n* = 668,124, and Southwest *n* = 307,079.

<sup>&</sup>lt;sup>12</sup> Possible Side Effects After Getting a COVID-19 Vaccine (2021). Centers for Disease Control and Prevention. <u>https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html</u>

<sup>&</sup>lt;sup>13</sup> Possible Side Effects After Getting a COVID-19 Vaccine (2021). Centers for Disease Control and Prevention. <u>https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html</u>

## Equity in COVID-19 Vaccine Distribution

Certain factors such as income, education, economic status, healthcare access, racism/discrimination, and transportation/neighborhood conditions can contribute to disparities in access to COVID-19 vaccines.<sup>14</sup>

To assess perceptions of vaccine equity, residents were asked, "How confident are you that the COVID-19 vaccine is being distributed fairly?" As illustrated in the figure below, perceptions of fairness in vaccine distribution are approximately similar across regions.



Figure 33. Confidence in Fair Distribution of COVID-19 Vaccine

Note: Coachella Valley *n* = 389,052, Mid *n* = 223,830, Northwest *n* = 791,035, and Southwest *n* = 373,637.

<sup>&</sup>lt;sup>14</sup> COVID-19 Vaccine Equity for Racial and Ethnic Minority Groups (2021).Centers for Disease Control and Prevention. <u>https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/vaccine-equity.html</u>

# Disproportionate Impact of COVID-19 on Communities of Color

The COVID-19 pandemic exacerbated a variety of health, social, and economic problems. Among these areas, health inequities were highlighted among communities of color as racial and ethnic minorities were disproportionally at risk of becoming ill or dying from COVID-19.<sup>15</sup> To understand perceptions of these health inequities, residents were provided with statements to rate their agreement/disagreement. First, participants rated this statement: "People of color (e.g., African Americans, Latinos) are facing more of the health impact of coronavirus (COVID-19) than Whites."

A significantly higher percentage of adults in the Coachella Valley region (35.6%) strongly agree that people of color are experiencing more of a health impact compared to all three other regions: Mid (28.1%), Northwest (29.2%), and Southwest (26.1%).



Figure 34. Disproportionate Health Impact of COVID-19 on Communities of Color

Note: Coachella Valley *n* = 389,307, Mid *n* = 224,286, Northwest *n* = 789,831, and Southwest *n* = 372,867.

<sup>&</sup>lt;sup>15</sup> Health Equity Considerations and Racial and Ethnic Minority Groups (2021). Centers for Disease Control and Prevention. <u>https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html</u>

Participants were also asked to rate the following statement: "People of color (e.g., African Americans, Latinos) are facing more of the financial/economic impact of coronavirus (COVID-19) than Whites."

A significantly higher percentage of adults in the Coachella Valley region (41.2%) strongly agree that people of color are facing more of an economic impact when compared to their counterparts in the other three regions: Mid (32.1%), Northwest (35.4%), and Southwest (30.0%).



Figure 35. Disproportionate Economic Impact of COVID-19 on Communities of Color

Note: Coachella Valley *n* = 388,794, Mid *n* = 224,016, Northwest *n* = 787,653, and Southwest *n* = 373,574.

# **COVID-19 Information Seeking**

Residents were asked, "How well do you trust information from members of your own community?" Response options ranged from "extremely" to "not at all", as illustrated in the figure below.

A significantly higher percentage of adults in the Southwest (18.2%) and Mid (19.4%) regions stated "not at all" to trusting information from members of their own community compared to Northwest (13.4%) and Coachella Valley (11.6%). Conversely, a significantly higher percentage of adults in the Coachella Valley region (16.8%) reported being "very" trusting in information from members of their own community compared to Southwest (10.3%) and Mid (11.2%).



Figure 36. Trust in Information from One's Own Community

Note: Coachella Valley *n* = 390,382, Mid *n* = 226,352, Northwest *n* = 792,135, and Southwest *n* = 373,717.

## **COVID-19 Resources Accessed**

Residents were also asked, "Have you accessed any of these resources during the pandemic?" and were encouraged to select all that apply.

A significantly higher percentage of adults in the Mid region (15.6%) reported receiving utility discounts compared to Northwest (11.5%), Southwest (10.3%), and Coachella Valley (8.1%). See the figure below for additional details.



#### Figure 37. Resources Accessed During the Pandemic

Note: Coachella Valley *n* = 381,111, Mid *n* = 221,176, Northwest *n* = 773,376, and Southwest *n* = 365,349.

## Knowledge of Public Health Efforts During COVID-19

RUHS – Public Health has worked relentlessly to mitigate the effects of COVID-19 in our communities. To evaluate efforts and understand local perception, residents were given the following prompt, "The Department of Public Health within Riverside County had worked to reduce the impact of COVID-19 throughout the community" and could then rate their knowledge of each activity. Knowledge of Public Health efforts included a variety of response options.

For clarity, only the option of "Unaware and would have liked to know about this" is illustrated in the figure on the following page. All responses are provided in a table, following the figure.

Several significant differences were present. For clarity, percentages have been omitted from the narrative below. See the figure on the following page for percentages and further details. Significant differences include:

- A significantly higher percentage of adults in the Northwest and Mid regions were unaware and would have liked to know about mask distribution, food assistance, and data being provided to the community, compared to Southwest and Coachella Valley.
- A significantly higher percentage of adults in Northwest and Mid were unaware and would have liked to know about childcare assistance and opened vaccine sites compared to Coachella Valley.
- A significantly higher percentage of adults in Northwest were unaware and would have liked to know about educational information compared to Southwest and Coachella Valley.
- A significantly higher percentage of adults in Mid were unaware and would have liked to know about opened testing sites compared to Southwest and Coachella valley.
- A significantly higher percentage of adults in Mid were unaware and would have liked to know about information being given to support small businesses compared to Coachella Valley.



#### Figure 38. Knowledge of Public Health Efforts during COVID-19

Note: Mask distribution Coachella Valley n = 382,716, Mid n = 222,469, Northwest n = 779,957, and Southwest n = 368,418. Gave information to support small business Coachella Valley n = 374,331, Mid n = 214,109, Northwest n = 765,582, and Southwest n = 362,106. Food assistance/Great Plates program Coachella Valley n = 378,233, Mid n = 219,699, Northwest n = 772,550, and Southwest n = 364,927. Provide data to the community Coachella Valley n = 374,215, Mid n = 215,088, Northwest n = 763,586, and Southwest n = 362,011. Educational information and videos Coachella Valley n = 371,481, Mid n = 214,932, Northwest n = 758,332, and Southwest n = 361,543. Childcare assistance Coachella Valley n = 371,380, Mid n = 214,534, Northwest n = 761,569, and Southwest n = 361,500. Opened testing sites Coachella Valley n = 378,715, Mid n = 219,974, Northwest n = 771,787, and Southwest n = 364,269. Opened vaccine sites Coachella Valley n = 380,058, Mid n = 220,738, Northwest n = 775,482, and Southwest n = 367,290.

Category	Response	Coachella Valley	Mid	North	South
Opened	Unaware and would have liked to	5 5%	11 70%		
vaccine sites	know about this	5.570	11.270	0.070	0.070
	Unaware and didn't need it	8.1%	12.4%	12.9%	12.9%
	Knew and used it	36.2%	32.5%	32.2%	33.1%
	Knew about it	50.2%	43.9%	46.0%	45.9%
Opened	Unaware and would have liked to	5.8%	13.0%	10.2%	8.3%
testing sites	know about this				
	Unaware and didn't need it	8.8%	15.5%	11.4%	14.4%
	Knew and used it	31.6%	23.8%	29.1%	23.8%
	Knew about it	53.8%	47.8%	49.3%	53.5%
Childcare	Unaware and would have liked to	12.8%	18.2%	19.4%	16.0%
assistance	know about this				
	Unaware and didn't need it	67.0%	62.6%	63.0%	67.8%
	Knew and used it	1.0%	1.4%	1.6%	1.2%
	Knew about it	19.2%	17.8%	15.9%	15.1%
Educational	Unaware and would have liked to	14.3%	20.3%	20.2%	15.4%
information	know about this				
and videos	Unaware and didn't need it	49.3%	48.9%	48.0%	53.0%
	Knew and used it	8.6%	7.0%	7.6%	6.8%
	Knew about it	27.8%	23.8%	24.2%	24.8%
Provided data	Unaware and would have liked to	15.0%	22.7%	21.2%	16.3%
to the	know about this				
community	Unaware and didn't need it	24.6%	27.1%	28.4%	29.3%
	Knew and used it	17.9%	14.5%	16.2%	18.0%
	Knew about it	42.4%	35.8%	34.2%	36.4%
Food	Unaware and would have liked to	1/ 50%	22 70%	22 00%	16 /06
assistance/Gr	know about this	14.570	23.770	22.970	10.470
eat Plates	Unaware and didn't need it	43.1%	45.4%	45.4%	51.4%
Program	Knew and used it	5.6%	6.6%	5.0%	3.6%
	Knew about it	36.8%	24.4%	26.7%	28.6%
Gave	Unaware and would have liked to	16.0%	20.5%	22.6%	18.5%
information	know about this				
to support	Unaware and didn't need it	45.2%	51.1%	47.0%	49.4%
small	Knew and used it	5.9%	3.8%	5.5%	6.5%
business	Knew about it	32.9%	24.6%	24.9%	25.6%

Table 4. Knowledge of Public Health Efforts during COVID-19

Category	Response	Coachella	Mid	North	South
		Valley		west	west
Mask	Unaware and would have liked to	24.0%	30.0%	30.6%	23.7%
distribution	know about this				
	Unaware and didn't need it	39.5%	41.3%	41.9%	45.9%
	Knew and used it	9.1%	8.0%	7.2%	5.8%
	Knew about it	27.4%	20.7%	20.3%	24.6%

Note: Mask distribution Coachella Valley n = 382,716, Mid n = 222,469, Northwest n = 779,957, and Southwest n = 368,418. Gave information to support small business Coachella Valley n = 374,331, Mid n = 214,109, Northwest n = 765,582, and Southwest n = 362,106. Food assistance/Great Plates program Coachella Valley n = 378,233, Mid n = 219,699, Northwest n = 772,550, and Southwest n = 364,927. Provide data to the community Coachella Valley n = 374,215, Mid n = 215,088, Northwest n = 763,586, and Southwest n = 362,011. Educational information and videos Coachella Valley n = 371,481, Mid n = 214,932, Northwest n = 758,332, and Southwest n = 361,543. Childcare assistance Coachella Valley n = 371,380, Mid n = 214,534, Northwest n = 761,569, and Southwest n = 361,500. Opened testing sites Coachella Valley n = 378,715, Mid n = 219,974, Northwest n = 771,787, and Southwest n = 364,269. Opened vaccine sites Coachella Valley n = 380,058, Mid n = 220,738, Northwest n = 775,482, and Southwest n = 367,290.

# **Trust in Local Government**

Given that RUHS – Public Health is a vital entity in helping the community thrive and recover from COVID-19, residents were asked, "How much do you trust local government such as County Public Health departments?"

A significantly higher percentage of adults in the Coachella Valley region (31.1%) reported trusting local government "a lot" compared to the Northwest (23.7%), Southwest (22.1%), and Mid (20.7%) regions.



Figure 39. Trust in Local Government

Note: Coachella Valley *n* = 389,274, Mid *n* = 225,230, Northwest *n* = 787,012, and Southwest *n* = 373,886.

# CONCLUSION

The purpose of this report was to provide the results of a County-wide needs assessment by Riverside County Public Health regions (Coachella Valley, Mid, Northwest, and Southwest). This information provided here can help to inform outreach and education and understand regional differences as it pertains to attitudes and behaviors towards COVID-19 and vaccination.

Overall, each of the Public Health regions has been negatively impacted by COVID-19. Residents among each of these regions have reported being impacted in work/school, social life, and their economic situations. Residents across regions reported being worried about friends and family, experiencing increased anxiety, and having a fear of getting sick. There was also a loss in savings/retirement funds, reduced wages/work hours, and job loss across all regions in Riverside County. Generally, residents across all regions perceived protection from the COVID-19 vaccine, and variants did not change these views for most residents. The majority of residents are also vaccinated and would recommend it to others.

While there are similar attitudes/behaviors across regions, there are some features that are more prevalent than others. For example, the Northwest region experienced significantly more of an impact in work/school participation when compared to the Mid and Coachella Valley region. The Northwest region also experienced significantly more "fear of getting sick" and "worry about friends and family" compared to the Southwest region. The Coachella Valley experienced fewer childcare issues compared to the other regions, likely due to the older population in the Coachella Valley.

A noticeable difference among the regions was found regarding vaccination against COVID-19. Specifically, significantly higher proportions of adults in the Coachella Valley region believe that the COVID-19 vaccine would protect them, were fulling vaccinated, and would recommend the vaccine when compared to the Mid, Northwest, and Southwest regions. This may be because the Coachella Valley is home to many HIV positive adults who are immunocompromised and thus seriously concerned about falling ill.

Altogether, this report provides information on regional differences in attitudes, behaviors, and the impact of COVID-19. Local health and human service agencies may use this report to respond appropriately in outreach and education.